Texas Environmental Law Journal

Volume 51 Summer 2021 Number 2

Prepared through The University of Texas School of Law Publications Office
ISSN 0163-545X

Please cite as: Tex. Envtl. L. J.

TEXAS ENVIRONMENTAL LAW JOURNAL

Volume 51 Summer 2021 Number 2

STATE BAR OF TEXAS

ENVIRONMENTAL AND NATURAL RESOURCES LAW SECTION

P.O. Box 220, Mailstop S-520
Austin, Texas 78767-0220
www.texenrls.org

EDITORIAL BOARD

DEVELOPMENTS ATTORNEY CONTRIBUTORS

Texas Environmental Law Journal

Volume 51 Summer 2021 Number 2

University of Texas School of Law

Texas Environmental Law Journal
727 East Dean Keeton St.
Austin, Texas 78705-3224
(512) 471-0299 / telj@law.utexas.edu

Texas Environmental Law Journal

Volume 51 Summer 2021 Number 2

State Bar of Texas
Environmental and Natural Resources Law Section

Section Officers (2020-2021)

Executive Committee Members (2020-2021)

Committee Chairs (2021)

Education
Lisa Dyar
Greg Ellis

Publications
Ashleigh K. Acevedo
Aaron Vargas

Social Media Committee
David Klein
Amber Ahmed

Law School
Kristen Fancher
Walt Shelton

Pro Bono
Buck Benson
Chris Schlag

Nominating Committee
David Klein
Susan Maxwell

Website & Technology
Steve McMillen
Paul Sarahan

Sponsorship & Membership
Heather Palmer
Ty'Meka Reeves-Sobers

Diversity, Inclusion & Engagement
Paul Sarahan
>Amber Ahmed
Ty'Meka Reeves-Sobers

Statement of Purpose

The purpose of the *Texas Environmental Law Journal* is to provide members of the Environmental and Natural Resources Law Section of the State Bar of Texas and the public with legal articles and recent development columns on relevant environmental and natural resources law issues. The *Journal* also provides new of Section activities and other events pertaining to this area of law. The *Journal* is the leading source for articles on Texas environmental and natural resources law.

Joint Publication

The *Texas Environmental Law Journal* is an official publication of the Environmental and Natural Resources Law Section of the State Bar of Texas and is published jointly with the University of Texas School of Law's *Texas Environmental Law Journal*. In 1990, the Environmental and Natural Resources Law Section reached an agreement with this student organization at the University of Texas School of Law to co-produce the *Journal* as the *Texas Environmental Law Journal*. The students' involvement began with the summer issue in 1990.

Other Information

The materials contained in the *Journa*l represent the opinions of the authors and should not be construed to be those of the School of Law, the University of Texas School of Law's Texas Environmental Law Journal, or the *Journal's* editors and staff. Nothing contained herein is to be considered as the rendering of legal advice for specific cases, and readers are responsible for obtaining such advice from their own legal counsel.

To contact the *Journal*, please use the contract information in the preceding pages.

Solicitation of Articles & Editorial Policies

The *Journal* solicits articles from authors on environmental and natural resources subjects that will assist Texas environmental and natural resource law practitioners and develop the advancement of environmental and natural resource law.

If you are interested in submitting an article, please contact:

Ashleigh K. Acevedo, Editor-in-Chief (teljeds@gmail.com)

The *Journal* will consider for publication any articles from practitioners, judges, academics, policymakers, and others that are relevant and useful to practitioners in the environmental and natural resources law arena. Manuscripts should be submitted via email to the Solicitations Attorney Editor, Student Lead Articles Editor, or Editor-in-Chief at the addresses shown above.

If the *Journal* accepts a manuscript for publication, the author must provide a copy in electronic format (Microsoft Word) with no pre-defined embedded coding or styles. If a manuscript includes graphics, please provide as separate files, preferably JPEG, PDF, or TIFF files. Graphics should be grayscale and at a resolution of at least 300dpi. The manuscript should be typed and double-spaced, with footnotes. Citations should conform to the most recent editions of *The Bluebook*: A *Uniform System of Citation* and the *Texas Rules of Form*.

If you desire the *Journal* to return any printed manuscript, please provide a postage prepaid, self-addressed envelope with the manuscript.

Copyright & Permission to Use

REPRINTS

The *Journal* has a contract with William S. Hein & Co., Inc. for Hein to provide back issues. Hein has single issues, single volumes, and complete sets available from Vol. 1 (1971) to current at its current fees. These issues are also available electronically through HeinOnline. William S. Hein & Co., Inc.; 2350 N. Forest Rd., Getzville, New York 14068; (716) 882-2600, (800) 828-7571, Fax: (716) 883-8100; mail@]wshein.com; www.wshein.com.

SUBSCRIPTIONS & SECTION MEMBERSHIPS

SUBSCRIPTIONS

Subscriptions to the *Journal* are available through:

The University of Texas School of Law Publications
727 East Dean Keeton Street
Austin, Texas 78705-3224
(512) 232-1149
Publications@law.utexas.edu
Order and pay online at: www.texaslawpublications.com

The annual subscription price is $40.00 domestic / $50.00 foreign; single issues are $15.00. Austin residents add 8.25% sales tax, and other Texas residents add 7.25% sales tax.

SECTION MEMBERSHIPS

For attorneys licensed by the State Bar of Texas, membership in the Environmental and Natural Resources Law Section includes an electronic subscription to the *Journal*. To receive hardcopy issues of the *Journal*, please mail Publications@law.utexas.edu or write the Publications Office at the above address stating your Section membership number and your mailing address. Hardcopy requestors will receive only those issues published after your Section membership begins. All subscriptions expire on May 31 unless your annual Section membership is renewed, regardless of the date of initial membership.

To become a member of the Section or to renew your annual membership by May 31 of each year if not renewed when paying your annual State Bar of Texas dues, mail a completed copy of the form on the following page and a check for $30.00 made payable to "Environmental and Natural Resources Law Section – State Bar of Texas" to:

The State Bar of Texas
Membership Services
P.O. Box 12487
Austin, Texas 78711-2487

And, mail a copy to ENRLS, P.O. Box 220, Mailstop H520, Austin, Texas 78767-0220.

Please call Membership Services ((800) 204-2222 or (512) 427-1463), the Publications Office ((512) 232-1149), the Treasurer, or the Editor-in-Chief, if you have any questions.

Name	
Firm, Business, or Agency	
E-mail Address (required to receive Greenwire Newservice and e-Newsletters)	
Mailing Address	
Hard Copy Desired	
Telephone/Fax Numbers	
State Bar Number	

Critiquing Sustainable Development and Analyzing Avenues for Just Sustainability in India

Stellina Jolly & Siddharth Singh

I. Introduction

State of Meghalaya v. All Dimsa Students Union, a 2019 decision by the Indian Supreme Court, raised concerns about exploitative rat-hole mining and illegal mining forms in Meghalaya, India.[1] These practices polluted nearby water bodies with an acidic discharge called Acid Mine Drainage (AMD). Before making its way to the Supreme Court, the issue was first raised in 2012, when the Gauhati High Court registered Public

1 State of Meghalaya v. All Dimasa Students Union, (2019) 8 SCC 177, 196–97, 219 (India). For this article's purposes, pinpoint citations for cases will refer to the specific paragraph where the cited information can be found as opposed to the reporter's page. The decision is available at https://main.sci.gov.in/supremecourt/2018/39439/39439_2018_11_1501_14662_Judgement_03-Jul-2019.pdf.

Interest Litigation (PIL) *suo moto* after fifteen coal mining laborers died at Nongalbibra, a small town famous for its coal mines.[2] The Gauhati High Court transferred the matter to the National Green Tribunal (NGT), a specialized body created to handle environmental disputes.[3]

The NGT's view was that "illegal and unscientific mining neither can be held to be in the interest of people of the area [or] the people working in the mines nor in the interest of the environment."[4] The NGT passed an order directing the state's Chief Secretary and the Director General of Police "to ensure that rat-hole mining or illegal mining [was] stopped . . .and any illegal transport of coal" to not take place until further orders by the NGT.[5] Following the order, numerous applications were filed by "persons claiming [an] interest in the subject matter of the application."[6] The NGT collected the applications and created a committee to aid the tribunal with its proceedings and implement its orders.[7]

In its order, the NGT observed that "rampant, illegal, unscientific, and life-threatening mining activity, particularly rat hole mining" had occurred for years, and it placed a ban on the mining activities.[8] The state government was also directed to formulate state mining policies and guidelines, which have yet to be created, to deal with all mining aspects.[9] The tribunal further observed that illegal and unscientific mining had caused huge environmental degradation.[10] Based on the 'Polluter Pays Principle,' an environmental policy requiring the polluter to bear environmental restorative costs,[11] the court directed the state government to collect, from the polluters, 10% of the coal's market value for every consignment and then deposit it in an account—the Meghalaya Environment Protection and Restoration Fund—maintained by the Chief Secretary of the State of Meghalaya.[12]

An appeal was filed by an aggrieved party, arguing that the NGT's blanket ban on mining activities adversely affected the miners' lives and livelihood.[13] The India Supreme Court held that the mining ban was limited to illegal mining activity and did not extend to mining authorized under the Mines and Minerals (Development and Regulation) Act's leasing mechanism.[14] While reiterating the NGT's stance, the court observed that:

---

2 *Id.* at 4.
3 *Id.*
4 *Id.*
5 *Id.*
6 *Id.*
7 *Id.* at 15.
8 *Id.* at 7, 13.
9 *Id.*
10 *Id.* at 9.
11 HARSH MAHASETH, ANALYSIS OF THE EFFECTIVENESS OF THE POLLUTER PAYS PRINCIPLE IN INDIA 1 (Mar. 13, 2017), https://ssrn.com/abstract=2930921 or http://dx.doi.org/10.2139/ssrn.2930921.
12 *All Dimasa Students Union*, 8 SCC 177, at 9.
13 *Id.* at 13.
14 *Id.* at 145.

> Natural resources of the country are not meant to be consumed only by the present generation of men or women of the region where natural resources are deposited. These treasures of nature are for all generations to come and for intelligent use of the entire country. The present generation owes a duty to preserve and conserve the natural resources of the nation so that it may be used in the best interest of coming generations as well and for the country as a whole.[15]

Though this observation echoes sustainable development's core dimensions, the judgment lacks an elaborate sustainable-development discussion, a standard practice in Indian courts' judgments.[16] Nevertheless, the judgment is considered a landmark and turning point in how the sustainable development concept is interpreted.[17] Some argue the judgment has ushered the "just sustainability" idea into Indian jurisprudence.[18]

This Article evaluates the just sustainability concept advanced by the judgment. It contends that just sustainability will help overcome the uncertainty and indeterminacy associated with sustainable development's operationalization and will be instrumental in placing environmental justice within the core ambit of sustainable development. With this objective, this Article's Part II contextualizes sustainable development by plotting its projected evolution and discussing its potential concerns. Part III explores sustainable development's essential components and settings and assesses how the Indian judiciary has perceived and interpreted it. Part IV evaluates the indeterminacy and the absence of environmental justice linkages while operationalizing the sustainable development concept. Parts V and VI evaluates how the just sustainability concept can be an effective mechanism for reinvigorating and guiding sustainable development operationalization.

II. Environmental Crisis to Sustainable Development

Environmental degradation brought on by industrialization and conventional economic growth has gravely impacted human lives and societies—reflecting an imbalance between environmental protection and economic development.[19]This imbalance demands a rethinking of development activities that acknowledges the planet's finite natural-resource supply.[20]

---

15 *Id.* at 1.

16 Upendra Baxi, *A Milestone for Environmental Justice*, India Legal (July 20, 2019), https://www.indialegallive.com/constitutional-law-news/supreme-court-news/a-milestone-for-environmental-justice/.

17 *See id.*

18 *Id.*

19 *See generally* John C. Dernbach & Federico Cheever, *Sustainable Development and its Discontents*, 4 Transnat'l Env't L. 247 (2015).

20 Tomislav Klarin, *The Concept of Sustainable Development: From its Beginning to the Contemporary Issues*, 21 Zagreb Int'l Rev. Econ. & Bus. 67, 70 (2018); *see also* Graham Turner & Cathy Alexander, *Limits to Growth was Right. New research shows we're nearing collapse*, The Guardian (Sept. 2, 2014), https://www.theguardian.com/commentisfree/2014/sep/02/limits-to-growth-was-right-new-research-shows-were-nearing-collapse (analyzing predictions of global civilization collapse due to unsustainable development).

The international community's efforts have resulted in nebulous international legal responses that do not prioritize the environment's protection.[21]Balancing developmental needs with environmental protection forms the basis of the complex system that is international environmental law.[22] In 1972, the United Nations Conference on Human Environment in Stockholm (the Stockholm Conference) brought the global north and the global south together on the human development issue.[23] A declaration adopted at the Stockholm Conference states that "environmental policies . . . should enhance and not adversely affect the present or future development potential of developing countries."[24]

The Stockholm Conference also saw countries grouping together based on their diverse developmental needs.[25] The global north (largely comprised of industrialized countries) prioritized environmental protection, and the global south prioritized economic development.[26] This created a challenge for world leaders to unify both groups' agendas and facilitate cooperation.

Balancing environmental protection and economic development was further bolstered by the World Commission on Environment's report (the Brundtland Report), that defined the term "sustainable development" as a development that "meets the needs of the present without compromising the ability of future generations to meet their own needs."[27]

A. Operationalization of Sustainable Development

The sustainable development evolution and operationalization encompasses the period after 1987, wherein the Rio Declaration[28] and Agenda 21[29] firmly etched the concept into international law's vocabulary. These documents highlighted human development's environmental constraints and the significance of long-term plans for resource-consumption to ensure their availability and integrity for future generations.[30]

Following the Rio Declaration's conference, many of the major international environmental conventions incorporated the sustainable development objective—making it

---

21 Klarin, *supra* note 20, at 67–68.

22 *See generally* Adil Najam, *Developing Countries and Global Environmental Governance: From Contestation to Participation to Engagement*, 5 Int'l Env't Agreements: Pol'y L. & Econ. 303 (2005) (describing developing countries as the center of global hopes for actualizing sustainable development).

23 *Id.* at 307.

24 U.N. Conference on Environment and Development, *Stockholm Declaration of the United Nations Conference on the Human Environment*, ¶ 4, U.N. Doc. A/CONF.48/14/Rev.1 (June 16, 1972).

25 *Id.*

26 Longyu Shi et al., *The Evolution of Sustainable Development Theory: Types, Goals, and Research Prospects*, 11Sustainability 1, 5 (2019).

27 Rep. of the World Comm'n on Env't and Dev., ¶ 27, U.N. Doc. A/42/427 (Aug. 4, 1987).

28 U.N. Conference on Environment and Development, *Rio Declaration on Environment and Development*, ¶ 24, U.N. Doc. A/CONF.151/26/ (Vol. I), annex I (Aug. 12, 1992) [hereinafter *Rio Declaration*].

29 U.N. Conference on Environment and Development, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I), annex II (Aug. 12, 1992).

30 Klarin, *supra* note 20, at 76.

a keystone environmental-jurisprudence principle.[31] It is a constitutional goal, policy goal, and judicial objective that guides changes in environmental decision-making.[32] Still, sustainable development requires a reformulation of economic, social, and political system priorities.[33] Sustainable development is difficult to understand, measure, and quantify. It has garnered hostile critics who are wary of its utility in addressing environmental degradation and prefer to replace it with an alternative concept.[34] Others are looking to demystify the concept's amorphous nature to understand its implementation challenges.[35] This criticism is supported by the fact that international instruments have incorporated sustainable development through a filter of exclusivity, operating in relative isolation even in common areas, so that efforts lack integration.[36] Because sustainability metrics are not confined to a fixed formula, its potential application across judicial cultures is inconsistent.[37]

For instance, the International Court of Justice (ICJ) quoted the Rio Declaration in its nuclear weapon's Advisory Opinion to explain sustainable development's relevance.[38] In *Gabcikovo-Nagymaros*, the court observed the need to reconcile economic develop-

---

31 U.N. Framework Convention on Climate Change art. 3, May 9, 1992, 1771 U.N.T.S. 107 [hereinafter UNFCCC]; Adoption of the Paris Agreement arts. 1(1), 4(1), 6, 7(1), 8(1), 10(5), Dec. 12, 2015, T.I.A.S. No. 16-1104; Convention on Biological Diversity arts. 8, 10, June 5, 1992, 1760 U.N.T.S. 69; Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Feb. 2, 1971, 996 U.N.T.S. 245, 11 I.L.M. 963; U.N. Convention to Combat Desertification arts. 2, 4, 5, 6, 9, 18, June 17, 1994, 1954 U.N.T.S. 3, 33 I.L.M. 1328; G.A. Res. 51/229, art. 5, 24 (July 7, 1997); Stockholm Convention on Persistent Organic Pollutants, May 22, 2001, 2256 U.N.T.S. 119, 40 I.L.M. 532.

32 *See generally* Margaret Troyak & Tom Muir, *Development, Growth and Sustainability*, 1 BUFF. ENV'T L.J. 173 (1993); James R May, *Sustainability Constitutionalism*, 86 UMKC L. REV. 855 (2018) (surveying and contextualizing the extent to which nations recognize sustainability in their constitutions).

33 Lucretia Dogaru et al., *The Importance of Environmental Protection and Sustainable Development*, 93 PROCEDIA – SOC. & BEHAV. SCIS. 1344, 1346 (2013).

34 Nicola Lugaresi, *The Unbearable Tiredness of Sustainable Development (At Different Levels, Lately)*, *in* GLOBAL ENVIRONMENTAL LAW AT A CROSSROADS 195–210 (Edward Elgar ed., 2014); *see* Dernbach & Cheever, *supra* note 19, at 272; Sam Adelman, *Justice, development and sustainability in the Anthropocene*, *in* RESEARCH HANDBOOK ON LAW, ENVIRONMENTAL, & THE GLOBAL SOUTH 23 (Edward Elgar ed., 2019).

35 *See* Dernbach & Cheever, *supra* note 19, at 272.

36 Rakhyun E. Kim, *The Nexus between International Law and the Sustainable Development Goals*, 25 REV. EUR., COMPLEX & INT'L ENV'T L. 15 (2016).

37 *See generally* Virginie Barral, *Sustainable Development in International Law: Nature and Operation of an Evolutive Legal Norm*, 23 EUR. J. INT'L L. 377 (2012) (characterizing different formulations of sustainable development across nations); Vaughan Lowe, *Sustainable Development and Unsustainable Arguments*, *in* INTERNATIONAL LAW AND SUSTAINABLE DEVELOPMENT: PAST ACHIEVEMENTS AND FUTURE CHALLENGES 19 (Alan Boyle & David Freestone eds., Oxford: Oxford Univ. Press ed., 1999) (arguing that the lack of precision in the concept of sustainable development makes it a poor candidate for use by tribunals as a component of judicial reasoning); *see also* Dernbach & Cheever, *supra* note 19, at 275.

38 Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226 (July 8); *see also Rio Declaration*, *supra* note 28, at 4 ("Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for

ment with the environment's protection—embodied by the sustainable development concept.[39] However, the Court could not articulate sustainable development's intricacies and failed to create guidelines for its implementation in concrete situations.[40] In *Pulp Mills*, the ICJ modified its approach by mentioning sustainable development as an objective of local states' laws.[41] It was only in the *Iron Rhine* arbitration that the Court acknowledged sustainable development's customary nature.[42] Though articulated as a policy objective, the absence of international courts' clear direction in decisions have failed to contribute to sustainable development's meaning, making it only an interpretive tool for judges.[43]

Because of this, countries found it easier to discuss sustainable development rather than incorporate it into actual practice.[44] Even when constitutional and statutory provisions incorporated sustainable development as an objective, its implementation remained difficult to assess.[45] As a result, sustainability provided no significant response to existing problems.[46] Political leaders and industrialists used the term's vagueness to mislead people with greenwashing—the use of disinformation to mislead consumers.[47] These challenges led scientists and policymakers to quantify sustainable development and then assess its implementation worldwide.[48]

In 2000, the United Nations adopted Millennium Development Goals (MDGs), recognizing eight critical, human-development areas and guiding national-development framework for the next fifteen years.[49] In 2015, the United Nations Sustainable Devel-

---

the environment in times of armed conflict and cooperate in its further development, as necessary.").

39 Gabcikovo-Nagymaros Project (Hung. v. Slovak.), Judgment, 1997 I.C.J. 7, at 78 (Sept. 25).

40 Philippe Sands, *International Courts and the Application of the Concept of "Sustainable Development"*, MAX PLANCK YEARBOOK OF U.N. L. ONLINE 389, 396 (1999); Prue Taylor, *The Case Concerning the Gabcikovo-Nagymaros Project: A Message from the Hague on Sustainable Development*, NEW ZEALAND J. ENV'T L. 109, 114 (1999).

41 Pulp Mills on the River Uruguay(Arg. v. Uru.), Judgment, 2010 I.C.J. 14, at 74–75 (Apr. 20) ("Regarding Article 27, it is the view of the Court that its formulation reflects not only the need to reconcile the varied interests of riparian States in a transboundary context and in particular in the use of a shared natural resource, but also the need to strike a balance between the use of the waters and the protection of the river consistent with the objective of sustainable development. . . . Consequently, it is the opinion of the Court that Article 27 embodies this interconnectedness between equitable and reasonable utilization of a shared resource and the balance between economic development and environmental protection that is the essence of sustainable development.").

42 Arbitration Regarding the Iron Rhine ("Ijzeren Rijn") Railway between the Kingdom of Belgium and the Kingdom of the Netherlands (Belg. v. Neth.),Award, 2005 I.C.G.J. 35, at 37–38 (May 24); *see* Barral, *supra* note 37.

43 Sands, *supra* note 40.

44 *Id*.

45 *Id*.

46 *Id*.

47 Charles Francis et al., *Greening of Agriculture: Is it All a Greenwash of the Globalized Economy?*, 19 J. CROP IMPROVEMENT 193, 194 (2007).

48 Shi et al., *supra* note 26, at 6.

49 G.A. Res. 55/2 (Sept. 8, 2000).

opment Summit reviewed MDGs' implementation and adopted Sustainable Development Goals (SDGs), covering seventeen focus areas and 169 specific targets.[50] The SDGs went beyond the MDGs by emphasizing inclusive growth while balancing the environmental, economic, and social elements. The challenge, however, is to achieve these goals for everyone. SDGs' success is only possible when governmental policies are formulated to ensure all major stakeholders' substantive participation.

The core idea driving sustainable development's evolution was the need to mitigate conventional development's negative consequences.[51] However, its implementation's history does not present a convincing picture. After decades of sustainable development implementation, ecological crises continue to deepen inequality and disparity between nations, communities, and individuals.[52] These dual crises persist because of a lack of clarity regarding sustainable development's meaning and direction.[53] Semantically, sustainability implies stability and continuity while development implies dynamism and change.[54] Efforts have failed to reconcile these two concepts.[55] Clashing conceptual and normative frameworks led to widely varying conclusions about what constitutes "sustainability" and whose needs sustainable development is addressing.[56] The challenge is compounded by the fact that sustainable development is a normative framework premised upon the harmonization of the planet, profit, and people.[57] Instead of integrating these three elements, developers often neglect social considerations.[58] Even sustainable developers place unbalanced emphasis on inter-generational over intra-generational equity.[59] These infirmities arise because of sustainable development's meaning's lack of clarity. Policymakers must holistically understand the term before undertaking sustainable development initiatives. Thus, it is imperative to review sustainable development's current state in the light of contemporary issues and to look for new ways to integrate justice and environmental protection. In this context, the next Part will analyze how

---

50 G.A. Res. 70/1 (Oct. 21, 2015); *see also* Stellina Jolly & Abhishek Trivedi, *Implementing the SDG-13 through International Law: A Legal Overview with an Emphasis on Climate-Induced Displacement*, 2 BRILL OPEN LAW 69 (2020).

51 *See generally* G.A. Res. 70/1 (Sept. 25, 2015).

52 Wolfang Sachs, *Sustainable Development and the Crisis of Nature: On the Political Anatomy of an Oxymoron*, *in* LIVING WITH NATURE: ENVIRONMENTAL POLITICS AS CULTURAL DISCOURSE (Oxford Univ. Press ed., 1999).

53 Klarin, *supra* note 20, at 86; *see* HAYDN WASHINGTON, DEMYSTIFYING SUSTAINABILITY TOWARDS REAL SOLUTIONS (2015).

54 JULIA BOURKE, THE SEMANTICS OF SUSTAINABILITY 3 (2004).

55 ANTHONY GIDDENS, GLOBAL POLITICS AND CLIMATE CHANGE (2009).

56 Sachs, *supra* note 52, at 40.

57 Dernbach & Cheever, *supra* note 1919, at 252.

58 Prabhu Kandachar, *Materials and Social Sustainability*, *in* MATERIALS EXPERIENCE: FUNDAMENTALS OF MATERIALS AND DESIGN 91–103 (Elvin Karana, Owain Pedgley, & Valentina Rognoli eds., 2014).

59 Ken G. Willis, *Is all Sustainable Development Sustainable? A Cost-benefit Analysis of Some Procurement Projects*, 12 J. ENV'T ASSESSMENT POL'Y & MGMT. 311 (2010); Laurie Kaye Nijaki, *Justifying and Juxtaposing Environmental Justice and Sustainability: Towards an Inter-Generational and Intra-Generational Analysis of Environmental Equity in Public Administration*, 39 PUB. ADMIN. Q. 85 (2015).

Indian courts have understood and deliberated upon one of the 21st century's most significant terms.

III. Legal Response to Sustainable Development Under Indian Jurisprudence

Environmental stewardship is an inherent value in Indian culture and traditions.[60] Compassion for other living and non-living entities finds its root in the Indian subcontinent's ancient religious texts.[61] However, environmental protection was not explicitly incorporated into India's constitutional mandate.[62] The legal focus on environmental protection grew as a response to international developments.[63] The Stockholm Conference's declaration was followed by a flurry of domestic legislation enactments including the Water (Prevention and Control of Pollution) Act of 1974, Forest (Conservation) Act of 1980, Air (Prevention and Control of Pollution) Act of 1981, and Environment (Protection) Act of 1986.[64]

In 1976, the Indian Constitution was amended to require "the state to . . . [endeavor] to protect and improve the environment and to safeguard the forests and wildlife of the country."[65] Subsequently, the government incorporated a chapter on "Environment and Development" in its sixth Five-Year Plan,[66] a series of plans to promote national economic programs,[67] that emphasized environmental preservation in all developmental activities' areas.[68] Likewise, other governmental policies followed this trend, including the 2006 National Environment Policy, which underpins balancing environmental protection and development.[69]

---

60 Arvind Jasrotia, *Environmental Protection and Sustainable Development: Exploring the Dynamics of Ethics and Law*, 49 J. of the Indian L. Inst. 30, 34 (2007).

61 *Id*.

62 Bhaskar Kumar Chakravarty, *Environmentalism: Indian Constitution and Judiciary*, 48 J. of the Indian L. Inst. 99, 100 (2006).

63 Stellina Jolly & Zen Makuch, *Procedural and Substantive Innovations Propounded by the Indian Judiciary in Balancing Protection of Environment and Development: A Legal Analysis*, *in* Courts and the Environment, 142–68 (Christina Voigt & Zen Makuch eds., 2018).

64 Furqan Ahmad, *Origin and Growth of Environmental Law in India*, 43 J. of the Indian L. Inst. 358, 362 (2001).

65 *Id*. at 369.

66 *See generally Overview*, NITI Aayog, https://niti.gov.in/content/overview (last visited Apr. 30, 2021). From 1950 to 2014, Indian economic and social development was regulated by the Planning Commission of India, a non-constitutional and non-statutory body, by adopting the Five-Year Plan after five years; on January 1, 2015, the Commission was replaced by a policy think tank. *Id*., https://www.jagranjosh.com/general-knowledge/list-of-all-five-year-plans-of-india-1468309723-1.

67 Hemant Singh, *List of all Five Year Plans of India*, Jagran Josh (Apr. 7, 2021), https://www.jagranjosh.com/general-knowledge/list-of-all-five-year-plans-of-india-1468309723-1.

68 *Planned Development: Retrospect and Prospect*, NITI Aayog (Nov. 25, 1985), https://niti.gov.in/planningcommission.gov.in/docs/plans/planrel/fiveyr/7th/vol1/7v1ch1.html.

69 Gov't of Ind. Ministry of Env't & Forests, National Environmental Policy (2006).

The Indian judiciary has tried to establish harmony between development and the environment through broad constitutional and statutory provision interpretations, concentrating on the right to the environment as part of the Indian Constitution's right to life.[70] The *Rural Litigation and Entitlement Kendra v. State of U.P.* (*Doon Valley* case) was one of the earliest cases to discuss the balance between ecological and economic concerns.[71] The Supreme Court balanced the two by ordering mine closures and ensuring mine owners had an alternative occupation.[72] The court's position deviated from its previous judgment, wherein the court simply adopted a pro-environmental approach and ordered tanneries polluting the Ganges River to close, stating "[w]e are conscious that closure of tanneries may bring unemployment, loss of revenue, but life, health and ecology have greater importance to the people."[73]

A. Carrying Capacity Rule

In *Vellore Citizens Welfare Forum v. Union of India*, the Supreme Court incorporated the term "sustainable development" for the first time.[74] The court employed the notion to prevent tanneries from discharging effluents into the river Palar, a major potable water source.[75] The court held that, while the leather industry generates vital foreign exchange for the country, tanneries have no right to degrade the environment and pose a public health hazard.[76] The court recognized "'[s]ustainable development' [a]s a balancing concept between ecology and development has been accepted as a part of the [c]ustomary [i]nternational [l]aw though its salient feature[s] have yet to be finali[z]ed by the [i]nternational [l]aw [j]urists."[77]

In the *Vellore* case, the Court had the opportunity to strengthen its environmental jurisprudence by incorporating sustainable development into domestic Indian law.[78] The Court carefully outlined the concept while leaving room for future interpretation.[79] Simultaneously, the Court upheld the precautionary principle,[80] directing state governments to anticipate, prevent, and attack environmental degradation causes, and the

---

70 Jolly & Makuch, *supra* note 63, at 152; *see* L.K. Koolwal v. State of Rajasthan, (1988) AIR Raj. 2 (India); T. Damodhar Rao v. The Special Officer, (1987) AIR SC 171 (India).

71 Rural Litigation and Entitlement Kendra v. State of U.P., (1985) SCC 431 (India).

72 *Id.*

73 MC Mehta v. Union of India, (1988) 2 SCR 530 (India).

74 Vellore Citizens Welfare Forum v. Union of India, (1996) 5 SCC 647 (India).

75 *Id.*

76 *Id.* at 9.

77 *Id.* at 10.

78 Nupur Chowdhury, *Sustainable Development as Environmental Justice – Exploring Judicial Discourse in India*, 51 Econ. & Pol. Wkly. 84, 85 (2016); *see* Jolly & Makuch, *supra* note 63, at 154 ("It is almost accepted proposition of law that the rule of customary international law which are not contrary to the municipal law shall be deemed to have been incorporated in the domestic law and shall be followed by the courts of law."); *Vellore Citizens Welfare Forum*, 4 SCC 177, at 15.

79 Chowdhury, *supra* note 78, at 85.

80 Gitanjali Nain Gill, *The Precautionary principle. Its interpretation and application by the Indian judiciary: 'When I use a word it means just what I choose it to mean-neither more nor less' Humpty Dumpty*, 21 Env't L. Rev. 292, 295 (2019).

Polluter Pays Principle as essential sustainable development features and declared them law-of-the-land when interpreting various constitutional and statutory provisions.[81]

In another landmark case, *Narmada Bachao Andolan v. Union of India*, the Supreme Court had to decide on the Sardar Sarovar Project's, a multi-purpose project to provide power and supply water for drinking and irrigation purposes, suitability.[82] Emphasizing the "carrying capacity principle," the Supreme Court held that "[s]ustainable development means what type or extent of development can take place which can be sustained by nature/ecology with or without mitigation."[83] Based on this principle, the Court rejected any ecological-disaster threats arising out of a dam's construction while failing to provide detail to enforce resettlement accommodations for the affected population.[84] However, the court did not know that the project had undergone an incomplete environmental impact assessment.[85]

Courts have often approved public utility projects over environmental objections based on a utilitarian approach, valuing economic development benefits despite the harm occurring to a minority of the population.[86] In *Narmada Bachao Andolan*, the Court emphasized that PIL should not be used to interfere with the government's decisions.[87]

B. Proportionality Test

The *Godavarman* case signaled a shift in Indian environmental jurisprudence from using the carrying capacity principle to a proportionality test to examine sustainable development.[88] The proportionality test is based on finding harmony and balancing developmental priorities with environmental concerns.[89] *Godavarman* explored the doctrine of proportionality in the context of forest management.[90] The Court conceded that all developmental activities would involve some adverse effect on ecology and the environment, and it is necessary to adjust the interests of people and the necessity to main-

---

81 Vellore Citizens Welfare Forum v. Union of India, (1996) 5 SCC 647, 11–14 (India).

82 Narmada Bachao Andolan v. Union of India, (2000) 10 SCC 664 (India).

83 *Id.* at 123.

84 *Id.* at 124.

85 Chowdhury, *supra* note 78, at 86; *see also* Sanjay Sangvai, *No Full Stops for the Narmada: Life after the Verdic*t, 36 Econ. & Pol. Wkly. 4524, 4525 (2001).

86 *See, e.g.*, K.M. Chinnappa, T.N. Godavarman Thirumulpad v. Union of India, (2002) 10 SCC 606, 35 (India); *see also* Antarsingh Patel v. Union of India, (2012) SCC Online NGT 47, 58–62 (India); Chowdhury, *supra* note 78, at 86.

87 *Narmada Bachao Andolan*, 10 SCC 664, at 231, 234 ("If a considered policy decision has been made which is not in conflict with any law or is not mala fide, it will not be in public interest to require the court to go into and investigate those areas which are the function of the executive.").

88 *See Godavarman*, 10 SCC 606, at 35 ("It cannot be disputed that no development is possible without some adverse effect . . . The comparative hardships have to be balanced and the convenience and benefit to a larger section of the people has to get primacy over comparatively lesser hardship.").

89 *See, e.g.*, Jolly & Makuch, *supra* note 63, at 158; V. Venkatesan, *The Dilution of Principle*, Frontline (Nov. 16, 2007), https://frontline.thehindu.com/environment/article30193493.ece.

90 *See Godavarman*, 10 SCC 606, at 35.

tain the environment.[91] Each economic activity must be assessed and, if the benefit of the project outweighs its potential harm, it should go forward.[92]

The Court applied this proportionality test in the *Blue Lady* case and held that the ship-breaking industry employing citizens and generating revenue far outweighs the sustainability concerns.[93] The Court noted sustainable development application requires invoking proportionality to balance sustainability on one hand and concepts like revenue, employment, and development interests on the other.[94]

The balance between environmental and pro-economic considerations has tipped back and forth in Indian courts, but the Supreme Court maintains development and sustainability are not at odds.[95] Environmental laws should aim to complement the two because neither can be wholly sacrificed to save the other.[96] The Court reiterated this by pointing out that mere intention for development is not enough to sanction the destruction of local ecological resources.[97] The Court should find a balance between developmental needs and environmental degradation.[98]

C. *Vedanta* Case: Addressing the Social Pillar of Sustainable Development

The 2013 Supreme Court judgment in *Vedanta* brought a significant change in the existing sustainable development interpretations.[99] The case involved quashing a forest clearance authorization because a company's mining activities affected the region's Dongaria Kondh tribe's identity, culture, and other customary rights.[100] The Court ordered the clearance be enjoined until an affirmative decision taken by the tribal people through their region's body of electorates, the Gram Sabha.[101] In response, all twelve Gram Sabha unanimously rejected Vedanta's regional mining activities authorization.[102]

On previous occasions, the courts have emphasized either sustainable development's environmental or economic aspects without considering socio-cultural factors. *Vedanta*

---

91 *Id.*

92 *Id.*

93 Rsch. Found. for Sci. Tech. & Nat. Res. Pol'y v. Union of India, (2007) 657 SCC 1995,11(India).

94 *Id.*

95 *See, e.g.*, Dahanu Taluka Env't Prot. Grp. v. Bombay Suburban Elec. Supply Co. Ltd., (1991) 2 SCC 539 (India); State of Himachal Pradesh v. Ganesh Woods Prods., (1995) 3 SCC 363 (India); Indian Council for Enviro-Legal Action v. Union of India, (1996) 5 SCC 281 (India); M.C. Mehta v. Union of India, (1997) 2 SCC 653 (India).

96 Essar Oil v. Halar Utkarsh Samiti, (2004) 2 SCC 392 (India).

97 *See* Intellectual Forum, Tirupathi v. State of A.P., (2006) 3 SCC 549 (India).

98 *Id.* at 73.

99 Orissa Mining Corp. Ltd v. Ministry of Env't & Forest, (2013) 6 SCC 476 (India).

100 *Id.*

101 "Gram Sabha" is a constitutional body established at the village level in India representing the people of that village. Article 243(b) of the Indian Constitution defines it as "a body consisting of persons registered in the electoral rolls relating to a village comprised within the area of Panchayat at the village level." India Const. art. 243(a).

102 *12th Gram Sabha Unanimously Rejects Vedanta's Bauxite Mining in Niyamgiri*, The Indian Express, https://indianexpress.com/article/india/india-others/12th-gram-sabha-unanimously-rejects-vedantas-bauxite-mining-in-niyamgiri/ (last updated Apr. 8, 2014).

marks a shift by highlighting sustainable development's social dimension and not adhering to the proportionality principle.[103] This case encouraged the state to recognize and support indigenous group's identity, culture, and customary rights so that they can contribute equally to achieving sustainable development.[104] The Court considered environmental justice principles to involve Scheduled Tribes (STs) and Traditional Forest Dwellers (TFDs) in the decision-making process.[105] These minority groups are an integral part of the forest ecosystem, but are often neglected.[106]

Vedanta recognized STs' and TFDs', residing in the scheduled areas, rights to maintain their distinctive spiritual relationship with their traditionally-owned or otherwise occupied and used lands.[107] Another positive result was the strengthening of the Gram Sabha's role in safeguarding STs' and TFDs' customary and religious rights.[108] The Court entrusted the Gram Sabha with deciding community, individual, and religious claims, and directed the Environment Ministry to grant clearances in the light of the Gram Sabha's decisions.[109] This democratic decision-making power fulfills the public participation need and acts as a sustainable development prerequisite.[110]

An Indian judicial decision analysis revealed the pronounced variations and inconsistencies in sustainable development interpretations.[111] The decisions demonstrate that the judiciary requires sustainable development considerations but offers no general framework, requiring judges to determine the principle's application within each case's facts.[112] Judges have used the principle to take both pro-developmental and pro-environmental stances.[113] As a result, sustainable development's interpretation has remained open-ended, vague, and lacking direction.[114] Part IV will problematize sustainable development's operationalization in India.

---

103 Jolly & Makuch, *supra* note 63, at 163.

104 Orissa Mining Corp. Ltd. v. Ministry of Env't & Forest, (2013) 6 SCC 476 (India).

105 *Id.*

106 *Id.* at 39. The court noted the limitations of STs and TFDs from exercising their rights as, "Many of the STs and other TFDs are totally unaware of their rights. They also experience lot of difficulties in obtaining effective access to justice because of their distinct culture and limited contact with mainstream society. Many a times, they do not have the financial resources to engage in any legal actions against development projects undertaken in their abode or the forest in which they stay." *See id.* at 47.

107 *Id.* at 38.

108 *Id.* at 40.

109 *Id.* at 59.

110 Stellina Jolly, *The Vedanta (Niyamgiri) Case: Promoting Environmental Justice and Sustainable Development*, *in* THE CAMBRIDGE HANDBOOK OF ENVIRONMENTAL JUSTICE AND SUSTAINABLE DEVELOPMENT 289–302 (Carmen Gonzalez, Sumudu Atapattu, & Sara L. Sec eds., 2021).

111 Jasrotia, *supra* note 60; P. Leelakrishnan, *Law and Sustainable Development in India*, 9 J. OF ENERGY & NAT. RES. L. 193 (1991); Sanjeev Kumar Tiwari, *Sustainable Development and Protection of Environment in India: Judicial Perspective*, 42 INDIAN J. OF L. & JUST. 91 (2013).

112 Jolly & Makuch, *supra* note 63, at 166.

113 Arindam Basu & Uday Shankar, *Balancing of Competing Rights Through Sustainable Development: Role of Indian Judiciary*, 6 JINDAL GLOB. L. REV. 61, 61–72 (2015).

114 SAPTARISHI BANDOPADHYAY ET AL., INDIAN ENVIRONMENTAL LAW: KEY CONCEPTS AND PRINCIPLES 149 (Shibani Ghosh ed., 2019); Union Territory of Lakshadweep v. Seashells

IV. Operationalizing Sustainable Development in India: Indeterminacy and Neglect of Environmental Justice

A. Indeterminacy in Sustainable Development

Each phase of sustainable development jurisprudence has endured pervasive uncertainty as no rationale is provided to understand how and why each phase preferred environmental protection or development. In the initial phase, the courts adopted a balancing approach to harmonize environmental protection and economic development in assessing sustainable development.[115] The next phase was dominated by the doctrine of proportionality, which preferred economic development at the cost of ecological destruction.[116] Only the *Vedanta* judgment highlighted sustainable development's social components and attempted to bring equity to the forefront of sustainability.[117]

In *Narmada Bachao Andolan*, the Court assumed a pro-development stance and observed that "[m]erely because there will be a change is no reason to presume that there will be an ecological disaster. It is when the effect of the project is known [that] the principle of sustainable development would come into play[,] which will ensure that mitigative steps are and can be taken to preserve the ecological balance."[118] However, in *Prafulla Samantray v. Union of India*,[119] the court's position skewed in favor of environmental protection.

Despite the sustainable development's social components' inclusion in the Johannesburg Declaration, to which India is a signatory, judicial consideration of social equity in sustainable development was negligible. In *Narmada Bachao Andolan*, the Court did not pay attention to local tribal displacement and welfare concerns.[120]

> The displacement of the tribals and other persons would not per se result in the violation of their fundamental or other rights. The effect is to see that on their rehabilitation at new locations they are better off than what they were . . . The gradual assimilation in the mainstream of the society will lead to betterment and progress.[121]

This approach relies on the controversial suggestion that government displacement is a benefit for tribal people. This understanding prevailed despite numerous studies highlighting the traumatic experience of displacement.[122] In this case, the idea of envi-

---

Beach Resort, (2012) SCC 2309 (India); Bombay Dyeing & Mfg. Co. Ltd. v. Bombay Env't Action Grp., (2006) SCC 1489 (India); *In re* Amarnath Shrine, (2013) 3 SCC 247 (India); Samaj Parivartana Samudaya v. State of Karnataka, (2013) 8 SCC 211 (India).

115 Jolly & Makuch, *supra* note 63, at 167.

116 *Id*.

117 *Id*.

118 Narmada Bachao Andolan v. Union of India, (2000) 10 SCC 664; *see also* Balakrishnan Rajagopal, *The Role of Law in Counter-hegemonic Globalization and Global Legal Pluralism: Lessons from the Narmada Valley Struggle in India*, 18 Leiden J. Int'l L.345 (2005).

119 Prafulla Samantray v. Union of India, Appeal No. 8/2011 (Nat'l Green Tribunal) (India).

120 *Narmada Bachao Andolan*,10 SCC 664; *see also* Philippe Cullet, *Human Rights and Displacement: The Indian Supreme Court Decision on Sardar Sarovar in International Perspective*, 50 The Int'l & Compar. L.Q. 973, 977 (2001).

121 *Narmada Bachao Andolan*, 10 SCC 664, at 62.

122 Cullet, *supra* note 120, at 984.

ronmental sustainability and maximizing yield triumphed over concern for the local population.

B. Absence of Integration with Environmental Justice

Sustainable development implementation has largely ignored environmental justice, and their linkage is a contested one.[123] Proponents claim a close symbiotic relationship exists between them.[124] Both concepts intend to address environmental degradation and its impact on human well-being.[125] The Copenhagen Declaration articulates that "[e]quitable social development that recognizes empowering the poor to utilize environmental resources sustainably is a necessary foundation for sustainable development."[126] The Declaration also recognizes that "broad-based and sustained economic growth in the context of sustainable development is necessary to sustain social development and social justice."[127]

Simultaneously, there has been disjunction on sustainability and environmental justice discourse. The environmental justice concept underscores that the decision-making processes and systems do not proportionately distribute environmental consequences.[128] Environmental justice originated by recognizing marginalized communities' distributive justice questions in environmental decision making.[129] However, the movement has expanded to include procedural, corrective, and social justice concerns as crucial environmental justice components.[130] Building on the global environmental justice movement, the Indian environmental justice movement adopted multi-pluralistic forms and lan-

---

123 Andrew Dobson, Justice and the Environment: Conceptions of Environmental Sustainability and Theories of Distributive Justice 26 (Oxford Univ. Press 1998); Donald T. Hornstein, *Environmental Sustainability and Environmental Justice at the International Level: Traces of Tension and Traces of Synergy*, 9 Duke Env't L. & Pol'y F. 291, 292 (1999); J. B. Ruhl, *The Co-Evolution of Sustainable Development and Environmental Justice: Cooperation, Then Competition, Then Conflict*, 9 Duke Env't L. & Pol'y. F. 161, 182–84 (1999); Emily Fisher, *Sustainable Development and Environmental Justice: Same Planet, Different Worlds?*, 26 Environs Env't L. & Pol'y J. 201, 201 (2003).

124 *Id.*

125 Brie Sherwin, *After the Storm: The Importance of Acknowledging Environmental Justice in Sustainable Development and Disaster Preparedness*, 29 Duke Env't L. & Pol'y F. 273, 277 (2019); Joshua C. Gellers & Trevor J. Cheatham, *Sustainable Development Goals and Environmental Justice: Realization through Disaggregation?*, 36 Wis. Int'l L.J. 276, 283 (2019).

126 U.N. World Summit for Social Development, *Copenhagen Declaration on Social Development*, ¶ 6, U.N. Doc. A/CONF.166/9 (Mar. 14, 1995).

127 *Id.*

128 Jedediah Purdy, *The Long Environmental Justice Movement*, 44 Ecology L.Q. 809, 825 (2018); Ole W. Pedersen, *Environmental Principles and Environmental Justice*, 12 Env't L. Rev. 26, 27 (2010); Carmen Gonzalez, *Environmental Justice and International Environmental Law*, *in* Routledge Handbook of Int'l Env't L. 77 (Shawkat Alam et al. eds.,2013).

129 Robin L. Turner & Diana Pei Wu, *Environmental Justice and Environmental Racism: An Annotated Bibliography and General Overview, Focusing on U.S. Literature, 1996-2002*, 2002 Berkeley Workshop on Env't Politics, Inst. of Int'l Studies 53; Robert D. Bullard, Dumping in Dixie: Race, Class, and Environmental Quality 16 (2000).

130 Carmen G. Gonzalez, *Environmental Justice, Human Rights, and the Global South*,13 Santa Clara J. Int'l L. 151, 155 (2015); *see also* Sheila Foster, *Environmental Justice in an Era of Devolved Collaboration*, 26 Harv. Env't L. Rev. 459 (2002).

guage.[131] The broad concept of social justice has been ingrained into development, leading some to analyze environmental issues as a colonial legacy continuation and view these injustices as stemming from the dominance of neoliberal economic models.[132] Environmental justice activism was advanced by the grass-root civil-society movement, academic literature, and environmental litigation strategies emphasizing civil rights.[133] However, in India, there are few cases that have discussed the environmental justice concept and framework.

A feature of the Indian environmental justice movement has been a focus on the right to life. Environmental justice litigation has concentrated on the right to life paradigm rather than engaging with sustainable development's social components.[134] This approach recognized that sustainable development relies on balancing development and environmental protection while the right to life responds to quality-of-life issues. It is the right to life's malleability that made it easier to support any claim while the "balancing" argument required a decision to favor either environmental protection or development.[135] Additionally, even when litigating for civil rights, advocates have focused on the right to life and not on the right to equality under the Constitution.[136] This neglect is significant for the environmental justice movement because it highlights the disproportionate impact of environmental degradation, developmental projects, and arbitrary decisions on marginalized communities. The non-incorporation of the equality jurisprudence in the environmental justice debate has prevented the judiciary from invoking a robust tool that could have highlighted the social justice components of equality, discrimination, and avoiding arbitrary actions. Further, relying on sustainable development would have required a cost-benefit analysis, which may tend to affect environmental justice communities detrimentally.[137] Overall, the environmental justice movement did not pay enough attention to the linkage of sustainability.

The Plachimada groundwater struggle is illustrative of a community's effort to defend the inalienable right to clean, accessible groundwater. The Plachimada groundwater struggle highlighted the critical social justice paradigm of including a marginal commu-

---

131 *See, e.g.*, S.C. SHASTRI, ENVIRONMENTAL LAW (2002).

132 *See, e.g.*, RAMACHANDRA GUHA, ENVIRONMENTALISM: A GLOBAL HISTORY (Oxford Univ. Press 1998).

133 Peggy Rodgers Kalas, *Environmental Justice in India*, 1 ASIA PAC. J. ON HUM. RTS. & L. 97 (2000); *see generally* NANDINI SUNDER, THE BURNING FOREST: INDIA'S WAR IN BASTAR (Verso Books 2019); Amita Baviskar, IN THE BELLY OF THE RIVER: TRIBAL CONFLICTS OVER DEVELOPMENT IN THE NARMADA VALLEY (Oxford Univ. Press 2004).

134 Deepa Badrinarayana, *The "Right" Right to Environmental Protection: What We Can Discern from the American and Indian Constitutional Experience*, 43 BROOK J. INT'L. L. 5 (2017); Eileen Gauna, *Environmental Law, Civil Rights and Sustainability: Three Frameworks for Environmental Justice*, 19 J. ENV'T & SUSTAINABILITY L. 34 (2012); Lavanya Rajamani, *The Right to Environmental Protection in India: Many a Slip between the Cup and the Lip*, 16 REV. EUR. COMP. & INT'L ENV'T L. 274 (2007).

135 *Id.*

136 N.D. Jayal v. Union of India, (2004) 9 SCC 362, 25 (India) ("The concept of 'sustainable development' is to be treated an integral part of 'life' under Article 21 [of The Constitution of India].").

137 Willis, *supra* note 59.

nity in its resource management.[138] However, when the issue was brought before the judiciary in *Perumatty Grama Panchayat v. State of Kerala*, the sustainable development and its linkage with social sustainability issue went unaddressed; instead, the focus was on the right to groundwater access.[139]

In *ND Jayal and Anr v. Union of India and Ors*, sustainable development was linked to and held to be an integral part of the right to life.[140] Sustainable development was held to be *sine qua non* for the maintenance of the symbiotic balance between the rights to environment and development.[141]

It should be noted that, even in cases where a social or community component of sustainable development was emphasized, a discussion on the core linkage between environmental justice and sustainable development was not undertaken. In *S Jagannath*, the Court observed, "We are of the view that before any shrimp industry or shrimp pond is permitted to be installed in the ecology fragile coastal area[,] it must pass through a strict environmental test . . . [T]he assessment must also include the social impact on different population strata in the area."[142] In *New Kattalai Canal Anr v. Union of India*, a case involving alignment for a bypass project to improve the infrastructure for agricultural, industrial, educational, health, and socio-economic advancement, the Court held that "mere economic criteria or commercial venture by itself cannot be termed as sustainable development. A development will have to satisfy the whole spectrum of civil, cultural, economic, political and social process for the overall improvement of the general public."[143] However, there was no reference to social justice components while interpreting and operationalizing sustainable development. As a result, the judicial statements were transfixed between environmental protection and economic development.

The disconnect between environmental justice and sustainable development also revolves around the fact that environmental justice was founded upon local imperatives based on class, caste, and social location; however, sustainability discourse does not focus on local paradigms.[144] Thus, each value's objective was considered different, and there was a general reluctance to engage in broader sustainable development discourse. For

---

138 Stellina Jolly, *Evaluating Community Resilience in Promoting Ecological and Social Justice in Groundwater Governance: Lessons from India*, *in* THE TRANSFORMATION OF ENVIRONMENTAL LAW AND GOVERNANCE: INNOVATION, RISK AND RESILIENCE (Tianbao Quin, Francesco Sindico, & Stephanie Switzer eds., 2021) (forthcoming).

139 Perumatty Grama Panchayat v. State of Kerala, (2003) 1 KLT 731, 1 (Kerala High Court); *see also* C.R. Bijoy, *Kerala's Plachimada Struggle: A Narrative on Water and Governance Rights*, 41 ECON. & POL. WKLY. 4332, 4332 (2006) ("The struggle in Plachimada, Kerala, against Coca-Cola not only raises issues of mindless destruction of groundwater by a multinational company, but also exposes the gross inadequacies in the laws of governance and the rights to water.").

140 *N.D. Jayal*, 9 SCC 362, at 2 ("The concept of 'sustainable development' is to be treated an integral part of 'life' under Article 21 [of The Constitution of India].").

141 *Id.* at 25. ("The adherence of sustainable development principle is a sine qua non for the maintenance of the symbiotic balance between the rights to environment and development.").

142 S. Jagannath v. Union of India, (1997) 2 SCC 87, 50 (India).

143 New Kattalai Canal v. Union of India, (2011) SCC 1673, 8 (Madras High Court).

144 R. Gregory Roberts, *Environmental Justice and Community Empowerment: Learning from the Civil Rights Movement*, 48 AM. U. L. REV. 229 (1998).

instance, India's National Action Plan on Climate Change (NAPCC) is littered with sustainability indicators, but social justice or equity is found less frequently across the plan.[145]

The result has been that India's sustainable development's operationalization has been beset with indeterminacy and has ignored the linkage between equity and environmental justice.[146] This is not unique to India. Many jurisdictions have been struggling to find the balance in operationalizing sustainable development.[147] Scholars have attempted to recalibrate the sustainable development concept through emphasizing environmental integrity and resilience but could not find an adequate alternative.[148] However, the Anthropocene's and climate change's unfolding—both characterized by uncertainty—present new and complex development challenges.[149] With rapid changes happening to natural, human, and social life, it becomes difficult to pinpoint what needs to be sustained while maintaining economic growth and the biosphere's health.[150] Sustainable development, with its emphasis on economic, social, and ecological stability, requires reformulation and recalibration. In this context, the recent Indian Supreme Court decisions become important in adequately incorporating the equity and justice components to sustainable development and rendering a well-defined direction.

V. Advancing the Just Sustainability by the Judiciary

The *Meghalaya Coal Mining* judgment provided a new direction to sustainable development implementation.[151] The Court heard appeals challenging various NGT orders wherein several directions were issued to check and combat the state's tribal areas' unregulated coal mining, which had resulted not only in the loss of lives but also environmental damage.[152]

The decision reiterated the NGT's jurisdiction over environmental harm. The Court held that the NGT's procedural and practice rules empower the tribunal to make such orders or give such directions as necessary or expedient to give effect to its orders or to

145 Stellina Jolly & Amit Jain, Climate Change: Changing Dimensions of Law and of Law and Policy (2009).

146 *Id.*

147 Sharon Beder, *Costing the Earth: Equity, Sustainable Development and Environmental Economics*, 4 N.Z. J. Env't L., 227, 227–43 (2000).

148 Timothy M Mulvaney, *Pining for Sustainability*, 44 U. Rich. L. Rev. 1115 (2010); Keith H Hirokawa, *Saving Sustainability*, 46 Env't L. Rep. News & Analysis 10151 (2016); Charles Perrings, *Resilience and Sustainable Development: Environment and Development Economics*, 11 Env't & Dev. Econ. 417, 427 (2006).

149 George Holmes, Jacob Barber, & Johannes Lundershausen, *Anthropocene: Be Wary of Social Impact*, 541 Nature 464 (2017); Noel Castree, *The Anthropocene and the Environmental Humanities: Extending the Conversation*, 5 Env't Human 233 (2014).

150 Björn Johnson & Gert Villumsen, Sustainable Development in the Anthropocene (Draft) 3 (2017), https://www.ike.aau.dk/digitalAssets/344/344927_sust-dev-in-the-anthropocene.pdf.

151 *All Dimasa Students Union*, 8 SCC 177.

152 *Id.*

secure the ends of justice.[153] The Court upheld the statutory legal process as the only means of exploiting natural resources given the threat of unsustainable and polluting practices in its absence.[154] This compulsory process provides the executive a handle to mitigate the adverse impacts on the local environment. Further, it provides a single path for coal throughout the country to enter the market without any barriers, increasing natural resource availability for market consumption.

However, this part of the judgment appears problematic following the clear mining economics and mode of resource extraction observations in *Nandini Sunder v. State of Chhattisgarh*.[155] The Court observed that the private sector's rapid and large-scale resource exploitation, without credible commitments to equitable distribution of benefits, costs, and environmental sustainability, has created a mining mafia and violated the promise of equality before law and the dignity of life assured by the Constitution.[156] The Court also articulated that the state's primary task is to provide security to all its citizens without violating human dignity.[157] This would require the "undertaking of tasks that would prevent the emergence of great dissatisfaction, and disaffection, on account of the manner and mode of extraction, and distribution, of natural resources and organization of social action, its benefits and costs."[158]

The Supreme Court in the *Meghalaya Coal Mining* case made it a point to delineate the "manner" of extraction and distribution of natural resources but said nothing about the "mode."[159] This "mode" of extraction and distribution is a real problem in resource management and needs to be evaluated for sustainable development attainment with social justice at its core.[160] Hopefully, the courts' formulation of just sustainability can provide an impetus to the problem of "mode" of natural resource extraction and distribution.

However, the judgment's significant part is that the Court went on to make germane observations regarding the principles governing the country's natural resource management.[161] The Court highlighted that environmental protection is an ongoing process and should not be prescribed in a straight-jacket formula.[162] After highlighting the significance of balancing environmental protection and development and recognizing the absence of a concrete approach regarding sustainable development, the Court made some pertinent observations significant for the discussion here.[163] First, "[n]atural resources of the country are not meant to be consumed only by the present generation of men or women of the region where natural resources are deposited."[164] Second, these

153 *Id.* at 160.
154 *Id.*
155 Nandini Sundar v. State of Chattisgarh, (2011) 7 SCC 547 (India).
156 *Id.* at 12.
157 *Id.* at 5.
158 *Id.* at 17.
159 *All Dimasa Students Union*, 8 SCC 177.
160 *Id.*
161 *Id.*
162 *Id.* at 149 (citing Lafarge Umiam Mining (P.) Ltd. v. Union of India, (2011) 7 SCC 338, 75 (India)).
163 *Id.* at 146.
164 *Id.* at 1.

"treasures of nature are for all generations to come and for [the] intelligent use of the entire country."[165] Third, the "present generation owes a duty to preserve and conserve the natural resources of the nation so that it may be used in the best interest of coming generations as well and for the country as a whole."[166]

A bare reading of the judgment gives the impression that the Court merely reiterated the sustainable development doctrine referring to intra- and inter-generational equity. However, a more in-depth look points to the Court's nuanced analysis that brought a new approach and direction in the way environmental protection is assessed. Professor Baxi opines that the judgment heralded a new paradigm in environmental jurisprudence.[167] He supports his articulation by pointing to the absence of an elaborate sustainable development discussion in the entire judicial discourse.[168] He points out that the judgment exposes three aspects.[169] First, that natural resources are not only meant for the present generations' consumption but also have to be preserved for future generations.[170] This espousal broadly aligns and reiterates the principle of sustainable development. However, the judgment goes beyond intra- and inter-generational equity and vividly espouses the distributional equity or justice aspects by emphasizing that, in the context of a nation, the resources cannot be claimed only by the present and future generations of the local population.[171] The judgment states that natural resources must be made available to the entire population, thus bringing environmental spatial justice to the fore.[172]

Spatial justice emphasizes that, within the nation, there are deviations in the way resources are distributed.[173] While articulating spatial justice, the authors acknowledge that resource differences are natural creations and hence do not argue for the equal resource presence everywhere.[174] Spatial justice is part of environmental justice and requires that a resource-rich state cannot claim that they have exclusive entitlement to resources, but instead should distribute resources among the resource-strapped localities.[175] Similar to how social justice requires resources to be equitably distributed across class, caste, and gender, spatial justice requires that the resource be allocated and distributed geographically, taking into account the other fault lines of class, case, and gender.[176] Though the judgment articulated only the equitable resource distribution in spatial justice, this Article acknowledges the broader application of the spatial justice

---

165 *Id.*
166 *Id.*
167 Baxi, *supra* note 16.
168 *Id.*
169 *Id.*
170 *Id.*
171 *Id.*
172 *Id.*
173 *See* ASGHAR ALI, A CONCEPTUAL FRAMEWORK FOR ENVIRONMENTAL JUSTICE BASED ON SHARED BUT DIFFERENTIATED RESPONSIBILITIES (2001), https://www.econstor.eu/bitstream/10419/80259/1/358262577.pdf.
174 *Id.*
175 *See id.*
176 Julian Agyeman, *Equity? "That's not an issue for us, we're here to save the world"*, JULIAN AGYEMAN (Aug. 24, 2011), https://julianagyeman.com/2011/08/24/equity-thats-not-an-issue-for-us-were-here-to-save-the-world/.

concept, especially in the context of indigenous people.[177] Spatial justice is embodied by indigenous peoples' special relationship with nature as a living entity and their fight to defend land, places, resources, and autonomy.[178] The idea of spatial justice as part of environmental justice may provide an opportunity for nature's and indigenous communities' protection by promoting environmental justice and giving a new direction to sustainable development.[179]

In the context of states sharing water, the reliance on equitable utilization of shared water resources must be seen through the lenses of justice.[180] As seen in several cases, interstate water sharing is a politically sensitive issue.[181] Water sharing based on sustainability is not always equitable. That is why water resource sharing follows equity principles at the international level and not sustainability alone. One hopes that this true meaning of utilization and resource sharing eventually trickles down to the national level for resource management.

Professor Baxi considers emphasis on spatial distribution as extending beyond sustainable development by implying the "just sustainability" concept.[182] The idea is to highlight that not all sustainability forms will qualify as "just."[183] The judgment articulates that the "intelligent use of resources" for present and future generations is intended to benefit the whole country.[184] What is "intelligent" has not been defined. Professor Baxi opines that this qualification indicates the requirement for intelligent uses, and all sustainable uses may not qualify.[185] For instance, the privatization of water may be a sustainable use of resources, but it may not be regarded as intelligent utilization for the whole country.[186] However, it is also important to keep in mind that more clarity needs to be provided regarding the term "intelligent" for it to be considered superior to sustainable development. Before *Meghalaya Coal Mining*, the Court in *Monnet Ispat & Energy Ltd. v. Union of India* also emphasized that mineral conservation, preservation, and intelligent utilization are very important in the interest of mankind and succeeding generations.[187] By employing the term "intelligent," the policy makers or courts should not be submitting to a technocratic, top down, and utilitarian method of analyzing the various ecological problems. The task is to find the specific points at which the goals and meth-

---

177 *All Dimasa Students Union*, 8 SCC 177; ASGHAR, *supra* note 173.

178 *See* JANET MCGAW & ANOMA PIERIS, ASSEMBLING THE CENTRE: ARCHITECTURE FOR INDIGENOUS CULTURES: AUSTRALIA AND BEYOND (2016).

179 *See* June L. Lorenzo, *Spatial Justice and Indigenous Peoples' Protection of Sacred Places: Adding Indigenous Dimensions to the Conversation*, 11 SPATIAL JUST. 13 (2017).

180 Philippe Sands, *Water and International Law: Science and Evidence in International Litigation*, 22 ENV'T L. & MGMT. 151 (2010); *see* STEPHEN MCCAFFREY, THE INTERNATIONAL LAW OF WATERCOURSES (2019).

181 *See* A. Dan Tarlock, *Four Challenges for International Water Law*, 23 TUL. ENVTL. L.J. 369 (2010); *see also* Tamar Meshel, *Swimming Against the Current: Revisiting the Principles of International Water Law in the Resolution of Fresh Water Disputes*, 61 HARV. INT'L L.J. 136 (2020).

182 Baxi, *supra* note 168.

183 *Id.*

184 *Id.*

185 *Id.*

186 *Id.*

187 Monnet Ispat v. Union of India, (2012) 11 SCC 1 (India).

ods of sustainable and intelligent resource use become "just." The next part evaluates the concept of "just sustainability" and assesses how it is an improvement on the concept of sustainable development for environmental protection.

VI. Just Sustainability: Integration of Environmental Justice and Sustainable Development

The previous parts have illustrated the challenges associated with sustainable development's operationalization. It has also been argued that some sustainable policies may not be justified based on equity. A non-critical embrace of the sustainable development concept ignores essential questions. In addition, experts have contended that the environmental crisis is one of values, politics, and power. Environmental protection needs more than the principle of sustainability to address the challenges faced by humanity. Equity is the cornerstone of any response to the environmental crisis.[188] As a response to the need to foreground the issues of equity in environmental protection,[189] the concept of just sustainability began to take shape. The idea of just sustainability originated in the writings of Julian Agyeman during the increasing scientization of environmental sustainability, its theory, rhetoric, and practice, which was pervading the world.[190]

A. Just Sustainability: A Reinvigoration of Sustainable Development

Just sustainability emphasizes that sustainability needs to be recalibrated where broader questions of social needs and welfare are integrally related to environmental limits.[191] Thus, the idea travels beyond the Brundtland Report's narrow definition to ensure a better quality of life for all, now and into the future, in a just and equitable manner, while within the limits of supporting ecosystems.[192] Just sustainability supporters argue that the idea is not intended to have a single template, acknowledging the

188 Michelle M.L. Lim, Peter Sogaard Jorgensen,& Carina A. Wyborn, *Reframing the Sustainable Development Goals to Achieve Sustainable Development in the Anthropocene – A Systems Approach*, 23 Ecology & Soc'y 3 (2018); J.K. Summers & L.M. Smith, *The Role of Social and Intergenerational Equity in Making Changes in Human Well-Being Sustainable*, 43 Ambio 718 (2014); Laurie Kaye Nijaki, *Justifying and Juxtaposing Environmental Justice and Sustainability: Towards an Inter-Generational and Intra-Generational Analysis of Environmental Equity in Public Administration*, 39 Pub. Admin. Q. 85 (2015).

189 W. Neil Adger, *Inequality, Environment and Planning*, 34 Env't & Planning 1716 (2002); Duncan McLaren, *Environmental Space, Equity and the Ecological Debt*, *in* Just Sustainabilities: Development in an Unequal World19 (Julian Agyeman, Robert Doyle Bullard, & Bob Evans eds., 2003); Ton Buhrs, *Sharing Environmental Space: The Role of Law, Economics and Politics*, 47 J. Env't Plan. & Mgmt. 429 (2004).

190 *See* Agyeman, *supra* note 176; *see also* Julian Agyeman, *Toward a 'Just' Sustainability?*, 22 Continuum: J. Media & Cultural Stud. 751, 753 (2008) [hereinafter *Toward a 'Just' Sustainability?*].

191 Julian Agyeman, Robert D. Bullard, & Bob Evans, *Exploring the Nexus: Bringing Together Sustainability, Environmental Justice and Equity*, 6 Space & Polity 70, 78 (2002).

192 McLaren, *supra* note 189, at 5.

concept's plurality.[193] However, questions remain as to how this concept is a modification of sustainable development, how it will be operationalized, and what are just sustainability's contours.

The just sustainability concept involves equity's and environmental justice's inclusion into sustainability's definition. Just sustainability provides a framework for rethinking and reinvigorating the current environmental paradigm based on sustainable development.[194]It emphasizes that any sustainable development model failing to incorporate equity is itself unsustainable.[195] For instance, an analysis of international-level groundwater laws reveals that specific marginal communities' (including women, the youth, and indigenous peoples) interest are elaborated in human rights law.[196] However, they are not included in any legally binding groundwater governance text.[197] There are only occasional references made considering social dynamics in groundwater governance texts.[198] This systemic disparity places marginalized communities in a vulnerable position throughout all groundwater governance stages. This position may be environmentally sustainable but cannot be justified on an equity basis. Thus, a shift to just sustainability helps us understand the environmental, economic, and social dynamics influencing sustainability.[199] Similarly, groundwater law privatization may be sustainable but cannot be considered just without having provisions for affordable and accessible groundwater for marginalized communities.[200] An analysis of agriculture laws cannot merely focus on the sustainability of land use patterns, but must also address access to land use and ownership. This shift to just sustainability includes the equity aspect, which was generally obliterated in sustainable development dynamics, and provides sustainability with a well-defined direction and purpose.[201]

Global discourse concerning climate change is relevant here. The international community has addressed climate change not only from the sustainable development perspective but has also explicitly carved out a prominent place for equity based on the

193 *Id*. at 6.

194 *Toward a 'Just' Sustainability*, *supra* note 190.

195 *Id*. at 755.

196 Jenny Grönwall & Kerstin Danert, *Regarding Groundwater and Drinking Water Access through A Human Rights Lens: Self-Supply as A Norm*,12 WATER 419, 12 (2020).

197 *Id*. at 7.

198 U.N. International Conference on Water and the Environment, *The Dublin Statement and Report of the Conference*, U.N. Doc A/CONF.151/PC/112 (Jan. 31, 1992); Seventy-First Conference of the International Law Ass'n, *Report of the Seventy-First Conference Held in Berlin 16-24 August 2004*, att. IV, XVII, XX, 71 I.L.A. 337 (Aug. 17, 2004); Convention on the Protection and Use of Transboundary Watercourses and International Lakes, arts. IV, V, VI, & XVI, Mar. 17, 1992, 1936 U.N.T.S. 269; Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, art. V ¶ i, June 17, 1999, 2331 U.N.T.S. 202.

199 *See generally* JULIAN AGYEMAN, SUSTAINABLE COMMUNITIES AND THE CHALLENGE OF ENVIRONMENTAL JUSTICE (2005).

200 *See* Grönwall & Danert, *supra* note 196, at 429–31.

201 Julian Agyeman & Bob Evans, *'Just Sustainability': The Emerging Discourse of Environmental Justice in Britain?*, 170 THE GEOGRAPHICAL J. 155 (2004).

common but differentiated responsibilities principle.[202] Focusing on distributive and retributive justice assures that climate actions' burdens and benefits will be fairly allocated among those who are causing a problem and those who experience climate change consequences.[203] The national and international community needs to respond and integrate equity within the sustainable development paradigm to reduce global sustainability problems that are putting people at risk worldwide.

B. Conceptualizing Just Sustainability: Its Contours

Just sustainability's (as a process or an outcome) contours are not mentioned in the *Meghalaya Coal Mining* jurisprudence.[204] However, just sustainability's role in environmental protection is sufficiently fleshed out in the writings and templates provided Agyeman and others.[205] Agyeman summarized just sustainability as "the need to ensure a better quality of life for all, now and into the future, in a just and equitable manner, while living within the limits of supporting ecosystems."[206] Just sustainability is the integration of environmental justice into sustainable development theory and practice.[207] This proposition points to the deeply interconnected aspects of justice and development for the attainment of just sustainability. The objectives and contours of just sustainability are: ensuring quality of life and well-being, meeting the needs of both present and future generations, enabling justice and equity in recognition, processes, procedures, and outcomes, of environmental decision making, and living within ecosystem limits.

1. *Ensuring the Quality of Life and Well-Being*

Just sustainability focuses on improving the quality of life and well-being for all present and future generations in a just and equitable manner. This will require policy measures concentrating on ensuring availability and access to basic economic well-being.[208] The foremost fundamental right is the right to a healthy environment. Without such an environment, a healthy life, and even life itself, may not be possible. To supplement and complement the right to the environment, ensuring other rights, including the right to clean air, water, and related resources, is equally necessary. Most nations have adopted

---

202 *See* UNFCCC, *supra* note 31, at 1–3, 5–11; *see also* Kyoto Protocol to the United Nations Framework Convention on Climate Change, art. II & III, Dec. 11, 1997, 2303 U.N.T.S. 162 (entered into force Feb. 16, 2005).

203 *See* Jorge E. Viñuales, *Balancing Effectiveness and Fairness in the Redesign of the Climate Change Regime*, 24 Leiden J. Int'l L. 223, 245 (2011); *see also* Rowena Maguire, *The Role of Common but Differentiated Responsibility in the 2020 Climate Regime: Evolving a New Understanding of Differential Commitments*, 7 Carbon & Climate L. Rev. 260, 265–66 (2013); *see also* Lavanya Rajamani, *The Devilish Details: Key Legal Issues in the 2015 Climate Negotiations*, 78 Mod. L. Rev. 826 (2015).

204 *All Dimasa Students Union*, 8 SCC 177.

205 Agyeman, Bullard, & Evans, *supra* note 191, at 5.

206 *Id*.

207 *Id*.

208 Julian Agyeman & Tom Evans, *Toward Just Sustainability in Urban Communities: Building Equity Rights with Sustainable Solutions*, 590 Annals. Am. Acad. Pol. & Soc. Science 35 (2003).

some of these rights as part of their constitutional or judicial mandate.[209] However, ensuring rights in an unequal world will not help, as environmental quality is inextricably linked to human equality.[210] Thus, besides granting the formal right to equality, it is necessary that efforts are undertaken to ensure that equality includes access to resources to ensure a quality of life. The fundamental premise is that inequality alienates people from their living spaces and negatively affects their concern for environmental issues.[211] Therefore, ensuring quality of life in an equitable manner is needed. In the context of judicial decisions focusing on environmental degradation, it has been noted that courts often emphasize the need to protect the right to life and even expand its scope to include access to water, livelihood, food, health, and sanitation.[212] However, most of these judgments lack a nuanced discussion of the distributional burdens and structural and institutional inequality in gender, indigenous populations, and lower-income categories.[213] It is imperative that adequate judicial attention is paid to the operationalization of equality and inequality in society. Regarding resource extraction, adequate attention needs to be paid to ensure equitable mode of extraction and distribution of resources.

2. Distributive Justice Within the Limits of Ecosystems

Just sustainability refers to resources' use that meets the needs of present and future generations within ecological limits.[214] This aspect is borrowed from the sustainable development principle.[215] However, just sustainability gives sustainable development direction by insisting that development within the earth's carrying capacity needs to be achieved, taking into account the interests of both the present and future generations in a just and equitable manner.[216] This understanding gives rise to the question of a distributive component of the resources. The distributive component of the resources emphasizes the availability and accessibility of resources for the collective community.[217] Therefore, improving just sustainability requires legal frameworks to focus on mutually reinforcing sustainability mechanisms and environmental justice paradigms premised on equitable distribution and opportunities provided to people to utilize the resources and participate in intelligible resource management.[218]

---

209 Melissa Thorme, *Establishing Environment as a Human Right*, 19 Denv. J. Int'l L. & Pol'y 301, 310 (2020).

210 S. Nazrul Islam, Inequality and Environmental Sustainability 3 (2015), https://www.un.org/esa/desa/papers/2015/wp145_2015.pdf.

211 *Id*.

212 Sumudu Atapattu, *The Right to a Healthy Life or the Right to Die Polluted?: The Emergence of a Human Right to a Healthy Environment Under International Law*, 16 Tul. Env't L. J. 65, 99–100 (2002).

213 Stellina Jolly & K. S. Roshan Menon, *Climate Change, Disaster and Gender Resilience: A Legal Analysis from India*, 61 J. Indian L. Inst. 420 (2019).

214 Agyeman &Evans, *supra* note 201, at 157.

215 United Nations Development Programme, *Sustainable Development Goals*, U.N. Dev. Prog., https://www.undp.org/content/undp/en/home/sustainable-development-goals.html (last visited Apr. 30, 2021).

216 Agyeman, *supra* note 176, at 755.

217 *Id*. at 752.

218 *Id*. at 755.

All countries' disadvantaged and vulnerable groups bear a disproportionate share of environmental burdens, benefits, and opportunities, but have no influence on the policies that determine their lives.[219] As noted in *Nandini Sunder*, the existing development paradigm has always imposed on the vulnerable communities, causing irreparable damage and resulting in sub-human existence.[220] On the other hand, the benefits have been disproportionately cornered by the dominant sections.[221] Further, instead of locating the problem in the socio-economic matrix and the sense of disempowerment wrought by the false developmental paradigm without a human face, the dominant narrative propagates the obsession with economic growth as our only path, and that the disproportionate burdens borne by the poor and the deprived are necessary.[222] This needs to change, and the just sustainability concept provides the right direction as it enlarges individual freedom promoting just development.

Thus, just sustainability operationalization requires laws encouraging an inclusive approach to resource and development balance.[223] This depends on the promotion of participatory justice when developing human spaces that favorably reflects sustainability efforts and elevates participation in the planning process. As there is no one form of sustainable development, there cannot be one form of just sustainability. Any pursuit of just sustainability must reflect the prevailing social, cultural, ecological, and political conditions to ensure a quality of life and well-being through access to information and administrative and judicial justice.[224]

Referencing Environmental Impact Assessments (EIA) can help. An EIA is a procedural tool for analyzing developmental project's impact and ensuring adequate mitigative steps for promoting sustainable development.[225] In the initial phase, the EIA primarily focuses on identifying impacts on the environment's physical and natural components.[226] However, EIAs are increasingly assessing social, cultural, and anthropological impacts with a rigorous focus on public participation.[227] An analysis of the environment's physical and natural components would provide enough to assess environmental sustainability. However, the focus on social impacts and public participation concerns environmental justice,[228] which can only be achieved when local communities develop

---

219 Julia C. Rinne & Carol E. Dinkins, *Environmental Justice: Merging Environmental Law and Ethics*, 25 NAT. RES. & ENV'T 3, 5(2011); Paul Mohai, David Pellow,& J. Timmons Roberts, *Environmental Justice*, 34 ANN. REV. OF ENV'T & RES. 405 (2009).

220 Nandini Sundar v. State of Chattisgarh, (2011) 7 SCC 547, 6 (India).

221 *Id*.

222 *Id*.

223 Vanesa Castan Broto & Linda Westman, *Just Sustainabilities and Local Action: Evidence from 400 Flagship Initiatives*, 22 LOCAL ENV'T 635 (2017).

224 *See* Roberts, *supra* note 144; Purdy, *supra* note 1288.

225 Julie A. Lemmer, *Cleaning up Development: EIA in Two of the World's Largest and Most Rapidly Developing Countries*,19 GEO. INT'L ENV'T L. REV. 275 (2006); Shibani Ghosh, *Demystifying the Environmental Clearance Process in India*, 6 NUJS L. REV. 433 (2013).

226 *Id*.

227 *See* Lemmer, *supra* note 225; Nay Htun, *EIA and Sustainable Development*, 8 IMPACT ASSESSMENT 15 (1990).

228 Shibani Ghosh, *Procedural Environmental Rights in Indian Law*, *in* INDIAN ENVIRONMENTAL LAW – KEY CONCEPTS AND PRINCIPLES (2019); Okhumode H. Yakubu, *Delivering Environ-*

skills to analyze and solve the ecological and social problems they face.[229] The vociferous criticism, which has been meted out to the latest Draft EIA Notification wherein the public participation process was diluted, is to be assessed in this background.[230] The inference drawn from the above discussion is that the community's bottom-up participation is critical in achieving just sustainability.

This inference is further supported by the robust sense of community participation and the several promising instances where community involvement has been positive. Examples include the Plachimada-groundwater struggle and tribal communities' protest against mining by *Vedanta*. In these movements, marginalized people were the forces to be reckoned with in environmental decision-making.[231] There is a dire need to build up local-level institutions and, in the Indian context, the Gram Sabha needs to be strengthened.[232] The Gram Sabha can play an active role in safeguarding individual rights and be tasked with explaining and discussing law and policy provisions with the local population.[233] It will facilitate evolving effective mechanisms for access to information, consultation, decision engagement, and will serve as a neutral forum for hearing disputes and redress in grievances. Thus, just sustainability is a wake-up call for the legislative, executive, and judicial bodies to integrate equity into the mainstream theory and practice of sustainable development rather than merely concentrating on environmental sustainability.

This Article assessed the concept of just sustainability advanced in the *Meghalaya Coal Mining* judgment. Further, it argues just sustainability's transformation by building on the integration between environmental justice and sustainable development. Just sustainability is expected to provide a nuanced understanding and direction, an ethical foundation, a priority-establishing and choice-assessment mechanism, and a vision for sustainable development practice and theory. Clarity at the normative level becomes

---

mental Justice through Environmental Impact Assessment in the United States: The Challenges of Public Participation, 9 CHALLENGES 1 (2018).

229 George K. Foster, *Community Participation in Development*, 51 VAND. J. TRANSNAT'L L. 39 (2018).

230 *See* Stellina Jolly, *Draft EIA Notification 2020 Is Out of Sync with State Practices, International Law*, THE WIRE (July 31, 2020), https://thewire.in/environment/draft-environment-impact-assessment-notification-international-law; Siddharth Singh, *The Problematic Story of Draft EIA Notification 2020*, COUNTERCURRENTS.ORG (Aug. 2, 2020), https://countercurrents.org/2020/08/the-problematic-story-of-draft-eia-notification-2020/.

231 *See* K.M. Sudheesh, *'Resistance from Below': An Assessment of the Struggle Against Coca Cola Company in Plachimada, Kerala*, 70 INDIAN J. POL. SCI. 839 (2009); Jo Woodman, *India's Rejection of Vedanta's Bauxite Mine is a Victory for Tribal Rights*, THE GUARDIAN (Jan. 14, 2014), https://www.theguardian.com/global-development/poverty-matters/2014/jan/14/india-rejection-vedanta-mine-victory-tribal-rights.

232 INDIA CONST. art. 243(b) ("'Gram Sabha' means a body consisting of persons registered in the electoral rolls relating to a village comprised within the area of Panchayat at the village level."). *See generally* The Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996 § 4 (empowering the Gram Sabha to exercise regulatory powers and perform functions under Panchayats); The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forests Rights) Act, 2007 (maintaining the sustainability of the village and its resources).

233 *See* INDIA CONST. art. 243(b).

essential, considering the indeterminacy associated with the operationalization of the sustainable development principle. The transformation of just sustainability from sustainable development does not require a complete overhaul of current legal framework. Adequate legal hooks exist for environmental justice and sustainable development integration. Fundamental rights are protected to ensure the quality of life under constitutional frameworks. Legal mechanisms to promoting information access, access to justice, and participatory justice are already part of the legal framework. Conceptually, environmental justice and sustainable development can be integrated, but just sustainability should be explicitly incorporated into sustainable development legislation, guidelines, and institutional arrangements.

VII. CONCLUSION

Global environmental degradation has forced the realization that it is possible for humans to alter natural earth patterns in disastrous ways. While governments at every level appear eager to embrace the principle of sustainability, the mechanisms adopted differ. It is debatable whether the mechanisms employed truly result in sustainable development. At a normative and practical level, sustainable development implementation is a challenge.

This Article analyzed sustainable development's operationalization and explored the pervasive indeterminacy surrounding its implementation. The judicial analysis in India reveals that the judiciary initially analyzed sustainable development through balancing and proportionality doctrines and has recently started paying attention to social justice concepts. The assessment shows the neglect of social components and environmental justice. In this context, the decision in *Meghalaya Coal Mining*, which articulates "just sustainability" by integrating and weaving together environmental justice and sustainable development, is significant. The just sustainability concept employed by the court suggest that the courts' balancing assessment should be based on equity.

Courts must adhere to a more inclusive approach to deal with future cases of sustainable development. Such an approach would consider the environmental justice notion and can overcome the existing sustainable development challenges. However, further clarity regarding the term "intelligent use" and how to arrive at intelligent utilizations needs to be determined. In the background of deepening crises of nature and inequality that has not been solved by operationalizing sustainable development, the just sustainability concept of integrating environmental justice and sustainable development provides a well-defined direction for sustainable development operationalization.

This Article builds upon the propositions forwarded by Agyeman and others who define just sustainability as environmental justice and sustainable development integration. The conceptual framework proposed by Agyeman will require ensuring quality of life and well-being of all, meeting the needs of both present and future generations, enabling justice and equity in recognition, processes, procedures, and outcomes, of environmental decision making, and living within ecosystem limits. The implementation and movement towards just sustainability can drive a paradigm shift and require sustainable integration of environmental justice concerns through participative justice, processed through access to information and justice. For this purpose, justice and equity

must move to the center stage in sustainability discourse if we are to have any chance of a just sustainable future.

Stellina Jolly is an Assistant Professor at the Faculty of Legal Studies, South Asian University (SAARC), New Delhi, India, and is a visiting Senior Research Associate at the Research Centre for Private International Law in Emerging Countries, University of Johannesburg. She is a Fulbright scholar with the University of San Francisco (2018–2019) and a recipient of the International Visitors Leadership Program (IVLP). She researches international environmental law and conflict of laws.

Siddharth Singh is a Doctoral Candidate at the Faculty of Legal Studies, South Asian University, New Delhi, India.

Public Rights and Sovereign Power: Rethinking the Federal Public Trust Doctrine

Bennett J. Ostdiek

I. Introduction

Ambiguity surrounds the public trust doctrine. The doctrine defines the public's rights in and the government's power over certain natural resources, and in recent years courts have confronted public trust arguments in contexts as diverse as climate change litigation, public easement cases, and takings claims relating to development restrictions.[1] However, despite the doctrine's significance, its fundamental nature remains poorly understood.[2] Two questions in particular have provoked disagreement among courts and academic commentators. First, what is the public trust doctrine's scope and substantive content? In other words, to which natural resources does the doctrine apply, to which sovereigns does the doctrine apply, and what rights, duties, and powers does the doctrine create with respect to those resources and those sovereigns? Second, what is the

1 *See infra* notes 17–22 and accompanying text.

2 As Carol Rose has observed, "the modern public trust doctrine is notoriously vague as to its own subject matter." Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. Chi. L. Rev. 711, 722 (1986); *see also* Joseph D. Kearney & Thomas W. Merrill, *The Origins of the American Public Trust Doctrine: What Really Happened in Illinois Central*, 71 U. Chi. L. Rev. 799, 803 (2004) ("A number of serious ambiguities afflict [the public trust] doctrine.").

public trust doctrine's legal source? Does it derive from federal constitutional law, state constitutional law, or natural law?

Legal scholars generally agree that the public trust doctrine constrains the sovereign's power over natural resources. However, they disagree over how exactly it does so. Traditionally, the doctrine has been understood to restrict state governments' ability to alienate lands beneath navigable waters and to protect the public's right to access those waters.[3] For example, Charles Wilkinson describes the public trust doctrine as a "limitation on states' ownership of the beds and banks of navigable watercourses" that both prohibits "the large-scale disposition of lands under navigable waterways" and guarantees "the right of the public to obtain access to the overlying waters."[4] In recent years, environmental thinkers such as Mary Christina Wood and Gerald Torres have attempted to move beyond this traditional paradigm, arguing that the public trust doctrine obligates the federal government to take affirmative action to protect all natural resources from existential threats such as climate change.[5] And Thomas Merrill has intervened in this

---

3 Joseph Sax stands as the traditional public trust doctrine's leading proponent. Sax famously argues that the public trust doctrine prohibits states from granting trust property to a private party "if that grant is of such amplitude that the state will effectively have given up its authority to govern." Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 488–89 (1970). According to Sax, courts have historically applied the doctrine only to "that aspect of the public domain below the low-water mark on the margin of the sea and the great lakes, the waters over those lands, and the waters within rivers and streams of any consequence," though he suggests that it would prove "equally applicable and equally appropriate" in controversies involving other natural resources. *Id.* at 556–57. Sax's seminal 1970 article led to an explosion of both scholarship and litigation relating to the public trust doctrine. *See* Rose, *supra* note 2, at 715 n.18.

4 Charles F. Wilkinson, *The Headwaters of the Public Trust: Some Thoughts on the Source and Scope of the Traditional Doctrine*, 19 ENV'T L. 425, 452–53, 462, 465–70 (1989) [hereinafter *Headwaters of the Public Trust*]; Charles F. Wilkinson, *The Public Trust Doctrine in Public Land Law*, 14 U.C. DAVIS L. REV. 269, 273 (1980) [hereinafter *Public Land Law*]. Similarly, Douglas Grant argues that the doctrine "constrains the power of the state legislature and its administrative agencies to grant private property rights in navigable waters, their underlying lands, and related resources." Douglas L. Grant, *Underpinnings of the Public Trust Doctrine: Lessons from Illinois Central Railroad*, 33 ARIZ. ST. L.J. 849, 849 (2001). Harrison Dunning makes it clear that while the public trust doctrine "sometimes . . . serves to prevent the governmental owner of a public trust resource from alienating it to private persons," it more often manifests itself as an easement that protects the public's "right of access to certain natural resources for various public purposes." Harrison C. Dunning, *The Public Trust: A Fundamental Doctrine of American Property Law*, 19 ENV'T L. 515, 519 (1989).

5 Mary Christina Wood argues that under the public trust doctrine, governments "must act as a fiduciary to protect the natural resources held in trust from damage, as well as from dangerous privatization." MARY CHRISTINA WOOD, NATURE'S TRUST: ENVIRONMENTAL LAW FOR A NEW ECOLOGICAL AGE xviii (2014). According to Wood, the doctrine necessarily applies "to *both* the federal and state sovereigns." *Id.* at 134. Further, it not only "empowers courts to invalidate executive and legislative acts that violate the public's property rights in natural resources" but also allows the federal judiciary to "compel affirmative action." *Id.* at 139–40, 241. Wood further argues that "virtually all categories of natural resources merit protections as assets in the trust – air and atmosphere, surface waters, groundwater, dry sand

debate to suggest that because the public trust doctrine is "a matter of state law,"[6] any attempt "to articulate a single 'correct' view of what kinds of resources are protected by the doctrine and what sorts of things it protects against" will necessarily fail.[7] However, Merrill observes, while "the scope of the doctrine, who enforces it, and how amenable it is to change over time" differ in different jurisdictions,[8] the various forms of the doctrine all require the sovereign to devote a certain "set of resources . . . to particular uses identified as public."[9] Thus, commentators have consistently described the public trust doctrine as a limitation on the government's power over natural resources, though they disagree over whether the doctrine applies to resources other than lands beneath navigable waters, whether it merely restricts the sovereign's power to act or affirmatively obligates the sovereign to act in certain ways, and whether it applies to the federal government in addition to the states.

The question of the public trust doctrine's legal source proves even more contentious. After all, the Supreme Court famously did not state the source of the law it applied in *Illinois Central Railroad Company v. Illinois*, the leading case on the public trust doctrine.[10] Indeed, some argue that the public trust doctrine rests on a basis of poor legal reasoning and incorrect history.[11] However, the doctrine enjoys numerous defenders. Joseph Sax, the founding father of public trust doctrine scholarship, justifies the doctrine

---

beaches, wildlife, fisheries, plant life, wetlands, soils, minerals and energy sources, forests, grasslands, and public lands." *Id.* at 157; *see also* John E. Davidson, Federal Atmospheric Trust Litigation Amicus Brief I (2013) (discussing and providing a draft of the brief in Alec L. *ex rel.* Loorz v. McCarthy, 561 F. App'x 7 (D.C. Cir. 2014) (No. 13-5192) (available for download at http://www.ssrn.com/abstract=2361780)); Gerald Torres & Nathan Bellinger, *The Public Trust: The Law's DNA*, 4 WAKE FOREST J.L. & POL'Y 281 (2014).

6 Thomas W. Merrill, *The Public Trust Doctrine: Some Jurisprudential Variations and Their Implications*, 38 U. HAW. L. REV. 261, 266 (2016).

7 *Id.* at 261.

8 *Id.*; *see also* Robin Kundis Craig, *A Comparative Guide to the Eastern Public Trust Doctrines: Classifications of States, Property Rights, and State Summaries*, 16 PENN ST. ENV'T L. REV. 1 (2007) [hereinafter *Eastern Public Trust Doctrines*]; Robin Kundis Craig, *A Comparative Guide to the Western States' Public Trust Doctrines: Public Values, Private Rights, and the Evolution toward an Ecological Public Trust*, 37 ECOLOGY L.Q. 53 (2010) [hereinafter *Western Public Trust Doctrines*].

9 Merrill, *supra* note 6, at 262.

10 Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387 (1892). Carol Rose characterizes *Illinois Central* as "remarkably free of supporting authority." Rose, *supra* note 2, at 737. Richard Lazarus describes "the source of law the Court was drawing on to reach its result" in that case as "far from clear." Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources Law: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631, 638 (1986).

11 James Rasband describes the "modern public trust doctrine of *Illinois Central* and its progeny" as "a departure from the earlier common law understanding that the sovereign had power to convey land under navigable water and associated resources as long as it clearly expressed its intent to do so" that proves "necessarily irreconcilable" with the equal footing doctrine. James R. Rasband, *The Disregarded Common Parentage of the Equal Footing and Public Trust Doctrines*, 32 LAND & WATER L. REV. 1, 6 (1997). James Huffman argues that "what we think we know about the history of the public trust doctrine is often a distortion and sometimes just plain wrong. Even a cursory review of the literature and case law reveals a lot of wishful thinking and not very much sound historical research." James L. Huffman,

in terms that sound almost in natural law,[12] as do Wood and Torres.[13] Charles Wilkinson, Richard Epstein, and John Edward Davidson have all attempted to locate the doctrine in the federal constitution,[14] while Douglas Grant, William Araiza, and Harrison Dunning find support in state constitutional law.[15] Finally, Merrill explains that the doctrine has different jurisprudential foundations in different jurisdictions, resting on a "title theory" in some states, a "clear statement theory" in others, and a "constitutional theory" in the remainder.[16]

Modern public trust doctrine litigation both reflects and contributes to these theoretical disagreements. Litigants have raised public trust doctrine claims in a remarkably

---

Speaking of Inconvenient Truths - A History of the Public Trust Doctrine, 18 DUKE ENV'T L. & POL'Y F. 1, 8 (2007).

12 Sax argues that the public trust doctrine derives from the idea that certain resources are "so intrinsically important to every citizen," "so particularly the gifts of nature's bounty," and of such a "peculiarly public nature" that they should be "reserved for the whole of the populace" rather than adapted to private use. Sax, *supra* note 3, at 484–85. Sax describes the Supreme Court's decision in *Illinois Central* as arising from "a general view of the function of government" rather than from the positive law of any particular sovereign. *Id.* at 490.

13 Wood argues that when a "government derives its power from the people, the sovereign's property interests necessarily amount to a trust." WOOD, *supra* note 5, at 128. Thus, "the public trust stands as a fundamental attribute of sovereignty – a constitutive principle that government cannot shed." *Id.* at 129. Similarly, Gerald Torres and Nathan Bellinger describe the public trust doctrine as an "inherent right[ ] that pre-dates the United States Constitution." Torres & Bellinger, *supra* note 5, at 288.

14 Wilkinson argues that "the public trust doctrine applies on all navigable watercourses as a matter of federal law." *Headwaters of the Public Trust*, *supra* note 4, at 455. Though Wilkinson considers several possibilities for the source of this law, he ultimately concludes that "the public trust doctrine is rooted in the commerce clause and became binding on new state at statehood." *Id.* at 459. Epstein suggests that "public trust cases . . . fall under the [equal protection] clause." Richard A. Epstein, *The Public Trust Doctrine*, 7 CATO J. 411, 428 (1987). Davidson locates the public trust doctrine in the Preamble's posterity clause, Article I's anti-nobility and vesting clauses, the Fourteenth Amendment's equal protection clause, and the Fifth Amendment's due process clause. Davidson, *supra* note 5, at 16–32.

15 Grant argues that the public trust doctrine fits "within the broader reserved powers doctrine," which is itself "grounded in widely found state constitutional provisions on 'legislative power.'" Grant, *supra* note 4, at 851. Araiza suggests that "state constitutional provisions dealing with the environment can furnish the substantive commitment to resource conservation that, in turn, justifies judicial application of the public trust doctrine." William D. Araiza, *Democracy, Distrust, and the Public Trust: Process-Based Constitutional Theory, the Public Trust Doctrine, and the Search for a Substantive Environmental Value*, 45 UCLA L. REV. 385, 438 (1997). Dunning views the doctrine as "as implied state constitutional doctrine, one that springs from a fundamental notion of how government is to operate with regard to common heritage natural resources." Dunning, *supra* note 4, at 523.

16 Merrill, *supra* note 6, at 261. The title theory "holds that the state's title to certain resources is impressed by a trust in favor of particular public uses"; the clear statement theory "holds that certain resources are subject to a presumption that they will be devoted to particular public uses unless the state legislature specifically legislates to the contrary"; and the constitutional theory "holds that the state constitution mandates that certain resources be devoted to particular public uses." *Id.*

wide array of contexts and with varying success. Courts have held that the doctrine gives the public the right to walk along the shore of navigable waters below the ordinary high water mark,[17] prevents the government from alienating submerged lands to private parties,[18] guarantees the public's right to access upland dry sand beaches,[19] and even empowers the government to completely prohibit shoreline-property development without compensating the landowner.[20] On the other hand, an Illinois federal district court has rejected the argument that the public trust doctrine prevents Chicago from building the Obama Presidential Center on public parkland,[21] and federal courts have split on the question of whether the public trust doctrine places on the federal government an affirmative duty to combat climate change.[22]

This Article seeks to further our understanding of the public trust doctrine. Of course, the doctrine takes different forms in different jurisdictions. This Article focuses specifically on the *federal* public trust doctrine, defined as the legal regime that the U.S. Supreme Court has established to govern sovereign ownership of lands beneath navigable waters.[23] What rights, duties, and powers does this regime create? Does the same regime govern both state and federal ownership of such lands? Does this regime rest on a sound legal and historical basis? Does the regime that governs sovereign ownership of submerged lands also apply to other resources? This Article addresses these questions.

Contrary to existing scholarly accounts, the Supreme Court's submerged lands decisions make it clear that, as a matter of federal law, the public trust doctrine empowers, rather than constrains, the sovereign. Though the federal public trust doctrine emerges from the idea that the public possesses special rights in lands beneath navigable waters, the doctrine attempts to protect those public rights by expanding, rather than restricting, the sovereign's power over such lands. In a series of nineteenth century cases, the Court held that the original thirteen states gained title to the lands beneath the navigable waters within their borders when they won their independence from Great Britain;[24] that new states gain title to the submerged lands within their borders when they enter the Union;[25] that all states possess the power to alienate such lands;[26] and that states can

---

17 Gunderson v. State, 90 N.E.3d 1171, 1188 (Ind. 2018).

18 Lake Michigan Fed'n v. U.S. Army Corps of Eng'rs, 742 F. Supp. 441 (N.D. Ill. 1990).

19 Raleigh Ave. Beach Ass'n v. Atlantis Beach Club, Inc., 185 N.J. 40, 42 (N.J. 2005).

20 Esplanade Properties, LLC v. City of Seattle, 307 F.3d 978, 987 (9th Cir. 2002).

21 Protect Our Parks, Inc. v. Chicago Park Dist., 385 F. Supp. 3d 662, 686 (N.D. Ill. 2019).

22 *Compare* Juliana v. United States, 217 F. Supp. 3d 1224 (D. Or. 2016), *with* Alec L. *ex rel.* Loorz v. McCarthy, 561 F. App'x 7 (D.C. Cir. 2014), *and* Clean Air Council v. United States, 362 F. Supp. 3d 237, 253 (E.D. Pa. 2019).

23 Even though courts and commentators disagree on the public trust doctrine's scope, content, and legal source, all agree that the doctrine paradigmatically applies to lands beneath navigable waters. *See supra* notes 3–4 and accompanying text; *see also* WOOD, *supra* note 5, at 146–47. Accordingly, in order to understand the public trust doctrine, we should begin by studying the legal rules governing these submerged lands. *See* JED RUBENFELD, REVOLUTION BY JUDICIARY 13–18 (2005) (discussing the importance of paradigm cases). And because we are interested in the federal public trust doctrine rather than state public trust doctrines, we should study the U.S. Supreme Court's cases involving submerged lands rather than state court decisions.

24 *See infra* Part II.A.

25 *See infra* Part II.A.

revoke grants of such lands without compensating the grantee.[27] In the twentieth century, the Court applied this same regime to federal ownership of submerged lands, holding that the U.S. holds title to the ocean's floor;[28] that it can dispose of its oceanic landholdings however it pleases;[29] and that it can condemn lands beneath navigable waters without compensating the landowner.[30] The states enjoy these powers over the submerged lands within their borders as an incident of their sovereignty,[31] while the federal government possesses such powers over the ocean's floor and the land underneath interstate waterways by virtue of the Property Clause, the Commerce Clause, and the Constitution's federal structure.[32] Further, the Court has made it clear that the public trust doctrine's rule of revocability does not violate the Takings Clause, at least as applied to submerged lands, because it stands as a pre-existing limitation on a private owner's title to such lands.[33] Thus, the federal public trust doctrine neither imposes affirmative obligations on the sovereign nor restricts the sovereign's ability to act. Rather, in the name of protecting public rights, the doctrine augments sovereign power.

Of course, some scholars might consider an inquiry into the nature of the federal public trust doctrine misguided. As Thomas Merrill observes, the Supreme Court "has made clear . . . that the public trust doctrine is based on state law."[34] However, the federal public trust doctrine presents an important object of study for at least three reasons. First, environmental activists have sued the federal government, arguing that the public trust doctrine requires the U.S. to affirmatively combat climate change.[35] These lawsuits necessarily raise the question of whether the public trust doctrine applies to the federal government in addition to the states. Second, commentators have frequently criticized the public trust doctrine as a violation of the Fifth Amendment's Takings Clause.[36] Regardless of whether the public trust doctrine applies to the federal government, then, the Constitution might place limitations on the scope of state public trust doctrines. Third, many state courts have viewed the Supreme Court's public trust cases, particularly its decision in *Illinois Central*, as binding federal law.[37] Accordingly, a reconsideration of the federal public trust doctrine might cause states to reassess their own

---

26 *See infra* Part II.B.1.
27 *See infra* Part II.B.2.
28 *See infra* Part III.A.1.
29 *See infra* Part III.A.2.
30 *See infra* Part III.B.
31 *See infra* Part II.
32 *See infra* Part III.
33 *See infra* Part IV.B; *infra* Part V.
34 Merrill, *supra* note 6, at 261 (citing Phillips Petroleum Co. v. Mississippi, 484 U.S. 469, 482–84 (1988); Shively v. Bowlby, 152 U.S. 1, 40–46, 57–58 (1894)); *see also* PPL Montana, LLC v. Montana, 565 U.S. 576, 603 (2012) ("[T]he public trust doctrine remains a matter of state law."). For a discussion of state public trust doctrines see *infra* Part IV.A.
35 *See supra* note 22.
36 *See, e.g.*, James L. Huffman, *Avoiding the Takings Clause through the Myth of Public Rights: The Public Trust and Reserved Rights Doctrines at Work*, 3 J. LAND USE & ENV'T L. 171, 173–76, 204–08, 210–11 (1987); Maureen E. Brady, *Defining Navigability: Balancing State-Court Flexibility and Private Rights in Waterways*, 36 CARDOZO L. REV. 1415, 1416–20, 1452–55 (2015).
37 *Western Public Trust Doctrines*, *supra* note 8, at 62; Lazarus, *supra* note 10, at 640.

public trust doctrines, even if the federal doctrine does not actually bind the states. Thus, a proper understanding of the federal public trust doctrine has significant implications for modern public trust litigation, at both the federal and state levels.

This Article proceeds as follows. Part II examines the federal public trust doctrine's nineteenth century origins, explaining how the Supreme Court constructed a legal regime governing state ownership of submerged lands that attempts to protect the public's rights by empowering, rather than constraining, the states. Part III shows how the Court applied this same regime to federal ownership of submerged lands during the twentieth century. Part IV responds to potential objections. Part V analyzes the federal public trust doctrine's scope. Finally, the Article concludes by considering this analysis' implications for modern public trust doctrine cases and offering reasons why environmentalists might support a public trust doctrine that expands sovereign power.

II. The Origins of the Federal Public Trust Doctrine

The Supreme Court has constructed a legal regime governing submerged lands that sounds in public rights but functions to protect and augment sovereign power. The regime begins with the premise that lands beneath navigable waters, unlike non-submerged lands, primarily have public, rather than private, value.[38] Accordingly, the sovereign holds title to these lands as the public's trustee,[39] and the original thirteen states gained title to the submerged lands within their borders when they became independent sovereigns.[40] As equal sovereigns to the original states, new states gain title to such lands when they enter the Union,[41] and, to protect this equal sovereignty, courts presume that Congress did not make a pre-statehood grant of submerged lands unless it clearly stated its intent to do so.[42] After joining the Union, a state can freely alienate lands beneath navigable waters;[43] however, to protect the public's rights in these lands, the state always retains the sovereign power to revoke a submerged-lands grant.[44] Thus, at every turn, the Supreme Court's submerged-lands cases use the existence of public rights in lands beneath navigable waters to justify protecting and expanding sovereign power over such lands.

A. Sovereign Lands

The Supreme Court announced the principle that submerged lands are sovereign lands in the 1842 case *Martin v. Waddell's Lessee*.[45] In *Martin*, Merrit Martin and the lessee of William Waddell disagreed as to whether the British king could "grant to a subject a portion of the soil covered by the navigable waters of the kingdom, so as to give

38 *See* Shively v. Bowlby, 152 U.S. 1, 57 (1894).
39 *See* Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387, 456 (1892).
40 *See* Martin v. Waddell's Lessee, 41 U.S. 367, 410 (1842).
41 *See* Pollard v. Hagan, 44 U.S. 212, 222, 229 (1845).
42 *See Shively*, 152 U.S. at 58.
43 *See id.* at 26, 57-58.
44 *See Ill. Cent.*, 146 U.S. at 455.
45 41 U.S. 367 (1842).

him an immediate and exclusive right of fishery."[46] The Court explained that, at common law, the crown held title to "the shores, and rivers and bays, and arms of the sea, and the land under them . . . as a public trust for the benefit of the whole community, to be freely used by all for navigation and fishery."[47] However, it declined to decide whether the crown possessed the power to alienate these public trust lands to private parties, holding that regardless of whether the crown could do so, it had not done so here.[48] More importantly, the Court declared that the question of whether the British king could make grants of submerged lands "has ceased to be a matter of much interest in the United States."[49] After all, once the thirteen colonies won their independence, "the people of each state became themselves sovereign; and in that character hold the absolute right to all their navigable waters, and the soils under them, for their own common use."[50] Accordingly, "[a] grant made by their authority must . . . manifestly be tried and determined by different principles from those which apply to grants of the British crown."[51]

Three years later, the Court confronted the question of whether the states admitted to the Union after 1789 enjoy the same sovereign rights over submerged lands as the original states. The 1845 case *Pollard v. Hagan*[52] involved conflicting claims to drained mud flats in Alabama that had been submerged when Alabama entered the Union, with one party claiming title under a federal land patent, issued by Congress after Alabama's statehood, and the other under a Spanish grant that Alabama was honoring.[53] The Court explained that, as a result of both the Northwest Ordinance and the Georgia and Virginia deeds ceding western territories to the federal government, new states entered the Union "on an equal footing with the original states in all respects whatever."[54] As such, new states possess "all the rights of sovereignty, jurisdiction, and eminent domain"

---

46 *Id.* at 410. The case involved conflicting claims to an oyster bed; Waddell traced his title back to a grant that King Charles II had made to the Duke of York, while Martin had leased the land from the state of New Jersey. *Id.* at 378–380, 407.

47 *Id.* at 413. The Court cited Lord Chief Justice Matthew Hale's famous treatise *De Jure Maris* for this proposition. *Id.* For the standard account of the public trust doctrine's common law origins, see Sax, *supra* note 3, at 475–78; *see also* Lazarus, *supra* note 10, at 633–35; Shively v. Bowlby, 152 U.S. 1, 11–14 (1894). For criticisms of this standard account, see Glenn J. MacGrady, *The Navigability Concept in the Civil and Common Law: Historical Development, Current Importance, and Some Doctrines That Don't Hold Water*, 3 FLA. ST. U. L. REV. 511, 513–587 (1975); Patrick Deveney, *Title, Jus Publicum, and the Public Trust: An Historical Analysis*, 1 SEA GRANT L. J. 13, 13–52 (1976); Rasband, *supra* note 11, at 8–14; and Huffman, *supra* note 11, at 3–27. For an argument that the public trust doctrine remains vital despite its "alleged mythological history," see Hope M. Babcock, *The Public Trust Doctrine: What a Tall Tale They Tell*, 61 S. C. L. REV. 393, 397–505 (2009).

48 *Martin*, 41 U.S. at 409–18.

49 *Id.* at 410.

50 *Id.*

51 *Id.*

52 44 U.S. 212 (1845).

53 *Id.* at 219–20; *see also* Gregory Ablavsky, *The Rise of Federal Title*, 106 CAL. L. REV. 631, 674 (2018).

54 *Pollard*, 44 U.S. at 222 (citing the Ordinance of 1787).

as the original states.[55] And what do those sovereign rights entail? Quoting *Martin*, the Court declared that "the people of each state . . . hold the absolute right to all their navigable waters, and the soils under them for their own common use."[56] For this reason, "[t]o give to the United States the right to transfer to a citizen the title to the shores and the soils under the navigable waters, would be placing in their hands a weapon which might be wielded greatly to the injury of state sovereignty."[57] In other words, Alabama's sovereign prerogatives required the Court to void Congress' post-statehood grant of submerged lands. To hold otherwise would deny Alabama's equal sovereignty to the original states.

Though *Pollard* purported to empower states by assuring them of title to the submerged lands within their borders, Justice Catron worried in his dissent that the majority's holding would actually function to restrict sovereign power if followed to its logical conclusion.[58] Justice Catron reasoned that "if the United States cannot grant these lands, neither can Alabama; and no individual title to them can ever exist."[59] After all, if submerged lands are "clothed with a sovereign political right in the state; not as property, but as a sovereign incident to navigation," then "Alabama has only political jurisdiction over the thing; and it must be admitted that jurisdiction cannot be the subject of a private grant."[60] In other words, the majority's logic suggested that courts should void all sovereign grants of submerged lands, not just post-statehood federal grants. Further, Catron doubted that such a rule would remain limited to lands beneath navigable waters. Pointing out that the "political discussions of the country" already contained the idea "that the new states coming in, with equal rights appertaining to the old ones, took the high lands as well as the low, by the same implication now successfully asserted here in regard to the low lands," he argued that "the principles on which the present judgment proceeds" were "as applicable to the high lands of the United States as to the low lands and shores."[61] The majority's holding thus raised the possibility that all public lands, both submerged and non-submerged, should pass to the states upon their admission to the Union and that the states could not grant to private parties any of these lands. Because of these possible implications, Catron viewed *Pollard* as "the most important controversy ever brought before this court."[62]

Martin and *Pollard* ultimately create more questions than they resolve. The Court made it clear in those cases that the original states had gained title to the lands beneath navigable waters within their borders upon winning their independence and that new

---

55 *Id.* at 223.

56 *Id.* at 229 (quoting *Martin*, 41 U.S. at 410).

57 *Id.* at 230.

58 *See id.* at 235 (Catron, J., dissenting).

59 *Id.* at 234.

60 *Id.* at 235.

61 *Id.* By "high lands," Catron meant "all federal lands, not just those inundated at high tide." Ablavsky, *supra* note 53, at 675. The majority had explained that a new states' "public lands," by which it meant non-submerged lands, "remain[ed] in the possession and under the control of the United States, for temporary purposes provided for in the deed of cession and the legislative acts connected with it," namely, "to aid in paying the public debt, incurred by the war of the Revolution." *Pollard*, 44 U.S. at 223.

62 *Id.* at 235 (Catron, J., dissenting).

states gain title to such lands upon entering the Union. But can a state grant submerged lands to a private party? Can Congress make a pre-statehood grant of such lands? And on what basis, if any, does the law distinguish between submerged and non-submerged lands? Those questions remained unanswered.

B. Sovereign Power

Almost fifty years after deciding *Pollard*, the Court clarified both the reason for and nature of sovereign power over lands beneath navigable waters. [63] In two landmark submerged-lands cases, *Shively v. Bowlby* and *Illinois Central Railroad Company v. Illinois*, the Court declared that states hold title to lands beneath navigable waters in trust for the people because, unlike non-submerged lands, submerged lands primarily have public value rather than private value;[64] that courts will protect this trust by assuming that pre-statehood congressional land grants did not convey submerged lands unless they did so explicitly;[65] that states possess the power to grant such lands to private parties if they so choose;[66] and that states also possess the power to protect the public's rights in submerged lands by revoking grants of such lands without compensating the grantee.[67] In short, because the public has special rights in navigable waters, states possess almost unlimited power over the lands beneath such waters.

1. *Shively v. Bowlby*

The 1894 case *Shively v. Bowlby*,[68] another case involving conflicting state and federal titles to submerged lands, articulated and rationalized the federal regime governing lands beneath navigable waters. First, the Court explained why a special relationship exists between submerged lands and sovereignty. Unlike uplands, "[l]ands under tide waters are incapable of cultivation or improvement in the manner of lands above high-water mark" but "are of great value to the public for the purposes of commerce, navigation, and fishery."[69] For this reason, "the title and the control of them are vested in the sovereign, for the benefit of the whole people."[70] *Shively* thus justified *Pollard*'s seemingly arbitrary rule that new states receive the submerged lands within their borders upon admission to the Union while the federal government retains the publicly-owned uplands. Submerged lands are sovereign lands because, unlike uplands, they have little private value but tremendous public value.

Second, the Court clarified the nature of Congress' power over submerged lands. It disclaimed any statement in *Pollard* implying that the federal government could not have granted away "the title in the land below high-water mark . . . before the admission of the state into the Union."[71] Those statements were "not necessary to the decision, which

---

63 *See infra* notes 68–99 and accompanying text.
64 *See* Shively v. Bowlby, 152 U.S. 1, 57 (1894).
65 *See id.* at 58.
66 *See id.* at 26, 57-58.
67 *See Ill. Cent.*, 146 U.S. at 455.
68 152 U.S. 1 (1894).
69 *Id.* at 57.
70 *Id.*
71 *Id.* at 28.

involved only a grant made by congress after the admission of Alabama."[72] Congress undoubtedly "may grant, for appropriate purposes, titles or rights in the soil below high-water mark of tide waters."[73] However, the Court further explained that Congress had generally chosen not to alienate these lands.[74] Because "the navigable waters and the soils under them" mainly have value "for the public purposes of commerce, navigation, and fishery," Congress had "constantly acted upon the theory that those lands . . . shall be held by the United States in trust for the future states."[75] For this reason, congressional grants "of portions of the public lands within a territory to settlers thereon, though bordering on or bounded by navigable waters, convey, of their own force, no title or right below high-water mark."[76] Rather, courts should only construe pre-statehood congressional land grants to convey submerged lands if they do so expressly.[77]

Third, and most importantly, the Court explained that once a territory became a state and claimed ownership of its submerged lands under the equal footing doctrine, the new state gained an almost unlimited right to regulate and dispose of its submerged lands as it saw fit. After all, each of the original states "has dealt with the lands under the tide waters within its borders according to its own views of justice and policy, reserving its own control over such lands, or granting rights therein to individuals or corporations, . . . as it considered for the best interests of the public,"[78] and "[t]he new states admitted into the Union since the adoption of the constitution have the same rights as the original states in the tide waters, and in the lands below the high-water mark, within their respective jurisdictions."[79] Therefore, "[t]he title and rights of riparian or littoral proprietors in the soil below high-water mark . . . are governed by the local laws of the several states, subject, of course, to the rights granted to the United States by the constitution."[80] In other words, states can freely grant submerged lands to private parties if they wish to do so.

This last point raises a further question. If states can alienate lands beneath navigable waters, then what function does the public trust doctrine serve? What protects the public's rights in submerged lands?

2. *Illinois Central*

The Court answered this question in the landmark public trust case *Illinois Central Railroad Company v. Illinois*, decided two years before *Shively*.[81] Though academic commentators almost uniformly describe *Illinois Central* as limiting the state's power to alien-

---

72 *Id.*
73 *Id.* at 58.
74 *Id.*
75 *Id.* at 49–50.
76 *Id.* at 58.
77 For an explicit statement of this rule, see United States v. Holt State Bank, 270 U.S. 49, 55 (1926) ("[D]isposals [of lands under navigable waters] by the United States during the territorial period are not lightly to be inferred, and should not be regarded as intended unless the intention was definitely declared or otherwise made very plain." (citing *Shively*, 152 U.S. at 49, 57, 58)).
78 *Shively*, 152 U.S. at 26.
79 *Id.*
80 *Id.* at 57–58.
81 Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387 (1892).

ate submerged lands,[82] a close reading of the case reveals that the Court actually held that states have the power to revoke grants of submerged lands without compensating the grantee. The *Illinois Central* Court recognized that the public possessed rights in submerged lands.[83] However, it chose to protect those public rights by empowering, rather than restricting, the sovereign.[84]

Though a complicated backstory lays behind *Illinois Central*,[85] the case's facts are simple. In 1869, the Illinois Legislature granted the Illinois Central Railroad Company more than 1,000 acres of submerged lands in the bed of Lake Michigan.[86] Four years later, the Legislature repealed the act, and the state brought suit to confirm its title to the lakebed.[87] The Court ultimately validated the 1873 repealing act, holding that the state held title to the lands at issue.[88]

The Court made it clear that the public possesses special rights in submerged lands. Writing for a 4-3 majority, Justice Fields declared that "the state holds the title to the lands under the navigable waters of Lake Michigan . . . in trust for the people of the state, that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein, freed from the obstruction or interference of private parties."[89] Citing *Martin v. Waddell's Lessee* and *Pollard v. Hagan*, Justice Fields explained that the existence of this trust "follows necessarily from the public character of the property, being held by the whole people for purposes in which the whole people are interested."[90] States do not violate the trust by granting to private parties "parcels of lands under navigable waters that may afford foundation for wharves, piers, docks, and other structures in aid of commerce," because such grants improve the "interest of the people in the navigation of the waters and in commerce."[91] But a state cannot abdicate "general control . . . over lands under the navigable waters of an entire harbor or bay, or of a sea or lake" consistently "with the exercise of that trust which requires the government of the state to preserve such waters for the use of the public."[92]

---

82 Joseph Sax argued that the case "articulated . . . the central substantive thought in public trust litigation," namely that when reviewing state action related to public trust resources, "a court will look with considerable skepticism upon *any* governmental conduct which is calculated *either* to reallocate that resource to more restricted uses *or* to subject public uses to the self-interest of private parties." Sax, *supra* note 3, at 490. Similarly, Charles Wilkinson reads the case to say "that the [public trust] doctrine, in its classic form, operates as a bar against the large-scale disposition of lands under navigable waterways." *Public Land Law*, *supra* note 4, at 273. James Rasband perhaps makes the point most bluntly: "*Illinois Central* holds that the states . . . do not have plenary power to convey land under navigable water." Rasband, *supra* note 11, at 66.

83 *See Ill. Cent.*, 146 U.S. at 452, 456.

84 *See id.* at 455, 459–62.

85 *See generally* Kearney & Merrill, *supra* note 2, at 811–924.

86 *Ill. Cent.*, 146 U.S. at 448–49, 454.

87 *Id.* at 439, 448–49.

88 *Id.* at 463–64.

89 *Id.* at 452.

90 *Id.* at 456.

91 *Id.* at 452.

92 *Id.* at 452–53.

However, the Court did not hold that this public trust restricts states' power to alienate lands beneath navigable waters. Rather, acting under the theory that it could best protect public rights by empowering the sovereign, it held instead that states can revoke grants of submerged lands and re-assume ownership over them at any time without compensating the grantee.[93] To understand this point, we must look less to what the Court said and more to what it actually did. The Court did not void Illinois' 1869 grant of submerged lands to Illinois Central. Instead, it characterized the state's 1869 grant "as a mere license" and upheld the legislature's 1873 revocation of that license.[94] The Court explained that because states hold submerged lands "in trust for the common use and as a portion of their inherent sovereignty, any act of legislation concerning their use . . . is therefore appropriately within the exercise of the police power of the state."[95] However, "[t]he legislation which may be needed one day for the harbor may be different from the legislation that may be required at another day."[96] And because the legislature can neither "give away nor sell the discretion of its successors in respect to matters, the government of which, from the very nature of things, must vary with varying circumstances,"[97] grants of submerged lands are "necessarily revocable, and the exercise of the trust by which the property was held by the state can be resumed at any time."[98] In other words, though the sovereign can convey submerged lands to private parties, the public trust doctrine empowers it, in the name of public rights, to re-assume ownership over those lands at any time.[99]

Thus, the public trust doctrine protects the public's rights in navigable waters not by restricting states' ability to convey submerged lands but rather by empowering states to revoke conveyances of such lands. This understanding of *Illinois Central* fits perfectly with *Martin* and *Pollard*'s holding that states presumptively hold title to lands beneath navigable waters and *Shively*'s acknowledgement that states can freely alienate submerged lands. At every turn, the Supreme Court's submerged-lands cases have held that because the public has special rights in submerged lands, states necessarily possess special powers over those lands.

III. The Public Trust Doctrine and the Federal Government

The Supreme Court has also grappled with questions relating to federal ownership of and power over submerged lands. Just like the regime governing state-held submerged lands, the Court's federal submerged-lands cases have consistently both protected sovereign lands and augmented sovereign power. In *United States v. California* and *United*

93 *Id.* at 454.

94 *Id.* at 461–62 ("If the act in question be treated as a mere license to the company to make the improvement in the harbor contemplated as an agency of the state, then we think the right to cancel the agency and revoke its power is unquestionable.").

95 *Id.* at 459.

96 *Id.* at 460.

97 *Id.*

98 *Id.* at 455.

99 *Id.* at 460 ("There can be no irrepealable contract in a conveyance of property by a grantor in disregard of a public trust, under which he was bound to hold and manage it.").

States v. Texas, the Court declared that the national government presumptively holds title to the oil-rich lands underneath the ocean by virtue of the Constitution's federal structure.[100] In *Alabama v. Texas*, the Court held that the Constitution's Property Clause empowers the federal government to dispose of its submerged landholdings, including the ocean's floor, however it pleases.[101] And a long line of cases involving the federal navigation servitude has established that the Commerce Clause allows the U.S. to condemn lands beneath navigable waters without compensating the prior owner.[102] In short, the same basic rules that govern state ownership of submerged lands also govern federal ownership of such lands. The sovereign presumptively holds title to lands beneath navigable waters, and though it may alienate those lands if it wishes, it always retains the power to revoke grants of such lands.

A. The Tidelands Controversy

The question of who owns the ocean's floor became a major political controversy in the late 1940s and early 1950s. During the nation's first 150 years, few doubted that the coastal states owned the "tidelands"—the belt of submerged oceanic lands that extends three miles outward from the ordinary low-water mark, underlying an area known as the marginal sea.[103] However, it eventually became clear that the lands beneath the marginal sea contained vast oil reserves, and, in 1937, the Roosevelt Administration introduced legislation declaring that the federal government owned these submerged lands.[104] Over the next decade, both houses of Congress debated various bills attempting to settle once and for all which sovereign—the coastal states or the federal government—owned the tidelands, and, eventually, the U.S. took its claims to court.[105] The Supreme Court ultimately ruled that the U.S. presumptively holds title to the lands beneath the marginal sea by virtue of national sovereignty, just as the *Martin* and *Pollard* Courts had ruled

---

100 United States v. California, 332 U.S. 19, 35–36 (1947); United States v. Texas, 339 U.S. 707, 718 (1950).

101 Alabama v. Texas, 347 U.S. 272, 273 (1954).

102 *See, e.g.*, United States v. Rands, 389 U.S. 121, 123 (1967); United States v. Chicago, M., St. P. & P. R. Co., 312 U.S. 592, 595 (1941); Gibson v. United States, 166 U.S. 269, 275 (1897).

103 Ernest R. Bartley, The Tidelands Oil Controversy: A Legal and Historical Analysis 4–5 (1953). Though the Supreme Court uses the term "tidelands" only to refer to the strip of land located between the high- and low-water marks, both other courts and journalists have used the term more broadly. Id. at 6 n.7. The term "marginal sea" refers to "that part of the sea within three nautical miles of the shores of a nation, measured outward from low-water mark or from the seaward limit of a bay, river mouth, or other inland water." *Id.* at 9 n.9. Some states claimed even more than three miles of tidelands—Texas, for example, claimed a coastal belt stretching 10.5 miles into the ocean, while Louisiana declared that its boundaries extended 27 marine miles (over 30 standard miles) into the ocean. *Id.* at 57, 82.

104 Bureau of Ocean Energy Mgmt., U.S. Dep't of Interior, Summary of Law—Submerged Lands Act 1 (2013), https://coast.noaa.gov/data/Documents/OceanLawSearch/Summary%20of%20Law%20-%20Submerged%20Lands%20Act.pdf.

105 *See* Bartley, *supra* note 103, at 95–121; William K. Wyant, Westward in Eden: The Public Lands and the Conservation Movement 219–223 (1982); Lucius J. Barker, *The Supreme Court as Policy Maker: The Tidelands Oil Controversy*, 24 J. Pol. 350, 350 (1962).

that states presumptively holds title to the lands beneath navigable waters within their borders because of their own sovereignty.[106] The Court also held that the U.S. possesses the same power to alienate submerged lands that the states possess under *Shively v. Bowlby*.[107] Thus, in the mid-20th century, the Supreme Court applied the regime that governs state ownership of lands beneath navigable waters to federal ownership of such lands.

1. Federal Sovereign Lands

In October 1945, the U.S. filed in the Supreme Court an original action against California.[108] The federal government sought a declaratory judgement making clear that it, rather than the state, "is the owner in fee simple of, or possessed of paramount rights in and powers over, the lands, minerals and other things of value underlying the Pacific Ocean, lying seaward of the ordinary low water mark on the coast of California."[109] California claimed ownership over these lands on the grounds that "a belt extending three English miles from low water mark lies within the original boundaries of the state."[110] Citing *Martin v. Waddell* and *Pollard v. Hagan*, it asserted that "the original thirteen states acquired from the Crown of England title to all lands within their boundaries under navigable waters, including a three-mile belt in adjacent seas," and argued that "since California was admitted as a state on an 'equal footing' with the original states, California at that time became vested with title to all such lands."[111] On the other hand, the federal government argued that because "the thirteen original colonies did not own the marginal belt," the equal footing doctrine does not "apply to lands under the ocean."[112] Further, the U.S. insisted that its constitutional duties to protect the country from overseas security threats and to conduct foreign relations with other nations required "that it have power, unencumbered by state commitments, always to determine what agreements will be made concerning the control and use of the marginal sea and the land under it."[113] Accordingly, the U.S. concluded, the tidelands belong to the federal government "as appurtenances of national sovereignty."[114]

The Court ruled for the federal government. First, it rejected California's claim that "the thirteen original colonies separately acquired ownership to the three-mile belt or

---

106 *See* United States v. California, 332 U.S. 19, 39–40 (1947).

107 *See* Alabama v. Texas, 347 U.S. 272, 273 (1954).

108 BARTLEY, *supra* note 103, at 161.

109 *California*, 332 U.S. at 22. Additionally, California had "negotiated and executed numerous leases with persons and corporations purporting to authorize them to enter upon the described ocean area to take petroleum, gas, and other mineral deposits," and the United States sought "a decree . . . enjoining California and all persons claiming under it from continuing to trespass upon the area in violation of the rights of the United States." *Id.* at 23. Ultimately, *United States v. California* was a dispute over drilling rights. As the Court explained, the case "involves the conflicting claims of federal and state officials as to which government, state or federal, has a superior right to take or authorize the taking of the vast quantities of oil and gas underneath that land." *Id.* at 25.

110 *Id.* at 23.

111 *Id.*

112 *Id.* at 31.

113 *Id.* at 29.

114 *Id.* at 31.

the soil under it, even if they did acquire elements of the sovereignty of the English Crown by their revolution against it."[115] The Court explained that "[a]t the time this country won its independence from England there was no settled international custom or understanding among nations that each nation owned a three-mile water belt along its borders."[116] However, "shortly after we became a nation our statesmen became interested in establishing national dominion over a definite marginal zone to protect our neutrality," and "as a result of their efforts, the idea of a definite three-mile belt in which an adjacent nation can, if it chooses, exercise broad, if not complete dominion, has apparently at last been generally accepted throughout the world."[117] Thus, the "acquisition, as it were, of the three-mile belt, been accomplished by the national Government," rather than by the colonies or the states.[118]

Further, the Court declared that "protection and control" of this three-mile littoral belt "is a function of national external sovereignty."[119] After all, "[t]he ocean, even its three-mile belt, is . . . of vital consequence to the nation in its desire to engage in commerce and to live in peace with the world," and "peace and world commerce are the paramount responsibilities of the nation, rather than an individual state."[120] Therefore, "national interests, responsibilities, and . . . rights are paramount in waters lying to the seaward in the three-mile belt."[121] Accordingly, the Court held that "California is not the owner of the three-mile marginal belt along its coast, and that the Federal Government rather than the state has paramount rights in and power over that belt, an incident to which is full dominion over the resources of the soil under that water area, including oil."[122]

Three years later, in *United States v. Texas*,[123] the Court clarified that even if a state once owned the submerged lands off its coast, ownership of the tidelands passes to the federal government when the state enters the Union. Texas had explained to the Court that, prior to its admission to the Union, the Republic of Texas, "as a sovereign nation," had held title to "the bed and sub-soil of the marginal sea" and that the Joint Resolution annexing Texas had declared that the state would "retain all the vacant and unappropriated lands lying within its limits."[124] Therefore, Texas argued, the state retained title to these lands when it entered the Union.[125] However, the Court rejected Texas' argu-

---

115 *Id.* at 31 (footnote omitted).
116 *Id.* at 32.
117 *Id.* at 33 (footnotes omitted).
118 *Id.* at 34.
119 *Id.*
120 *Id.* at 35.
121 *Id.* at 36; *see also* United States v. Louisiana, 339 U.S. 699, 704 (1950) ("The marginal sea is a national, not a state concern. National interests, national responsibilities, national concerns are involved. The problems of commerce, national defense, relations with other powers, war and peace focus there. National rights must therefore be paramount in that area.").
122 *California*, 332 U.S. at 38–39. The Court disclaimed as dicta language from previous opinions suggesting "that the Court then believed that states not only owned tidelands and soil under navigable inland waters, but also owned soils under all navigable waters within their territorial jurisdiction, whether inland or not." *Id.* at 36.
123 339 U.S. 707 (1950).
124 *Id.* at 713–14.
125 *Id.*

ments. It explained that just as the equal footing doctrine requires that "upon the admission of a state to the Union, the title of the United States to lands underlying navigable waters within the state passes to it," it also "negatives any implied, special limitation of any of the paramount powers of the United States in favor of a State."[126] In other words, "[t]he 'equal footing' clause prevents extension of the sovereignty of a State into a domain of political and sovereign power of the United States from which the other States have been excluded, just as it prevents a contraction of sovereignty which would produce inequality among the States."[127] And given the way in which the "use, disposition, management, and control" of the marginal sea necessarily implicates "national interests and national responsibilities," it follows that "any claim that Texas may have had to the marginal sea was relinquished to the United States" when Texas obtained statehood.[128] In other words, the Constitution's federal structure requires states to relinquish their claims to the ocean's floor in favor of the national government when they enter the Union.[129]

Even though over a century separates the tidelands cases from the Court's original submerged-lands cases, the parallels between *United States v. California* and *Martin v. Waddell's Lessee* prove striking, as do the parallels between *United States v. Texas* and *Pollard v. Hagan*. In the former cases, the Court held that the sovereign presumptively holds title to submerged lands as an incident of sovereignty, and in the latter cases, the Court held that denying a sovereign initial title to those lands would inappropriately take away some portion of that sovereign's sovereignty. Thus, the Supreme Court's submerged-lands jurisprudence rests on the premise that, at both the state and federal levels, submerged lands are sovereign lands.

2. Federal Sovereign Power

Soon after the Supreme Court confirmed that the U.S. held title to the tidelands, the question arose of whether the federal government could alienate those lands. After *United States v. Texas*, the controversy over who owned the land beneath the marginal sea quickly became a national political issue. Republican presidential candidate Dwight Eisenhower campaigned in 1952 on a platform favoring "restoration to the states of their rights to all lands and resources beneath navigable inland and offshore waters within their historic boundaries," while his Democratic opponent, Adlai Stevenson, argued that Congress should not "institute a practice of giving away" national assets to individual states.[130] Similarly, outgoing Democratic President Harry Truman described the Republican proposal as a "hundred billion dollar steal," declaring that "it would be the height of folly for the United States to give away the vast quantities of oil contained in the conti-

---

126 *Id.* at 717.

127 *Id.* at 719–20 (citation omitted).

128 *Id.* at 718; *see also id.* at 719 ("Unless any claim or title which the Republic of Texas had to the marginal sea is subordinated to this full paramount power of the United States on admission, there is or may be in practical effect a subtraction in favor of Texas from the national sovereignty of the United States.").

129 For discussions of the use of structural arguments in Constitutional law, see generally Charles L. Black, Jr., Structure and Relationship in Constitutional Law (1969); Philip Bobbitt, Constitutional Fate: Theory of the Constitution 74–92 (1982).

130 Wyant, *supra* note 105, at 219, 228.

nental shelf and then buy back this same oil at stiff prices for use by the Army, the Navy and the Air Force in defense of the Nation."[131] Of course, Eisenhower won the election, and on May 22, 1953, he signed into law the Submerged Lands Act, which renounced federal title in the lands beneath the marginal sea in favor of the coastal states.[132] The states thus won in Congress what they had failed to win in court: title to the ocean's floor.

But did Congress even possess the power to alienate the tidelands? After all, the *California* and *Texas* cases seem to suggest that the Constitution's federal structure requires the national government to retain control over those lands. However, when Alabama and Rhode Island challenged the Submerged Lands Act's constitutionality on these exact grounds, the Supreme Court summarily rejected their arguments. In a per curiam opinion, the Court declared, "The power of Congress to dispose of any kind of property belonging to the United States 'is vested in Congress without limitation.'"[133] It explained that "Congress not only has a legislative power over the public domain, but it also exercises the powers of the proprietor therein. Congress 'may deal with such lands precisely as an ordinary individual may deal with farming property. It may sell or withhold them from sale.'"[134] This power flows directly from Article 4, Section 3, Clause 2 of the Constitution, which "provides that 'The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States.'"[135] In other words, the Constitution's Property Clause gives the federal government the same plenary power to alienate submerged lands that the states possess under *Shively v. Bowlby*.

In his concurrence, Justice Reed elaborated on why he believed that the Property Clause gives Congress such power. Alabama and Rhode Island, he explained, had argued that because the federal government's "paramount rights" over the marginal sea "arose from the sovereignty of the United States and the duty to provide for the common defense," the tidelands "are held in trust for all the states as a federal responsibility."[136] Therefore, the states reasoned, by ceding these lands to the coastal states, the federal government was compromising "the 'equal footing' among states by extending state power into the domain of national responsibility."[137] However, Justice Reed rejected the states' argument. "The United States holds resources and territory in trust for its citizens

---

131 *Id.* at 229.

132 Barker, *supra* note 105, at 350–51. However, the Submerged Lands Act did not yield the entire continental shelf to the states. Rather, it granted the states property rights extending to their historic boundaries, which ranged from three to 10.5 miles from the coast, depending on the state. Congress confirmed that the rest of the continental shelf remained federal property in August 1953, when it passed the Outer Continental Shelf Lands Act. The federal government had ceded 48,000 square miles of submerged lands beneath the territorial sea to the states, but it retained 805,000 square miles of such lands for itself. WYANT, *supra* note 105, at 232–33.

133 Alabama v. Texas, 347 U.S. 272, 273 (1954) (quoting United States v. Midwest Oil Co., 236 U.S. 459, 490 (1915)).

134 *Id.* (quoting Camfield v. U.S., 167 U.S. 518, 524 (1897)).

135 *Id.* (quoting United States v. City of San Francisco, 310 U.S. 16, 29 (1940)).

136 *Id.* at 274 (Reed, J., concurring).

137 *Id.* (citing United States v. Texas, 339 U.S. 707, 719 (1950); Coyle v. Smith, 221 U.S. 559 (1911)).

in one sense," he declared, but it does not do so "in the sense that a private trustee holds for a cestui que trust."[138] Rather, Congress' responsibility "is to utilize the assets that come into its hands as sovereign in the way that it decides is best for the future of the Nation. That is what it has done here. Such congressional determination as the legislation here in question is not subject to judicial review."[139] In other words, Congress has a duty to dispose of land only in ways that it believes will promote the public interest, but the existence of this duty does not empower courts to review congressional grants of public lands, including grants of submerged lands.

Writing in dissent, Justice Black, who had written the majority opinion in *United States v. California*, articulated a different vision of federal sovereignty. "Ocean waters are the highways of the world," he declared.[140] "Freedom of the seas everywhere is essential to trade, commerce, travel and communication among the nations."[141] Accordingly, "[i]n ocean waters bordering our country, if nowhere else, day-to-day national power—complete, undivided, flexible, and immediately available—is an essential attribute of federal sovereignty."[142] And because the Submerged Lands Act "transferred to the states substantial power over the ocean," this dispute involved "a great deal more . . . than who gets what oil."[143] Rather, the case implicated "the Nation's power to protect the freedom of the seas—a power essential to keep peace and friendship among the nations of the world."[144] Though he did not directly say as much, Justice Black clearly sympathized with the idea that Congress did not possess the power to alienate its sovereign lands.

Justice William O. Douglas, the author of the majority opinion in *United States v. Texas*, explicitly stated what Justice Black did not. He declared, "we are dealing here with incidents of national sovereignty. The marginal sea is not an oil well; it is more than a mass of water; it is a protective belt for the entire Nation over which the United States must exercise exclusive and paramount authority."[145] And that authority "can no more be abdicated than any of the other great powers of the Federal Government. It is to be exercised for the benefit of the whole."[146] Accordingly, "unless we are to change our form of government, that domain must by its very nature attach to the national government and the authority over it remain nondelegable."[147] In other words, the nature of federal sovereignty prevents Congress from alienating the tidelands, and, accordingly, the Court should have struck down its attempt to do so.

Of course, Justices Black's and Douglas' views did not prevail. The majority instead adopted the view that the Property Clause gives Congress plenary power to alienate submerged lands. Thus, over the course of the tidelands controversy, the Supreme Court augmented the federal government's sovereignty by first awarding it title to the tidelands and then allowing it to alienate those lands. Once again, but now in the federal rather

---

138 *Id.* at 277.
139 *Id.*
140 *Id.* at 278 (Black, J., dissenting).
141 *Id.*
142 *Id.*
143 *Id.* at 280–81.
144 *Id.* at 281.
145 *Id.* at 282 (Douglas, J., dissenting).
146 *Id.*
147 *Id.*

than the state context, we see the Court's submerged-lands cases protecting and expanding sovereign power.

B. The Navigation Servitude

What powers does the federal government have over submerged lands once it has granted them away? After all, *Illinois Central* makes it clear that states can revoke submerged-lands grants without compensating the grantee. Further examination of the Supreme Court's submerged-lands cases reveals that the U.S. possesses this same power, under a doctrine known as the navigation servitude.

The navigation servitude derives from the federal government's power to regulate interstate commerce.[148] As Chief Justice John Marshall explained in *Gibbons v. Ogden*, the word "commerce," as used in the Constitution, "comprehends, and has been always understood to comprehend, navigation within its meaning; and a power to regulate navigation, is as expressly granted, as if that term had been added to the word 'commerce.'"[149] And, the Court later elaborated, Congress' power to regulate navigable waters "necessarily includes the power to keep them open and free from any obstruction to their navigation."[150] Accordingly, "although the title to the shore and submerged soil is in the various states, and individual owners under them," such titles are "always subject to the servitude in respect of navigation created in favor of the federal government by the constitution."[151] This "navigational servitude . . . gives rise to an authority in the Government to assure that [navigable] streams retain their capacity to serve as continuous highways for the purpose of navigation in interstate commerce."[152] In other words, the Commerce Clause gives the federal government the power to ensure that navigable waters remain navigable.

As part of its power to regulate navigation, Congress can condemn land beneath navigable waters without compensating owners.[153] Of course, the federal government always has the power to take private property if it pays just compensation.[154] However, in cases where it applies, "the navigational easement generally obviates the obligation to pay compensation at all."[155] Such cases do not implicate the Fifth Amendment's Takings Clause because Unites States' navigable waters "are the public property of the nation."[156]

---

148 *See* U.S. Const. art. I, sec. 8, cl. 10 (empowering Congress "[t]o regulate commerce with foreign Nations, and among the several States, and with the Indian Tribes").

149 Gibbons v. Ogden, 22 U.S. 1, 193 (1824); *see also* Gilman v. City of Philadelphia, 70 U.S. 713, 724–25 (1865) ("Commerce includes navigation. The power to regulate commerce comprehends the control for that purpose, and to the extent necessary, of all the navigable waters of the United States which are accessible from a State other than those in which they lie."); Kaiser Aetna v. United States, 444 U.S. 164, 173 (1979) ("It has long been settled that Congress has extensive authority over this Nation's waters under the Commerce Clause.").

150 *Gilman*, 70 U.S. at 725.

151 Gibson v. United States, 166 U.S. 269, 271–72 (1897).

152 *Kaiser Aetna*, 444 U.S. at 177.

153 *See* United States v. Rands, 389 U.S. 121, 121 (1967).

154 U.S. Const. amend. V ("[N]or shall private property be taken for public use, without just compensation.").

155 United States v. Winstar Corp., 518 U.S. 839, 879 n.23 (1996).

156 Gilman v. City of Philadelphia, 70 U.S. 713, 724–25 (1865).

Though a private party can hold title to lands beneath navigable waters under state law, "the interest of a riparian owner in the submerged lands in front of his upland bordering on a public navigable water" remains "at all times subordinate to such use of the submerged lands and of the waters flowing over them as may be consistent with or demanded by the public right of navigation."[157] Thus, when Congress assumes control over "the bottom of [a] river . . . , it is not thereby taking private property for a public use."[158] After all, "the owner's title was in its very nature subject to that use in the interest of public navigation."[159]

For example, in *United States v. Chandler-Dunbar Water Power Co.*, a power company sought compensation after the federal government condemned its submerged lands underneath the St. Marys River, on the Michigan-Canada border.[160] The Court rejected this claim, explaining that while the company's "technical title" under state law "includes the bed of the river,"[161] such title "is subordinate to the public right of navigation, and however helpful in protecting the owner against the acts of third parties, is of no avail against the exercise of the great and absolute power of Congress over the improvement of navigable rivers."[162] For this reason, Congress' actions did "not deprive the Chandler-Dunbar Company of private property rights,"[163] and the government accordingly did not need to compensate the company for the submerged lands that it had condemned.[164] Similarly, in *United States v. Chicago, Milwaukee, St. Paul, and Pacific Railroad Company*, after "[t]he United States raised the level of [a] navigable river above its ordinary high-water mark," the Supreme Court "declined to allow compensation for the damage caused to the segment of the respondent's embankment which concededly was located on land within the bed of the river."[165] The Court explained that the federal government's "dominant power . . . extends to the entire bed of a stream" and that its "exercise of the power within these limits is not an invasion of any private property right in such lands for which the United States must make compensation."[166] After all, any damage that occurs in such cases "results not from a taking of the riparian owner's property in the stream bed, but from the lawful exercise of a power to which that property has always been subject."[167]

---

157 Scranton v. Wheeler, 179 U.S. 141, 163 (1900).

158 United States v. Chandler-Dunbar Water Power Co., 229 U.S. 53, 62 (1913); *see also* United States v. Kansas City Life Ins. Co., 339 U.S. 799, 808 (1950) ("When the Government exercises [the navigation] servitude, it is exercising its paramount power in the interest of navigation, rather than taking the private property of anyone.").

159 *Chandler-Dunbar Water Power Co.*, 229 U.S. at 62.

160 *Id.* at 55–56.

161 *Id.* at 60–61.

162 *Id.* at 62.

163 *Id.* at 72.

164 *Id.* at 74 (holding that "the court below erred in awarding $550,000, or any other sum . . . to the Chandler-Dunbar Company as riparian owners of the shore and appurtenant submerged land"). However, the Court made it clear that "compensation must be made for the upland taken." *Id.* at 58.

165 United States v. Kansas City Life Ins. Co., 339 U.S. 799, 808 n.7 (1950).

166 United States v. Chi., Milwaukee, St. Paul. & Pac. R.R. Co., 312 U.S. 592, 596–97 (1941).

167 *Id.* For further examples of the Supreme Court denying compensation when the federal government acted pursuant to its power under the navigation servitude, see Lewis Blue

However, no case better illustrates the similarity between the navigation servitude and *Illinois Central*'s public trust doctrine than *United States v. Cherokee Nation of Oklahoma*.[168] In *Cherokee Nation*, the U.S. had granted the Cherokee Tribe "fee simple title to the riverbed underlying specified portions of the Arkansas River in Oklahoma"[169] and then subsequently made a series of navigational improvements to the river that caused "the loss of valuable deposits of sand, gravel, and coal."[170] Accordingly, the Cherokee Tribe sued the U.S., arguing that its actions constituted "a taking under the Fifth Amendment of the Tribe's riverbed interests without just compensation."[171] However, the government argued "that its navigational servitude precluded liability for the alleged taking,"[172] and the Court agreed. The Court explained that the "proper exercise of [the navigation servitude] is not an invasion of any private property rights in the stream or the lands underlying it."[173] Rather, "the damage sustained" in such cases "result[s] . . . from the lawful exercise of a power to which the interests of riparian owners have always been subject."[174]

The similarity between *Illinois Central* and *Cherokee Nation* proves striking. In both cases, the sovereign made a fee simple grant of submerged lands, with Illinois granting

---

Point Oyster Cultivation Co. v. Briggs, 229 U.S. 82 (1913) (holding that no taking occurred after the United States destroyed an oyster bed that had been cultivated on privately held submerged lands), and United States v. Twin City Power Co., 350 U.S. 222 (1956) (denying compensation for loss in water power due to the government impairing the flow of a navigable river), and United States v. Rands, 389 U.S. 121, 121 (1967) (holding that the United States need not compensate a riparian landowner for any part of a condemned parcel's value that is attributable to its access to navigable water). At first glance, the Supreme Court's decision in *Kaiser Aetna* appears to cut against this long line of cases. Kaiser Aetna v. United States, 444 U.S. 164 (1979). In that case, the Court insisted that it had "never held that the navigational servitude creates a blanket exception to the Takings Clause whenever Congress exercises its Commerce Clause authority to promote navigation." *Id.* at 172. However, the *Kaiser Aetna* Court acknowledged that in many takings cases involving "the exercise of the public right of navigation over interstate waters that constitute highways for commerce, . . . this Court has held . . . that compensation may not be required as a result of the federal navigational servitude." *Id.* at 175. Further, the Court treated *Kaiser Aetna* almost dismissively in its next case regarding the relationship between the navigation servitude and the Fifth Amendment. *See* United States v. Cherokee Nation of Oklahoma, 480 U.S. 700, 704 (1987) (quoting *Kaiser Aetna*, 444 U.S. at 172). Finally, in *Lucas v. South Carolina Coastal Council*, the Court specifically described the "navigational servitude" as the type of "pre-existing limitation upon the landowner's title" that creates an exception to the Fifth Amendment's compensation requirement. Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1028–29 (1992) (citing Scranton v. Wheeler, 179 U.S. 141, 163 (1900)). For reasons explained in *infra* Part V, we should read *Kaiser Aetna* to limit the bodies of water to which the navigation servitude applies rather than to limit Congress' powers when acting pursuant to the servitude.

168 United States v. Cherokee Nation of Okla., 480 U.S. 700 (1987).

169 *Id.* at 701 (citing Choctaw Nation v. Oklahoma, 397 U.S. 620 (1970)).

170 Cherokee Nation of Okla. v. United States, 782 F.2d 871, 873 (10th Cir. 1986).

171 *Cherokee Nation of Okla.*, 480 U.S. 700, 702 (1987).

172 *Id.*

173 *Id.* (quoting United States v. Rands, 389 U.S. 121, 123 (1967)).

174 *Id.* (quoting *Rands*, 389 U.S. at 123).

the Chicago waterfront to the Illinois Central Railroad Company in the former and the U.S. granting a portion of the Arkansas River's bed to the Cherokee Nation in the latter. In both cases, the sovereign subsequently revoked at least a portion of that grant, Illinois by voiding the conveyance entirely and the U.S. by destroying mineral deposits located within the granted land. Finally, in both cases the Supreme Court validated the sovereign's action in the name of public rights rather than requiring the government to pay compensation. In short, the rule governing *Illinois Central* also governs *Cherokee Nation*. Both doctrines allow sovereigns to revoke submerged-lands grants without compensating the titleholder. The navigation servitude is the public trust doctrine applied to the federal government.

Thus, the same regime governs both state and federal ownership of submerged lands. In each case, the sovereign presumptively holds title to certain types of submerged lands, can alienate submerged lands whenever it chooses, and possesses the power to revoke submerged-lands grants without compensating the grantee. Because the state and federal governments are different types of sovereigns, the public trust doctrine naturally applies to each of them for different reasons—the states enjoy these powers simply by virtue of their sovereignty, while the national government possesses them as a result of the Property Clause, the Commerce Clause, and the Constitution's federal structure. But regardless of their legal source and the sovereign to which they apply, the doctrines that relate to governmental ownership of submerged lands consistently attempt to protect the public's rights in such lands by augmenting, rather than restricting, sovereign power.

IV. Potential Objections to the Federal Public Trust Doctrine

Two potential objections to the regime governing submerged lands described above readily present themselves. First, how can we reconcile the Supreme Court's sweeping view of sovereign power over submerged lands with the numerous state public trust doctrines that restrict the legislature's power over such lands? Second, if the federal public trust doctrine purports to empower sovereigns to condemn submerged lands without compensating landowners, how does it not violate the Fifth Amendment's Takings clause?

A. State Public Trust Doctrines

In some states, the public trust doctrine limits the legislature's ability to alienate submerged lands.[175] However, the existence of these state law doctrines in no way contravenes the above argument that, as a matter of federal law, both the states and the federal government possess the sovereign power both to alienate lands beneath navigable waters to private parties and to revoke grants of such lands without compensating the grantee. Rather, these doctrines simply demonstrate that states possess the sovereign power to place restrictions on their own ability to dispose of such lands.

States have the power to decide for themselves what restrictions if any, to place on their own ability to dispose of lands beneath navigable waters. The Supreme Court has explained that "the nature and extent of the rights of the state and of riparian owners in

175 *See infra* notes 179–184 and accompanying text.

navigable waters within the state and to the soil beneath are matters of state law to be determined by the statutes and judicial decisions of the state."[176] Even though "equal-footing cases have noted that the State takes title to the navigable waters and their beds in trust for the public, the contours of that public trust do not depend upon the Constitution."[177] Rather, "the States retain residual power to determine the scope of the public trust over waters within their borders."[178] In other words, states have plenary power to determine the terms of the trust that governs their ownership of submerged lands.

Some states have adopted a public trust doctrine that empowers courts to void legislative dispositions of lands beneath navigable waters. For example, in *People ex rel. Scott v. Chicago Park District*, the Illinois Supreme Court voided a "conveyance by the State of Illinois of 194.6 acres of land submerged in waters of Lake Michigan to the United States Steel Corporation" on the grounds that the conveyance "violated the public trust doctrine."[179] The court explained that "the state holds title to submerged land . . . in trust for the people" and that accordingly it would not uphold a grant of such lands if the grant's "primary purpose was to benefit a private interest."[180] Similarly, in *Lake Michigan Federation v. U.S. Army Corps of Engineers*, a federal district court in Chicago invalidated the Illinois Legislature's grant of 18.5 acres of land beneath Lake Michigan to Loyola University under the Illinois public trust doctrine, finding that "the primary purpose of the grant is to satisfy a private interest."[181] The court rejected the idea that it owed any deference to the legislature's determination that the project did not violate the public trust, declaring that the "very purpose of the public trust doctrine is to police the legislature's disposition of public lands."[182] Other states apply the public trust doctrine in a similar manner. The California Supreme Court has described the public trust as, in part, "an affirmation of the duty of the state to protect the people's common heritage of streams, lakes, marshlands and tidelands."[183] And an Arizona appeals court has held that "the legislative and executive branches are judicially accountable for their dispositions of the public trust."[184]

However, states need not restrict their ability to dispose of submerged lands. The Supreme Court has explained that "the individual States have the authority to define the limits of the lands held in public trust and to recognize private rights in such lands as they see fit."[185] After all, "[s]ome of the original States . . . recognize[d] more private interests in tidelands than did others of the 13," and indeed, "many coastal States, as a

---

176 Fox River Paper Co. v. R.R. Comm'n of Wis., 274 U.S. 651, 655 (1927) (citations omitted).

177 PPL Montana, LLC v. Montana, 565 U.S. 576, 603–04 (2012) (citing Shively v. Bowlby, 152 U.S. at 49, 15–17, 24, 46).

178 *Id.* at 60.

179 People *ex rel.* Scott v. Chi. Park Dist., 360 N.E.2d 773, 775 (1976).

180 *Id.* at 780; *see also id.* at 780 ("Lake Michigan is a valuable natural resource belonging to the people of this State in perpetuity, and any attempted ceding of a portion of it in favor of a private interest has to withstand a most critical examination." (citations omitted)).

181 Lake Mich. Fed. v. U.S. Army Corps of Engineers, 742 F. Supp. 441, 445 (N.D. Ill. 1990).

182 *Id.* at 446.

183 Nat'l Audubon Soc'y v. Superior Court, 658 P.2d 709, 724 (Cal. 1983).

184 Ariz. Ctr. for Law in Pub. Interest v. Hassell, 837 P.2d 158, 169 (Ariz. Ct. App. 1991).

185 Phillips Petrol. Co. v. Mississippi, 484 U.S. 469, 475 (1988) (citing Shively v. Bowlby, 152 U.S. 1, 26 (1894)).

matter of state law, granted all or a portion of their tidelands to adjacent upland property owners long ago."[186] For example, in Pennsylvania, "[t]he title of the riparian owner, derived by grant from the state, extends to low-water mark."[187] Similarly, in Massachusetts, "the common law of [England] was altered by an ordinance, providing that the proprietor of land adjoining on the sea or salt water, shall hold to low water mark."[188] Of course, many states where "tidelands are privately held" still recognize "public rights to use the tidelands for the purposes of fishing, hunting, bathing, etc."[189] However, a state need not recognize such rights. "If the state chooses to resign to the riparian proprietor sovereign rights over navigable rivers which it acquired upon assuming statehood, it is not for others to raise objections."[190]

Thus, the states possess plenary power to define the terms of the trust in which they hold the submerged lands that they receive upon entering the Union. They can prevent the legislature from alienating lands beneath navigable waters at all, grant such lands to private parties but retain public easements, or completely relinquish all public rights in submerged lands.[191] Once again, we see the federal public trust doctrine empowering sovereigns—this time, by allowing states to restrict their own power if they choose to do so.

B. Takings

Even though states may relinquish their claims to lands beneath navigable waters, *Illinois Central* suggests that states always retain the power to reassert those claims without compensating the landowner.[192] At first glance, this doctrine appears to violate the Fifth Amendment's Takings Clause.[193] After all, the Illinois Legislature initially granted the Chicago waterfront to Illinois Central "in fee."[194] Thus, when the Legislature subsequently revoked the grant, it transferred from the railroad company to the state an apparently absolute property interest. Such a forced transfer of fee simple title seems on its face to constitute a compensable taking. Indeed, the dissenting justice in *Illinois Central* argued as much, stating that if Illinois had "reason to doubt the prudence of her legislature in entering into the contract created by the passage and acceptance of the act of 1869, she can take the rights and property of the railroad company in these lands by a

---

186 *Id.* at 483 n.12 (citing Bradford v. Nature Conservancy, 294 S.E.2d 866, 873–74 (Va. 1982)). The Court is here using the term "tidelands" to refer to the strip of land between the high- and low-water marks rather than to the lands beneath the marginal sea. *See supra* note 103.

187 Tinicum Fishing Co. v. Carter, 61 Pa. 21, 30 (Pa. 1869).

188 Storer v. Freeman, 6 Mass. 435, 438 (Mass. 1810).

189 *Phillips Petroleum*, 484 U.S. at 483.

190 Fox River Paper Co. v. R.R. Comm'n of Wis., 274 U.S. 651, 655 (1927) (citing Barney v. City of Keokuk, 94 U.S. 324, 338 (1876)).

191 For a description of the variety of state public trust doctrines, see *Eastern Public Trust Doctrines*, *supra* note 8, and *Western Public Trust Doctrines*, *supra* note 8. *See also* Merrill, *supra* note 6, at 261–83.

192 *See supra* text accompanying notes 93–99.

193 U.S. Const. amend. V ("[N]or shall private property be taken for public use, without just compensation.").

194 Ill. Cent. R.R Co. v. Illinois, 146 U.S. 387, 448 (1892).

constitutional condemnation of them."[195] However, the majority chose to allow the Legislature to revoke its fee simple grant rather than to accept the dissent's argument that the state should have used its eminent domain power. Can *Illinois Central* be reconciled with the Fifth Amendment? Why would a revocation of a fee simple grant of submerged lands not require compensation?[196]

Two answers to this question readily present themselves. First, *Martin*, *Pollard*, *Shively*, and *Illinois Central* all make it clear that lands beneath navigable waters are public property. Accordingly, such lands fall outside the scope of the Takings Clause, which by its plain text only applies to private property.[197] Second, the public trust doctrine provides exactly the sort of "pre-existing limitation upon the landowner's title" that, as the Supreme Court explained in *Lucas v. South Carolina Coastal Council*, allows the government to avoid liability when faced with a takings claim.[198] Since the sovereign always retains the right to revoke grants of submerged lands, no taking occurs when it exercises this power. Of course, these two reasons why the public trust doctrine does not violate the Takings Clause complement each other. The state retains the right to revoke grants of lands beneath navigable waters precisely because such lands are first and foremost public property.

Indeed, state and lower federal courts have reasoned along these lines in holding that the public trust doctrine defeats takings claims. For example, in *Esplanade Properties, LLC v. City of Seattle*, the Ninth Circuit rejected Esplanade Properties' compensation claim after Seattle rejected its application to develop submerged property.[199] The court explained that because Esplanade's proposed development "would have been inconsistent with the public trust doctrine," it "never constituted a legally permissible use."[200] Accordingly, the "plaintiff's claimed property right never existed,"[201] and the Fifth

---

195 *Id.* at 474 (Shiras, J., dissenting).

196 Scholars have previously suggested that the public trust doctrine might violate the Fifth Amendment. *See, e.g.*, Huffman, *supra* note 36, at 173–76, 204–08, 210–11; Brady, *supra* note 36, at 1416–20, 1452–55; Sax, *supra* note 3, at 557. For an argument that the public trust doctrine provides a background principles defense to a takings claim, see John D. Echeverria, *The Public Trust Doctrine as a Background Principles Defense in Takings Litigation*, 45 U.C.D. L. REV. 931 (2012).

197 U.S. CONST. amend. V ("[N]or shall *private* property be taken for public use, without just compensation.") (emphasis added).

198 Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1028–29 (1992). The *Lucas* Court explained that "our 'takings' jurisprudence . . . has traditionally been guided by the understandings of our citizens regarding the content of, and the State's power over, the 'bundle of rights' that they acquire when they obtain title to property." *Id.* at 1027. Accordingly, when "existing rules or understandings that stem from an independent source such as state law" limit an owner's property rights, "the Takings Clause does not require compensation." *Id.* at 1030 (citation omitted).

199 Esplanade Properties, LLC v. City of Seattle, 307 F.3d 978, 980 (9th Cir. 2002).

200 *Id.* at 987. Under Washington law, the public trust doctrine provides that when the state sells tidelands to private parties, the public retains the "right 'of navigation, together with its incidental rights of fishing, boating, swimming, water skiing, and other related recreational purposes.'" *Id.* at 985. The court found that the development "would have interfered with those uses." *Id.* at 987.

201 *Id.* at 985.

Amendment "does not supply [the] plaintiff with . . . a right to indemnification."[202] Similarly, in *McQueen v. South Carolina Coastal Council*, the South Carolina Supreme Court held that "McQueen's ownership rights do not include the right to backfill or place bulkheads on public trust land and the State need not compensate him for the denial of permits to do what he cannot otherwise do."[203] And in *Glass v. Goeckel*, the Michigan Supreme Court declared, "The state cannot take what it already owns. Because private littoral title remains subject to the public trust, no taking occurs when the state protects and retains that which it could not alienate: public rights held pursuant to the public trust doctrine."[204]

The Supreme Court's navigation servitude cases confirm that the Fifth Amendment does not require states to compensate landowners when it revokes grants of submerged lands. As discussed above, the navigation servitude empowers the federal government to condemn submerged lands without compensating landowners because submerged lands are public, rather than private, property and because the servitude is a preexisting limitation that inheres in a landowner's title.[205] And if the federal government possesses the power to condemn submerged lands without paying compensation, then the states have the same power. As the Court has explained, for the purpose of regulating navigation, "Congress possesses all the powers which existed in the States before the adoption of the national Constitution."[206] In other words, if the federal navigation servitude does not violate the Fifth Amendment, then neither does *Illinois Central*'s public trust doctrine.

V. The Scope of the Federal Public Trust Doctrine

We have seen that the federal public trust doctrine effectively functions as an affirmative defense to takings claims. However, the scope of this defense still must be determined. The cases discussed so far in this Article all involved submerged lands, the paradigmatic resource to which the public trust doctrine applies. Does the public trust doctrine also apply to other resources? Scholars have vigorously argued that the doctrine should apply to a wide array of natural resources,[207] and indeed many states have expanded the scope of their public trust doctrines.[208] However, the Supreme Court's public-lands caselaw suggests not only that the federal public trust doctrine only applies to

202 *Id.* at 987.

203 McQueen v. S.C. Coastal Council, 580 S.E.2d 116, 120 (S.C. 2003).

204 Glass v. Goeckel, 703 N.W.2d 58, 78 (Mich. 2005)

205 *See supra* text accompanying notes 153–159.

206 Gilman v. City of Phila., 70 U.S. 713, 725 (1865).

207 *See, e.g.*, Sax, *supra* note 3, 556–57; Wood, *supra* note 5, at 144–61; *Headwaters of the Public Trust*, *supra* note 4, at 465–70; Torres & Bellinger, *supra* note 5, at 286–88, 297–310. *But see* Thomas W. Merrill & Henry E. Smith, Property: Principles and Policies 270 (3d ed. 2017).

208 *See, e.g.*, Nat'l Audubon Soc'y v. Superior Court, 33 Cal. 3d 419, 437 (Cal. 1983) (nonnavigable tributaries of navigable streams); Paepcke v. Public Bldg. Comm'n, 263 N.E.2d 11, 15 (Ill. 1970) (public parks); Van Ness v. Borough of Deal, 393 A.2d 571, 574 (N.J. 1978) (dry sand beaches).

lands beneath navigable waters but also that, in certain situations, it does not apply even to those lands.

The federal public trust doctrine rests on the premise that lands beneath navigable waters enjoy a special legal status. *Shively v. Bowlby* makes this point clearly, explaining that the law treats submerged lands differently than uplands because they have little private value but tremendous public value.[209] Modern cases have elaborated on this idea. The Court has explained that "navigable waters uniquely implicate sovereign interests."[210] Accordingly, "lands underlying navigable waters have historically been considered 'sovereign lands.' State ownership of them has been 'considered an essential attribute of sovereignty.'"[211] This unique relationship between submerged lands and sovereignty explains why the original thirteen states "claimed title to the lands under navigable waters within their boundaries as the sovereign successors to the English Crown,"[212] "underlies the equal footing doctrine,"[213] and justifies the rule "that the United States is presumed to have held navigable waters in acquired territory for the ultimate benefit of future States."[214] *Illinois Central* similarly "invoked the principle in American law recognizing the weighty public interests in submerged lands."[215] In short, the Court views its submerged lands jurisprudence as "a natural outgrowth of the perceived public character of submerged lands, a perception which underlies and informs the principle that these lands are tied in a unique way to sovereignty."[216]

Given the Court's frequent statements that submerged lands enjoy a special legal status, it seems natural to conclude that the legal regime governing such lands, including the public trust doctrine, does not apply to other resources. The Court's decision in *Fletcher v. Peck* confirms this intuition. In *Fletcher*, the Court held that the Georgia Legislature's attempt to repeal a law granting non-submerged lands to a private party violated the Constitution's Contracts Clause.[217] Why did the Court allow Illinois to revoke a fee simple land grant in *Illinois Central* but prevent Georgia from doing so in *Fletcher*? Quite simply, Illinois was revoking a grant of submerged lands while Georgia was revoking an uplands grant. *Fletcher* thus makes it clear that the public trust doctrine, which empowers sovereigns to revoke fee simple land grants, only applies to lands beneath navigable waters.

Moreover, the public trust doctrine does not apply to all lands beneath navigable waters. The Supreme Court's decision in *Kaiser Aetna v. United States* demonstrates this point. In that case, after the owners of Kuapa Pond dredged a channel connecting that previously non-navigable body of water to the Pacific Ocean, the government claimed that the pond had become a "navigable water of the United States" and that the public had "thereby acquired a right to use Kuapa Pond as a continuous highway for naviga-

---

209 *See supra* text accompanying notes 69–70.
210 Idaho v. Coeur d'Alene Tribe of Idaho, 521 U.S. 261, 284 (1997).
211 *Id.* at 283 (quoting Utah Div. of State Lands v. United States, 482 U.S. 193, 195 (1987)).
212 *Utah Div. of State Lands*, 482 U.S. at 196.
213 *Coeur d'Alene Tribe of Idaho*, 521 U.S. at 284.
214 *Id.* at 283.
215 *Id.* at 285.
216 *Id.* at 286.
217 Fletcher v. Peck, 10 U.S. 87, 135–39 (1810).

tion."[218] But the Court rejected the government's argument, holding instead that the U.S. "may not, without invoking its eminent domain power and paying just compensation, require [the pond owners] to allow free access to the dredged pond."[219] The Court explained that the navigation servitude empowers Congress to ensure that navigable waterways "retain their capacity to serve as continuous highways for the purpose of navigation in interstate commerce."[220] However, "prior to its improvement, Kuapa Pond was incapable of being used as a continuous highway."[221] Therefore, the pond "is not the sort of 'great navigable stream' that this Court has previously recognized as being '[incapable] of private ownership.'"[222] In other words, the federal public trust doctrine does not apply to lands beneath previously non-navigable bodies of water that only became navigable because of improvements made by private owners.[223]

A further limitation applies specifically to state governments. The Court held in *Summa Corporation v. California* that a state cannot condemn submerged lands without compensating the landowner if the title to those lands properly originates in a federal law or treaty and does not mention the state's public trust interest.[224] *Summa Corporation* seems like a straightforward application of the Supremacy Clause—the public trust doctrine does not empower states to override federal laws. While the federal government can condemn lands beneath navigable waters without compensation even when the state made the initial grant of such lands, states can only revoke submerged-lands grants that they initially made.

Fletcher, *Kaiser Aetna*, and *Summa Corporation* thus narrow the federal public trust doctrine's scope. Though the doctrine offers governments an affirmative defense to takings claims, it does not apply in every case. The doctrine only empowers sovereigns in a limited domain. Accordingly, before deciding that the federal public trust doctrine obvi-

---

218 Kaiser Aetna v. United States, 444 U.S. 164, 167, 170 (1979).

219 *Id.* at 180.

220 *Id.* at 177.

221 *Id.* at 178.

222 *Id.* at 178–79 (citation omitted) (alteration in original). *Kaiser Aetna* contains dicta stating that the Court has "never held that the navigational servitude creates a blanket exception to the Takings Clause whenever Congress exercises its Commerce Clause authority to promote navigation." *Id.* at 172. However, as explained in Part III.B, both the *Kaiser Aetna* opinion itself and the Court's subsequent cases give us good reason to discount this statement. *See supra* note 167. Accordingly, we should read *Kaiser Aetna* as limiting the bodies of water to which the navigation servitude applies rather than restricting Congress' powers in cases where the servitude does apply.

223 *See also* Vaughn v. Vermilion Corp., 444 U.S. 206, 208 (1979) (holding that "channels built on private property and with private funds, in such a manner that they ultimately join with other navigable waterways," are not "open to use by all citizens of the United States").

224 Summa Corp. v. California *ex rel.* State Lands Comm'n, 466 U.S. 198, 200–01, 204–05, 209 (1984). California argued that the public trust doctrine enabled the City of Los Angeles to make improvements to a lagoon "without having to exercise its power of eminent domain." *Id.* at 200. However, the Court held that because the lagoon owners derived their title from a federal patent that "made no mention of any public trust interest such as the one asserted by California in the present proceedings" and had been issued as part of "this country's obligations under the Treaty of Guadalupe Hidalgo," the public trust doctrine did not apply to the property. *Id.* at 204, 206.

ates the need to compensate a takings claimant, courts must first determine whether the doctrine applies to the regulated property.

VI. Conclusion

In cases where it applies, the federal public trust doctrine empowers, rather than constrains, the sovereign by allowing it to revoke grants of submerged lands without compensating the grantee. This analysis has at least three significant implications for modern public trust doctrine cases. First, courts should dismiss claims that the doctrine obligates the federal government to take affirmative action to protect natural resources.[225] The Supreme Court's submerged-lands jurisprudence makes it clear that the federal public trust doctrine does not create any rights that citizens can enforce against the government in court.[226] Second, courts should reject arguments that state governments violate the Takings Clause by prohibiting the development of submerged lands or guaranteeing public access to such lands. After all, the greater power to revoke grants of submerged lands surely includes the lesser power to revoke development rights or condemn an easement. Third, states that have adopted a restrictive public trust doctrine based on a misreading of *Illinois Central* should consider whether they wish to keep this form of the doctrine.[227]

Admittedly, environmentalists might find themselves disappointed by this account of the public trust doctrine. After all, many of those who have argued that the public trust doctrine restricts sovereign power have also argued that activists could use the doctrine to further environmentalist objectives.[228] However, those who care about the planet's future might have good reasons to prefer the version of the public trust doctrine described in this article to both the traditional and modern academic accounts of the doctrine. The example of Illinois, which has adopted a public trust doctrine that limits the state's ability to alienate lands beneath navigable waters, shows that the traditional version of the doctrine proves both over- and underinclusive in its efforts to protect the public's rights in submerged lands. Illinois courts have struck down development projects that would seem to benefit the public on the grounds that the state has made a fee simple grant of submerged lands to a private party but have upheld projects with dubious public benefits on the grounds that the state leased, rather than sold, the submerged

225 *See, e.g.*, cases cited in *supra* note 22.

226 This article takes no position on whether legal doctrines other than the federal public trust doctrine may or may not require the federal government to take affirmative action to combat climate change.

227 *See supra* note 37 and accompanying text.

228 *See, e.g.*, Sax, *supra* note 3, at 474 ("Of all the concepts known to American law, only the public trust doctrine seems to have the breadth and substantive content which might make it useful as a tool of general application for citizens seeking to develop a comprehensive legal approach to resource management problems."); *see also* Wood, supra note 5, at xviii–xix.

lands at issue.[229] This form of the doctrine offers a blunt instrument for protecting environmental interests—standing doctrine, nuisance law, and administrative law can all more effectively enable litigants to use the courts to accomplish preservationist ends than can the traditional public trust doctrine.[230] And while the new account of the doctrine that environmentalists have put forth in recent years, which holds that the public trust imposes on the federal government an affirmative obligation to protect all natural resources from climate change,[231] might prove better able to protect environmental interests, it ultimately asks courts to do a thing that they cannot do. As the Ninth Circuit recently made clear, federal courts simply do not possess the resources or expertise necessary to oversee the federal government's efforts to combat climate change.[232] Further, both the traditional and modern accounts of the public trust doctrine suffer from obvious democratic legitimacy issues. Why should unelected judges have the power to overturn legislative decisions regarding publicly owned resources?[233]

In contrast, a public trust doctrine that empowers the sovereign not only aligns more with democratic values but also might prove more successful at combating climate change. Though environmental activists have long distrusted the administrative state,[234] there is no a priori reason to believe that judges will prove more sympathetic to environmental interests than administrators.[235] Further, administrators possess resources, expertise, and flexibility that courts do not.[236] In recent years, scholars of "administrative constitutionalism"[237] have shown how bureaucrats played a crucial role in creating and

---

229 *Compare* Lake Mich. Fed'n v. U.S. Army Corps of Eng'rs, 742 F. Supp. 441 (N.D. Ill. 1990), *with* Friends of the Parks v. Chicago Park Dist., 786 N.E.2d 161 (Ill. 2003); *see also* MERRILL & SMITH, *supra* note 207, at 269.

230 *See* Lazarus, *supra* note 10, at 658–91.

231 *See supra* note 5 and accompanying text.

232 *See* Juliana v. United States, 947 F.3d 1159, 1164–65 (9th Cir. 2020) (explaining that Article III courts simply do not possess the "constitutional power" to issue "an order requiring the government to develop a plan to 'phase out fossil fuel emissions and draw down excess atmospheric CO_2'").

233 For arguments that the traditional account of the public trust doctrine is undemocratic, see James L. Huffman, *Trusting the Public Interest to Judges: A Comment on the Public Trust Writings of Professors Sax, Wilkinson, Dunning and Johnson*, 63 DENV. U. L. REV. 565, 574–76 (1986); James L. Huffman, *A Fish out of Water: The Public Trust Doctrine in a Constitutional Democracy*, 19 ENV'T L. 527, 565–68 (1989); William D. Araiza, *Democracy, Distrust, and the Public Trust: Process-Based Constitutional Theory, the Public Trust Doctrine, and the Search for a Substantive Environmental Value*, 45 UCLA L. Rev. 385, 403–33 (1997). For defenses of the doctrine's democratic legitimacy, see Sax, *supra* note 3, at 557–561; Michael C. Blumm, *Public Property and the Democratization of Western Water Law: A Modern View of the Public Trust Doctrine*, 19 ENV'T L. 573, 580, 595–97 (1989).

234 *See* Paul Sabin, *Environmental Law and the End of the New Deal Order*, 33 L. & HIST. REV. 971, 974–981 (2015); Sax, *supra* note 3, at 473–74; Mary Christina Wood, *Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part 1): Ecological Realism and the Need for a Paradigm Shift*, 39 ENV'T L. 43, 54–61 (2009); WOOD, *supra* note 5, at 49–122.

235 *See* Lazarus, *supra* note 10, at 712.

236 *See id.* at 688–91, 712–13; Merrill, *supra* note 6, at 284–85.

237 *See generally* Gillian E. Metzger, *Administrative Constitutionalism*, 91 TEX. L. REV. 1897 (2013).

expanding public rights in areas such as racial and gender equality,[238] social welfare,[239] privacy,[240] and civil liberties.[241] It is reasonable to believe that a similar phenomenon could occur in the environmental domain.

At any rate, we have a federal public trust doctrine that attempts to protect the public's interest in natural resources by empowering rather than constraining the government, whether we like it or not. Environmentalists should find a way to use the doctrine to their advantage. Though the public trust doctrine may not require an obstinate federal government to take affirmative action to prevent climate change, it does offer a federal government sympathetic to environmental concerns an affirmative defense to, for example, claims that restrictions on offshore drilling constitute a taking. More generally, as environmental activists lobby the federal government's political branches to take action to combat climate change, they should keep in mind that progressive legislative programs tend to face constitutional challenges and that those challenges sometimes succeed.[242] Accordingly, environmental law scholars and practitioners should focus their efforts on developing affirmative defenses to claims that climate change legislation violates the Constitution. Given that environmental regulation tends to restrict development and that the Roberts Court has proven extremely protective of private property rights,[243] it seems likely that opponents of environmental legislation, such as the proposed Green New Deal,[244] would argue that the law violates the Fifth Amendment's Taking Clause. The federal public trust doctrine provides an affirmative defense to such challenges in situations involving submerged lands. Environmentalists would prove wise to develop more such defenses.

Bennett J. Ostdiek, Law Clerk, Supreme Court of Texas. For excellent advice and generous feedback at every stage of this project, I thank Claire Priest. I also thank Nathaniel Donahue, Tobias Kuehne, and Alexander Mechanick for numerous thoughtful discussions about the public trust doctrine.

---

238 *See* Sophia Z. Lee, *Race, Sex, and Rulemaking: Administrative Constitutionalism and the Workplace, 1960 to the Present*, 96 VA. L. REV. 799 (2010).

239 *See* Karen M. Tani, *Welfare and Rights Before the Movement: Rights as a Language of the State*, 122 YALE L.J. 314 (2012).

240 *See* Anuj C. Desai, *The Transformation of Statutes into Constitutional Law: How Early Post Office Policy Shaped Modern First Amendment Doctrine*, 58 HASTINGS L.J. 671 (2007); Anuj C. Desai, *Wiretapping Before the Wires: The Post Office and the Birth of Communications Privacy*, 60 STAN. L. REV. 553, 556–58 (2007).

241 *See* Jeremy K. Kessler, *The Administrative Origins of Modern Civil Liberties Law*, 114 COLUM. L. REV. 1083 (2014); Reuel E. Schiller, *Free Speech and Expertise: Administrative Censorship and the Birth of the Modern First Amendment*, 86 VA. L. REV. 1, 21–22 (2000).

242 *See, e.g.*, The Civil Rights Cases, 109 U.S. 3 (1883) (invalidating part of the Civil Rights Act of 1875); Pollock v. Farmers' Loan & Tr. Co., 158 U.S. 601 (1895) (declaring the federal income tax unconstitutional); A.L.A. Schechter Poultry Corp. v. United States, 295 U.S. 495 (1935) (striking down New Deal legislation); *but see* Heart of Atlanta Motel, Inc. v. United States, 379 U.S. 241 (1964) (upholding the Civil Rights Act of 1964); Nat'l Fed'n of Indep. Bus. v. Sebelius, 567 U.S. 519 (2012) (validating the Affordable Care Act).

243 *See* John G. Sprankling, *Property and the Roberts Court*, 65 U. KAN. L. REV. 1, 1–4, 14–24 (2016).

244 *See* Recognizing the duty of the Federal Government to create a Green New Deal, H.R. 109, 116th Cong. (2019).

NEPA, CEQA, CICA, and the FAR: Reforming Areas of Abuse Which Consistently Impact Federal Government Projects

Anthony Threatts

I. INTRODUCTION

A hospital corporation competitor sought to enjoin another medical corporation from building a medical center near an existing air base.[1] While the hospital corporation alleged environmental claims to attempt to maintain a National Environmental Policy

1 Clinton Cmty. Hosp. Corp. v. S. Maryland Med. Ctr., 374 F. Supp. 450, 451 (D. Md. 1974).

Act (NEPA) action, the true purpose was to avoid profit loss.[2] In California, labor unions used the California Environmental Quality Act (CEQA) to halt the development of 1,076 homes, alleging the developer failed to conduct thorough environmental studies.[3] In another instance, a federal contractor filed over 150 bid protests in one fiscal year,[4] significantly impacting the award or performance of several federal government contracts. NEPA, CEQA, the Competition in Contracting Act (CICA), and the Federal Acquisition Regulation (FAR) continue to provide incentives and opportunities for disingenuous parties to file frivolous complaints to halt or disrupt the plans of environmentally friendly and fairly completed federal contracts.

While environmental laws and regulations have a long history of ensuring proper environmental impacts consideration to best protect the health and welfare of both the environment and society, these same laws and regulations can be used in ways that restrict competition or create other inefficiencies. In 2006, the Organization for Economic Co-operation and Development (OCED) identified tension between current environmental laws and competition.[5] Specifically, OCED noted competition and environmental policy are complementary and seek to correct market failures while enhancing social welfare.[6] Additionally, OCED noted that environmental regulations can reduce competition in markets, raise prices for consumers, and create barriers to entry which then increase concentration.[7] These same environmental laws and regulations can encourage anticompetitive practices and be misused in predatory schemes to exclude and disadvantage competitors.[8] On a similar note, loopholes within the federal government's procurement system, particularly the bid protest process, create the same incentives for abuse and create similar inefficiencies.

NEPA is an important federal government policy for overseeing proposed actions that may detrimentally impact the environment.[9] It was crafted when the federal government first began to recognize the man's activities' detrimental effects on the environment and the potential those actions had to encumber our way of life.[10] NEPA established an environmental impact policy, requiring the government to take into ac-

---

2 *Id.* at 455.

3 Jennifer Wadsworth, *CEQA Lawsuit Halts Irvine Company's 1,076-Unit Housing Development in Sunnyvale*, SAN JOSE INSIDE (May 30, 2019), http://www.sanjoseinside.com/2019/05/30/ceqa-lawsuit-halts-irvine-companys-1076-unit-housing-development-in-sunnyvale.

4 Steven Koprince, *GAO Suspends Protester–Again–For "Abusive Litigation Practices*," SMALLGOVCON: LEGAL NEWS AND NOTES FOR SMALL GOVERNMENT CONTRACTORS (Nov. 30, 2017), http://smallgovcon.com/gaobidprotests/gao-suspends-protester-again-for-abusive-litigation-practices.

5 ANTHONY HEYES ET AL., POLICY ROUNDTABLES: ENVIRONMENTAL REGULATION AND COMPETITION 9 (2006), htttp://www.oecd.org/regreform/sectors/37981581.pdf.

6 *Id.*

7 *Id.*

8 *Id.*

9 *See* 42 U.S.C. §§ 4321–4370h (requiring federal agencies to evaluate the environmental effects of their actions).

10 *See* 42 U.S.C. § 4321(a) (recognizing "the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical

count significant environmental actions' negative impacts, and it outlined a process for interested parties to have input on government actions with significant environmental impacts.[11]

Modeled after NEPA, CEQA provides the environmental law guidance for California.[12] Due to California's size and economy,[13] the federal government frequently has significant projects there that significantly impact the environment or have the potential to significantly impact the environment.[14] CEQA is a more liberal statute than NEPA and also provides parties with the opportunity to comment and object,[15] frequently resulting in significant delays, cost increases,[16] or the canceling of important projects.[17] A key distinction between NEPA and CEQA is that CEQA has broader standing, allowing for labor unions[18] and anonymous filers to seek redress under the statute.

On a related track, the federal Competition in Contracting Act[19] was drafted to ensure that government contract solicitation requires full and open competition. While CICA is intended to help ensure potential contractors are not at a disadvantage when it comes to opportunities to secure federal government contracts,[20] this system provides multiple appeals avenues and can hamper important federal government contracts' execution. CICA has been implemented through the Federal Acquisition Regulation, a highly technical regulation, drafted when the federal government purchased mainly goods and not services.[21] This application and the resultant loopholes create anticompe-

---

importance of restoring and maintaining environmental quality to the overall welfare and development of man.").

11 Sarah E. Boslaugh, *National Environmental Policy Act*, ENCYCLOPEDIA BRITTANICA (Dec. 30, 2013), https://www.britannica.com/topic/National-Environmental-Policy-Act.

12 Bowman v. City of Berkeley, 122 Cal. App. 4th 572, 591 (2004).

13 Pat Evans, *16 mind-blowing facts about California's economy*, MARKETS INSIDER (Apr. 26, 2019), https://markets.businessinsider.com/news/stocks/california-economy-16-mind-blowing-facts-2019-4-1028142608 (stating that California has the largest economy of any US state, and if California were its own nation, California would have the fifth largest economy in the world).

14 *See id.*

15 *See* Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agric. Ass'n, 42 Cal. 3d 929, 935 (1986).

16 *See CEQA used as legal "greenmail"*, ORANGE CTY. REGISTER (Jul. 6, 2015), https://www.ocregister.com/2015/07/06/ceqa-used-as-legal-greenmail [hereinafter *Legal "Greenmail"*].

17 *See New Holland & Knight Study Reveals Epidemic of Anti-Housing CEQA Lawsuits*, HOLLAND & KNIGHT (Dec. 18, 2019), https://www.hklaw.com/en/news/pressreleases/2019/12/new-holland-knight-study-reveals-epidemic-of-antihousing-ceqa [hereinafter HOLLAND & KNIGHT STUDY].

18 Bakersfield Citizens for Local Control v. City of Bakersfield, 124 Cal. App. 4th 1184, 1198 (2004).

19 41 U.S.C. § 253.

20 MARK V. ARENA ET. AL., ASSESSING BID PROTESTS OF U.S. DEPARTMENT OF DEFENSE PROCUREMENTS 11–12 (2018), https://www.rand.org/content/dam/rand/pubs/research_reports/RR2300/RR2356/RAND_RR2356.pdf.

21 *See id.* at 7.

titive opportunities, which can lead to stays in contract awarding or performance until the case is resolved by either an administrative body or court.[22]

Due to their strength, especially CEQA, these regulations have been subject to exploitation through greenmailing, the practice of using environmental laws for blackmail techniques.[23] Interested parties have used the NEPA process, CEQA process, and the federal government's procurement appeals process as ways to delay projects and increase costs.[24] Oftentimes, in the environmental context, these challenges can be avoided by agreeing to mitigate impacts on satisfactory terms or by making other concessions.[25] Although one may agree to these terms, the end result is often a less profitable project, which may affect the federal government's and other parties' benefits. In the most extreme cases, this can make the project uneconomic to pursue.[26] In the government procurement context, frivolous lawsuits are often used as a discovery technique or to simply extend or delay a government contracts' granting and performance for just a few months.[27] Oftentimes, competitors with a current government contract will use this technique to gain a few additional months.[28]

Part II of this Article addresses NEPA's background and legislative history, environmental impact statements, and the current state of NEPA case law. Further, it will address a few key problems with the federal government's practice under NEPA. Part III addresses CEQA, the current state of CEQA case law, and the practice of greenmail. Part IV addresses the federal government's procurement process, law loopholes, and regulations that give rise to anticompetitive practices. Part V discusses NEPA's, CEQA's, and the federal government's procurement system's weaknesses. Part VI addresses potential ways to curb these abuses. Part VII addresses recommended legal changes, and provides an analysis of the constitutionality of proposed regulatory changes under NEPA. While it may seem odd to analyze certain environmental statutes and the federal government's procurement system's anticompetitive and abuse problems, the areas are more closely related than one may realize. After a proposed project successfully completes the NEPA process, that same proposed project typically goes through the federal government's procurement process and must be successfully competed for and awarded prior to work beginning. Ultimately, the goal is to streamline both processes to eliminate wasting resources, but, at the same time, this must be balanced against protecting both the environment from pollution and the procurement process's integrity. Much like threading a needle, it is a tough endeavor but not impossible.

---

22 *See, e.g.*, 48 C.F.R. § 33.103(f)(1) (2020) (providing that the awarding of a contract may be withheld when the agency receives a protest about the contract).

23 Christian Britschgi, *How California Environmental Law Makes It Easy for Labor Unions to Shake Down Developers*, REASON MAGAZINE (Aug. 21, 2019), https://reason.com/2019/08/21/how-california-environmental-law-makes-it-easy-for-labor-unions-to-shake-down-developers.

24 *Id.*

25 *See, e.g.*, *Legal "Greenmail"*, *supra* note 16.

26 HOLLAND & KNIGHT STUDY, *supra* note 17.

27 *See, e.g.*, *Legal "Greenmail"*, *supra* note 16.

28 *Id.*

II. NATIONAL ENVIRONMENTAL POLICY ACT

This Part will discuss the text, legislative history, and current state of case law involving NEPA. It will include an analysis on environmental impact statements (EIS), one of NEPA's key items. It will present current NEPA problems with and highlight how the mere possibility of anticompetitive or frivolous litigation has resulted in a slow, overly cautious EIS process.

A. NEPA Recognized the Importance of Establishing a Balance Between Environmental Development and Protection.

> The purposes of this Act are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.[29]

NEPA has two titles. Title I sets forth the Congressional Declaration of National Environmental Policy and has five sections.[30] Title I's Section 101 notes Congress acknowledges man's activities' impact on the environment and recognizes the "critical importance of restoring and maintaining environmental quality to the overall welfare and development of man."[31] NEPA further declares it is the federal government's continuing policy, in cooperation with state and local governments and other concerned public and private organizations, to use all practicable means to foster and promote the general welfare and to create sustainable conditions for both man and nature to exist in harmony.[32]

NEPA includes six key responsibilities for the federal government: (1) act as a environment trustee for succeeding generations; (2) assure for all Americans safe, healthful, and aesthetically pleasing surroundings; (3) attain the widest range of beneficial uses of the environment without degradation or other undesirable consequences; (4) preserve important aspects of national heritage; (5) achieve a balance between population and resource use that permits high standards of living; and (6) enhance renewable resource quality.[33]

Congress further authorized and directed that, to the fullest extent possible, U.S. public laws be administered in accordance with the policy set forth in NEPA.[34] In probably the most recognizable portion of NEPA, Congress directed federal agencies to use a systematic, interdisciplinary approach to ensure an integrated use of natural and social sciences to help decision-makers determine man's actions' environmental impact.[35] Specifically, for all major federal actions significantly affecting the environment's quality,

---

29 42 U.S.C. § 4321.
30 *Id.* § 4331.
31 *Id.* § 4331(a).
32 *Id.*
33 *Id.* § 4331(b).
34 *Id.* § 4332.
35 *Id.* § 4331(a).

agencies are required to provide a detailed statement on the environmental impact of the proposed action, any unavoidable adverse environmental effects, alternatives to the proposed action, the relationship between local short-term uses and maintenance and enhancement of long-term productivity, and irreversible commitments of resources if the proposed action should be implemented.[36] Title II established the Council on Environmental Quality and outlined its roles, composition, responsibilities, powers, and funding.[37]

B. The Intent of NEPA was Clear: To Provide Broad Overview of Current and Long-Term Trends in the Environment.

Prior to passing NEPA, Congress identified the bill's purpose was to create a Council on Environmental Quality with broad and independent overview of current and long-term trends in our national environment's quality.[38] Further, this would require an annual environmental quality report on various aspects of the American environment, on foreseeable trends that may affect that status, and on their impact on other national requirements.[39]

In identifying this particular legislation's need, Congress noted that, for many, the most dangerous of all enemies to our way of life is man's own "undirected technology."[40] In particular, the report includes examples of the consequences of unregulated modern technology: the significant negative effects from nuclear tests, nitrogen fertilizers' runoff into rivers, smog from automobiles, pesticides in the food chains, and destruction of topsoil.[41] The Senate's report acknowledged the present state of knowledge, established public policies, and noted that existing governmental institutions were not adequate to deal with the growing environmental problems the nation was facing.[42]

Although NEPA was well-reasoned and needed, the legislative history did not reflect potential system abuses. These abuses diminish NEPA's, and other critical environmental laws', effectiveness.

C. The Environmental Impact Statement is the Key Area of NEPA and Ensures Significant Environmental Impacts are Analyzed and Discussed.

An EIS's primary purpose is to serve as an action-forcing device to ensure NEPA's policies and goals are included into ongoing programs and federal government actions.[43]

> It shall provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human

---

36 *Id.* § 4331(c).
37 *Id.* § 4342 ("There is created in the Executive Office of the President a Council on Environmental Quality . . . .").
38 H.R. Rep. No. 91-378, at 116 (1969).
39 *Id.*
40 *Id.* at 117 (quoting *By Land, See, and Air*, N.Y. Times (May 3, 1969)).
41 *Id.* at 116.
42 Sen. Rep. No. 91-296 at 4 (1969).
43 40 C.F.R. § 1502.1 (2020).

> environment . . . . Statements shall be concise, clear, and . . . supported by evidence that the agency has made the necessary environmental analyses.[44]

The EIS should be used by federal officials in conjunction with other relevant material.[45]

EISs are required on proposals, for legislation, and for other major federal actions significantly affecting the quality of the human environment.[46] "Major federal action" includes actions with major effects that are potentially subject to federal control and responsibility.[47] Actions include the circumstance where responsible officials fail to act and the failure is reviewable as an agency action by courts or administrative tribunals under the Administrative Procedure Act or other applicable law.[48] Actions include new and continuing activities; including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals."[49]

The definition of "significantly" plays the key role in EIS's applicability. "Significantly" requires consideration of both context and intensity.[50] An action's significance must be analyzed in contexts such as society as a whole, the affected region, the affected interests, and the locality.[51] In evaluating a proposed action's intensity, responsible officials must take into account the following: (1) impacts that may be both beneficial and adverse; (2) the degree to which the proposed action affects public health or safety; (3) unique geographic-area characteristics such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas; (4) the degree to which the effects on the human environment's quality are likely to be highly controversial; (5) the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks; (6) the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration; (7) whether the action is related to other actions with individually insignificant but cumulatively significant impacts; (8) the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places; (9) the degree to which the action may adversely affect an endangered or threatened species, as determined to be critical under the Endangered Species Act of 1973, or its habitat; and (10) whether the action threatens a violation of federal, state, or local law or requirements imposed for the environment's protection.[52]

When there are duplicate responsibilities between NEPA and state and local requirements, agencies shall cooperate with state and local agencies to the fullest extent possible to reduce duplication.[53] To better integrate EISs into state or local planning

---

44 *Id.*
45 *See id.*
46 *Id.* § 1502.3.
47 *Id.* § 1508.18(a).
48 *Id.*
49 *Id.*
50 *Id.* § 1508.27.
51 *Id.* § 1508.27(a).
52 *Id.* § 1508.27(b).
53 *Id.* § 1506.2(b).

processes, statements shall discuss any proposed action inconsistency.[54] When inconsistencies exist, the EIS should describe the extent to which the federal agency would reconcile its proposed action with the plan or law.[55]

A key part of NEPA procedures is meaningful public involvement. Agencies have a duty to make diligent efforts to involve the public in preparing and implementing NEPA procedures.[56] This includes providing public notice of NEPA-related hearings, public meetings, and the availability of environmental documents to inform those persons and agencies who may be interested or affected.[57] Following the affected state's notice procedures may be required.[58] Agencies must allow at least forty-five days for comments from interested parties on draft EISs.[59] Upon a showing of compelling reasons of national policy by the lead agency, the Environmental Protection Agency (EPA) may reduce or extend comment periods.[60] The EPA must notify the Council of the comment period's extension or reduction.[61]

D. The Current State of Case Law Indicates the EIS Process Should be Straightforward.

Plaintiffs typically claim that NEPA procedures were not met when the relevant agency grants or intends to grant a party's permit. EISs are frequently the basis of plaintiffs' claims. The statutory requirement that a federal agency contemplating a major action prepare an EIS serves NEPA's "action-forcing purposes in two important aspects."[62] It ensures the agency will have available and will carefully consider detailed information concerning significant environmental impacts, and it guarantees the public will have access to the same information and play a role in the decision-making process and possible decision implementation.[63] NEPA does not dictate a decision, it merely ensures federal agencies fully evaluate each decision's impacts and engage in a proper cost-benefit analysis.[64] If the proposed action's adverse environmental effects are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs.[65] For example, in *Robertson v. Methow Valley Citzens Council*, the federal agency would not have violated NEPA if, after complying with NEPA's procedural prerequisites, it decided the benefits to be derived from downhill skiing justified the permit's issuance, even if the environmental effect resulted in the

---

54 *Id.* § 1506.2(d).
55 *Id.*
56 *Id.* § 1506.6(a).
57 *Id.* § 1506.6(b).
58 *Id.* § 1506.6(b)(3)(iii).
59 *Id.* § 1506.10(c).
60 *Id.* § 1506.10(d).
61 *Id.*
62 *See* Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. 87, 97 (1983); *see also* Weinberger v. Catholic Action of Hawaii/Peace Educ. Project, 454 U.S. 139, 143 (1981).
63 Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989).
64 *Id.* at 349.
65 *See* Vermont Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc., 435 U.S. 519, 558 (1978).

loss of 100% of a local deer species.[66] NEPA itself does not impose substantive requirements on federal agencies, but other statutes and regulations may do just that.

There are also significant limits to NEPA's reach and the types of claims attenuated enough to be brought under the NEPA process. Claims of psychological health damage caused by project risks are a category excluded under NEPA.[67] The rationale underlying this limitation is that operations are events in physical environments, but psychological health damage to surrounding residents from some potential risks are too far removed from the physical events to be covered under NEPA.[68] NEPA does not apply if the harm alleged does not have a sufficiently close connection to the physical environment.[69]

Importantly, there may be deference given to Department of Defense (DoD) activities. In some cases, even if plaintiffs are able to show irreparable injury from a DoD activity, such as a training exercise, the injury is likely outweighed by the public interest and the DoD's interest in effective, realistic training of its troops.[70] The Supreme Court gives "greater deference to the professional judgment of military authorities concerning the relative importance of particular military interest."[71] This occurs when senior officers can articulate the threat posed and the sufficient need for training to counter the particular type of threat.[72]

E. In Practice, the EIS Process is a Significant Roadblock to the Government's Timely Accomplishments of its Goals.

Historically, the EIS process has been much slower than anticipated.[73] The average time for EIS completion and issuance of a joint record of decision was over 4.5 years, and the median was 3.6 years.[74] Twenty-five percent of EISs took less than 2.2 years, but 25% of EISs also took more than 6 years.[75] The CEQA goal for an EIS, even the complex projects, was one year or less.[76] Additionally, CEQA recommended page limits of 150 pages for a typical EIS, and 300 pages for proposals of "unusual scope or complex."[77] However, for final EISs, the average document length has been 669 pages, and the median document length was 445 pages.[78] The government's tendency to overdo, overthink, and get bogged down with tangential details and problems is likely one of the main problems in NEPA practice. It can be argued this is a result of an overly cautious approach to anticompetitive suits and other frivolous litigation.

---

66 *Robertson*, 490 U.S. at 351.
67 Metro. Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 776 (1983).
68 *Id.* at 777.
69 *Id.* at 778.
70 Winter v. Nat. Res. Def. Council, Inc., 555 U.S. 7, 23 (2008).
71 Goldman v. Weinberger, 475 U.S. 503, 507 (1986).
72 *Winter*, 555 U.S. at 24.
73 Regulations Implementing the Procedural Provisions of the National Environmental Policy Act, 85 Fed. Reg. 1687–88 (proposed Jan. 10, 2020).
74 *Id.*
75 *Id.*
76 *Id.*
77 *Id.*
78 *Id.*

III. CALIFORNIA ENVIRONMENTAL QUALITY ACT

This section will address CEQA, its creation, its intent, background, and current state of case law. Additionally, it will outline how CEQA's broader application presents and gives rise to serious anticompetitive practices, impacting both commercial and residential projects. This will help to highlight why the current regulatory law and its practice are insufficient to help tackle the issue of anticompetitive practices, specifically greenmailing—using environmental laws in a way similar to blackmail.[79] This will give context to the law's current shortcomings in dealing with the rise in the abuse of the process. The impacts of these abuses reach far beyond wealthy corporations and present significant problems to the middle class attempting to purchase homes or simply find affordable housing to rent.

A. CEQA is NEPA's Little Brother.

CEQA was modeled after NEPA, and NEPA cases can be persuasive authority for interpreting CEQA.[80] CEQA's purpose is to compel government at all levels to make decisions with environmental consequences in mind.[81] CEQA does not guarantee that these decisions will always be those that favor environmental considerations.[82] Much like NEPA, CEQA was not intended to mandate choosing the best environmentally friendly project, but was designed to ensure feasible mitigation measures were implemented and environmental damages from the particular project were reduced to an acceptable level.[83] The California Legislature simply intended to ensure private parties are informed when local government agencies make an environmental impact report on any project that may have a significant effect on the environment.[84]

B. CEQA is Defined by its Liberal Interpretations of Significant Environmental Impacts and its Broad Standing it Grants Parties.

Choosing the best environmentally friendly project is done through an environmental impact report (EIR), which closely resembles EIS requirements. EIRs are required for any projects that may have a significant effect on the environment, both public and private.[85] A project's potential negative effects on views and other aesthetic features could trigger a significant effect and the requirement for an environmental impact re-

---

79 Christian Britschgi, *How California Environmental Law Makes It Easy for Labor Unions to Shake Down Developers*, Reason Magazine para.16 (Aug. 21, 2019), https://reason.com/2019/08/21/how-california-environmental-law-makes-it-easy-for-labor-unions-to-shake-down-developers.

80 Bowman v. City of Berkeley, 122 Cal. App. 4th 572, 591 (2004).

81 *See California Environmental Quality Act (CEQA) Review*, Cal. Dep't of Fish & Wildlife, https://wildlife.ca.gov/Conservation/Environmental-Review/CEQA (last visited Apr. 14, 2021).

82 *See* Dusek v. Anaheim Redevelopment Agency, 173 Cal. App. 3d 1029, 1044 (1985).

83 Laurel Hills Homeowners Ass'n v. City Council, 83 Cal. App. 3d 515, 521 (1978).

84 Cal Pub. Res. Code § 21000 (2019).

85 Kaufman & Broad-South Bay, Inc. v. Morgan Hill Unified School Dist., 9 Cal. App. 4th 464, 472 (1992).

port.[86] Public participation is also critical to the CEQA process, and projects must be both open to the public to discuss the potential negative environmental impacts and for the agency to modify its proposed plans during the CEQA process.[87] Overall, CEQA analysis should be focused on "identifying any substantial adverse changes in physical conditions, and any physical changes, not economic or social effects of a project."[88] In a finalized EIR, the lead agency must show a project's significant environmental effects have been mitigated or avoided or show the unmitigated effects are outweighed by the project's benefits.[89]

Courts are instructed to construe CEQA liberally because of its beneficial purposes, and parties cannot avoid its requirements by dividing up proposed projects when the cumulative impact on the environment will likely be significant.[90] In CEQA analysis, the "harmless error" standard does not apply to agencies failing to proceed as CEQA requires, and failure to comply with those standards is per se prejudicial.[91] Standing to bring suit is also intended to be interpreted broadly under CEQA. For example, standing to challenge a city's ordinance for an alleged violation of CEQA was granted to a plaintiff who lived 1,800 feet from the proposed location and other plaintiffs simply because they alleged they would be harmed by the action's environmental impacts.[92] In another instance, a member of the general public had standing as a private individual acting in the public interest to enforce CEQA's provisions with regard to a proposed flood control project and other redevelopment, even though he was not a resident or property owner within the area affected by the project's actual environmental reach.[93] Most importantly, unions have standing to litigate environmental claims under CEQA.[94]

C. Greenmail is a Tactic Frequently Used by Labor Unions and Other Self-Interested Parties to Abuse the CEQA Process.

Greenmailing is a process by which self-interested parties file frivolous environmental complaints against a project as a means of extracting concessions from its developer.[95] Essentially, greenmail is blackmail, but it uses environmental laws instead of other extortion techniques. Under California's environmental laws, contractors must make plans available for forty-five days for public comment, and oftentimes, unions submit detailed

---

86 Quail Botanical Gardens Found., Inc. v. City of Encinitas, 29 Cal. App. 4th 1597, 1604 (1994).

87 Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Ass'n, 42 Cal. 3d 929, 935 (1986).

88 Nat'l Parks & Conservation Assn. v. Cty. of Riverside, 71 Cal. App. 4th 1341, 1361 (1999).

89 Cty. of Amador v. El Dorado Cty. Water Agency, 76 Cal. App. 4th 931, 945 (1999).

90 Plan for Arcadia, Inc. v. City Council of Arcadia, 42 Cal. App. 3d 712, 726 (1974).

91 Miller v. City of Hermosa Beach, 13 Cal. App. 4th 1118, 1143 n.23 (1993).

92 Bozung v. Local Agency Formation Comm'n, 13 Cal. 3d 263, 286–87 (1975).

93 Kane v. Redevelopment Agency, 179 Cal. App. 3d 899 (1986).

94 Bakersfield Citizens for Local Control v. City of Bakersfield, 124 Cal. App. 4th 1184, 1199 (2004).

95 Christian Britschgi, *How California Environmental Law Makes It Easy for Labor Unions to Shake Down Developers*, Reason Magazine (Aug. 21, 2019), https://reason.com/2019/08/21/how-california-environmental-law-makes-it-easy-for-labor-unions-to-shake-down-developers.

letters of alleged deficiencies in the municipality's environmental study of a project's impact.[96] Experts note that these complaints are rarely about the environment, but mostly as a way to "shake down the process" to secure work for laborers.[97]

Californian construction unions have started to exploit CEQA loopholes to delay new construction contracts under the guise of environmental protection.[98] These construction unions have become experts at greenmailing and often use the tactic to secure generous, sometimes exclusive, labor agreements across the state.[99] Some expert environmental planners note they have rarely seen CEQA used to actually protect the environment.[100] Greenmailing raises project costs anywhere from 9–37%, and with these cost increases passed on to end users, greenmailing can ensure marginal projects do not occur at all, severely harming individuals, such as those attempting to find affordable housing.[101]

During the CEQA process, labor unions often seek project labor agreements (PLAs)—agreements between an owner and trade unions.[102] These PLAs help determine the following: how much contractors pay their workers, what benefits contractors provide, how many breaks employees get each day, and how labor disputes are resolved.[103] Although there has been a push to ban government-mandated PLAs at the state and federal level, it has not occurred.[104]

The petitions filed by labor unions are often questionable at best; for example, in Sunnyvale, California, an environmental review had cleared a path to build over 1,000 new homes.[105] The Laborers Intentional Union of North America claimed the city violated CEQA by failing to consider how the proposed project would impact "indoor air quality and birds."[106] The union alleged the developer "should[ ] [have] conducted an environmental study of the cancer-causing effects of the composite wood typically used in home construction" and also "should have taken a closer look at the impact on . . . as many as 36 special-status bird species in the vicinity."[107] Although possibly a legitimate claim, the claim's timing suggested otherwise.[108] In a particularly egregious example of abuse of process, a case was brought by a union against only one particular solar energy

---

96 *Id.*
97 *Id.*
98 *Id.*
99 *Id.*
100 *Id.*
101 Britschgi, *supra* note 95.
102 Kim Slowey, *Deal or no deal: PLAs in the construction industry*, CONSTRUCTION DIVE (Apr. 25, 2019), https://www.constructiondive.com/news/deal-or-no-deal-plas-in-the-construction-industry/553152.
103 *Id.*
104 *Id.*
105 Jennifer Wadsworth, *CEQA Lawsuit Halts Irvine Company's 1,076-Unit Housing Development in Sunnyvale*, SAN JOSE INSIDE (May 30, 2019), http://www.sanjoseinside.com/2019/05/30/ceqa-lawsuit-halts-irvine-companys-1076-unit-housing-development-in-sunnyvale.
106 *Id.*
107 *Id.*
108 Carolyn Schuk, *Construction Unions Make CEQA Work for Them*, THE SILICON VALLEY VOICE (Aug. 9, 2019), www.svvoice.com/construction-unions-make-ceqa-work-for-them.

project out of the twenty similar projects which had been proposed.[109] The union alleged it was "concerned about how the project would affect burrowing owls," but the union provided no explanation as to why this particular project differed from the other nineteen projects.[110] After the developer reached a deal with the union, the union asked for the case to be dismissed.[111]

Labor unions are not the only individuals using CEQA for purposes not intended by the original Act. Businesses have been known to use CEQA in anticompetitive ways,[112] and "local governments and neighborhood groups have used [CEQA] as leverage to compel developers to build additional facilities or features on their wish lists."[113] As early as 2013, three former California governors, George Deukmejian, Pete Wilson, and Gray Davis, acknowledged that CEQA is "too often abused by those seeking to gain a competitive edge, to leverage concessions from a project or by neighbors who simply don't want any new growth in their community—no matter how worthy or environmentally beneficial a project may be."[114] In 2015, the law firm Holland & Knight noted in a study that "only 13 percent of CEQA lawsuits in Southern California were filed by established environmental advocacy organizations."[115] Two particular firms, Lozeau Drury and Adams Broadwell Joseph & Cardozo, specialize in this particular type of CEQA activity and are engaged in the majority of the lawsuits involving labor unions suing developers under CEQA.[116] These two firms have made over a hundred CEQA complaints against various developers since 2016.[117]

D. Greenmail's Impacts are also Felt by Ordinary Citizens without Ties to Major Developers.

Although one may not be sympathetic toward major developers being exploited through greenmail, one must not discount the true impact greenmail has on average citizens. EIRs require a substantial amount of technical analysis, can cost more than $1 million, and are impairing affordable housing development at a time when there is a "historic housing shortage."[118] Due to the lack of affordable housing produced, it becomes even more difficult for middle-class citizens to obtain housing.

---

109 *Id.*
110 *Id.*
111 *Id.*
112 Scott Herold, *Herhold: A San Jose gas station corner is ground zero in environmental fight*, The Mercury News (Oct. 29, 2019), https://www.mercurynews.com/2012/10/29/herhold-a-san-jose-gas-station-corner-is-ground-zero-in-environmental-fight.
113 *Legal "Greenmail"*, *supra* note 16.
114 *Id.*
115 Adam B. Summers, *Yes, of course, CEQA hampers development and affordable housing*, Orange Cty. Register (Jan. 9, 2018), https://www.ocregister.com/2018/01/09/yes-of-course-ceqa-hampers-development-and-affordable-housing-2.
116 Schuk, *supra* note 108.
117 *Id.*
118 Greg Cornfield, *Battleground: LA Development; Despite court decisions, the battle between developers and NIMBY group continues*, Commercial Observer (Dec. 23, 2019), https://commercialobserver.com/2019/12/battleground-la-development.

In areas such as San Francisco, homelessness is a well-known problem that the state has attempted to solve for decades.[119] Despite state and local governments expending billions of dollars in recent years to combat homelessness, California's homeless population is close to 130,000 people.[120] Opponents of a proposed homeless shelter conceded they were using CEQA to get politicians' attention after the politicians allegedly ignored residents who were concerned about crime and drug use.[121] One resident stated the city needed to analyze the proposed site to see whether the soil was toxic, while admitting at the same time that he was concerned the shelter would attract substance abusers and unregistered sex offenders, and that the location "rubs us the wrong way."[122] Other residents have said CEQA lawsuits such as these enable people to cloak stereotypes in environmental language.[123]

While there is no doubt that homeless shelters would likely lead to an increase in homeless individuals in an area—along with their personal possessions and garbage—these examples highlight the ways in which well-intended government projects can be stonewalled by individuals with concerns not intended to be addressed by environmental laws. Thousands of individuals may be forced to remain homeless and without shelter assistance because a small minority has decided to exploit this particular environmental law.

According to 2018 statistics, housing was targeted in 60% of all CEQA lawsuits despite a significant portion of the projects complying with local general plans, zoning codes, and "hundreds of applicable environmental, health, safety, and labor laws and regulations."[124] Regardless of the CEQA claim's validity, merely filing a lawsuit is enough to halt construction loans for the 95% of housing not subsidized by taxpayers and makes the governor's goal of building 3.5 million new housing units over the next eight years unlikely.[125] Thus, not only are multi-billion dollar corporations being impacted by CEQA abuse, but there is also a visible, tangible impact on average citizens.

IV. FEDERAL GOVERNMENT PROCUREMENT PROCESS

This Part will address the federal government's procurement process, from its competitive procedure's requirements to its bid protest process, a process in which dissatisfied potential government contractors can challenge the federal government's contracting process validity on a specific project. Missteps, whether perceived or actual, at any step along the procurement process invite challenges to an agency's award of a contract. The

---

119 Alicia Victoria Lozano, *California Governor Seeks 1.4 Billion to Combat Homelessness as Crisis Grows*, NBC NEWS (Jan. 11, 2020), https://www.nbcnews.com/news/us-news/california-governor-seeks-1-4-billion-combat-homelessness-crisis-grows-n1113926.

120 Liam Dillion & Benjamin Oreskes, *Homeless shelter opponents are using this environmental law in bid to block new housing*, L.A. TIMES (May 15, 2019), https://www.latimes.com/politics/la-pol-ca-ceqa-homeless-shelter-20190515-story.html.

121 *Id.*

122 *Id.*

123 *Id.*

124 HOLLAND & KNIGHT STUDY, *supra* note 17.

125 *Id.*

bid protest process, by which disappointed potential government contractors can appeal many of the federal government's contracting decisions and halt the procurement process, is discussed in-depth below.

A. The Current Federal Government Procurement System was Created to Increase Competition in Government Contracting.

In 1984, Congress passed CICA to increase competition in government contracting.[126] CICA sought to impose limits on the use of non-competitive contracts and sought to adopt a "full and open competition" standard for most federal government contracts.[127] Full and open competition does not require that actual competition be achieved, but only that steps were taken to ensure that interested parties at least had the opportunity to compete in the federal government's procurement process.[128] Though there are exceptions in which the federal government may sole-source contracts, the vast majority of federal government contracts are subject to its full and open competition requirement.[129]

B. There are Various Types of Procurement Procedures, and Each Provides Certain Advantages and Disadvantages.

For certain agencies comprising the armed forces, the agency head, in conducting a procurement for property or services, shall obtain full and open competition through the use of competitive procedures and shall use the procedure or combination of competitive procedures that is best suited under the circumstances.[130] Sealed bids shall be solicited if four factors are met:

> (i) time permits the solicitation, submission, and evaluation of sealed bids; (ii) the award will be made on the basis of price and other price-related factors; (iii) it is not necessary to conduct discussions with the responding sources about their bids; and (iv) there is a reasonable expectation of receiving more than one sealed bid.[131]

The downside to sealed bids is that the process does not incentivize innovation because the bid is evaluated solely on price and price-related factors.

When sealed bids are inappropriate under the law, the agency shall use competitive proposals.[132] Competitive proposals are evaluated using both technical and cost factors in response to solicitation for competitive proposal's requirements.[133] These procedures allow for cost-technical tradeoff and can increase innovation because the government is able to pay a price premium for features which it deems worth the additional expense.

---

126 41 U.S.C. § 253.
127 *Id.* § 3301(a).
128 *Id.*
129 *Id.* § 3304.
130 10 U.S.C. § 2304(a)(1).
131 *Id.* § 2304(a)(2)(A).
132 *Id.* § 2304(a)(2)(B).
133 *Id.* § 2305(a)(3).

C. Federal Procurement Process is a Formalistic Process which Requires Close Adherence to its Requirements.

The federal procurement contract's planning and solicitation process is a highly formalistic process.[134] This very technical, specific process is ripe for missteps for overtasked contract officers. During the planning process, the agency must "specify its needs and solicit bids or proposals in a manner designed to achieve full and open competition[,] use advance procurement planning and market research," and "include restrictive provisions or conditions only to the extent necessary."[135] During the solicitation process, the agency must include the factors and subfactors it will use to evaluate bids or competitive proposals and the importance assigned to those factors or subfactors.[136] Overall, potential contractors should be fully aware of the criteria used to judge them, and the federal government should ensure it has done everything, to the maximum extent possible under the circumstances, to ensure full and open competition.

For sealed bids, the agency shall evaluate the bids in accordance with 41 U.S.C. § 3701(a) without discussions with the bidders, except in limited circumstances, and shall award a contract with reasonable promptness to the responsible source whose bid conforms to the solicitation, considering only price and other price-related factors.[137] Agencies shall evaluate competitive proposals in accordance with 41 U.S.C. § 3701(a) and shall award a contract to the responsible source whose proposal is the most advantageous, considering only cost or price and the other factors included in the solicitation.[138]

D. The Post-Award Process Presents an Opportunity for Dissatisfied Government Contractors to Appeal the Award of a Government Contract.

Contractors dissatisfied with certain procurement decisions may file a bid protest. A bid protest is a written objection by an interested party to any of the following: a solicitation or other request by an agency for contract offers for the procurement of property or services, the solicitation request's cancellation, an award or proposed award of the contract, or a termination or cancellation of a contract's award.[139] Interested parties seeking to file a protest have three appellate avenues: (1) the agency, (2) the Government Accountability Office (GAO), and (3) the United States Court of Federal Claims.[140] Nothing precludes an interested party from filing an agency-level protest, a GAO protest, and then a Court of Federal Claims protest.

The bid-protest-processing timelines depend on the forum. The code specifies that "[p]rior to submission of an agency protest, all parties are required to use their best efforts

---

134 *See* 41 U.S.C. § 3306 (describing requirements for solicitation of proposals).

135 41 U.S.C. § 3306(a)(1)–(2).

136 *Id.* § 3306(b)–(c).

137 *Id.* § 3702(b).

138 *Id.* § 3703(c).

139 48 C.F.R. § 33.101 (2020).

140 31 U.S.C. § 3553; 41 U.S.C. § 7104; *see also* Agency Procurement Protests, 60 Fed. Reg. 55,171 (Oct. 25, 1995) (providing that agencies shall prescribe procedures to resolve protests concerning procurement contracts); 31 U.S.C. §§ 3551–3556 (concerning protests before the Government Accountability Office); 28 U.S.C. § 1491 (providing for protests before the Court of Federal Claims).

to resolve concerns raised by an interested party at the contracting officer level through open and frank discussions."[141] Agencies are encouraged to provide for inexpensive, informal, procedurally simple, and expeditious resolution of protests, using alternative dispute resolution techniques, if possible.[142] Ultimately, even though an interested party may be disappointed in the outcome, the agency's bid protest process is established to effectively resolve protests, build confidence in the procurement system, and reduce the number of protests to the GAO and Court of Federal Claims.[143] A protest filing with the agency triggers an automatic stay provision that will either prevent the awarding of the contract or prevent the contract's performance.[144] Regardless of the protest's complexity, agencies are directed to make their best efforts to resolve agency protests within thirty-five days of the protest's filing.[145]

The GAO handles the majority of bid protests.[146] The contracting officer receives notice when a protest is filed with GAO, and the agency must submit a complete report to GAO within thirty-days of the GAO notifying the agency that a protest has been filed or within twenty-days after receipt from the GAO of a determination to use the express option.[147] When a protest is filed before a contract's award, the contract may not be authorized unless the contracting activity's head makes a written finding that urgent and compelling circumstances, which significantly affect the U.S.'s interest, will not permit awaiting the GAO's decision and an award is likely to occur within thirty-days of the written finding.[148] When the agency receives a protest notice after the contract's award and within the permissible protest period, the contractor is required to immediately suspend contract performance or terminate the contract's award unless the contracting agency's head makes a written finding that contract performance is in the U.S.'s best interest or urgent and compelling circumstances that significantly affect the U.S.'s interests will not permit waiting for the GAO's decision.[149] The GAO issues its recommendation on a protest within one hundred days from the date of the protest's filing with the, or within sixty-five if under the express option.[150] Court of Federal Claims' appeals are governed by the Rules of the United States Court of Federal Claims and governed by any federal agency regulation.[151] Filing in the Court of Federal Claims can lead to significant delays in the government procurement process.[152]

Post-award debriefings play an important role in the bid protest process. During a post-award debriefing, an unsuccessful offeror shall be debriefed and notified why the

---

141 48 C.F.R. § 33.103(b) (2020).
142 *Id.* § 33.103(c).
143 *Id.* § 33.103(d).
144 *Id.* § 33.103(f)(1)–(3).
145 *Id.* § 33.103(g).
146 Bruce L. Mayeaux, *Administrative Law*, 65 La. B.J. 263, 264 (2018).
147 48 C.F.R. § 33.104(3)(i) (2020).
148 *Id.* § 33.104(b)(1).
149 *Id.* § 33.104(c)(1)–(2).
150 *Id.* § 33.104(f).
151 28 U.S.C. § 2503(b).
152 Ethan Elkind et. al., CEQA in the 21st Century: Environmental Quality, Economic Prosperity, and Sustainable Development in California 25 (2016), https://rosefdn.org/wp-content/uploads/2016/08/CEQA-in-the-21st-Century.pdf.

contractor did not receive the particular government contract.[153] In the debriefing, the government shall include, at a minimum, the evaluation of the weak or deficient factors in the offeror's offer, the overall evaluated cost and technical rating of the awarded contract's offer and the same for the debriefed offeror, the overall ranking of all offers, a summary of the award's rationale, and reasonable responses to relevant questions posed by the debriefed offeror as to whether source selection procedures set forth in the solicitation, applicable regulation, and other applicable authorities were followed by the agency.[154]

V. CHANGES TO THE CURRENT NEPA/CEQA PROCESS

This Part will address current changes that the federal government and California can make to the actual NEPA and CEQA legal practice to ensure the maximum rate of success on challenges to proposed projects. It will focus mainly on CEQA because it is abused more. CEQA process changes can also be used in the NEPA process, and focusing on CEQA reduces the need for redundant analysis.

A. Increasing the Transparency would be Helpful to Both NEPA/CEQA in Allowing Them to Overcome Challenges.

Holland & Knight noted a major problem with CEQA lawsuits was that parties were allowed to conceal their identity and interest, and even make up non-existent names mirrored after environmental groups.[155] Forcing parties to avoid anonymity can help identify the plaintiff's objective and identify whether the plaintiff is tied to a law firm known to actively engage in greenmail tactics. Although little case law exists on NEPA and CEQA processes' abuses for anticompetitive or economic reasons, courts have been willing to characterize plaintiffs' cases as spurious and note that the primary concern is economic benefit while environmental aspects are being used only to maintain the action.[156] The Maryland District Court noted, "NEPA was not designed to prevent loss of profits, but was intended only to promote governmental awareness of environmental problems."[157] It is clear that with early party identification, defendants would be able to make a colorable argument as to the legitimate purposes of the action under both NEPA and CEQA. Claiming only remote, speculative interest in the environment and abandoning that interest after ensuring protection of one's own financial interest is exactly the type of behavior courts seek to protect against.[158] Federal courts have already taken

---

153 41 U.S.C. § 3704(c).

154 *Id.*

155 Jennifer Hernandez, David Friedman, & Stephanie DeHerrera, *In the Name of the Environment: How Litigation Abuse Under the California Environmental Quality Act Undermines California's Environmental, Social Equity and Economic Priorities – and Proposed Reforms to Protect the Environment from CEQA Litigation Abuse*, Holland & Knight, https://www.hklaw.com/en/insights/publications/2015/08/in-the-name-of-the-environment-litigation-abuse-un (last visited Apr. 23, 2021).

156 Clinton Cmty. Hosp. Corp. v. S. Md. Med. Ctr., 374 F. Supp. 450, 455 (D. Md. 1974).

157 *Id.*

158 *Id.*

note of this, and this push toward transparency will allow Californian courts to take the same objective look when evaluating the legitimacy of a plaintiff's claim, especially if the party is one with a substantial financial interest who will likely settle the case without any environmental protections as a settlement condition.

B. For CEQA, Reaching out to Unions and Adding Unions to the Scoping and EIR Process Could Eliminate Some of the Frivolous Challenges.

The current EIS and EIR practice under NEPA and CEQA are easily manipulated in practice due to the broad public participation requirements under both. However, to reduce some of the challenges, taking a more expansive approach during the public comment and notice periods will protect potential defendants and allow for a better argument: that the alleged negative environmental impact has already been taken into account through the public comment process, the EIS or EIR, and the Record of Decision.

For instance, the current public involvement procedures require providing public notice of NEPA-related hearings, public meetings, and the availability of environmental documents to inform interested and/or affected parties.[159] Although this may seem broad, its drafting occurred when greenmailing had not become a substantial threat to environmental projects, and the regulation's preamble in 1978 did not mention NEPA abuse, indicating an assumption that the laws in place would be used to help the environment and not just increase compensation for labor unions and others.[160] One key way to reduce the risk or impact of future challenges is by actively seeking to add the labor unions and other interested parties to discussions during the beginning of the EIS or EIR period. Disingenuous parties typically attack the process at the end of the EIS or EIR period with tangential impacts, which are not the true reasons behind the EIS or EIR challenges. The addition of these group's input would result in their later inability to argue that the agency failed to take into account their important environmental concerns.

This approach's counterargument is that regardless of the labor unions' arguments' full consideration, it will not prevent them from engaging in frivolous litigation. From a cost-benefits analysis, this recommendation costs little, but has tremendous benefit. In the end, labor union inclusion throughout the process presents a substantial hurdle to labor unions' arguments that the agency failed to take their concerns into account. One added cost is that the EIS or EIR process will take longer, but the added time negotiating with the union on the front end far outweighs the potential increase in key projects' labor costs, delays, or cancellations from extended litigation and settlements.

Ultimately, both NEPA and CEQA are procedurally-oriented statutes with the goal of ensuring that the government or contractor has taken into account its action's potential environmental impacts. This approach would allow the agency or party to argue that the decided benefits from the project are justified, even in the face of potentially extremely negative impacts on the area's environment.[161]

---

159 40 C.F.R. § 1506.6(b) (2020).

160 *See id.* (declining to reduce the scope of notice requirements).

161 *See* Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 351 (1989).

Including labor unions throughout the EIS or EIR process is key for one particular reason: it makes it more likely the agency will prevail on a summary judgment motion. The labor union inclusion will help build the case's record and assert the agency's position that it took into account all relevant factors prior to making its determination that the benefits exceeded the environmental costs.

In federal courts, summary judgment is appropriate when the moving party shows there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.[162] However, to reach this decision, the movant's factual position must be strongly supported.[163] The court takes into account depositions, electronically stored information, affidavits, declarations, stipulations, admissions, interrogatory answers, and other materials.[164] The California summary judgment and motions for judgment on the pleadings' rules closely mirror the federal rules.[165] Regardless of whether it is a summary judgment motion for an EIS or EIR challenge, the process and burden of proof are essentially the same.

Critics would likely argue this is a simplistic argument to resolve a complex issue, but that assertion misses the point. One of the key problems with environmental laws, CEQA in particular, is the uncertainty of litigation.[166] Although uncertainty is inextricably tied to litigation, CEQA takes it to another level, with its broad standing standard and California's liberal judicial interpretation. To overcome these obstacles, the record must be thorough, robust, and must tackle the majority of relevant arguments. This is not a novel process, and in the past, a similar tactic has been used to successfully defend California's EIR process.[167] Ensuring that labor unions and other key parties place their significant objections to the project on the record, these objections or concerns are analyzed objectively, and the decision is well-reasoned without conclusory statements, may preclude a successful challenge to the process.[168]

C. Agencies/Parties Must Truly Focus on Nailing Down the Requirements of a Legally Sufficient EIS/EIR and Not Cut Corners.

One major challenge to the NEPA and CEQA process is drafting an EIS or EIR that will survive a judicial challenge. 42 U.S.C. § 4332(2)(C) outlines the requirement for NEPA's EIS, but case law illustrates a review process that leaves EISs vulnerable and susceptible to challenges even when they are thoroughly and meticulously prepared to take into account all reasonably foreseeable environmental impacts, mitigation, and al-

---

162 Fed. R. Civ. P. 56(a).

163 *See id.* 56(c)(1).

164 *Id.* 56(c)(1)(A).

165 Cal. C. Civ. Pro. 437c–439.

166 Hernandez, Friedman, & DeHerrera, *supra* note 155, at 9.

167 *Id.*

168 *See* Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal., 6 Cal. 4th 1112, 1129 (1993) (concluding the addition of new information to an EIR after the close of the public comment period is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a *substantial* adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect that the project's proponents have declined to implement).

ternative plans.[169] "It is now well settled that NEPA itself does not mandate particular results, but simply prescribes the necessary process."[170] From the Supreme Court's perspective, the EIS's most important part is the detailed discussion of steps that can be taken to mitigate adverse environmental consequences.[171] NEPA does not require a fully developed mitigation plan before an agency can act.[172] An agency's decision should be upheld as long as it is not arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.[173] For example, an agency action that failed to follow its own internal regulation might be successfully challenged.

However, despite this deferential view of EISs and EIRs, they are frequently overturned when challenged for what appear to be substantive reasons—not procedural reasons. For example, an EIS withstood challenges on multiple fronts, but was deemed insufficient in one section when drafters used generalities such as "development projects" and "ongoing urbanization" without sufficiently identifying the particular projects and their connection to cumulative impact.[174] A meticulous, almost checklist-oriented approach is necessary to ensure NEPA and CEQA compliance on an EIS or an EIR.

D. Crafting the Perfect Motion for Summary Judgment in a CEQA/NEPA Case

Drafting a successful summary judgment motion against a final EIS or EIS (FEIR/FEIS) is one of the most difficult, fact-intensive matters for the party attempting to complete a project, and it comes with a substantial risk the motion will be denied and the case will be further tied up in long-term litigation. Typically, parties seeking to challenge the FEIR will vaguely argue it does not adequately analyze environmental impacts, relies on flawed science or research methods, and failed to properly mitigate the project's effects.[175] Even though fighting a challenge to a FEIS is a risky and uphill battle, successful summary judgment motions defeating FEIS challenges still occur. The focus must always remain on ensuring the EIR allows those who did not participate in its preparation to understand and consider the issues raised by the proposed project.[176] This ties into the previous transparency and scoping arguments to ensure the community is well-informed, or at least had the opportunity to be.

"The foremost principle under CEQA is that the Legislature intended the act to be interpreted in such manner as to afford the fullest possible protection to the environ-

---

169 Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989); *see* Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 227–228 (1980) (per curiam); Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc., 435 U.S. 519, 558 (1978).

170 *Id.*

171 *Robertson*, 490 U.S. at 351.

172 *Id.* at 353.

173 5 U.S.C. § 706(2)(A).

174 City of Carmel-by-the-Sea v. U.S. Dep't of Transp., 123 F.3d 1142, 1148 (9th Cir. 1997).

175 *See, e.g.*, Sierra Club v. Cty. of Fresno, 6 Cal. 5th 502, 511 (2018) (holding, in part, that mitigation measures in EIR were impermissibly vague).

176 Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal., 47 Cal. 3d 376, 405 (1988); Berkeley Keep Jets Over the Bay Com. v. Bd. of Port Cmrs., 91 Cal. App. 4th 1344, 1356 (2011).

ment within the reasonable scope of the statutory language."[177] In reviewing an agency's determination under CEQA, the reviewing court must determine whether the agency prejudicially abused its discretion.[178] "The appellate court reviews the administrative record independently; the trial court's conclusions are not binding on it."[179] This results in a de novo review of statutory criteria but a more deferential standard for factual questions.[180] "CEQA requires an EIR to reflect a good faith effort at full disclosure; it does not mandate perfection, nor does it require an analysis to be exhaustive."[181] However, an EIR must reflect a reasonable, good faith effort to disclose and evaluate environmental impacts and identify and describe mitigation measures and alternatives; it also evaluates "whether the FEIR [final environmental impact report] includes reasonable responses to comments on draft EIR raising significant environmental issues."[182] The courts will not require an analysis of an exhaustive environmental-effects list, but courts will require an analysis of what was reasonably feasible.[183] "Failure to comply with the information disclosure requirements constitutes a prejudicial abuse of discretion when the omission of relevant information has precluded informed decision-making and informed public participation, regardless whether a different outcome would have resulted if the public agency had complied with the disclosure requirements."[184] Most importantly, however, an EIR is presumed adequate, and the CEQA action's plaintiff has the burden of proving otherwise.[185]

Parties frequently challenge EIRs on the grounds that a particular and/or reasonably foreseeable condition was not sufficiently evaluated.[186] To satisfy this standard, parties must ensure specific health and environmental risks are identified and connect those risks to a project's specifics with enough analysis to ensure the public is aware of the project's specific consequences.[187] In short, a CEQA analysis must ensure significant increases in pollution and other negative environmental impacts are sufficiently tied to their negative impacts on human health and the environment, and not just with vague statements.[188]

---

177 *Laurel Heights Improvement Ass'n*, 91 Cal. App. 4th at 390 (quoting Friends of Mammoth v. Bd. of Supervisors, 8 Cal. 3d 247, 259 (1972)).

178 *See* CAL PUB. RES. CODE § 21168.5 (2019); City of Long Beach v. Los Angeles Unified Sch. Dist., 176 Cal. App. 4th 889, 897 (2009).

179 Bakersfield Citizens for Local Control v. City of Bakersfield, 124 Cal. App. 4th 1184, 1197 (2004).

180 Connerly v. State Personnel Bd., 37 Cal.4th 1169, 1175 (2006).

181 *City of Long Beach*, 176 Cal. App. 4th at 898.

182 STEPHEN L. KOSTKA & MICHAEL H. ZISCHKE, PRACTICE UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT 566 (2009).

183 Ass'n of Irritated Residents v. Cty. of Madera, 107 Cal. App. 4th 1383, 1390–91 (2003).

184 Bakersfield Citizens, 124 Cal. App. 4th at 1197 (citing Dry Creek Citizens Coal. v. Cty. of Tulare, 70 Cal. App. 4th 20, 26 (1999) and Ass'n of Irritated Residents,107 Cal. App. 4th at 1391 (2003)).

185 Preserve Wild Santee v. City of Santee, 210 Cal. App. 4th 260, 275 (2012).

186 *See, e.g.*, Sierra Club v. Cty. of Fresno, 6 Cal. 5th 502 (2018).

187 *Sierra Club*, 6 Cal. 5th at 518.

188 *See id.* at 521 (noting that the EIR must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must adequately

Project alternatives and mitigation measures are often an area where FEIR challengers are successful in arguing against the agency or private party in charge of the project. Alternatives should be limited to ones that avoid or substantially lessen the project's significant effects.[189] This often includes thorough analysis of the impact of (1) not constructing the project, (2) reducing the project's size, and (3) alternative sites.[190] The input process prior to the alternatives can present compelling evidence that the project's proposing agency evaluated a reasonable range of alternatives.[191] Absent a showing from the EIR challenger demonstrating (1) the choosing of alternatives are "manifestly unreasonable," (2) do not contribute to a reasonable range of alternatives, and (3) submission of evidence showing the rejected alternative was "feasible" and adequate, taking into account project objectives, suitability, economic viability, availability of infrastructure, general plan consistency, and other relevant factors, the courts defer to the agency's selection of alternatives.[192]

Although there is a risk the summary judgment motion may not be granted against an FEIR challenge, that risk is apparent in all litigation. More agencies and parties have been willing to just settle against FEIR challenges because it is easier, less timely, and less expensive. However, this short-sighted approach has led to the current environment in which CEQA is constantly exploited by unscrupulous parties.

E. The Government and Parties Should Consider Launching Offensive Lawsuits for Abuse of CEQA/NEPA Process.

While it is extremely rare that government agencies or private companies are likely to file lawsuits for CEQA or NEPA abuses, the trend may be changing. In December 2018, a San Diego developer filed a suit against a labor union and alleged violations of antitrust law and Racketeer Influenced and Corrupt Organizations Act (RICO)[193] by allegedly using CEQA process for the improper purpose of securing labor union work for the developer's projects.[194] In January 2019, a developer filed a RICO suit against unions and consultants who allegedly used CEQA to oppose a project for illegitimate reasons.[195] Lastly, another developer filed a RICO lawsuit against a competitor and alleged the

---

explain what the agency does know and why, given existing scientific constraints, it cannot translate potential health impacts further).

189 Cal. Code Regs. tit. 14, § 15126.6(f) (2020).

190 City of Long Beach v. Los Angeles Unified Sch. Dist., 176 Cal. App. 4th 889, 921 (2009).

191 *Id.* ((1) holding four community meetings focused on site selection, alternative sites, and selection criteria; (2) reviewing site selection and alternative sites; (3) affording community input at two meetings; and (4) applying the site selection criteria established by a servicing division supported the position that a reasonable range of alternatives was evaluated and "no project alternative" was not feasible because it was counter to the entire purpose of the project).

192 Ctr. for Biological Diversity v. Dep't of Fish & Wildlife, 234 Cal. App. 4th 214, 256 (2015).

193 18 U.S.C. §§ 1961–1968.

194 Complaint, Evans Hotels, LLC v. Unite Here! Local 30 et al., 3:18-cv-02763-H-KSC (S.D. Cal., Dec. 7, 2018).

195 Complaint, The Icon at Panorama, LLC v. Sw. Reg. Council of Carpenters, 2:19-cv-00181-CBM-MRW (C.D. Cal., Jan. 9, 2019).

competitor used CEQA to extract a $5.5 million payment.[196] This lawsuit, like most questionable CEQA lawsuits, involved no consideration requested or provided to protect the environment.[197] Allegedly, one defendant was quoted as saying, "You know the drill. It's going to take a check to make this go away."[198]

F. Banning the Use of Project Labor Agreements Eliminates a Key Incentive to File Frivolous Lawsuits.

One way to prevent the use of greenmail and other abuses of the NEPA or CEQA processes is to eliminate one of the key incentives for filing frivolous EIS or EIR complaints. Several states have started to reduce the threat of greenmail by banning the use of government-mandated project labor agreements on state and local construction projects.[199] Prior to the state legislature passing a ban in Arizona, California labor unions had started to apply greenmail pressure on several green projects in Arizona.[200] By effectively preempting the problem through appropriate legislation, Idaho and Arizona are two states that will see reduced prices and more freedom to choose their workers on key environmental projects.[201]

Given the benefit this has at the state level, the U.S. President should consider issuing an executive order encouraging federal agencies to avoid PLAs, especially on high-value projects. President Obama issued Executive Order (E.O.)13502 in 2009 to encourage the use of PLAs for federal construction projects.[202] This E.O. alleged it was enacted to promote the efficient administration and completion of federal projects.[203] However, because PLAs are the leading reason green projects are halted, the president, by exempting environmental projects from this PLA order with his own executive order, would make great strides for the environmental projects' efficiency and pricing.[204] Some will argue that PLAs should be eliminated for all projects, but that is not an issue addressed in this Article. The purpose here is to ensure environmental project efficiency, and reducing PLAs will eliminate the key incentive individuals have for frivolous EIS or EIR appeals.

---

196 *See* Relevant Group, LLC v. Nourmand et al., 2:19-cv-05019-ODW (C.D. Cal., May 19, 2020).

197 Arthur F. Coon, *CEQ Meets RICO: True Stories of Extortion and Litigation Abuse in Tinseltown*, Miller Star Regalia (July 12, 2019) https://www.ceqadevelopments.com/2019/07/12/ceqa-meets-rico-true-stories-of-extortion-and-litigation-abuse-in-tinseltown.

198 *Id.*

199 Jonathan R. Mayo, *Project Labor Agreements in Public and Private Contracting*, Martindale: Legal Library (Nov. 29, 2016), https://www.martindale.com/construction-law/article_Smith-Currie-Hancock-LLP_2237838.htm.

200 Andy Conlin, *Arizona Bans Greenmail, Government-Mandated PLAs on State and Local Projects*, The Truth About Project Labor Agreements (Apr. 12, 2011), https://thetruthaboutplas.com/2011/04/12/arizona-bans-greenmail-government-mandated-plas-on-state-and-local-projects.

201 *Id.*

202 Exec. Order No. 13,502; 3 C.F.R. § 6985 (2009).

203 *Id.*

204 Ian Kullgren, *White House memo details divide-and-conquer labor strategy*, POLITICO (Oct. 4. 2019), https://www.politico.com/news/2019/10/04/federal-employees-white-house-memo-028954 (stating that project labor agreements drive up costs as much as 18 percent).

VI. THE IMPACT OF RECENT AND PROPOSED CHANGES

A. Executive Order 13087 Attempts to Improve the NEPA Process for Federal Agencies by Streamlining the Government's NEPA Process.

In August 2017, President Donald Trump issued E.O. 13087, Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects.[205] The purpose was to alter how the federal government processes its environmental reviews.[206] However, this purpose was still balanced against the safeguarding our communities, maintaining a healthy environment, and making informed decisions concerning infrastructure projects' environmental impacts.[207] The goal was to reduce environmental reviews and authorizations for major infrastructure projects down to an average of not more than two years.[208] Overall, the E.O. sought to eliminate some of the main complaints that the EIS process takes too long. One might suspect that President Trump made false claims about wanting to protect the environment and streamline the NEPA process, but he is far from the first individual to complain about the pace at which federal agencies complete EISs.[209] Justice Thurgood Marshall noted that an early start on the EIS is not only more than a procedural necessity, but it also ensures early consideration of environmental consequences.[210] Shortening the NEPA-goal timeline would force federal agencies to begin working more diligently on EISs as early as possible.

Additionally, there are other federal changes which, although not approved government-wide, are already implemented and are aligned with the EIS. For example, the Department of Transportation, has implemented a policy that prevents EISs from exceeding 150 pages.[211] For proposed actions with an unusual scope or complexity, the page limit may increase up to 300 pages.[212] When combining the agency's proposed time limits on its EISs and the page limits on its analysis, the federal government should see more succinct, timely examination of the potential environmental impacts. This is a step in the right direction because current EISs often take up to five years and, despite the EIS's attempts to properly consider the appropriate environmental impacts and mitigation, they are still frequently subject to challenges.[213]

Not unlike most process proposals and changes in the environmental context, these changes are already a source of contention between environmental activists and the

---

205 Exec. Order No. 13,087; 82 Fed. Reg. 40,463 (Aug. 15, 2017).
206 *Id.*
207 *Id.*
208 *Id.*
209 *See, e.g.*, Kleppe v. Sierra Club, 427 U.S. 390, 417 (1976).
210 *Id.*
211 Elizabeth Diller and John Hansel, *How the U.S. Department of Transportation is streamlining NEPA*, Inner City Fund (Oct. 28, 2019), https://www.icf.com/insights/environment/nepa-streamlining.
212 *Id.*
213 Sharon Zhan, *How Trump Plans to Gut NEPA, A 50-Year-Old Environmental Law*, Pacific Standard (Jan. 24, 2019), https://psmag.com/environment/how-trump-plans-to-gut-nepa-environment.

federal government.[214] Environmental activists allege it is an attack on NEPA to place arbitrary restrictions on how long an environmental review process can take, but the typical review process of three to five years is unacceptable.[215] Taxpayers have complained that federal agencies are untrustworthy, inefficient, and incompetent.[216] Stricter deadlines may present a more competent image of the federal government in key areas. Additionally, shortening the EIS goal timeline will not preclude a federal agency from taking a more extensive look when required. This shortened timeline will reduce bureaucratic hurdles, which hamper the federal government's processes, and it will prevent indecision by forcing decision-makers to act with increased motivation when these hard deadlines are set for key government projects.

One of the most persuasive reasons to believe the federal government can execute an EIS within two years without sacrificing the thoroughness of these reviews is found in the EIR regulations under CEQA.[217] Despite being more stringent than NEPA, public agencies have one year to complete and certify an EIR.[218] There is the possibility for a reasonable extension of time.[219] Given that CEQA is more stringent than NEPA, and most agencies are able to comply with the time limits with or without an extension,[220] federal agencies, with more funding and employees, should be able to comply with a timeline that is twice as long as the CEQA-EIR process without sacrificing quality for speed. Much like in CEQA, if an EIS is defective or controversial, the administrative review process and courts will still provide the opportunity for interested parties to object to the proposed project.

B. *Chevron* Provides the Analytical Framework for Analyzing Whether Agency Regulations will Withstand Judicial Scrutiny.

Chevron U.S.A., Inc. v. NRDC, outlined the standard for judicial review of agency regulations.[221] If Congress's intent is clear, because Congress has directly spoken to the precise issue at hand, the analysis ends there and the court, as well as the agency, must act as Congress expressly requires.[222] If, on the other hand, Congress has not directly addressed the precise issue because the statute is silent or ambiguous with respect to the specific issue, "the question . . . is whether the agency's answer is based on a permissible

214 *Id.*
215 *Id.*
216 Tom Schatz, *Firing bad federal government workers should not be difficult*, The Hill (Feb. 22, 2019), https://thehill.com/opinion/finance/431187-firing-bad-federal-government-workers-should-not-be-difficult.
217 Cal. Pub. Res. Code §§ 21100.2, 21151.5 (2019).
218 *Id.* § 21100.2.
219 *Id.*
220 *Id.* § 21151.5; *see* Cal. Senate Off. of Rsch, California Environmental Quality Impacts on Delivering State Highway Transportation Projects 5 (2018), https://sor.senate.ca.gov/sites/sor.senate.ca.gov/files/Policy%20Matters%20Research%20CEQA.pdf (noting that 320 projects analyzed in a transportation study, the average time to complete project approval and environmental document phase was 15 months).
221 *See* Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837 (1984).
222 *Id.* at 842–43.

construction of the statute."[223] "[C]onsiderable weight should be accorded to an executive department's construction of a statutory scheme it is trusted to administer," and deference applies.[224]

C. The U.S Forest Service's Proposed NEPA Streamlining Rule is One of the First Crafted in Response to E.O. 13087 and Likely the First that will be Challenged in Court.

In light of E.O. 13087, the United States Department of Agriculture's Forest Service proposed revisions to its NEPA procedures under 36 C.F.R. 220.[225] These proposed revisions include the addition or expansion of categorical exclusions to exempt activities from detailed NEPA analyses, modifications of public participation requirements, and the elimination of redundant NEPA analyses.[226] An analysis of relevant portions of this proposal, made from a conservative perspective, will help determine whether the proposed rule changes will be able to withstand judicial scrutiny.

1. Categorical Exclusions

Under the USDA Forest Service's proposed rule, proposed categorical exclusions include construction at an existing recreational site,[227] construction at an existing administrative site, activities requiring less than twenty acres of land,[228] and a catch-all category of additional activities.[229] The first step in statutory analysis under the *Chevron* framework is determining whether Congress specifically addressed categorical exclusions in NEPA, and it is not clear from the statute's legislative history whether categorical exclusions are mentioned.[230] Because the statute was left ambiguous with respect to categorical exclusions, a court would proceed to *Chevron* Step 2—an analysis to determine whether the Forest Service has engaged in a reasonable interpretation of NEPA.

The Forest Service's proposed rule to expand categorical exclusions will likely run into problems withstanding judicial scrutiny, even in the most conservative courts. In the past, courts have been hesitant to uphold agency environmental regulations that sought to remove more than a de minimis number of changes from the government review process.[231] However, more recently, the Supreme Court has been more willing to

---

223 *Id.* at 843.

224 *Id.* at 844.

225 National Environmental Policy Act (NEPA) Compliance, 84 Fed. Reg. 27,544 (June 13, 2019) (to be codified at 36 C.F.R. pt. 220).

226 *Id.*

227 *Id.* at 27,548.

228 *Id.* at 27,555.

229 *Id.* at 27,554.

230 *See* Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837 (1984).

231 *See* New York v. U.S. Env't Prot. Agency, 443 F.3d 880, (D.C. Cir. 2006) (In interpreting the Clean Air Act Amendments of 1977, the court struck down an EPA amendment excluding a large category of modifications from review, noting that it would be strange that a law intended to limit increases in air pollution would allow sources operating below applicable emission limits to increase significantly the pollution they emit without government review.)

read into statutes concerns, such as cost and ease of administration, when these concerns are not specifically mentioned in the statute's text.[232]

A court could find the Forest Service's attempt to broadly eliminate, from the government's review process, any construction at an existing recreation site, any construction at an existing administrative site, any activities requiring less than twenty acres of land, and any additional activities consistent with Forest Service approvals went beyond the scope of permissible statute construction. NEPA's plain text is clear: the statute's purpose is to promote efforts to prevent or eliminate environmental damage.[233] Exempting entire categories of activities from detailed analysis runs completely counter to NEPA's purpose and any reasonable ability to enforce the statute.[234] Justice Thomas, one of the Court's most conservative members, has been skeptical of unelected federal agency officials exercising broad lawmaking authority,[235] like the authority invested in site managers under this proposed rule.

More conservative justices have been known to be less environmentally friendly and take approaches that evince dissatisfaction with the nation's environmental regulatory scheme and agency oversight.[236] Even absent an explicit mention that costs should be considered when determining whether to implement certain power plant regulations, a conservative court, reviewing under the *Chevron* standard, noted "appropriate and necessary" regulation required at least some attention to cost because cost is a centrally relevant factor when determining whether to regulate.[237] This rationale was used to strike down a regulatory scheme on power plants' emissions when the estimated benefits of approximately $6 million were vastly outweighed by the regulatory burden of $9.6 billion.[238] Thus, though the Forest Service could point to the excessive disparity between the regulatory burden and benefits militating in favor of rollbacks, the broad authority given to site managers and the large expansion of the categorical exclusion category will

232 Michigan v. U.S. Env't Prot. Agency, 576 U.S. 743, 760 (2015).

233 42 U.S.C. § 4331.

234 *See id.*

235 *See* U.S. Env't Prot. Agency v. EME Homer City Generation, L.P., 572 U.S. 489, 525 (2014) (Thomas, J., dissenting) (questioning the textual justification of an action and noting too many important federal government decisions are made by unelected agency officials exercising broad lawmaking authority).

236 *See, e.g.*, Brad Plumer, *How Brett Kavanaugh Could Reshape Environmental Law From the Supreme Court*, N.Y. TIMES (July 10, 2018), https://www.nytimes.com/2018/07/10/climate/kavanaugh-environment-supreme-court.html; John H. Cushman, Jr., *Reshaping the Supreme Court: What 2 Dissents on Climate Rules Tell Us*, INSIDE CLIMATE NEWS (July 10, 2018), https://insideclimatenews.org/news/28062018/justice-anthony-kennedy-retirement-environmental-laws-climate-change-case-massachusetts-v-epa-supreme-court; Greg Sargent, *Not just Kavanaugh: Another alarming reason to fear the Supreme Court*, WASH. POST (Sept. 16, 2019), https://www.washingtonpost.com/opinions/2019/09/16/not-just-kavanaugh-another-alarming-reason-fear-supreme-court.

237 Michigan v. U.S. Env't Prot. Agency, 576 U.S. 743, 752 (2015).

238 *Id.* at 749.

likely lead to a conservative court ruling the regulation as impermissible because of the way in which it thwarts NEPA enforcement.[239]

2. Public Participation Modifications

The Forest Service currently exceeds requirements for public scoping by conducting it on all proposed actions,[240] but it intends to require scoping only for an EIS to allow the agency to effectively allocate resources to projects that have greater public interest and/or are more complex.[241] Even so, the proposed rule would still give discretion to allow for broader public engagement.[242] NEPA does not specifically mention how much public engagement is required, but notes the federal government should cooperate with the concerned public to use all practicable means to "promote the general welfare" and to create sustainable conditions for both man and nature.[243] These exhortations highlight Congress's intention to place significant importance on public participation.

This language is also subject to *Chevron* Step 2 deference because the terms of public engagement were not specifically outlined. NEPA's public comment and participation process is one of the most time-intensive and expensive portions, and cost considerations are a relevant factor when determining whether or not an agency should regulate.[244] Agencies are permitted to take into account the cost and benefits when deciding to regulate, and plainly excessive costs that exceed the benefit should not be imposed.[245]

The Forest Service's public participation modifications will likely survive a challenge. Currently, the agency strains its limited resources by conducting scoping reviews on all projects, including those with no significant environmental impact. Agencies are permitted to focus their limited resources on the areas that are more complex and are of greater public importance, and this regulation is reasonable in this way. Given the overbroadness of the agency's current scoping process, the agency's desire to focus on the most important and complex projects, and its discretion to allow for broader public engagement, means the public participation modification is a reasonable and permissible interpretation of the statute and will most likely withstand a judicial challenge.

3. Elimination of Redundant NEPA Analyses

The Forest Service's proposed rule attempts to eliminate redundancies by determining whether a NEPA analysis performed for a previously proposed action can suffice for a

---

239 *See, e.g.*, Util. Air Regulatory Group v. U.S. Env't Prot. Agency, 573 U.S. 302, 323–24 (2014) (noting that transformational expansion of regulatory authority is a statutory interpretation principle which should be rejected).

240 *See, e.g.*, 36 C.F.R. § 220.4(e)(1) (2020) ("Scoping is required for all Forest Service proposed actions, including those that would appear to be categorically excluded from further analysis and documentation in an EA or an EIS").

241 National Environmental Policy Act (NEPA) Compliance, 84 Fed. Reg. 27,551 (June 13, 2019) (to be codified at 36 C.F.R. pt. 220).

242 *Id.* at 27,553.

243 42 U.S.C. § 4331(a).

244 Michigan v. U.S. Env't Prot. Agency, 576 U.S. 743, 752 (2015).

245 *See id.*; *see also* Util. Air Regul. Group v. U.S. Env't Prot. Agency, 573 U.S. 302 (2014) (noting that plainly excessive demands placed on limited government resources are necessarily unreasonable).

newly proposed action.[246] To make this determination, the responsible official will evaluate the following: (1) whether the new proposed action is essentially similar to a previously analyzed proposed action or, alternatively, analyzed in detail in the previous NEPA analysis; (2) whether the range of alternatives previously analyzed is adequate under the present circumstances; (3) whether there is any significant new information or circumstances relevant to environmental concerns that would substantially change the analysis in the existing NEPA documents; and (4) whether the direct, indirect, and cumulative effects resulting from the new proposed action's implementation are similar to those analyzed in existing NEPA documents.[247]

The attempt at eliminating redundancies would also be entitled to a *Chevron* Step 2 analysis because NEPA does not address this area of the process in detail. Importantly, these guidelines strongly resemble the general permitting standards for a dredge or fill permit issued by the U.S. Army Corps of Engineers.[248] In determining whether a general permit type covers an entire group or category of similarly-situated but nonadjacent facilities should be covered, the agency evaluates whether the activities involve similar operations, discharge the same types of wastes, requires the same standards for sewage, requires the same or similar monitoring, and are more appropriately controlled under a general than an individual permit.[249] The permitting process requires a significant investigation into the operation's environmental impacts.[250]

The Forest Service's attempt to eliminate redundancy has a strong chance of withstanding judicial scrutiny. Before determining whether a project does not require a new EIS, the agency goes through a thorough four-step analysis to determine whether a similar project has already been analyzed, paying particular attention to new or significant environmental changes and the cumulative effects that might alter the analysis.[251] Similar methods of analysis have withstood scrutiny to the extent that they have considered relevant changes that might impact the analysis.[252] The rule as proposed attempts to efficiently allocate limited government resources by preventing duplicative work when only insignificant factors differ between the proposed projects.[253] When considering the Forest Service's resources, the proposed rule's stated objectives, and the thorough process by which the Forest Service determines whether a previously proposed analysis can suffice for a new proposed action, the rule as written appears to be a reasonable interpretation of the statute and should withstand a facial challenge. However, this does not

---

246 National Environmental Policy Act (NEPA) Compliance, 84 Fed. Reg. 27,553 (June 13, 2019) (to be codified at 36 C.F.R. pt. 220).

247 *Id.*

248 *See* 33 U.S.C. 1344(e) (providing requirements of general dredge and fill permits).

249 *Id.*

250 National Environmental Policy Act (NEPA) Compliance, 84 Fed. Reg. 27,552–544 (June 13, 2019) (to be codified at 36 C.F.R. pt. 220).

251 *Id.* at 27,553.

252 *See, e.g.*, Texas Indep. Producers & Royalty Owners Ass'n v. U.S. Env't Prot. Agency, 410 F.3d 964 (7th Cir. 2005); Upper Mo. Waterkeeper v. Mont. Dep't of Envt Quality, 395 Mont. 263, 272 (2019).

253 National Environmental Policy Act (NEPA) Compliance, 84 Fed. Reg. 27,544–558 (June 13, 2019) (to be codified at 36 C.F.R. pt. 220) (listing extensive, thorough, and exhaustive categorical exclusions for the purpose of, *inter alia*, attempting to conserve agency resources).

prevent the proposed rule from later being struck down in an as-applied challenge to the actual practice and implementation of the rule.

VII. RECOMMENDED CHANGES TO LAWS AND REGULATIONS

In addition to changes current practices, further law and regulation changes are necessary to reduce environmental and procurement law misuse. Necessary CEQA changes include limiting available remedies to allow for relief only and tightening standing criteria. In the federal acquisition context, improved debriefings, a reduction in the number of forums to file a bid protest, and the establishment of a bright-line rule standard for abuse of the protest process should reduce frivolous bid-protest filings.

A. Changing the Law to Eliminate Certain Remedies Will Dramatically Improve the CEQA Process.

Given that remedies allegedly sought may not match the remedies reached in CEQA settlement agreements,[254] the legislature could reduce CEQA abuses by making injunctive relief the sole available remedy. In an environmental case, the typical claim is that some harmful action will be taken that will have significant adverse environmental impacts. However, settlement agreements rarely involve provisions that protect the environment.[255] This strongly supports a common belief that motives CEQA lawsuits are to simply extract favorable terms, which often have nothing to do with the environment. Limiting remedies to only injunctions disincentivizes abuse by parties using CEQA as a vehicle to enhance their financial and employment positions.

B. Tightening the Standing Criteria under CEQA will Reduce the Ability of Disingenuous Parties to File Frivolous Lawsuits.

Altering standing may be one of the key changes to CEQA. As noted earlier, unions have standing to sue under CEQA and there have even been instances in which a member of the general public was granted standing regarding projects even when the individual was not a resident or property owner within the area which could be potentially impacted by the project's environmental reach.[256] CEQA standing should be crafted in line with the federal rules for standing. The Clean Air Act's citizen's suit provision provides for modifications to follow. For example, prior to bringing a citizen suit, citizens must provide EPA and the state with a sixty-day notice prior to initiating any lawsuit.[257] The notice under the Clean Air Act provides agencies with one last chance to cure the

---

254 *See* James Burnett, *Leaked Settlement Shows How NIMBYs "Greenmail' Developers*, CURBED: LOS ANGELES (Jan. 3. 2013), https://la.curbed.com/2013/1/3/10295162/leaked-settlement-shows-how-nimbys-greenmail-developers-1 (discussing how a $250,000 settlement to be used as plaintiff saw fit).

255 Hernandez, Friedman, & DeHerrera, *supra* note 155, at 89 (explaining that CEQA litigation often seeks non-environmental outcomes such as competitive advantage, control of project jobs, cash settlements, and dealing with localized neighborhood problems).

256 Kane v. Redevelopment Agency, 179 Cal. App. 3d 899 (1986).

257 42 U.S.C. § 7604(b)(1)(A).

alleged violation before litigation occurs.[258] Similarly, a ninety-day notice would provide CEQA defendants with advance notice and the opportunity to cure any perceived deficiencies in the EIS or EIR. This would also force the plaintiff to disclose the perceived deficiencies in the EIS or EIR, allowing companies and the government to determine whether there are impacts they would like to investigate or whether the lawsuit is greenmail. Additionally, much like the Clean Air Act, a provision precluding a citizen suit on the same alleged violation could be added.

The bipartisan Think Long Committee organized by the Nicolas Berggruen Institute[259] recommended a different approach that has its own implementation issues. The Committee stated, "Petitioners should be able to bring a CEQA lawsuit only if they have, and can demonstrate in court, a legitimate and concrete environmental concern about a project, as well as the absence of a competitive commercial or economic interest on their part in the project."[260] This solution works in theory, but it could preclude numerous legitimate cases that have a corollary commercial or economic interest. A better phrasing would be that there is a presumptive burden that must be overcome if the person showing a legitimate and concrete environmental concern about a project also has a competitive commercial or economic interest. This would capture those individuals who frequently abuse the process, but still allow certain environmental groups, who may be financially incentivized, to still pursue legitimate environmental concerns.

A more far-reaching and drastic approach would be to completely eliminate citizen suits and make the California Attorney General the sole individual with authority to bring CEQA suits. However, this is an ineffective approach. For example, CEQA has a great intent: it encourages the environment's protection through citizens who monitor projects that might significantly alter their surrounding environment. Preventing these citizen suits entirely would likely increase environmental deterioration, as private citizens would not be able to participate in the process. The goal is to curtail the abuse so that it no longer renders the statute as unworkable, so a carefully balanced revision of citizen participation opportunities is needed.

Regardless, before curtailing any citizen suits, one must carefully evaluate whether there is adequate funding for environmental oversight at both the federal and state levels. There is a recent trend toward slashing environmental funding at both the federal and state levels.[261] This might lead to an increase in monitoring and oversight problems, especially as the federal government attempts to shift more responsibility to the states.[262] Although this is a nationwide problem, California appears to be an outlier due to its 74%

---

258 *Id.* § 7604(b).

259 NICOLAS BERGGRUEN ET AL., A BLUEPRINT TO RENEW CALIFORNIA: REPORT AND RECOMMENDATIONS PRESENTED BY THINK LONG COMMITTEE FOR CALIFORNIA 3 (2012), https://36z59wriv543qd814533ma8z-wpengine.netdna-ssl.com/wp-content/uploads/2018/10/Blueprint_to_Renew_ca.pdf.

260 *Id.* at 17.

261 Valerie Volcovici, *Most U.S. states have cut environmental budgets and staffing since 2008: study*, REUTERS (Dec. 5, 2019), https://www.reuters.com/article/us-usa-epa-states/most-u-s-states-have-cut-environmental-budgets-and-staffing-since-2008-study-idUSKBN1Y9216.

262 *Id.*

increase in funding for its state environmental agency from 2008 to 2018.[263] The curtailing of citizen suit provisions will not likely prevent substantial CEQA enforcement, but it should help to reduce abuse. There is little evidence available to indicate environmental activists will become any less aggressive in their methods to ensure the environment's protection, and they remain an active part in bringing attention to important environmental causes and problems before they become mainstream.

Critics of CEQA reform have stated that the three arguments against CEQA—abuse of process through litigation, burdensome project costs and delays, and constraints on public policy initiatives—threaten to undo or compromise the concept and process behind the statute.[264] From 2013 to 2015, there were 570 CEQA lawsuits, and the CEQA litigation rate (challenges to CEQA review documents divided by the estimated total projects with CEQA review documents) was 0.71%.[265] Thus, critics CEQA abuse is negligible because this is such a small percentage of cases. However, the examples show the majority of CEQA challenges are not brought by environmental groups and often result in settlements with no environmental benefits indicate CEQA modifications are necessary.

C. The Federal Government's Debriefing Process Must be Improved to Combat Potential Bid Protests and Properly Educate Disappointed Offerors.

A major complaint with the current debriefing process is that contracting officers often tend to do nothing but the bare minimum and rarely actually educate disappointed offerors on how they can improve their chances for future contracts, despite the process's intent to both educate disappointed offerors and explain why they did not win a particular government contract.[266] One common assumption is that contracting officers are overworked and overtasked, and they are doing everything within their power to avoid violating a procurement statute or regulation by being too open during the debriefing process. However, this very openness is what is required to minimize the number of disappointed offerors, bid protests, and to ensure more efficiency in the federal government's procurement system.

Rob Burton, an attorney with Crowell & Moring and former deputy administrator in the Office of Federal Procurement Policy noted, "'[m]ost debriefings [are] handled through written, short explanations about why you lost, and they are totally ineffective.'"[267] These abbreviated debriefings raise many additional questions for contractors,

---

263 Noah Glick, *Idaho, Wyoming among states that have cut environmental agency funding, report says*, KUNC (Dec. 9, 2019), https://www.kunc.org/post/idaho-wyoming-among-states-have-cut-environmental-agency-funding-report-finds#stream/0.

264 ETHAN ELKIND ET. AL., *supra* note 152, at 2.

265 *Id.* at 21–22.

266 Jared Serbu, *RAND STUDY: Bid protests are rare, aren't frivolous*, FED. NEWS NETWORK (Jan. 4, 2018), https://federalnewsnetwork.com/contracting/2018/01/rand-study-bid-protests-are-rare-arent-frivolous.

267 Jason Miller, *GSA launches enhanced debriefing pilot, but why not make it permanent?*, FED. NEWS NETWORK (Feb. 18, 2019), https://federalnewsnetwork.com/reporters-notebook-jason-miller/2019/02/gsa-launches-an-enhanced-debriefing-pilot-but-why-not-just-make-it-permanent.

which agencies fail to answer, so the best way to get answers is often through filing a bid protest.[268] When used in this way, the bid protest process is essentially being used as a discovery tool, and this long, intensive process places a significant burden on the agency's employees, attorneys, and others involved in the process.[269] Improving this process on the front-end and answering all relevant questions a disappointed offeror may have has the potential of saving hundreds of work hours and hundreds of thousands of hours on the back-end. Most importantly, it helps to ensure key projects, including environmental ones, are not tied up with stays or injunctions from bid protests.

In January 2019, the Advisory Panel on Streamlining and Codifying Acquisitions Regulations issued a report identifying potential changes to improve the federal government's acquisition program.[270] Recommendation sixty-nine encouraged the federal government to provide, as part of a debriefing, in all procurements where a debriefing is required, a redacted source selection decision document and the technical evaluation of the vendor receiving the debriefing.[271] This report noted that many DoD contracting agencies do not consider debriefings to be a means of avoiding protests, and that this perception results in many debriefings that appear to be adversarial, incomplete, and insufficient.[272] Most DoD agencies presume that providing additional information during a debriefing will be used against them in a protest, but the opposite is true.[273]

The above-mentioned improvements are a start to improving the debriefing process, but they do not go far enough to address some of the underlying causes of the risk-averse nature of the contracting officers and federal government as a whole. The agencies must put forth the appearance that the debriefing process is beneficial for both the disappointed offeror and the agency because, ultimately, the disappointed offeror's end goal is often obtaining future work from the federal government. Additionally, the process needs to be arranged to encourage dialogue, rather than relying solely on written product. Individuals will frequently have questions, and at times, written communication is insufficient and not timely enough to answer the particular questions presented. Open oral communication must also be encouraged to reduce the communication barriers that exist by communicating solely through writing. However, despite this push toward open oral communication, as a precaution, conversations should be documented in writing and then included in the case file in the event there is still a bid protest arising out of that particular procurement.

D. The Federal Government Should Reduce the Number of Forums Available for Bid Protests and Should Allow Parties Just One Opportunity to Protest.

Reducing the number of potential forums in which a disappointed offeror can file a bid protest works to protect against potential abuse. Although currently a disappointed

---

268 *Id.*

269 *Id.*

270 Section 809 Panel, Report of the Advisory Panel on Streamlining and Codifying Acquisitions Regulations 321 (2019) https://discover.dtic.mil/wp-content/uploads/809-Panel-2019/Volume3/Sec809Panel_Vol3-Report_Jan2019_part-2_0307.pdf.

271 *Id.* at 320.

272 *Id.* at 358.

273 *Id.*

offeror can file a protest with the agency, the GAO, and then with the Court of Federal Claims, the number of potential forums should be reduced to one: the GAO. For one, eliminating the agency removes the perception that an agency would be biased and avoid admitting its own potential error. The Advisory Panel on Streamlining and Codifying Acquisitions Regulations also recommended federal agencies reduce potential bid protest processing time by eliminating the opportunity to file a protest with the Court of Federal Claims and requiring the Court of Federal Claims to issue a decision within one hundred days of ordering a procurement be delayed.[274] With three opportunities to litigate the same case, the disappointed offeror has had the opportunity to better refine it for the next round of litigation.[275]

Although the Advisory Panel on Streamlining and Codifying Acquisitions Regulations made a solid recommendation in reducing a problem with the number of forums available in the bid protest process, it was not the correct recommendation. From CY 2008 to CY 2016, the top eleven firms (by FY 2016 revenue) filed only ten protest cases at the Court of Federal Claims.[276] This indicates that although large, DoD contractors absorb the bulk of the federal procurement budget, and they infrequently use the Court of Federal Claims for resolving procurement problems. Seventy-five percent of cases at the Court of Federal Claims were resolved within 150 days, with an average of 133 days and a median of 87 days.[277] Bid protests account for less than 20% the Court of Federal Claims work, thus indicating an area which can likely be shifted elsewhere.[278]

From CY 2008 to CY 2016, GAO handled 21,186 actions related to protests.[279] DoD agencies accounted for approximately 60% of the total protest actions over this time period.[280] GAO currently has 100 days to resolve cases, but there have been recommendations to reduce the timeline to sixty-five days.[281] However, if a case is not resolved and GAO must render a decision, GAO typically takes 90–100 days to render its decision.[282] Given the sheer volume of bid protests the GAO handles, it should be the sole body for rendering decisions on bid protests, but should keep the 100-day timeline for office flexibility. This would allow the GAO to continue to build expertise in the bid protest area, eliminate redundancy, and provide more predictability, allowing the federal government to resolve contractual problems timelier. This will allow the federal government, particularly the DoD, to execute those key environmental contracts without some of the delays that limit the effectiveness of the final action. Although an area of concern, certain authority would need to be vested in the GAO to ensure it was no longer just an advisory body and had the power to enforce its ruling in a way similar to the Court of Federal Claims. This recommended change would be consistent with CICA's statutory mandate

---

274 *Id.* at 345.
275 *Id.* at 346.
276 Mark V. Arena et al., Assessing Bid Protests of U.S. Department of Defense Procurements, 47 (2018), https://www.rand.org/content/dam/rand/pubs/research_reports/RR2300/RR2356/RAND_RR2356.pdf.
277 *Id.* at 53.
278 *Id.* at 44.
279 *Id.* at 23.
280 *Id.* at 25.
281 *Id.* at 30.
282 Mark V. Arena et al., *supra* note 276 at 30.

and would allow the GAO to continue to provide for the "inexpensive and expeditious" resolution of protests.[283]

E. The Federal Government Should Articulate a Penalty Chart for Alleged Abuse of Process of the Bid Protest System.

Another recommendation to curtail perceived abuses would be to outline standards to handle the abuse of the bid protest process. This standard, when combined with the previous two recommended changes, should work to streamline the federal acquisition system, educate disappointed offerors on how to improve future bids, and create more predictability in the federal procurement system.

Abuse of process is one of those terms frequently cited, but for which a ruling is rarely issued. For example, one company, Latvian Connection LLC, was able to file 150 protests in a single year before the GAO finally suspended the company from filing bid protests.[284] This one protestor was likely able to waste thousands of workers' hours.

To combat this type of abuse of process, limiting the number of unsuccessful bid protests an individual contractor can file is necessary. After filing at least ten bid protests, if the contractor had a 60% or higher protest dismissal rate, that contractor could possibly risk suspension of protest privileges for anywhere up to a year. Five consecutive unsuccessful filings would require the contractor to present his or her case before the GAO to decide if the contractor would be subjected to a potential suspension. Although some individuals may argue these actions have the potential of stifling the full and open competition mandate, the opposite is true. It still ensures full and open competition, but it also prevents federal agencies from being bogged down in frivolous bid protests when other avenues exist to remedy the contractors' complaints.

Regardless of the federal government personnel's general dissatisfaction with the bid protest system, the private sector strongly supports it and believes it provides needed transparency and holds the government accountable.[285] Industry further argued that if bid protests were not allowed or curtailed, companies would likely make fewer bids.[286] Beginning in 2014, the federal government's contract spending has been on an upward trajectory, starting at $448 billion in 2014 and increasing to $560 billion in 2018.[287] The reliability of the federal government to pay on time and the sheer amount of money it spends will be enough to entice the majority of potential contractors to continue competing for government contracts even if the bid protest process is slightly more cumbersome.

---

283 *See* 31 U.S.C. § 3554(a)(1); *see also* 31 U.S.C. § 3555(a) (requiring the Comptroller General to prescribe such procedures as may be necessary to the expeditious decision of protests).

284 Koprince, *supra* note 4.

285 Mark V. Arena et al., *supra* note 276, at 22.

286 *Id.* at 19.

287 Daniel Snyder, *Federal Contract Spending Trends: Five Years in Five Charts*, Fed. News Network (Jan. 22, 2019), https://federalnewsnetwork.com/fiscal-2019-federal-contracting-playbook/2019/01/federal-contract-spending-trends-five-years-in-five-charts.

VIII. CONCLUSION

The problem with environmental and procurement laws' and regulations' abuse will continue to exist so long as there are incentives and avenues for the abuse. Changes in EIS and EIR process practices necessary to preempt some of the key arguments project opponents make. Additionally, regulatory changes must be enacted at the federal, state, and local levels to prevent NEPA and CEQA. Finally, the federal procurement process must transform slightly by altering the way in which federal procurement contracts are protested. By combining all of these steps, environmental and federal government procurement process abuse will be curtailed to a much greater extent, and agencies will be able to more effectively move their projects forward without the large unpredictability that exists in today's system.

FERC Order 841 & Energy Storage Resources

Thomas Kagerer

I. Introduction: The Problems Facing Energy Storage

Ever since electricity was first transmitted along the electric grid in the 1870s,[1] power markets have operated with the understanding that "electricity cannot be

1 *The History of Electrification*, Edison Tech. Ctr., https://edisontechcenter.org/HistElectPowTrans.html (last visited Mar. 29, 2021).

stored,"[2] and aside from a few exceptions, this has remained the case.[3] This limitation results because electrons travel along the least resistant path and cannot be routed to a particular grid area.[4] Electric supply must constantly be balanced with demand; otherwise, blackouts, brownouts, and other grid failures would be widespread.[5]

Today, this balancing act is becoming more difficult. Natural disasters, increasingly exacerbated by climate change, can decimate entire regions' electric grid, leaving many without electricity.[6] Additionally, increasing load demands can create supply shortages, leading to rolling blackouts or high prices.[7] This occurred in Texas in 2019, where blackouts were avoided by increasing Energy Reliability Council of Texas (ERCOT) energy prices to its $9,000/MWh cap,[8] and in the 2020 summer in California, where inadequate capacity during peak hours led to blackouts across the state.[9]

The clean energy transition has made this balancing act more difficult.[10] Renewable generators provide energy in proportion to the power of the sun or wind, regardless of demand.[11] This energy cannot be tailored to meet demand, and grid operators must respond to this "variability" that renewables create.[12] Variability can lead to an electricity oversupply when generation exceeds demand.[13] Discussed further in Section III, this oversupply can lead to negative pricing and other issues, decreasing grid reliability and creating waste.

As a result, grid operators have been forced to accept a number of inefficiencies.[14] These appear as preferences for "base-load" generators—large and expensive power plants always operating at near 100% capacity—and as "peaker plants"—generators only

---

2 Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 768 (2016) (describing the functions of interstate energy markets).

3 David Schmitt & Glenn M. Sanford, *Energy Storage: Can We Get It Right*, 39 Energy L.J. 447, 452 [hereinafter Schmitt, *Energy Storage*] (explaining the history of energy storage technology).

4 N. Am. Elec. Reliability Corp., Understanding the Grid 1 (2013), https://www.nerc.com/AboutNERC/Documents/Understanding%20the%20Grid%20AUG13.pdf.

5 *Id*.

6 *See* U.S. Dep't of Energy, U.S. Energy Sector Vulnerabilities to Climate Change and Extreme Weather 2–3, 35 (2013), http://energy.gov/sites/prod/files/2013/07/f2/20130710-Energy-Sector-Vulnerabilities-Report.pdf.

7 N. Am. Elec. Reliability Corp., *supra* note 4, at 2.

8 *ERCOT Prices Spiked to Historic Levels—And It Can Happen Again*, Direct Energy (Aug. 15, 2019), https://business.directenergy.com/blog/2019/august/ercot-prices-spiked-to-historical-levels.

9 Ivan Penn, *Poor Planning Left California Short of Energy in a Heatwave*, N.Y. Times (Sept. 4, 2020), https://www.nytimes.com/2020/08/20/business/energy-environment/california-blackout-electric-grid.html.

10 Amy L. Stein, *Reconsidering Regulatory Uncertainty: Making a Case for Energy Storage*, 41 Fla. St. U.L. Rev. 697, 699 (2014).

11 MIT Energy Inst., Managing Large-Scale Penetration of Intermittent Renewables 49 (Apr. 20, 2011), https://energy.mit.edu/wp-content/uploads/2012/03/MITEI-RP-2011-001.pdf [hereinafter MIT Report].

12 *Id*. at 15.

13 *Id*.; *see also* Joshua C. Macey & Jackson Salovaara, *Rate Regulation Redux*, 168 Pa. L. Rev. 1181, 1236 (2020).

14 Stein, *supra* note 10, at 698–99.

operating during peak hours but requiring the same maintenance and construction as normal generators.[15] This is the reality grid operators face when making decisions. But one class of technologies is reshaping this reality: Energy Storage Resources (ESRs).

ESRs operate by converting electricity into potential energy for later use.[16] While still in the early stages of widespread adoption, ESRs may provide the key to a reliable, sustainable, and efficient electric grid—a grid that can better meet peak demand and seamlessly integrate renewables.[17] For example, ESRs can address the variable generation problem by storing excess renewable energy and then dispatching it during peak hours. Referred to as "energy shifting,"[18] this is just one of the many applications of ESRs.

However, despite recent advancements, outdated regulatory models have hindered ESR development. Traditionally, Regional Transmission Organizations (RTOs),[19] Independent System Operators (ISOs), and other grid operators regulate by dividing the grid into three functions: generation, transmission, and distribution.[20] These functions serve to classify market participants, and market rules prevent providers of transmission and distribution services from owning and operating generation resources.[21] The rationale is that transmission and distribution owners and operators should not favor their own generation resources nor have the temptation to do so, thus, ensuring competitive pricing.[22]

These limitations are problematic for ESRs because ESRs do not strictly adhere to a single function or classification.[23] Rather, ESRs are capable of participating as a generation resource, as load or a purchaser of power, and as a transmission or distribution resource, and can switch between these roles seamlessly depending on the technology.[24] In fact, ESRs often rely on multiple functions to bring value to the grid and reach their full profitability through what is referred to as "value stacking."[25] Additionally, the Federal Energy Regulatory Commission's (FERC) jurisdiction often depends on resource classification, complicating whether ESRs are operating under federal or state jurisdic-

---

15 *Id.* at 699.

16 Schmitt & Sanford, *supra* note 2, at 448.

17 *Id.* at 450.

18 *Id.* at 467; Stein, *supra* note 10, at 719.

19 This paper will refer to both RTOs and ISOs as RTOs for the sake of simplicity. For this paper's purposes, they can be treated as interchangeable. *See* Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators, 83 Fed. Reg. 9,580 (Mar. 6, 2018) (codified at 18 C.F.R. pt. 35) [hereinafter Order 841] (referring to both RTOs and ISOs as RTO/ISO throughout).

20 W. Grid. Dev., LLC, 130 F.E.R.C. ¶ 61,056, 61,333 (2010) ("We note that electricity storage devices, such as those that will be used in the Projects, do not readily fit into only one of the traditional asset functions of generation, transmission or distribution. Under certain circumstances, storage devices can resemble any of these functions or even load.").

21 Schmitt & Sanford, *supra* note 2, at 476–77; Raymond Richards, *Preemption, I Think Not: Evaluating California's Stored Energy Procurement Law Against FERC Order 841*, 36 PACE ENV'T L. REV. 229, 239–40 (2019) (quoting 4 MICHAEL A. YUFFEE ET AL., ENERGY LAW AND TRANSACTIONS § 89.01 (2018)).

22 Richards, *supra* note 21, at 239.

23 Schmitt & Sanford, *supra* note 2, at 476–77.

24 *Id.* at 476–78.

25 *Id.* at 488.

tion.[26] As a result, ESRs have faced a high level of regulatory uncertainty—particularly in regions yet to address these issues.[27]

This is the problem facing energy storage. ESRs have the ability to provide value at multiple levels and through multiple functions.[28] But in a regulatory environment that limits resources to one or few functions, resources with better individual category performance win out, and potential value is lost.[29] For example, when fully compensated for generation, transmission, and ancillary services, an ESR may provide more value to the grid than a gas-powered generator.[30] But when that same ESR is limited to providing only generation services, the gas-powered generator often becomes the clear winner.[31] In short, regulatory barriers to ESR "value stacking" result in grid inefficiency where customers pay higher prices, and the transition to renewables is hindered.[32]

Incentives must be aligned so that ESRs are compensated for their value added to the grid. These reforms are not minor tweaks, but essential reforms necessary to maximize grid reliability, affordable electricity, and assist the clean energy transition.[33] The

---

26 *Id.* at 476–77.

27 *Id.*

28 *Id.* at 487–88 ("Accordingly, the FERC has posited that '[e]nabling electric storage resources to provide multiple services (including both cost-based and market-based services) ensures that the full capabilities of these resources can be realized.'").

29 KEN DRAGOON ET AL., ENERGY STORAGE OPPORTUNITIES AND CHALLENGES 1, 44 (Apr. 4, 2014), https://energyexemplar.com/wp-content/uploads/ecofys-2014-energy-storage-white-paper.pdf.

30 *Id.* ("The value of energy storage has historically been based on the difference between light load hour prices and the higher prices during heavy load hours in the wholesale electric market. This represents the expectation that the main value of energy storage derives from purchasing low price electric power at night for storage, and generating during the day when prices are higher. The reality is more complex than that. Storage brings all the values associated with other generation including: the provision of ancillary services such as contingency reserves; regulation and load following reserve; and transmission and/or distribution system support. Storage can also bring special advantages associated with speed of response, bi-directionality of reserve capability, and low or zero emissions.").

31 *See id.* at 45 ("The market's inability to support new market entrants has meant that most resources are being added as part of utility or ISO adequacy studies or in response to state renewable energy standards. Adequacy studies are mostly performed in integrated resource planning (IRP) processes. However, few IRPs take full account of all the values attributable to energy storage. Many may not seriously consider energy storage in any detail given the relatively high price per kilowatt compared with traditional generating resources. An important policy consideration is whether utilities and regulatory bodies need to devise analytical requirements for addressing energy storage valuation, or require energy storage consideration along with generating resources that takes account of the full value potential of storage resources.").

32 *See* Schmitt & Sanford, *supra* note 2, at 450; Stein, *supra* note 10, at 715 ("[B]y pairing energy storage with renewable energy, it firms the renewable energy generation, and may be able to displace some fossil fuel generators, as well as avoid their corresponding GHG and pollution emissions.").

33 MIT REPORT, *supra* note 11, at 14 ("Policy challenges exist in both short-term operations and long-term planning in order to maintain a reliable, economically efficient power system.").

challenge is that many reforms are at odds with fundamental assumptions of power markets—most notably, the assumption that energy cannot be stored, the dichotomy between load and generation, and the dichotomy between transmission and generation resources.[34]

Until recently, a patchwork of state and regional initiatives addressed some of these issues. For example, California,[35] New York,[36] and Massachusetts,[37] among other states, have adopted renewable portfolio standards promoting ESRs. In 2011, California Independent System Operator (CAISO) modified its tariffs to create a participation model for non-generation resources (NGRs), which include ESRs.[38]

Conversely, other RTOs have failed to update participation models for ESRs, forcing them to adhere to outdated participation models or to meet incompatible technical requirements.[39] For example, before Order 841, the only participation model available to ESRs in ISO-NE was designed for pumped hydro storage, leaving many smaller ESR technologies unable to participate.[40]

This patchwork of reforms—or lack thereof—did little to address the widespread ESR development barriers.[41] Eventually, these challenges prompted FERC to issue Order 841, a 2018 order which removes some regulatory barriers in wholesale generation markets.[42] Broadly speaking, the Order removes barriers to ESRs participating in wholesale markets by modernizing participation models and allowing ESRs to buy and sell power at

---

34 *See* Schmitt & Sanford, *supra* note 2, at 476 ("The issue is that energy storage and its inherent complexity differs from traditional resources in that it cannot be reduced to a single functional definition.").

35 *See Energy Storage*, CAL. PUB. UTIL. COMM'N., https://www.cpuc.ca.gov/General.aspx?id=3462 (last visited Mar. 29, 2021).

36 *See Energy Storage*, N.Y. State Energy Rsch. & Dev. Auth., https://www.nyserda.ny.gov/All-Programs/Programs/Energy-Storage (last visited Mar. 29, 2021).

37 Kristi Schallenberger, *Massachusetts targets 200 MWh of energy storage by 2020*, UTILITY DIVE (June 30, 2017), https://www.utilitydive.com/news/massachusetts-targets-200-mwh-of-energy-storage-by-2020/446281/.

38 FED. ENERGY REG. COMM'N, CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION SUBMITS TARIFF FILING 3 (2018), https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14725307. In fact, this participation model was mostly in compliance with Order 841 before the Order was promulgated, indicating that California's ESR participation model was influential in the rulemaking process.

39 *See* Order 841, *supra* note 19, at 9,583 ("[T]he Commission explained that these resources must often use existing participation models designed for traditional generation or load resources that do not recognize electric storage resources' unique physical and operational characteristics and their capability to provide capacity, energy, and ancillary services in the RTO/ISO markets. Even where the RTOs/ISOs have established distinct participation models for electric storage resources, the Commission stated that those models limit the services that electric storage resources may provide or are designed for electric storage resources with very specific characteristics . . . .").

40 *See* MASS. DEP'T OF ENERGY RES. ET AL., STATE OF CHARGE 1, 171–79 (2017), https://www.mass.gov/files/2017-07/state-of-charge-report.pdf.

41 *See* Order 841, *supra* note 19, at 9,582.

42 *See id.* at 9,582–85, 9,625–26.

wholesale prices.[43] However, the Order falls short in limiting ESRs to the generation-transmission dichotomy and failing to ensure ancillary service compensation.[44]

Section II introduces ESR technologies and Section III analyzes the grid benefits ESRs can provide, with a focus on value added and the clean energy transition. The barriers still in place after Order 841 will be discussed as part of this analysis. Finally, this Note evaluates the specifics of Order 841 in Section IV and discuss the jurisdictional issues and recent judicial decisions surrounding the Order in Section V.

II. Types of Energy Storage Resources

Before discussing Order 841, it is useful to understand the types of energy storage technologies available today. FERC defines "Energy Storage Resource" as "a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid."[45] ESRs can be divided into small and large-scale categories, with small-scale being less than 1 MW of capacity and large-scale being greater than 1 MW of capacity.[46] Large-scale resources include pumped hydro storage (PHS), compressed air energy storage (CAES), and some batteries.[47] These resource are all used for bulk energy shifting and often have large geographic footprints.[48] Small-scale resources include batteries, flywheels, and other ESRs yet to see commercial use.[49] These small-scale resources are best used for ancillary and transmission services but are also used for energy shifting.[50]

It is important to note that PHS is the most widely used of these technologies, comprising 96% of grid storage.[51] This is due to its long history and track record dating back to the 1920s.[52] Consequently, many previous ESR participation models were created with PHS in mind. These participation models represent the traditional view of

---

43 *Id.* at 9,599, 9,604 (allowing ESRs to set the wholesale LMP as a wholesale market buyer and seller).

44 *Id.* at 9,625–26.

45 *Id.* at 9,586.

46 *See* U.S. Energy Info. Admin., U.S. Battery Storage Market Trends 5–6 nn. 3–4 (2020), https://www.eia.gov/analysis/studies/electricity/batterystorage/pdf/battery_storage.pdf (defining large scale resources as having a power capacity greater than 1 MW and small scale as less than 1 MW.).

47 *See* Stein, *supra* note 10, at 705 (referring to large-scale energy storage as "bulk" energy storage).

48 *Id.*

49 *See id.*

50 *Battery Storage Paves Way for a Renewable-powered Future*, Int'l Renewable Energy Agency (Mar. 26, 2020), https://www.irena.org/newsroom/articles/2020/Mar/Battery-storage-paves-way-for-a-renewable-powered-future [hereinafter *Battery Storage Paves Way*].

51 Univ. of Mich., U.S. Grid Energy Storage 1 (2020), http://css.umich.edu/sites/default/files/US%20Grid%20Energy%20Storage_CSS15-17_e2020.pdf [hereinafter U.S. Grid Energy Storage].

52 *A Ten-Mile Storage Battery*, Popular Science Monthly, July 1930, at 60.

ESR technologies—large and inefficient bulk power resources meant to arbitrage pricing rather than complement renewables.[53]

By contrast, newer ESR technologies, like batteries, are capable of providing similar bulk-energy shifting, but not on the same scale as PHS.[54] These resources rely more on "value stacking" for multiple revenue streams and are best at integrating renewables.[55] Order 841 moves participation models toward accommodating these smaller-scale ESRs. As the market develops, there is a strong trend towards batteries dominating the grid.[56] Batteries are unique because they can be sized as either small- or large-scale resources and have a wide variety of applications, making them the most diverse and rapidly advancing ESR technology available today.[57]

III. Benefits and Applications of Energy Storage Resources

ESRs are unique because they can provide a number of services at the transmission, distribution, and generation levels.[58] Each energy storage technology has its own performance characteristics, allowing ESRs to be optimized for a variety of applications.[59] Some important services ESRs can provide include: electric energy time shift and arbitrage, ancillary services, and transmission and distribution services. However, a gap between value added and compensation for these services often hinders ESR development. Order 841 ensures that ESRs are compensated for their participation in markets as a generation resource but leaves barriers in place to simultaneously providing generation, ancillary, and transmission services, thus limiting the ability to value stack.

---

53 Stein, *supra* note 10, at 700 ("Some forms of energy storage, such as pumped hydropower storage, have been the historic face of bulk energy storage for over a hundred years. But the world is bracing for the next generation of bulk energy storage to address reliability, economic efficiency, and environmental issues plaguing the electric grid. In addition to pumped hydropower storage, this next generation will expand to include some combination of batteries, flywheels, fuel cells, superconducting magnets, and compressed air energy storage.").

54 *Id.*

55 Schmitt & Sanford, *supra* note 2, at 448 ("This is called "value-stacking" because it is combining multiple value streams into a single system. The cost of current energy storage represents a financial risk that will persist until technologies are able to monetize all of their benefits through a cost recovery mechanism that is able to accurately price the stacked benefits.").

56 *Battery Storage Paves Way*, *supra* note 50.

57 *Id.*; *See generally* Sandia Nat'l Laboratories, DOE/EPRI Electricity Storage Handbook in Collaboration with NRECA 1, 33 (2015), https://prod-ng.sandia.gov/techlib-noauth/access-control.cgi/2015/151002.pdf.

58 Schmitt & Sanford, *supra* note 2, at 458–59.

59 *Id.* at 459.

A. Electric Energy Time Shift and Arbitrage

1. *The Duck Curve*

Energy storage resources have the unique ability to transmit energy through time by converting it to potential energy and then releasing power to the grid when needed[60] This opens up possibilities to time shift and arbitrage energy according to supply, demand, and pricing. Pumped hydro storage has performed this function since the early 20th century.[61] Today, the concept remains the same, but renewables are making energy arbitrage increasingly attractive and even necessary.[62]

Specifically, renewables create a variable energy problem.[63] They generate when the sun is shining and the wind is blowing, regardless of demand, forcing grid operators to respond to power fluctuations.[64] This "variability" can lead to an oversupply of electricity, either due to transmission bottlenecks that limit the amount of electricity the grid can efficiently transmit or due to supply exceeding aggregate demand at various intervals.[65] Eventually, this oversupply from renewables can decrease grid reliability[66] and raise emissions in certain contexts.[67]

California exemplifies this issue. Specifically, variable generation presents itself on California's system as a daytime reduction in "net load."[68] This occurs because California has an abundance of renewable energy,[69] creating an electricity oversupply during daylight hours and triggering low or even negative wholesale prices.[70] As a result, grid

---

60 *Id.* at 448.

61 *Id.* at 452.

62 *See id.* at 464.

63 *See* MIT Report, *supra* note 11, at 7–8 ("The characteristics of intermittent generation combined with the need to maintain a constant balance between load and generation create challenges for system operators, who will require greater flexibility in the system to ensure reliability and meet policy goals. In the absence of economically viable large-scale storage, the burden of maintaining system reliability will fall mostly on the flexible operation of thermal generation units, such as coal, natural gas, and nuclear.").

64 *Id.* at 49.

65 Cal. Indep. Sys. Operator, What the duck curve tells us about managing a green grid 1, 3 (2016), https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf.

66 *See* MIT Report, *supra* note 11, at 7–8.

67 Randy T. Simmons & Josh T. Smith, *Germany shows how shifting to renewable energy can backfire*, The Hill (Jan. 17, 2018), https://thehill.com/opinion/energy-environment/369386-germany-shows-how-shifting-to-renewable-energy-can-backfire (discussing how Germany's increased reliance on renewables and a decreased use of nuclear energy have led to a reliance on coal and increased emissions in the country).

68 Cal. Indep. Sys. Operator, *supra* note 66, at 2. Net load is the difference between forecasted load and expected electricity production from variable generation resources.

69 *See* 2019 Total System Electric Generation, Cal. Energy Comm'n, https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2019-total-system-electric-generation (last visited Mar. 29, 2021).

70 Cal. Indep. Sys. Operator, *supra* note 66, at 2–3.

operators must respond through "curtailment," or shutting down various generation resources, during periods of oversupply.[71] But this is only one-half of the problem.

The other half of this issue occurs during evening peak-demand hours.[72] During this time, renewable energy from resources like solar is unavailable and other resources must meet demand. Most often, this demand is met by "peaker plants,"—typically natural gas plants—because of their ability to "ramp up" more quickly than other resources.[73] The capacity required for this shift is staggering. A 2016 CAISO report projects that up to 13,000 MW is needed to meet demand and balance the grid during a three-hour window, and this is without the benefit of many renewable resources.[74] This huge shift in net load—from daytime lows to late-afternoon peaks—has been nicknamed the "duck curve" due to its shape.

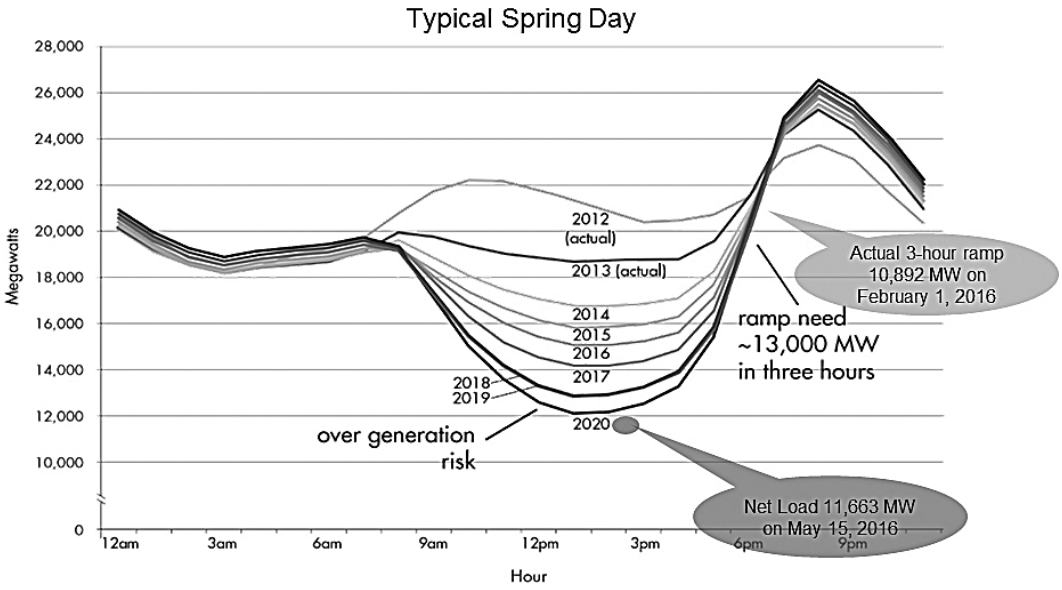

FIGURE 1: CAISO'S DUCK CURVE[75]

The result of this swing net load is high levels of inefficiency at both ends of the curve. First, curtailment involves wasting renewable energy.[76] When a renewable plant is

71 Bentham Paulos, *Too Much of a Good Thing? An Illustrated Guide to Solar Curtailment on California's Grid*, GREENTECH MEDIA (Apr. 3, 2017), https://www.greentechmedia.com/articles/read/an-illustrated-guide-to-solar-curtailment-in-california (discussing the specifics of curtailment in California).

72 CAL. INDEP. SYS. OPERATOR, *supra* note 65, at 2–3.

73 *See* Charles Newberry, *Energy Storage Poses a Growing Threat to Peaker Plants*, GE TRANSFORM (Oct. 1, 2018), https://www.ge.com/power/transform/article.transform.articles.2018.oct.storage-threat-to-peaker-plants.

74 CAL. INDEP. SYS. OPERATOR, *supra* note 66, at 2–3.

75 *Id.* at 3.

76 MIT REPORT, *supra* note 11, at 4.

curtailed, clean energy that could have been sent to consumers is wasted.[77] Second, if left unchecked, sustained negative pricing can significantly reduce grid reliability by discouraging "future investment in flexible generation technologies that will be necessary as older plants retire, electricity demand grows, and intermittent renewable capacity expands."[78] Meaning, if renewables continue to increase their market share, non-renewable generators, which are necessary to meet peak demand, could be priced out of the market.[79] While high peak-demand pricing can combat this in the short term, it is infeasible to shift all non-renewable energy to a three-hour window at the end of the day. In fact, this inadequate peak capacity contributed to California's summer 2020 blackouts.[80]

Additionally, relying on flexible fossil fuels to meet peak demand has its own issues. As variability increases, there is a concurrent increase in demand for "additional ramping capacity."[81] To ensure this ramping capacity is available, regulators must place flexibility at a premium through capacity pricing or other market mechanisms.[82] As a result, resources like natural gas are further entrenched in our energy mix due to their sustained participation in power markets.[83] California has reduced emissions due to a high penetration of renewables, but there are diminishing returns because fossil fuels are required to balance the grid.[84] Thankfully, there are synergies between renewables and energy storage to help solve these problems.[85]

2. *Energy Shifting*

ESRs can flatten the demand curve through energy shifting and arbitrage.[86] This shifting occurs by storing renewable energy during oversupply periods and then discharging it during peak hours.[87] Stored energy can offset the need for flexible fossil fuels by shifting renewable energy to peak-demand periods.[88] Benefits of this shifting include lower prices, emission reductions, and allowing renewable power to access peak market hours.[89]

---

77 *Id.* at 9.
78 *Id.* at 12.
79 Macey & Salovaara, *supra* note 13, at 1218.
80 Rebecca Smith & Katherine Blunt, *Why California Keeps Having Blackouts*, WALL STREET J. (Aug. 23, 2020), https://www.wsj.com/articles/why-california-keeps-having-blackouts-11598198401.
81 MIT REPORT, *supra* note 11, at 32.
82 Macey & Salovaara, *supra* note 13, at 1256.
83 *Id.*
84 *See* MIT REPORT, *supra* note 11, at 19 ("Inefficient thermal plant ramping and cycling operations, non-coincident peaks between wind generation and demand, and regional differences in generation mixes can potentially reduce the emissions benefits of renewables.").
85 Schmitt & Sanford, *supra* note 2, at 466 (citing Paul Denholm et al., *The Impact of Wind and Solar on the Value of Energy Storage*, NAT'L RENEWABLE ENERGY LAB. 1, 29 (2013)) (discussing "a potential synergistic relationship between renewables and energy storage").
86 Schmitt & Sanford, *supra* note 2, at 466.
87 *See id.* at 464–66.
88 *Id.* at 466.
89 *Id.*

Further, arbitrage can occur at various grid levels. As one possibility, ESRs can be "co-located" on-site with renewable energy resources.[90] In this context, the generator can avoid negative pricing and reduce oversupply by sending energy directly to an on-site ESR and dispatching it later, presumably for a higher price.[91] Alternatively, both co-located and stand-alone ESRs can purchase energy directly from the grid for resale later.[92] Order 841 enables this arbitrage by clarifying that ESRs purchase power at the wholesale LMP, thus ensuring equal compensation for ESRs and other generation resources.[93]

However, using ESRs for energy shifting and arbitrage is not a perfect solution. More energy storage does not automatically reduce emissions. ESRs can actually increase emissions when used for cost-shifting in a fossil-fuel-dominated grid or when ESR charging creates sufficient additional load for fossil fuel resources to be dispatched.[94] An example would be a coal plant being kept online due to the additional marginal load from charging ESRs.[95] Thus, it is important to keep in mind ESRs are not a "green" technology on their own; they are merely as green as the system in which they operate.[96]

B. Ancillary Services and Compensation

Ancillary service markets are essential for ESRs because they are often better at providing these services than traditional generators.[97] Ancillary services are "services [that] maintain electric reliability and support the transmission of electricity. . . . [and] NERC and regional entities establish the minimum amount of each ancillary service that is required for maintaining grid reliability."[98] In general, there are several ancillary services wholesale market participants provide including frequency regulation, operating reserves, spinning reserves, non-spinning reserves, supplemental reserves, black start, and reactive power (voltage regulation).[99] These services are necessary to ensure a working grid with adequate voltage, frequency, and reserves, but are secondary to the sale of power.

---

90 *See Solar-Plus-Storage 101*, Office of Energy Efficiency & Renewable Energy (Mar. 11, 2019), https://www.energy.gov/eere/solar/articles/solar-plus-storage-101.

91 *See id.*; *see also* Julian Spector, *GlidePath Took on Storage in Texas. Now It Wants to Add Batteries to Wind*, Greentech Media (Aug. 21, 2019), https://www.greentechmedia.com/articles/read/glidepath-took-on-storage-in-texas-now-it-wants-to-add-it-to-wind (explaining that co-locating batteries and wind energy "would allow GlidePath to divert its wind production into the batteries when an abundance of wind generation triggers negative pricing, rather than pay to bring it to market. Then, it could release that energy when prices have climbed, turning a potential loss into a profit via arbitrage.").

92 *See* Schmitt & Sanford, *supra* note 2, at 466.

93 Order 841, *supra* note 19, at 9,582.

94 Dragoon et al., *supra* note 29, at 28.

95 *Id.*

96 *See id.* ("[E]nergy storage is not 100% efficient and, in general, represents an additional load on the system that can result in increased emissions.").

97 Schmitt & Sanford, *supra* note 2, at 459.

98 *See* Fed. Energy Regulatory Comm'n, Energy Primer: A Handbook of Energy Market Basics 55 (2015), https://www.ferc.gov/market-assessments/guide/energy-primer.pdf [hereinafter Energy Primer].

99 *Id.*

ESRs are better at providing these services because their unique attributes make them the only system capable of charging and discharging in a single market interval, and thus the only system capable of providing all ancillary services from a single facility.[100] Additionally, ESRs can provide these services while also providing generation, transmission, and energy shifting services. These synergies increase grid reliability and open up possibilities for smarter grid management, efficiency, and operation.[101]

The problem is that markets have not historically compensated generators for many ancillary services and there is a disparity between value added to the grid and compensation.[102] The result is a lessened ability to "value stack" for both ESRs and other resources.[103] This disparity disproportionately impacts ESRs because of their reliance on "value stacking" and results in less-efficient generators winning out at the margins.[104]

Order 841 somewhat mitigates these challenges by allowing ESRs to participate in any ancillary service market.[105] However, Order 841 does not require RTOs to create markets for every ancillary service; RTOs must only allow ESRs to participate in existing ancillary service markets, so compensation will likely remain an issue.[106] As such, the potential value ESRs could bring through ancillary and other services is likely to remain depressed.[107] A similar story can be seen in the compensation and utilization of ESRs for transmission and distribution services.

C. Transmission and Distribution Services

1. *ESR Transmission/Distribution Capabilities*

Energy Storage Resources are capable of providing substitutes for transmission and distribution services in the form of transmission upgrade deferral, transmission congestion relief, and distribution grid analogs.[108] Transmission upgrade deferral allows utilities

---

100 *Id.* ("The unique attributes of energy storage are particularly appealing for ancillary services because they are the only system capable of absorbing energy when it is desirable and thus have the ability to provide capacity, energy, load, voltage and frequency regulation, and fast ramping services for the grid in a single facility. In fact, storage often outperforms conventional generation in performing many of the ancillary services that are critical to grid reliability and stability purposes.").

101 Int'l Renewable Energy Agency, Electricity Storage and Renewables: Costs and Markets to 2030 1, 4 (2017), https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2017/Oct/IRENA_Electricity_Storage_Costs_2017.pdf [hereinafter IRENA Report] ("By 2030, the installed costs of battery storage systems could fall by 50-66%. As a result, the costs of storage to support ancillary services, including frequency response or capacity reserve, will be dramatically lower. This, in turn, is sure to open up new economic opportunities.").

102 Schmitt & Sanford, *supra* note 2, at 459–60.

103 *Id.*

104 *Id.* ("The inability to monetize these services hinders the deployment of these technologies without regard for their technical effectiveness by tipping return-on-investment calculations toward other, possibly less effective, technologies.").

105 Order 841, *supra* note 19, at 9,584.

106 *Id.* at 9,592 ("[W]e are not requiring each RTO/ISO to revise or revisit the technical requirements or compensation provisions of [ancillary service] markets.").

107 Schmitt & Sanford, *supra* note 2, at 459–60.

108 *Id.* at 471–74.

to delay transmission upgrades by constructing an ESR facility, which can provide the same services.[109] Traditionally, utilities have only maintained or expanded their transmission and distribution services by constructing new transmission lines.[110] This is costly because transmission lines must be scaled for peak demand, which occurs only a few times a year.[111]

ESRs mitigate this by providing an "incremental approach."[112] For example, rather than constructing transmission lines to meet projected 20- or 30-year demand, a battery power storage station could be constructed in as little as 12–15 months, either replacing or deferring transmission construction needs.[113] Arizona Public Service (APS) utilized ESRs in this way when it was the first utility to construct a battery storage plant as "pure transmission deferment," in place of new transmission lines over "rugged terrain."[114]

Similarly, ESRs can be used to relieve grid congestion.[115] Grid congestion occurs when there is too much demand over a transmission line area.[116] If left unchecked, this congestion can result in a "bottleneck," preventing the lowest price generators from being dispatched and raising the wholesale LMP.[117] ESRs allow generators to relieve this congestion by placing an ESR downstream from the bottleneck and dispatching power during high demand periods.[118] The result is reduced congestion, which offsets the need for transmission upgrades.[119]

The distribution grid can also benefit from distribution deferral and congestion relief.[120] An ESR could be placed on the distribution grid to delay transformer and substation repairs.[121] Additionally, utilities maintaining the distribution grid can use ESRs to ensure the grid is not over-taxed during peak load.[122] These benefits can also be paired with ancillary services, further increasing the usefulness of distribution-level ESRs.[123] The use of ESRs on the distribution grid opens up possibilities for distributed energy, vehicle to grid (V2G),[124] and other "smart grid" concepts.[125] The smart grid involves an

---

109 *Id.* at 472.
110 *See* Gavin Bade, *APS to deploy 8 MWh of battery storage to defer transmission investment*, UTILITY DIVE (Aug. 9, 2017), https://www.utilitydive.com/news/aps-to-deploy-8-mwh-of-battery-storage-to-defer-transmission-investment/448965/.
111 NAT'L RENEWABLE ENERGY LAB., GRID SCALE BATTERY STORAGE FREQUENTLY ASKED QUESTIONS 1, 3 (2019), https://www.nrel.gov/docs/fy19osti/74426.pdf.
112 Bade, *supra* note 110.
113 *Id.*
114 *Id.*
115 Schmitt & Sanford, *supra* note 2, at 473.
116 *See, e.g.*, Pentland, *supra* note 65.
117 Schmitt & Sanford, *supra* note 2, at 473.
118 *Id.*
119 *Id.*
120 *Id.* at 473–74.
121 *Id.*
122 *Id.*
123 *Id.*
124 IRENA REPORT, *supra* note 102, at 56.
125 Schmitt & Sanford, *supra* note 2, at 474.

electric grid with two-way flows and instantaneous balancing—qualities ESRs can bring to the electric grid.[126]

Finally, it is important to note that ESRs are capable of providing transmission and distribution services while simultaneously acting as a generation resource. An ESR could provide transmission deferment while simultaneously energy shifting renewable energy to peak hours. However, current market rules prevent this behavior, which hinders the full utilization of ESRs.

2. Regulatory Barriers and Solutions

Order 841 did not open the door for ESRs to act as transmission resources and it limits ESR participation to wholesale generation markets. In August 2020, however, FERC approved the Midcontinent Independent System Operator's (MISO) request to use ESRs as a pure transmission resource.[127] As part of the MISO plan, ESRs can be used as part of the ISO's transmission planning when necessary to resolve a "discrete, nonroutine, transmission need."[128] These transmission ESRs would not participate under the Order 841 participation model and instead are operated solely as transmission resources.[129] At this time, other RTOs have not yet requested the same approvals.

While this is an important step in allowing ESRs to act as transmission resources, it does not go far enough. Limiting ESRs to only transmission services creates lost opportunities to receive the many benefits ESRs can provide in generation markets (i.e., load shifting and ancillary services).[130] The converse is true for limiting ESRs to generation as Order 841 does—value is lost on the transmission grid.[131] Thus, creative solutions are necessary to protect competition and allow ESRs to act as both a transmission and generation resource.

From a historical perspective, the divide between generation and transmission makes sense. While short-term reliability and long-term transmission planning is the responsibility of RTOs,[132] they have traditionally been prohibited from owning and operating generation resources.[133] This prohibition is a fundamental assumption of wholesale power markets, and ensures RTOs and transmission operators are perceived as, and in fact are, independent from market participants.[134] Thus, because ESRs can act in transmission and generation, RTOs that use ESRs for transmission planning could challenge

---

126 *Id.*

127 Midcontinent Indep. Sys. Operator, Inc., 172 FERC ¶ 61,132, 61,936 (2020).

128 *Id.* ¶ 61,947.

129 *Id.* ¶ 61,938 ("MISO will exercise functional control of the SATOA for transmission purposes only, and will not be responsible for buying power to energize the project.").

130 Schmitt & Sanford, *supra* note 2, at 480–81.

131 *See id.*

132 Joel B. Eisen et. al., Energy, Economics and the Environment 712–13 (5th ed. 2020).

133 Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, 61 Fed. Reg. 21,540 (Apr. 24, 1996) (codified at 18 C.F.R. §§ 35, 385) [hereinafter Order 888]; Regional Transmission Organizations, 65 Fed. Reg. 810 (Dec. 20, 1999) (codified at 18 C.F.R. § 35).

134 Eisen et al., *supra* note 132, at 713; Schmitt & Sanford, *supra* note 2, at 480.

this divide by owning and operating a generation resource.[135] The feared result is reduced market competition due to ESRs having a fixed income from transmission services or a preference for ESRs in generation markets.[136] These concerns were raised in a dissent to the MISO approval mentioned earlier.[137]

However, in the context of ESRs, this divide must give way so that energy markets can reach their full potential. There are ways to remove incentives for manipulation other than limiting ESRs to one-half of their designed function. One solution is to allow RTOs to utilize ESRs in transmission planning but assign wholesale-market bidding to another entity. With enough transparency, competition can be protected while allowing ESRs to act as both transmission and generation. Additionally, transmission cost recovery could be limited in proportion to generation revenues, which protects competition but potentially adds to market complexities.[138]

The same principles could apply for ESRs already participating in wholesale generation markets. Namely, RTOs could use existing ESRs for transmission services, but compensate the ESR owner for lost generation revenues rather than for transmission services.[139] Functionally, the lost wholesale market revenues would serve as a ceiling on transmission cost recovery.[140] These solutions would allow ESRs to provide their full value to the grid while simultaneously protecting competition in wholesale markets—just as any solution to this problem should.

Left unresolved, these issues will certainly remain a barrier to ESR usage. While it is good that FERC now allows ESRs to be used as either a transmission or generation resource, the ultimate solution must allow ESRs to participate as a transmission, generation, and perhaps even a distribution resource simultaneously. In reaching this end, a rethinking of how power markets are structured and managed may be necessary. However, in light of the many new technologies upending traditional market structures, this rethinking seems inevitable, even without ESRs.[141] Thankfully, Order 841 and the recent MISO approval seem to be steps in the right direction.

---

135 Schmitt & Sanford, *supra* note 2, at 480–81 ("Wholesale energy and ancillary services markets have been the province of generators to maintain the independence of grid operators and avoid the potential concern for any real or perceived market manipulation."); *see also* Order 888, *supra* note 133, at 21,541.

136 Schmitt & Sanford, *supra* note 2, at 480–81.

137 Midcontinent Indep. Sys. Operator, Inc., 172 FERC ¶ 61,132, 61,969 (2020) (Danley, dissenting) ("I oppose the order in this case as impermissibly blurring the line between generation and transmission. No matter how our order characterizes the function of energy storage facilities, the service contemplated by Midcontinent Independent System Operator, Inc.'s (MISO) filing is accomplished through the discharge of energy from storage units into the MISO transmission system. That, in my view, is a generation function, not a transmission function.").

138 Schmitt & Sanford, *supra* note 2, at 492–33.

139 *See id.*

140 *See id.*

141 *See generally*, JEFFERY S. DENNIS ET. AL., FEDERAL/STATE JURISDICTIONAL SPLIT: IMPLICATIONS FOR EMERGING ELECTRICITY TECHNOLOGIES, BERKELEY NATIONAL LABORATORY (2016), https://www.energy.gov/sites/prod/files/2017/01/f34/Federal%20State%20Jurisdictional%20Split--Implications%20for%20Emerging%20Electricity%20Technologies.pdf (reviewing the Federal Power Act and the issues surrounding power market structure).

IV. FERC Order 841

FERC Order 841 was issued on February 15, 2018, and requires RTOs to "revise [their] tariff[s] to establish market rules that, recognizing the physical and operational characteristics of electric storage resources, facilitate their participation in the RTO markets."[142] Order 841 was issued through FERC's authority to ensure "just and reasonable" rates under the Federal Power Act (FPA) section 206.[143] Specifically, FERC "found that current tariffs that do not recognize the operational characteristics of electric storage resources limit the participation of electric storage resources in the RTO/ISO markets and result in inefficient use of these resources," and that this limited participation was reducing competition in markets.[144] Thus, FERC found it necessary to reduce these barriers to "enhance competition and, in turn, help to ensure that [RTO] markets produce just and reasonable rates."[145]

As such, Order 841 required initial compliance filings before December 3, 2018.[146] These compliance filings required RTOs to submit revisions to their tariffs and establish ESR participation models that meet four broad criteria:

> (1) ensure that a resource using the participation model for electric storage resources is eligible to provide all capacity, energy, and ancillary services that it is technically capable of providing in the RTO/ISO markets; (2) ensure that a resource using the participation model for electric storage resources can be dispatched and can set the wholesale market clearing price as both a wholesale seller and wholesale buyer consistent with existing market rules that govern when a resource can set the wholesale price; (3) account for the physical and operational characteristics of electric storage resources through bidding parameters or other means; and (4) establish a minimum size requirement for participation in the RTO/ISO markets that does not exceed 100 kW.[147]

Additionally, the Order allows ESRs to buy and sell power at the wholesale locational marginal price (LMP).[148] The remainder of this section will analyze these mandates and the requirements they impose on RTO tariffs and participation models.[149]

---

142 *Id.* Order 841-A is an Order on "rehearing and clarification" that clarifies some of the mandates in Order 841. Elec. Storage Participation in Mkts. Operated by Regional Transmission Orgs. and Indep. Sys. Operators, 84 Fed. Reg. 23,902 (May 23, 2019) (codified at 18 C.F.R. pt. 35) [hereinafter Order 841-A].

143 *See* 16 U.S.C. § 824e; Order 841, *supra* note 19, at 9,582.

144 Order 841, *supra* note 19, at 9,584.

145 *Id.*

146 *Id.* at 9,582.

147 *Id.*

148 *Id.*; *see also* Energy Primer, *supra* note 98, at 60 ("RTOs use markets to deal with transmission constraints through locational marginal pricing (LMP). The RTO markets calculate a LMP at each location on the power grid. The LMP reflects the marginal cost of serving load at the specific location, given the set of generators that are dispatched and the limitations of the transmission system. LMP has three elements: an energy charge, a congestion charge and a charge for transmission system energy losses.").

149 A "tariff" refers to RTO market provisions that apply generally to all RTO market participants, specify "rates and charges" for connection and service, and provide the rules for

A. Participation Model Requirements

Order 841 requires an ESR "using the participation model for electric storage resources is eligible to provide all capacity, energy, and ancillary services that the resource is technically capable of providing in the RTO/ISO markets."[150] To accomplish this, the Order provides a definition for ESRs, outlines qualification criteria, and imposes technical requirements.[151]

1. ESR Definition

Order 841 defines an ESR as "a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid."[152] This definition is notable because it focuses on the ESR's ability to store and discharge energy rather than on the technology used.[153] Consistent with the Order's focus on the "unique physical and operational characteristics" of ESRs, the FERC envisions broad participation models that accommodate both present and future technologies.[154]

Additionally, the definition is notable because it does not specify where on the grid these ESRs must be located to participate in wholesale markets. In fact, the Order clarifies "that electric storage resources located on the interstate transmission system, on a distribution system, or behind the meter fall under this definition."[155] Thus, behind the meter and distribution ESRs may bid into wholesale markets under these participation models, even if their only access is through the distribution grid.[156] However, this aspect of Order 841 creates some metering and jurisdictional challenges.

First, allowing distribution-level ESRs to participate in wholesale markets creates metering and accounting challenges for RTOs and retail utilities.[157] Because these ESRs would charge and discharge retail and wholesale power, they are essentially participating in both retail and wholesale markets at the same time.[158] However, this retail and wholesale electricity is fungible, meaning each electron from the retail and wholesale grid must

---

participation in RTO markets. 18 C.F.R. § 35.2. A "participation model" is a tariff provision created specifically for resources that "have unique physical and operational characteristics or other attributes that warrant distinctive treatment from other market participants." Order 841, *supra* note 19, at 9,582.

150 Order 841, *supra* note 19, at 9,582.

151 *See generally id.* at 9,585–99 (outlining Order 841's requirements, qualification criteria, and definitions).

152 *Id.* at 9,586.

153 *Id.* ("We clarify that this definition is intended to cover electric storage resources capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid, regardless of their storage medium (*e.g.*, batteries, flywheels, compressed air, and pumped-hydro)").

154 *Id.* ("Through this Final Rule, we seek to ensure that RTO/ISO market rules account for the unique physical and operational characteristic of electric storage resources, namely their bidirectional capability to both inject energy to the grid and receive energy from it.").

155 *Id.*

156 *Id.* at 9,582, 9,586.

157 *See id.* at 9,624–25.

158 *Id.*

be metered and accounted for.[159] Without proper procedures, ESRs could charge at the wholesale LMP and then resell it at the retail rate, skipping wholesale bidding in the process.[160]

Order 841 prevents this by requiring RTOs to adopt accounting and metering procedures to prevent market manipulation and double counting,[161] but these procedures are costly or difficult for retail utilities and RTOs to adopt. One comment by AES stated this dual metering might be impossible due to state-mandated accounting procedures and software limitations,[162] and other comments similarly rejected the requirement.[163] Nonetheless, in its Final Order, FERC rejected these infeasibility claims and cited CAISO's existing ESR participation model as evidence that separately metering wholesale and retail power is feasible.[164]

CAISO's metering of ESRs occurs by designating ESRs as either CAISO Metered Entities (CAISOME), or as Scheduling Coordinator Metered Entities (SCME).[165] Essentially, ESRs can choose to be metered directly by either CAISO or work with a scheduling coordinator to coordinate charging and discharging.[166] Additionally, CAISO meters

---

159 *See* Schmitt & Sanford, *supra* note 2, at 485 ("Energy cannot be traced from grid through storage and back to the grid. There is no way to know precisely which electrical energy was used for which purpose as it has become comingled. Because we cannot assume traceability and identity of energy in energy storage, the meters could tell us how much electricity was stored, consumed, and injected into the grid, but upon discharge they cannot differentiate discharged energy by original source.").

160 *Id.*; *see also* Order 841, *supra* note 19, at 9,622.

161 Order 841, *supra* note 19, at 9,624.

162 *Id.* at 9,623–24.

163 *Id.* at 9,624 ("MISO Transmission Owners argue that, when an electric storage resource is located behind a retail customer's electric meter, it may be impractical, prohibitively expensive, or even impossible to distinguish between use of the resource (*i.e.*, charging and discharging) and the customer's other electric loads. FirstLight claims that an RTO/ISO cannot in practice distinguish between charging energy that will be used to provide a wholesale service and charging energy that will be used to provide a retail service, especially given that an electric storage resource may charge at different times and use its capacity to provide different services. Avangrid claims that, even if behind-the-meter retail load, distributed energy resources (including energy storage), and generation are separately metered, ownership and reconciliation of the data to produce results suitable for retail billing and wholesale settlement in a timely manner may be impractically complex and likely subject to both state and federal regulation.").

164 *Id.* at 9,624, 9,625.

165 CAL. INDEP. SYS. OPERATOR, COMPLIANCE WITH ORDER NO. 841 27–28 (2018), http://www.caiso.com/Documents/Dec3-2018-Compliance-OrderNo841-ElectricStorageParticipation-ER19-468.pdf ("Order No. 841 expressly notes that the CAISO has two example practices 'of how it has achieved market rules that accurately account for wholesale and retail activities by using direct metering.' As the CAISO explained in its comprehensive Metering Rules Enhancement initiative—which the Commission approved as just and reasonable—the CAISO obtains settlement quality meter data from two types of market participants: CAISO metered entities ('CAISOMEs') and scheduling coordinator metered entities ('SCMEs').").

166 *Id.*

behind-the-meter ESRs by directly and independently metering wholesale power.[167] Behind-the-meter ESRs and distribution utilities charging occurs at the retail level[168] As such, CAISO does not charge ESRs for drawing power from the distribution grid.[169] Citing CAISO's success, Order 841 requires RTOs to directly meter ESRs participating in wholesale markets, and also states FERC will consider "alternative proposals" in compliance filings.[170]

Second, opening the distribution grid to participation in wholesale markets has been characterized as a jurisdictional overreach.[171] FERC justified its jurisdiction over distribution level and behind-the-meter ESRs by stating that exclusion of these resources negatively impacts wholesale market pricing, resulting in unjust and unreasonable rates.[172] However, retail markets and the distribution grid are under state jurisdiction.[173] Thus, FERC requiring retail utilities to allow wholesale market participation for distribution-level ESRs resulted in challenges from states and utilities.[174] These challengers argued this aspect goes beyond FERC's "affecting jurisdiction," and a lack of an opt-out for states was arbitrary and capricious.[175] These challenges were rejected both in Order 841-A and more recently in the D.C. Circuit.[176] These jurisdictional issues and challenges are discussed more in the next Section.

2. Qualification Criteria

Order 841 requires "each RTO/ISO to define in its tariff the criteria that a resource must meet to use the participation model for electric storage resources (*i.e.*, qualification criteria)."[177]

These criteria must:

> [1] be based on the physical and operational characteristics of electric storage resources, . . . [2] must not limit participation under the electric storage resource participation model to any particular type of electric storage resource or other

167 *Id.*
168 *Id.* at 28.
169 *Id.* at 29.
170 Order 841, *supra* note 19, at 9,624–25.
171 *Id.* at 9,586 ("Some commenters express concerns regarding the jurisdictional implications of including electric storage resources connected at the distribution level in the definition of an electric storage resource.").
172 *Id.* at 9,587.
173 *See* 16 U.S.C. § 824(b)(1) ("The Commission . . . shall not have jurisdiction, except as specifically provided in this subchapter and subchapter III of this chapter, over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter.").
174 *See, e.g.*, Opening Brief of Petitioner, Nat'l Ass'n Regulatory Util. Comm'rs v. Fed. Energy Regulatory Comm'n, 964 F.3d 1177 (D.C. Cir. 2020) (Nos. 19-1142, 19-1147).
175 *Id.* at 10–12.
176 *See* Order 841-A, *supra* note 143, at 23,905–08; *Nat'l Ass'n Regulatory Util. Comm'rs*, 963 F.3d at 1187–88 ("If 'directly affecting' wholesale rates were a target, this program hits the bullseye.") ("Nothing in Order No. 841 directly regulates those distribution systems.").
177 Order 841, *supra* note 19, at 9,590.

> technology[,] and [3] must ensure that the RTO/ISO is able to dispatch a resource in a way that recognizes its physical and operational characteristics."[178]

Notably, these requirements are hands-off and give RTOs the flexibility to define ESR qualification criteria. Similar to the broad ESR definition, the purpose of these broad criteria is to ensure "that the electric storage resource participation model will accommodate both existing and future technologies" and to "provide greater certainty about which resources will be eligible to use" various ESR participation models.[179]

3. *Existing Technical Requirements and Participation Models*

Order 841 requires that participation models allow ESRs to "provide all capacity, energy, and ancillary services that it is technically capable of providing, including services that the RTOs/ISOs do not procure through an organized market."[180] This raised concerns that the participation model and tariff revisions may "undermine market designs that are based on services provided rather than resource type" and "grant undue preference to energy storage resources" as a class of technology.[181] In response, Order 841 clarified that RTO participation models are only required to remove barriers to ESRs providing services that they are "technically capable of providing."[182] In other words, RTOs do not need to change their technical requirements or testing criteria; they simply must remove barriers preventing ESRs from performing existing market functions.[183] Thus, if an ESR is technically incapable of participating in a capacity, energy, or ancillary service market, Order 841 will not force RTOs to change their bidding procedures.[184]

While this allows RTOs to preserve existing market and bidding procedures, ESRs are often still uncompensated for providing many ancillary and other services. Thus, while this aspect of the Order prevents an undue preference for ESRs, it raises the question of whether an undue preference for traditional resources is left in place.[185]

B. ESR as Wholesale Buyer and Seller

Traditionally, wholesale markets have operated with a neat division between buyers and sellers. Wholesale buyers are load, meaning they take energy from the transmission grid, and wholesale sellers are generators, meaning they sell power to the grid.[186] Both buy and sell power at wholesale prices, set differently in spot, day-ahead, capacity, and

---

178 *Id.*
179 *Id.*
180 *Id.* at 9,591.
181 *Id.* at 9,589.
182 *Id.* at 9,589.
183 *Id.*
184 *Id.* ("To the extent that an RTO/ISO has developed a standard set of technical requirements that all resources must meet to provide a given service, those requirements would also apply to a resource using the electric storage resource participation model if it wants to provide that service.").
185 *See supra*, Section II.
186 *See* Energy Primer, *supra* note 98, at 73.

other markets through both bidding and bilateral transactions.[187] The price of power sold in auctions is referred to as the "clearing price."[188]

Because ESRs have the ability to instantaneously switch between generation and load functions, they challenge the division between buyers and sellers.[189] In other words, they can act as both wholesale buyers and sellers.[190] Order 841 recognizes this ability and requires RTO participation models to allow ESRs to "set the wholesale market clearing price as both a wholesale seller and wholesale buyer" according to existing rules governing wholesale pricing.[191] However, in order to set prices in wholesale markets, the ESR must be "available to the RTO/ISO as a dispatchable resource."[192]

Additionally, Order 841 requires:

> (1) resources using the participation model for electric storage resources be able to set the price in the capacity markets, where applicable; (2) RTOs/ISOs must accept wholesale bids from resources using the participation model for electric storage resources to buy energy; and (3) resources using the participation model for electric storage resources must be allowed to participate in the RTO/ISO markets as price takers, consistent with the existing rules for self-scheduled resources.[193]

Thus, Order 841 allows ESRs to participate in any market they are technically capable of participating in as a wholesale buyer or seller.[194] Resulting in ESRs being fairly compensated for their dual participation as both a buyer and a seller—one of the most notable changes made in Order 841.

However, this dual market participation brings challenges for managing ESRs. First, because ESRs can be dispatched as either wholesale buyer or seller, Order 841 raises the concern that ESRs would be dispatched as both a load and a generation resource during a single market interval.[195] This could impact grid reliability by creating load or other shortages due to conflicting dispatch signals.[196] Order 841 gives RTOs flexibility to develop procedures to prevent this.[197]

---

187 Richards, *supra* note 22.

188 *Id.*

189 Glenn A. Smith, Enabling Electric Storage Participation in Wholesale Markets: An Analysis of FERC Order No. 841 1, 19 (2019) (available at https://repository.usfca.edu/cgi/viewcontent.cgi?article=1001&context=msesm).

190 *Id.*

191 *See* Order 841, *supra* note 19, at 9,604.

192 *Id.* at 9,599. A dispatchable resource is a resource that can be "turned on and off" and is "dispatched" by the system operator when it is economical to do so. Thus, ESRs must be dispatchable by the RTO as either supply or load when it is economical for them to do so. *See* Jason Donev et al., *Dispatchable source of electricity*, Energy Educ., https://energyeducation.ca/encyclopedia/Dispatchable_source_of_electricity (last updated April 28, 2020).

193 Order 841, *supra* note 19, at 9,600–01.

194 *Id.*

195 *Id.* at 9,601–03.

196 Smith, *supra* note 189, at 20.

197 *See* Order 841, *supra* note 19, at 9,602–03.

Second, an ESR could face uneconomic dispatch.[198] Uneconomic dispatch occurs when a resource is dispatched out of its merit order in bidding and receives a lower price for its power.[199] This can occur for reliability and other grid balancing reasons and results in make-whole payments to compensate generators.[200] Order 841 requires RTOs to include make-whole payment provisions for uneconomic dispatch in their ESR participation models.[201]

Finally, the Order clarifies the price for both charging and discharging will be the wholesale LMP.[202] Wholesale LMP is a composite price, set according to factors "including the incremental cost of the energy, transmission constraints present at the point of purchase and transmission losses."[203] The wholesale LMP can be either nodal or zonal.[204] Under Order 841, ESRs will buy and sell wholesale power at the nodal wholesale LMP regardless of distribution grid location.[205] However, ESRs are not limited to wholesale market bidding. They have freedom to purchase power in retail markets, charge from co-located generation resources, and "like other market participants . . . may enter into bilateral financial transactions."[206] In sum, these requirements ensure ESRs are compensated on the same basis as traditional generation resources, despite their unique characteristics.

C. Bidding Parameters

As part of its bidding procedures, RTOs consider a variety of information determining how resources are dispatched. Generators "submit bid curves to communicate the quantities of energy they are willing to provide at a given price for specific market intervals."[207] These bid curves are informed by bidding parameters.[208] Bidding parameters provide additional, non-price information such as generation limitations, ramp times, and minimum run times, to inform what dispatch is not only economical but also technically feasible.[209] Thus, RTOs can dispatch resources at the lowest cost while still ensuring grid reliability.[210]

Bidding parameters also apply to ESRs. However, traditional bidding parameters do not adequately reflect ESRs' unique operational characteristics of ESRs.[211] For example,

---

198 Smith, *supra* note 189, at 20.
199 *Id.*
200 *Id.*
201 *See* Order 841, *supra* note 19, at 9,604 ("[W]e find that the participation model for electric storage resources must allow make-whole payments when a resource is dispatched as load and the wholesale price is higher than the resource's bid price and when it is dispatched as supply and the wholesale price is lower than the resource's offer price.").
202 *Id.* at 9,621.
203 Smith, *supra* note 189, at 31.
204 *Id.* The wholesale nodal LMP refers to the price at a "specific location, or node," and the zonal LMP represents an aggregation of nodal pricing in a certain zone.
205 Order 841, *supra* note 19, at 9,621.
206 *Id.* at 9,622.
207 Smith, *supra* note 191, at 21.
208 *Id.*
209 *Id.*
210 *Id.*
211 *Id.*

ESRs have been unable to meet capacity and run-time requirements due to their limited charge, whereas a fossil fuel generator can always burn more fuel.[212] To mitigate this, Order 841 requires RTOs to "[a]ccount for the physical and operational characteristics of electric storage resources through bidding parameters or other means" in their compliance filings.[213] Initially, FERC considered imposing mandatory bidding parameters, but after notice and comment, decided to give RTOs the flexibility to develop bidding parameters, reflecting their "unique market designs."[214] However, in giving RTOs this flexibility, FERC outlines thirteen physical and operational characteristics to be reflected in compliance filings.[215]

These requirements are a major step to ensure ESRs can participate on equal footing with traditional generators. Previous bidding parameters never considered aspects of ESR technology, such as state of charge or discharge rate.[216] As a result, ESRs were often excluded from markets for not meeting run-time, capacity, or other requirements—even where they could provide power if state of charge and charging and discharging rates had been considered.[217]

Order 841's thirteen required operational characteristics fall into three categories based on the qualities they reflect: charge states and rates, operational durations, and improved service procurement and efficiency.[218]

First, the charge state and rates category includes state of charge, maximum state of charge, minimum state of charge, maximum charge limit, and minimum charge limit.[219] State of charge refers to the level of charge within the battery.[220]

Second, the operational durations category includes minimum and maximum charge time and run time.[221] Minimum and maximum charge time refer to how quickly the ESR can begin to receive or send energy to and from the grid.[222] Minimum and maximum run time refer to how long the ESR can send or receive energy from the grid.[223] These

---

212 Order 841, *supra* note 19, at 9,594 ("We find that allowing resources using the participation model for electric storage resources to de-rate their capacity to meet minimum run-time requirements to provide capacity or other services will help to ensure that electric storage resources are eligible to provide all services that they are technically capable of providing . . . .").

213 *Id.* at 9,631.

214 *Id.* at 9,607.

215 *See id.* at 9,605–12; SMITH, *supra* note 191, at 23–25.

216 Order 841, *supra* note 19, at 9,580, 9,606 ("As the Commission stated in the NOPR, requiring each RTO/ISO to revise its tariff to include a participation model for electric storage resources that incorporates bidding parameters that account for the physical and operational characteristics of electric storage resources will allow such resources to provide all of the services that they are technically capable of providing and allow the RTOs/ISOs to procure these services more efficiently.").

217 *Id.*

218 SMITH, *supra* note 189, at 23–25; *see also* Order 841, *supra* note 19, at 9,605–12.

219 SMITH, *supra* note 191, at 23–25; *see also* Order 841, *supra* note 19, at 9,605–12.

220 SMITH, *supra* note 191, at 23; *see also* Order 841, *supra* note 19, at 9,607–09.

221 SMITH, *supra* note 191, at 24; *see also* Order 841, *supra* note 19, at 9,609–10.

222 Order 841, *supra* note 19, at 9,610.

223 *Id.* at 9,610–11.

parameters inform the RTO how quickly and for how long the ESR can feasibly send or withdraw grid energy.[224]

Finally, the improved service procurement and efficiency category includes minimum discharge limit, minimum charge limit, discharge ramp rate, and charge ramp rate.[225] Minimum charge and discharge limit refer to the minimum MW output level an ESR can inject or receive from the grid.[226] Discharge and charge ramp rates refer to how quickly an ESR can move from zero to its maximum discharge and minimum charge limits.[227]

These various bidding parameters reflect "the ability of electric storage resources to provide all of the services that they are technically capable of providing and to allow the RTOs/ISOs to procure these services more efficiently, which will enhance competition and, in turn, help to ensure that the RTO/ISO markets produce just and reasonable rates."[228] Where these changes fall short, however, is in recognizing ESRs' unique characteristics beyond a generation function. As mentioned, while ESRs can now bid into generation markets on equal footing, they still will be limited in providing ancillary and transmission services.

D. Minimum Size Requirement

Order 841 sets a minimum size requirement of 100 KW for ESRs.[229] Thus, 100 KW is the highest minimum size requirement an RTO can include in its participation model and applies to "all minimum capacity requirements, minimum offer to sell requirements, and minimum bid to buy requirements."[230]

Traditionally, storage projects have been higher capacity or "bulk" resources.[231] This is because most ESRs operating today are pumped hydro storage resources with capacities higher than 100 MW.[232] However, as technology improves, smaller ESRs have become financially and technically feasible.[233] The Energy Information Administration reports "most storage resources operational in the US starting after 2000 have nameplate capacities ranging from less than 1 MW up to approximately 20 MW."[234] But this shift to smaller resources was not reflected in many RTO participation models.[235] Thus, the 100 KW size requirement was imposed to open up wholesale markets to both large- and small-scale ESRs.[236]

---

224 *See* Smith, *supra* note 189, at 24; *see also* Order 841, *supra* note 19, at 9,609–10.
225 Smith, *supra* note 189, at 25; Order 841, *supra* note 19, at 9,611–12.
226 Order 841, *supra* note 19, at 9,611–12.
227 *Id.* at 9,612.
228 *Id.*
229 *Id.* at 9,619.
230 *Id.* at 9,618.
231 *See* U.S. Grid Energy Storage, *supra* note 51.
232 *Id.*
233 Smith, *supra* note 189, at 27–28.
234 *Id.* (citing U.S. Energy Info. Admin., U.S. Battery Storage Market Trends (2018), https://www.eia.gov/analysis/studies/electricity/batterystorage/archive/2018/pdf/battery_storage.pdf).
235 Order 841, *supra* note 19, at 9,619.
236 *Id.*

Comments on the 100 KW size requirement were mixed. Many commenters supported the requirement,[237] but others argued that 100 KW is too low a threshold.[238] Notably, even CAISO—an ISO with a favorable ESR participation model in place since 2011—argued for a 500 KW requirement due to software and dispatch limitations.[239] CAISO raised concerns that "the 100 kW minimum size requirement would also apply to distributed energy resources" and require CAISO to manage thousands of distributed energy resources in the 100KW range.[240] These concerns are valid, particularly when considering the resources that meet this size requirement. For example, the 2019 Tesla Model S has a 120 KW battery.[241] Under this new threshold, a Tesla owner could theoretically participate in wholesale markets from the distribution grid or behind the meter. This lower barrier to entry could result in thousands of additional wholesale market participants for RTOs to manage.[242]

FERC rejected these concerns after finding existing participation models allowing resources with less than 100 KW of capacity to participate in each RTO region.[243] With this new threshold in place, FERC has laid the groundwork for future distributed energy possibilities and smaller energy storage resources.[244]

V. Jurisdictional Issues and *NARUC v. FERC*

Order 841 was issued under FERC's authority to ensure "just and reasonable rates" in wholesale markets.[245] This authority comes from the FPA, which requires FERC to review market provisions and tariffs and gives FERC jurisdiction over wholesale transactions in interstate commerce.[246] This authority extends to ESRs on the distribution grid as these ESRs conduct wholesale transactions—defined as a sale for resale[247]—whenever they withdraw and later resell energy.[248] Additionally, FERC clarified its jurisdiction extends to "wholesale market rules for participation of resources connected at or below distribution-level voltages," when these resources and related policies have an "affect" on interstate commerce and wholesale markets.[249] It is under this second "affecting jurisdic-

237 *See id.* at 9,616–17.
238 *See id.* at 9,617.
239 *Id.*
240 *Id.*
241 *See Tesla Model S Features and Specs*, Car and Driver, https://www.caranddriver.com/tesla/model-s/specs (last visited Mar. 30, 2021).
242 Order 841, *supra* note 19, at 9,617.
243 *Id.* at 9,618–19.
244 *See How Distributed Energy Is Reshaping the Energy Landscape*, Greentech Media, https://www.greentechmedia.com/articles/read/how-distributed-energy-is-reshaping-the-energy-landscape (last visited Mar. 29, 2021).
245 Order 841, *supra* note 19, at 9,582.
246 16 U.S.C. §§ 824(b), 824d(a), 824e(a).
247 *Id.* § 824(c).
248 Order 841, *supra* note 19, at 9,609.
249 *Id.* at 9,587, 9,616–17.

tion" that FERC exercises jurisdiction over behind-the-meter and distribution level ESRs, and prohibits state utilities from restricting these resources' wholesale access.[250]

However, this was challenged by various utilities throughout the notice and comment period for Order 841,[251] again in Order 841-A,[252] and recently in the D.C. Circuit, in a consolidated action by the National Association of Regulatory Commissioners (NARUC) and "Local Utility Petitioners."[253] Here, a panel of D.C. Circuit justices held in favor of FERC and upheld Order 841.[254] In doing so, the D.C. Circuit panel directly applied the Supreme Court's analysis in *FERC v. Electric Power Supply Ass'n* (*EPSA*), a 2016 decision involving similar jurisdictional issues regarding demand response programs administered by RTOs under Orders 719 and 745.[255] This is notable because both NARUC and FERC cited *EPSA* as supporting their arguments; accordingly, the D.C. Circuit's decision clarifies important issues regarding FERC's jurisdiction under *EPSA* and Order 841.[256] The remainder of this section will discuss FERC's jurisdiction over ESRs, the issues raised in *NARUC v. FERC*, and the implications of the D.C. Circuit's decision.

A. FERC's Jurisdiction Over ESRs

Under the FPA, FERC has exclusive authority to regulate "'the sale of electric energy at wholesale in interstate commerce,' including both wholesale electricity rates and any rule or practice 'affecting' such rates."[257] FERC also has "jurisdiction over all facilities for such transmission or sale of electric energy."[258] To ensure "just and reasonable" wholesale market rates, FERC has a statutory duty to revise market rules when they create "unjust [or] unreasonable rates."[259] This authority is broad but not unlimited.

---

250 *Id.* at 9,600–03.

251 *See, e.g.*, *id.* at 9,603–04.

252 *See* Order No. 841-A, *supra* note 142, at 23,905–08.

253 Nat'l Ass'n Regulatory Util. Comm'rs v. Fed. Energy Regulatory. Comm'n, 964 F.3d 1177, 1184 (D.C. Cir. 2020).

254 *Id.* at 1181.

255 *Id.* (citing Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 763 (2016), *as revised* (Jan. 28, 2016)). *See also* Wholesale Competition in Regions With Organized Electric Markets, 73 Fed. Reg. 64,100 (Oct. 28, 2008) (codified at 18 C.F.R. § 35); Demand Response Compensation in Organized Wholesale Energy Markets, 76 Fed. Reg. 16,658 (Mar. 24, 2011) (codified at 18 C.F.R. § 35).

256 Opening Brief for Respondent, National Association of Regulatory Utility Commissioners at 32–33, 964 F.3d 1177 (D.C. Cir. 2020) (Nos. 19-1142, 19-1147); *see also* Opening Brief of Petitioner, *supra* note 176.

257 *Elec. Power Supply Ass'n*, 136 S. Ct. at 766 (quoting 16 U.S.C. §§ 824(b), 824e(a)).

258 16 U.S.C. § 824(b)(1).

259 *Elec. Power Supply Ass'n*, 136 S. Ct. at 773, 767, 774 ("[T]he FPA obligates FERC to oversee all prices for those interstate transactions and all rules and practices affecting such prices. The statute provides that '[a]ll rates and charges made, demanded, or received by any public utility for or in connection with' interstate transmissions or wholesale sales—as well as 'all rules and regulations affecting or pertaining to such rates or charges'—must be 'just and reasonable.' And if 'any rate [or] charge,' or 'any rule, regulation, practice, or contract affecting such rate [or] charge[,]' falls short of that standard, the Commission must rectify

An important limitation in the FPA is that states are granted jurisdiction "over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter" except where the Act specifically says otherwise.[260] Thus, FERC has the power to set rules governing wholesale transactions—or those involving the sale of power for resale—so long as these rules do not directly regulate state controlled retail and distribution level markets.[261]

Under this cooperative federalism regime, FERC has jurisdiction in two nonexclusive scenarios—first, when market rules involve "electric energy at wholesale in interstate commerce," and second, when market "rule[s] or practice[s] 'affecting' [wholesale] rates."[262] The first scenario is straightforward and involves direct regulation of wholesale rates and rules in interstate markets.[263] For example, rules regarding wholesale power sales in competitive RTO bidding fall under FERC's authority.[264]

The second scenario is less straightforward and referred to as FERC's "affecting jurisdiction." In *EPSA*, the Supreme Court recognized FERC's "affecting" jurisdiction could be read to imply regulation of all electricity inputs, such as "steel, fuel and labor" that "might affect generators' supply of power."[265] Considering this reading too broad, the Court chose to limit its reading of "affecting" as limited to market rules that "directly affect" wholesale market rates.[266] The rationale for this limitation is the sphere of retail and distribution regulation left to states in the FPA.[267]

Order 841 uses both aspects of FERC's jurisdiction. First, ESRs that operate in wholesale markets and on the transmission grid are wholly within FERC's authority to regulate wholesale market procedures and the sale of power for resale.[268] Thus, FERC's authority to mandate new ESR participation models and market rules to ensure "just and reasonable rates" is wholly compatible with its FPA powers.[269] Second, FERC justified its Order 841 extension to the distribution grid and to behind-the-meter resources under its

---

the problem: It then shall determine what is 'just and reasonable' and impose 'the same by order.'" (citations omitted)).

260 16 U.S.C. § 824(b)(1).

261 *See id.* ("The Commission shall have jurisdiction over all facilities for such transmission or sale of electric energy, but shall not have jurisdiction, except as specifically provided in this subchapter and subchapter III of this chapter, over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter.").

262 *See* Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 766–67 (2016) (quoting 16 U.S.C. §§ 824(b), 824e(a)).

263 16 U.S.C. § 824(b).

264 *See id.*

265 *Elec. Power Supply Ass'n*, 136 S. Ct. at 770.

266 *Id.*at 774 (citing Cal. Indep. Sys. Operator Corp. v. Fed. Energy Regulatory Comm'n, 372 F.3d 395, 403 (2004)).

267 *Id.* at 778.

268 Order 841, *supra* note 19, at 9,580 (citing 16 U.S.C. § 824e).

269 *Id.* (citing 16 U.S.C. § 824e).

"affecting jurisdiction."[270] As part of this mandate, states and retail utilities must allow ESRs to access wholesale markets, even if the only access is through state-owned transmission and distribution lines.[271] States and retail utilities cannot "opt-out" of this requirement.[272] FERC justified this decision by arguing that exclusion of distribution-level ESRs from participation in wholesale markets "directly affects" wholesale rates through market participation and pricing.[273]

FERC conceded there would be additional costs imposed on retail utilities, but concluded the benefits in ensuring "just and reasonable" rates would offset these costs.[274] As a result, NARUC and other petitioners—mostly local utilities—challenged the Order as an impermissible overreach of FERC's authority.[275] This dispute culminated in the D.C. Circuit's recent decision in *NARUC v. FERC*.[276]

B. *NARUC v. FERC*

Petitioners in *NARUC v. FERC* primarily relied on the arguments that preventing distribution-level ESRs from participating in wholesale markets does not directly affect wholesale market prices and that FERC was impermissibly exceeding its authority by regulating parts of the grid under state jurisdiction.[277]

Essentially, NARUC asked for an opt-out provision similar to the one provided to state utilities in Orders 719 and 745, two related FERC Orders regarding demand re-

---

270 *Id.* (citing Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n, 136 S. Ct. 760 (2016); Advanced Energy Econ., 161 FERC ¶ 61,245 (2017)).

271 *Id.* at 9,615–16.

272 *Id.* at 9,587 ("We also understand that numerous resources connected to the distribution system participate in the RTO/ISO markets today. Under these circumstances, we are not persuaded to grant the MISO Transmission Owners' and DTE Electric/Consumers Energy's request that the Commission allow states to decide whether electric storage resources in their state that are located behind a retail meter or on the distribution system are permitted to participate in the RTO/ISO markets through the electric storage resource participation model.").

273 Order No. 841-A, *supra* note 142, at 23,911 ("Order No. 841 concluded that states cannot directly prohibit electric storage resources from participating in the wholesale market because doing so would invade the Commission's 'exclusive jurisdiction over the wholesale markets and the criteria for participation in those markets.'").

274 *Id.* ("In any event, any additional costs imposed on distribution utilities could be outweighed by the overall benefits from increased competition due to greater participation of electric storage resources in RTO/ISO markets.").

275 Opening Brief of Petitioner, *supra* note 176.

276 *See* Nat'l Ass'n Regulatory Util. Comm'rs v. Fed. Energy Regulatory Comm'n, 964 F.3d 1177 (D.C. Cir. 2020).

277 Opening Brief of Petitioner, *supra* note 1746, at 18 ("FERC improperly relies on its authority over rules affecting FERC jurisdictional rates to assert that the States cannot prohibit local storage resources from using state jurisdictional facilities to participate in the federal wholesale markets. While FERC argues that Sections 205 and 206 of the Act "provide the Commission with jurisdiction over all rules, regulations, practices, or contracts affecting jurisdictional rates, charges, or classifications," the plain language of the statute does not support FERC's argument.").

sponse.[278] Order 745 was the subject of *EPSA*, a decision upholding the requirement to pay demand response providers at the wholesale LMP.[279] According to NARUC, an Order 719 provision allowed state utilities to "opt out"[280] of demand response participation in wholesale markets, and this opt-out is what allowed Order 745 to be upheld.[281] Relying on this, NARUC argued that without a similar opt-out provision, Order 841 was invalid.[282]

FERC relied on the following arguments to uphold its authority under *EPSA* and the FPA: the sale of power by ESRs is a wholesale market sale or a sale for resale;[283] or alternatively, distribution level ESRs directly affect wholesale rates by participating in wholesale markets, thus giving FERC jurisdiction;[284] and FERC is not regulating retail utilities, but simply requiring them to allow wholesale market access while leaving their own authority unaffected.[285]

The D.C. Circuit opinion addresses FERC's second and third argument—Order 841 directly affects wholesale rates and does not impermissibly regulate retail utilities.[286] However, the decision does not go so far as to classify all distribution-level ESR transactions as wholesale market transactions, despite the strength of this argument.[287]

---

278 *Id.* 22–23; *see also* Wholesale Competition in Regions With Organized Electric Markets, 73 Fed. Reg. 64,100 (Oct. 28, 2008) (codified at 18 C.F.R. § 35); Demand Response Compensation in Organized Wholesale Energy Markets, 76 Fed. Reg. 16,658 (Mar. 24, 2011) (codified at 18 C.F.R. § 35).

279 Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 763 (2016), *as revised* (Jan. 28, 2016).

280 *Id.* (stating that Order 719 "requires wholesale market operators to receive demand response bids from aggregators of electricity consumers, except when the state regulatory authority overseeing those users' retail purchases bars such demand response participation.").

281 Opening Brief of Petitioner, *supra* note 176, at 22–23 ("In fact, [the opt-out provision] of the demand response program was part of the Court's reasoning to uphold Order No. 745.").

282 *Id.*

283 *See* Opening Brief for Respondent, *supra* note 2568, at 31–45. ("And the Rule requires market operators to account for ways in which storage resources can interact physically with the wholesale market—e.g., their 'bidirectional capability' to both inject energy *to* the grid and receive energy *from* the grid for resale back into the wholesale market (both of which involve wholesale transactions).").

284 *Id.* at 34 ("The Rule is directed at, and imposes obligations only on, FERC-jurisdictional wholesale market operators. Those market operators 'administer the entire program' by establishing their own set of market rules (or 'participation models') governing wholesale sales by electric storage resources." (citations omitted)).

285 *Id.* at 36 ("The next question is whether the Rule targets and directly regulates local distribution facilities in violation of 16 U.S.C. § 824(b)(1). Because it does not, the Rule is a lawful exercise of Commission authority." (citations omitted)).

286 Nat'l Ass'n Regulatory Util. Comm'rs v. Fed. Energy Regul. Comm'n, 964 F.3d 1177, 1186–87 (D.C. Cir. 2020) ("If 'directly affecting' wholesale rates were a target, this program hits the bullseye. . . . Nothing in Order No. 841 directly regulates those distribution systems.").

287 *See* Opening Brief for Respondent, *supra* note 258, at 35; *see also* Order 841-A, *supra* note 143, at 23,911 ("The Commission cited to certain RTO/ISO interconnection and market participation procedures, but merely to demonstrate that many distribution-connected resources are currently participating in those markets. As the Commission found in Order No.

1. Distribution-level ESRs Conduct Wholesale Market Transactions

In Order 841 and its *NARUC* brief, FERC emphasized that distribution-level ESRs engage in wholesale transactions whenever they participate in a sale for resale, giving FERC jurisdiction over these transactions.[288] Specifically, the act of charging and then reselling power on either the distribution or wholesale level is a sale for resale or a wholesale transaction under the FPA's plain meaning.[289] However, the court did not address this argument and instead focused on FERC's "directly affecting" jurisdiction under *EPSA*.[290]

Despite not being addressed, this argument bolsters support for FERC's jurisdiction over ESRs on the distribution grid, and some support is found in the *EPSA* dissent. The dissent characterized demand response as a non-wholesale transaction, meaning FERC had no jurisdiction to regulate.[291] Demand response involves large power users, such as factories and office spaces, using less power during peak hours and receiving compensation in proportion to their reduced demand.[292] The compensation comes from the price differential when this demand is taken off the grid, but no power is actually sold.[293] Focusing on the lack of a sale for resale, the *EPSA* dissent found that demand response was not a wholesale transaction under the FPA, and FERC did not have jurisdiction over

---

841, an electric storage resource that injects electric energy back into the grid for purposes of participating in an RTO/ISO market engages in a sale of electric energy at wholesale in interstate commerce and the sale of charging energy to an electric storage resource that the resource then resells into an RTO/ISO market is also a sale for resale in interstate commerce.").

288 *See* Opening Brief for Respondent, *supra* note 258, at 35; *see also* Order 841-A, *supra* note 142, at 23,911.

289 *See* Opening Brief for Respondent, *supra* note 2568, at 35; Order 841-A, *supra* note 143 at 23,911; *see also* 16 U.S.C. § 824(d) (The term "sale of electric energy at wholesale" when used in this subchapter, means a sale of electric energy to any person for resale.").

290 *Nat'l Ass'n Regulatory Util. Comm'rs*, 964 F.3d at 1186 ("If 'directly affecting' wholesale rates were a target, this program hits the bullseye.").

291 Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 785 (2016) (Scalia, J., dissenting), *as revised* (Jan. 28, 2016).

292 *Id.* at 767 ("These cases concern a practice called 'demand response,' in which operators of wholesale markets pay electricity consumers for commitments *not* to use power at certain times. That practice arose because wholesale market operators can sometimes—say, on a muggy August day—offer electricity both more cheaply and more reliably by paying users to dial down their consumption than by paying power plants to ramp up their production. In the regulation challenged here, FERC required those market operators, in specified circumstances, to compensate the two services equivalently—that is, to pay the same price to demand response providers for conserving energy as to generators for making more of it.").

293 *Id.*

demand response programs.[294] But the majority held otherwise, allowing these programs to remain in place.[295]

Interestingly, applying the *EPSA* dissent's logic and the FPA's plain language to Order 841, it is possible to justify FERC's jurisdiction over distribution-level ESRs without "affecting jurisdiction" being necessary. Every time an ESR charges and then discharges power, there is a sale of power for resale on either the wholesale or retail level.[296] The ESR purchases power when it charges and then resells power when it discharges—a set of transactions which directly fits into the definition of a wholesale transaction under the FPA.[297] FERC's briefings and rulemaking both mentioned this argument,[298] but the D.C. Circuit ignored it and focused on FERC's "affecting jurisdiction" without addressing the plain language argument.[299] This decision better follows the precedent set by *EPSA*.

It is also likely the D.C. Circuit was mindful of the current debate over other retail transactions with wholesale characteristics. There is an ongoing debate as to whether FERC should have jurisdiction over all behind-the-meter resources (e.g. rooftop solar) because these resources use net metering to sell power to retail utilities which is then resold to other customers—a "sale of power for resale" and thus, a wholesale transaction.[300] Historically, FERC has disclaimed jurisdiction over net metering by stating these transactions do not constitute a wholesale transaction,[301] and FERC recently affirmed

---

294 *Id.* at 785 (Scalia, J., dissenting) ("So what, exactly, is a 'sale of electric energy at wholesale'? We need not guess, for the Act provides a definition: 'a sale of electric energy to any person *for resale*.' No matter how many times the majority incants and italicizes the word 'wholesale,' nothing can change the fact that the vast majority of (and likely all) demand-response participants—'[a]ggregators of multiple users of electricity, as well as large-scale individual users like factories or big-box stores,'—*do not resell electric energy*; they consume it themselves. FERC's own definition of demand response is aimed at energy *consumers*, not resellers." (citations omitted)).

295 *Id.* at 784 ("FERC's statutory authority extends to the Rule at issue here addressing wholesale demand response. The Rule governs a practice directly affecting wholesale electricity rates.").

296 Order 841-A, *supra* note 143 at 23,911 ("As the Commission found in Order No. 841, an electric storage resource that injects electric energy back into the grid for purposes of participating in an RTO/ISO market engages in a sale of electric energy at wholesale in interstate commerce and the sale of charging energy to an electric storage resource that the resource then resells into an RTO/ISO market is also a sale for resale in interstate commerce.").

297 *See id.*; *see also* 16 U.S.C. § 824(c).

298 *See* Opening Brief for Respondent, *supra* note 2568, at 35; *see also* Order 841-A, *supra* note 143 at 23,911.

299 Nat'l Ass'n Regulatory Util. Comm'rs v. Fed. Energy Regul. Comm'n, 964 F.3d 1177, 1186 (D.C. Cir. 2020) ("If 'directly affecting' wholesale rates were a target, this program hits the bullseye.").

300 16 U.S.C. § 824(d); *see, e.g.*, New Eng. Ratepayers Ass'n, 172 F.E.R.C. ¶ 61042, 61359–63 (2020).

301 Jim Rossi, *Federalism and the Net Metering Alternative*, 29 ELEC. J. 13, 14 (2016) ("FERC has consistently disclaimed jurisdiction over net metering, arguing that the mere flow of power from a customer to the distribution grid does not provide a basis for it to assert authority.").

this position.[302] Had the D.C. Circuit chosen to recognize any ESR charging and discharging as a wholesale transaction, rather than a transaction "directly affecting" wholesale rates, it may have indirectly taken this debate out of FERC's hands by inserting itself on either side of the jurisdictional debate. As such, deciding the issue under FERC's "directly affecting" jurisdiction avoids these controversies while more closely adhering to precedent.

2. Applying *EPSA*: "Directly Affecting" Jurisdiction

FERC relied on *EPSA* to support its jurisdiction over distribution and behind-the-meter resources.[303] Namely, FERC pointed to its authority over "all rules and practices" affecting wholesale prices, and argued, that under *EPSA*, "[t]he Commission's 'affecting' jurisdiction is limited to 'rules or practices that 'directly affect the [wholesale] rate.'"[304] Here, distribution level and behind-the-meter ESR participation in wholesale markets directly affects the wholesale rate by lowering prices, just as the demand response program did in *EPSA*.[305] The D.C. Circuit agreed and upheld FERC's jurisdiction over distribution-level ESRs.[306]

Relatedly, FERC emphasized that Order 841 leaves state regulation over retail markets intact, and merely has an "incidental effect" on distribution facilities by requiring access to wholesale markets.[307] An "incidental effect" does not improperly regulate retail authorities, allowing the mandates in Order 841 to be upheld.[308] NARUC and Local Petitioners countered that the Order 841 effects are not incidental and are instead a direct regulation of the retail grid.[309] However, the D.C. Circuit panel disagreed, again applying *EPSA*.[310]

In *EPSA*, the Court held that demand response programs are a valid exercise of FERC's jurisdiction over wholesale markets because these transactions "directly affect" wholesale rates.[311] The demand response programs at issue lowered wholesale prices by taking large power users off the retail grid and compensating them at the wholesale LMP for the avoided power cost.[312] The benefits were felt in both wholesale and retail markets because the savings in wholesale markets are often passed on to retail utilities and end-

---

302 *See* New Eng. Ratepayers Ass'n, 172 FERC at ¶ 61363 (disclaiming federal jurisdiction over net metering on July 16, 2020).

303 Opening Brief for Respondent, *supra* note 2568, at 33–41.

304 *Id.* at 33 (quoting Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 774 (2016)).

305 *Id.*

306 Nat'l Ass'n Regulatory Util. Comm'rs v. Fed. Energy Regulatory Comm'n, 964 F.3d 1177, 1186 (D.C. Cir. 2020).

307 Opening Brief for Respondent, *supra* note 256, at 38 ("But mere incidental effects on retail rates and non-jurisdictional distribution facilities cannot be confused with verboten regulation of those rates and facilities.").

308 *Id.*

309 Opening Brief of Petitioner, *supra* note 176, at 2 ("Unfortunately, in its enthusiasm to enable storage resources to participate in the federal wholesale markets, FERC has exceeded its jurisdictional reach. That overreach is the basis for this appeal.").

310 *Nat'l Ass'n Regulatory Util. Comm'rs*, 964 F.3d at 1186.

311 Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 773 (2016).

312 *Id.* at 763.

users.[313] However, retail utilities challenged FERC's jurisdiction over these transactions, stating they encroached on states' jurisdiction over retail transactions and the demand response programs did not "directly affect" wholesale rates.[314] In upholding the demand response program administered by Order 719 and 745, the Supreme Court applied the following three-part analysis:

> Our analysis of FERC's regulatory authority proceeds in three parts. First, the practices at issue in the Rule—market operators' payments for demand response commitments—directly affect wholesale rates. Second, in addressing those practices, the Commission has not regulated retail sales. Taken together, those conclusions establish that the Rule complies with the FPA's plain terms. And third, the contrary view would conflict with the Act's core purposes by preventing all use of a tool that no one (not even EPSA) disputes will curb prices and enhance reliability in the wholesale electricity market.[315]

This is the same test applied by the D.C. Circuit to uphold Order 841.[316]

First, the D.C. Circuit "swiftly conclude[d] that FERC's prohibition of state-imposed participation bans directly affects wholesale rates."[317] This is because Order 841 is specifically intended to increase ESR participation by "[k]eeping the gates open to all types of ESRs–regardless of their interconnection points in the electric energy systems," thus ensuring that "technological advances in energy storage are fully realized in the marketplace . . . thereby reducing wholesale rates."[318]

Second, the court concluded the bigger question was whether Order 841 improperly regulated the distribution grid and retail utilities.[319] In its briefing, NARUC and Local Petitioners argued that by mandating access to wholesale markets over the distribution grid, FERC was essentially regulating the distribution grid itself.[320] However, the D.C. Circuit disagreed and reiterated that FERC asserting jurisdiction over these transactions is not a direct regulation of the distribution grid.[321] Rather, it "is the type of permissible effect of direct regulation of federal wholesale sales that the FPA allows," and that

---

313 *Id.* at 778 ("And when wholesale prices go down, retail prices tend to follow, because state regulators can, and mostly do, insist that wholesale buyers eventually pass on their savings to consumers.").

314 *Id.* at 777 ("EPSA's primary argument that FERC has usurped state power (echoed in the dissent) maintains that the Rule 'effectively,' even though not 'nominal[ly],' regulates retail prices.").

315 *Id.* at 773.

316 Nat'l Ass'n Regulatory Util. Comm'rs v. Fed. Energy Regulatory Comm'n, 964 F.3d 1177, 1185–86 (D.C. Cir. 2020) ("*EPSA* instructs us to confront Petitioners' exceeding-jurisdiction challenge in three parts.").

317 *Id.* at 1186.

318 *Id.*

319 *Id.* at 1186–87.

320 *Id.* ("Petitioners focus their energy on the second test: whether Order No. 841 unlawfully regulates matters left to the States."); *see also* Opening Brief for Petitioner, *supra* note 1746, at 2, 14–16.

321 *Id.* at 1187–88.

"[s]tates remain equipped with every tool they possessed prior to Order No. 841 to manage their facilities and systems."[322]

The D.C. Circuit also concluded FERC could regulate wholesale market participation regardless of whether an opt-out provision was available to states and utilities.[323] Specifically, because these ESRs are under FERC's affecting jurisdiction, the question is not limited to Order 841 and an opt-out; rather, it is decided by the Constitution's Supremacy Clause.[324] Because the FPA gives FERC authority to regulate wholesale market access, states restricting this access are preempted by the federal statute and related regulations.[325] Order 841 is a federal regulation, thus the field of ESR access to wholesale markets unquestionably preempts any conflicting state policy.[326] In short, the D.C. Circuit disagreed that the Order "usurps" state power and concluded the FPA preserves separate spheres of influence for federal and state regulation—it does not put them on an equal level.[327]

Finally, the D.C. Circuit held Order 841 did not perpetuate federal policy goals to the states' detriment or in violation of the FPA.[328] Rather, the court found the Order is consistent with ensuring "just and reasonable federal wholesale rates."[329] The court held in favor of FERC and upheld Order 841 based on these three *EPSA* factors.[330]

However, the D.C. Circuit also noted that while Order 841 survived a facial challenge brought by NARUC and petitioners, specific state statutes or regulations could still challenge Order 841.[331] Facial challenges only prevail if "no set of circumstances exists under which the [Order] would be valid," and the petitioners' challenge failed to

---

322 *Id.* at 1187. For example, the court explained that states could still prevent these ESRs from participating in both wholesale and retail markets by barring retail market access to ESRs that choose to participate in wholesale markets.

323 *Id.* at 1189.

324 *Id.* at 1187 ("While the FPA creates two separate zones of jurisdiction, the Supremacy Clause creates uneven playing fields.").

325 *Id.* at 1188.

326 *Id.* at 1187–88 (quoting N. Nat. Gas Co. v. State Corp. Comm'n of Kan., 372 U.S. 84, 91–92 (1963)) ("Hence, NARUC's argument that a local ESR does not participate in the federal wholesale market (and thus cannot fall with FERC's authority) until after it navigates through State-regulated facilities fails. Any State effort that aims directly at destroying FERC's jurisdiction by 'necessarily deal[ing] with matters which directly affect the ability of the [Commission] to regulate comprehensively and effectively' over that which it has exclusive jurisdiction 'invalidly invade[s] the federal agency's exclusive domain.'").

327 *Id.* at 1188 ("Thus, Order No. 841 does not 'usurp[ ] state power,' . . . nor does it impose a new 'reasonably related' test that re-draws the jurisdictional divide between FERC and the States . . . States continue to operate and manage their facilities with the same authority they possessed prior to Order No. 841.").

328 *Id.* at 1189 ("Lastly, because we do not conclude that FERC has perpetuated federal policy goals to the detriment of the statutory authority granted to the States, our determination is consistent with the FPA's purpose of maintaining the respective zones of jurisdiction while ensuring that FERC can carry out its duty of ensuring just and reasonable federal wholesale rates.").

329 *Id.*

330 *Id.*

331 *Id.* at 1188–89.

meet this standard.[332] But judicial review is not foreclosed for particular state laws or policies.[333] Thus, it is likely that states and utilities will bring future challenges to Order 841 under specific statutes.

C. Opt-Out and Arbitrary and Capricious Analysis

1. *Opt-Out Not Required Under EPSA*

Another critical aspect of the decision is the confirmation that Order 841 did not require an opt-out for retail utilities.[334] What state utilities, NARUC, and other petitioners wanted was an opt-out provision that allowed them to deny wholesale market access to distribution-level utilities.[335] Functionally, this opt-out would have been equivalent to how FERC treated demand response in Orders 719 and 745, and petitioners argued these Orders' opt-out is what allowed them to be upheld in *EPSA*.[336] On the other hand, FERC noted in its brief the opt-out was not necessary to uphold the *EPSA* demand response programs,[337] and both arguments seemed to find support in the Supreme Court's opinion.[338]

Looking to *EPSA*, the Supreme Court's analysis seems to favor the opt-out provided to retail utilities in the demand response programs, but falls short of requiring the opt-out to validate the program. Specifically, the Court mentions the opt-out or "veto" power provided to retail utilities in the demand response program exemplifies "cooperative federalism,"[339] and illustrates FERC's "recognition of the linkage between wholesale and retail markets and the States' role in overseeing retail sales."[340] Thus, the presence of the opt-out in *EPSA* "remove[d] any conceivable doubt as to its compliance with [the FPA]."[341]

NARUC, going one step further, took this discussion of the opt-out provision to conclude the opt-out was necessary to prevent FERC from exceeding its jurisdiction in Order 841.[342] This is a similar argument to Justice Scalia's dissent in *EPSA*.[343] Namely,

---

332 *Id.* at 1188.

333 *Id.* at 1189.

334 *Id.* ("FERC's decision to reject a state opt-out was adequately explained.").

335 *Id.*; Opening Brief of Petitioner, *supra* note 1746, at 23–24.

336 Opening Brief of Petitioner, *supra* note 1746, at 23–24.

337 *Id.* at 50–51.

338 Fed. Energy Regulatory Comm'n v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 779–80 (2016). ("The veto power thus granted to the States belies EPSA's view that FERC aimed to 'obliterate' their regulatory authority or 'override' their pricing policies. And that veto gives States the means to block whatever 'effective' increases in retail rates demand response programs might be thought to produce. Wholesale demand response as implemented in the Rule is a program of cooperative federalism, in which the States retain the last word. That feature of the Rule removes any conceivable doubt as to its compliance with § 824(b)'s allocation of federal and state authority.").

339 *Id.*

340 *Id.*

341 *Id.*

342 Reply Brief of Petitioner at 16, Nat'l Ass'n Regulatory Util. Comm'rs v. Fed. Energy Regulatory Comm'n, 964 F.3d 1177 (D.C. Cir. 2020) (Nos. 19-1142, 19-1147) ("FERC claims that including an opt-out provision in the Rule would be granting States a veto over FERC's jurisdiction or asking FERC to disclaim its jurisdiction. Including the opt-out lan-

that the demand response program opt-out provided to states is actually evidence of overreach into state jurisdiction by FERC, rather than an accommodation to state regulation.[344] However, as discussed, the D.C. Circuit simply decided the issue on Supremacy Clause grounds, holding that FERC has supremacy over state regulation so long as its FPA authority is not exceeded and it is only regulating transactions that "directly affect" wholesale markets.[345]

2. Lack of an Opt-Out is Not Arbitrary and Capricious

In a related argument, Local Utility Petitioners—another claimant in the consolidated action—challenged the lack of an opt-out as a departure from previous policy, calling it arbitrary and capricious.[346] In response, the D.C. Circuit panel reiterated it would not substitute its judgment for agencies' judgment and examined FERC's reasoning for withholding the opt-out in Order 841.[347] FERC's reasoning throughout notice and comment procedures—namely, that allowing states to opt-out would raise wholesale prices and thus promote unjust and unreasonable rates—was found to be adequate and the Order was upheld.[348] In upholding the Order, the D.C. Circuit cited FERC's reasoning in Order 841-A to find the decision was not arbitrary and capricious.[349]

---

guage could only be giving States a veto over FERC's jurisdiction or asking FERC to disclaim its jurisdiction if FERC had jurisdiction in the first place—which it does not.").

343 *Elec. Power Supply Ass'n*, 136 S. Ct. at 789 (Scalia, J., dissenting).

344 *Id.* ("Moreover, the rule itself allows States to forbid their retail customers to participate in the existing demand-response scheme. The majority accepts FERC's argument that this is merely a matter of grace, and claims that it puts the 'finishing blow' to respondents' argument that 16 U.S.C. § 824(b)(1) prohibits the scheme. Quite the contrary. Remember that the majority believes FERC's authority derives from 16 U.S.C. §§ 824d(a) and 824e(a), the grants of 'affecting' jurisdiction. Yet those provisions impose a *duty* on FERC to ensure that 'all rules and regulations affecting or pertaining to [wholesale] rates or charges *shall be just and reasonable*.' If inducing retail customers to participate in wholesale demand-response transactions is necessary to render wholesale rates 'just and reasonable,' how can FERC, consistent with its statutory mandate, permit States to thwart such participation? Although not legally relevant, the fact that FERC—ordinarily so jealous of its regulatory authority is willing to let States opt out of its demand-response scheme serves to highlight just how far the rule intrudes into the retail electricity market." (citations omitted)).

345 *Nat'l Ass'n Regulatory Util. Comm'rs*, 964 F.3d at 1186.

346 *Id.* at 1189 ("Local Utility Petitioners rely heavily on the existence of a State opt-out in the programs reviewed in *EPSA*."); *see also* 5 U.S.C. § 706(2)(A) (directing courts to set aside agency action found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law").

347 *Nat'l Ass'n Regulatory Util. Comm'rs*, 964 F.3d at 1189–90.

348 *Id.*

349 *Id.* The arguments against an opt-out in Order 841-A include: (1) the argument that ESR sales are a wholesale sale for resale, the plain meaning argument that went unaddressed in the D.C. Circuit's decision; and (2) that ESRs differ from demand response because states had working demand response policies in place while many states had little to no regulation for ESRs. Thus, the rationale for the opt-out in Order 719 was to protect working state policies and the lack of state policies regarding ESRs means Order 841 is not an unjustified departure from existing policy. Order 841-A, *supra* note 1423, at 23,911–12. ("We also disagree that the Commission's decision not to exercise its discretion and adopt an opt-out

D. Implications of *NARUC v. FERC*

The D.C. Circuit's decision is notable because it all but solidifies the legal status of Order 841 and is representative of a larger trend in federal power regulation. The decision ensures ESRs can participate in wholesale markets at both the wholesale and retail level. This improves ESRs' ability to value stack and be competitive in both markets.[350]

Combined with the 100 KW size requirement in Order 841,[351] this decision keeps the door open for many distributed energy and other smart grid concepts. As mentioned, a Tesla Model S battery meets this 100 KW size requirement.[352] Thus, it is conceivable a Tesla battery owner could participate in wholesale markets by arbitraging or even by selling power they generate from personal solar panels—so long as this battery could meet other RTO and ISO permitting requirements.[353] Opportunities like these are exactly what some utilities have feared will fundamentally change the operation of power markets,[354] but are exactly the type of "future technologies" Order 841 aims to accommodate.[355]

Of course, some state and local policies may remain barriers to these developments. As noted in the D.C. Circuit's opinion, individual statutes and policies may still conflict with Order 841, likely opening the door to further litigation.[356] While these statutes and policies may not succeed in preventing ESRs from participating in wholesale markets, the potential for significant litigation costs and delays could push some investors to choose traditional generators over ESRs. Relatedly, state policies may still restrict ESRs potential to value stack, and thus their profitability.[357] For example, while states can no longer restrict access to wholesale markets from the distribution grid, they could pass policies restricting ESRs from retail market participation while selling wholesale power.[358] In such a situation, ESRs would presumably be limited to one revenue stream, limiting their profitability from value stacking. These barriers to ESR investment are

---

in Order No. 841 is an unexplained departure from the demand response resource opt-out adopted in Order No. 719. As the Commission explained in *AEE*, Order No. 719 expressly provided that it only applies to demand response resources; therefore, the Commission's decision not to adopt an electric storage resource opt-out is not a change in policy.").

350 *See* Schmitt & Sanford, *supra* note 2, at 488. Order 841, *supra* note 19, at 9,592.

351 Order 841, *supra* note 19, at 9,614.

352 *See Tesla Model S Features And Specs*, Car and Driver, https://www.caranddriver.com/tesla/model-s/specs (last visited Mar. 30, 2021) (showing that the Tesla Model S has a 120 KW battery).

353 Order 841, *supra* note 19, at 9,587 (requiring ESRs to be both physically capable of and contractually able to participate in power markets).

354 *See* Stephen Lacey, *This Is What the Utility Death Spiral Looks Like*, Greentech Media (Mar. 4, 2014), https://www.greentechmedia.com/articles/read/this-is-what-the-utility-death-spiral-looks-like.

355 Order 841, *supra* note 19, at 9,590.

356 Nat'l Ass'n Regulatory Util. Comm'rs v. Fed. Energy Regulatory Comm'n, 964 F.3d 1177, 1185 (D.C. Cir. 2020).

357 *See* Schmitt & Sanford, *supra* note 2, at 488.

358 *Nat'l Ass'n Regulatory Util. Comm'rs*, 964 F.3d at 1186.

particularly an issue in areas that already have unfavorable ESR or clean energy policies, further complicating the transition to clean energy.[359]

Finally, the D.C. Circuit's decision may also be part of a broader jurisdictional trend. The decision solidifies FERC's jurisdiction over ESRs on the distribution level. To critics, it can be seen as a continuation of the trend toward a federally-dominated electric grid,[360] particularly with regard to new technologies that disrupt the status quo. In the broader transition to clean energy, this is a common occurrence—new technologies continually upend traditional divides between wholesale and retail markets, forcing old regulatory regimes to adapt and contributing to uncertainty across the energy sector.[361] ESRs are part of this trend by upending the long-held notion that power cannot be efficiently stored, the assumption of one-way power flows, and the division between retail and wholesale transactions.[362] A common theme is that outdated regulatory models are being forced to adapt through agency policies rather than legislation, moving policy debates to the courts and agencies rather than the legislature.[363] Order 841 may be another example in a long list of regulations adapting ancient statutes that are otherwise unequipped to address new technologies.

---

359 *See generally*, Brad Plumer, *Blue States Roll Out Aggressive Climate Strategies. Red States Keep to the Sidelines*, N.Y. TIMES (June 21, 2019), https://www.nytimes.com/2019/06/21/climate/states-climate-change.html (discussing the political divide on clean energy policies).

360 Delia Patterson, *FERC jurisdictional creep*, AM. PUB. POWER ASS'N (Mar. 28, 2018), https://www.publicpower.org/blog/ferc-jurisdictional-creep ("What should be a bright line is increasingly muddled and challenged by the changes, both regulatory and technological, that have occurred since 1935. Significant regulatory, structural, and technological changes since the FPA's passage have tested the adaptability and coherence of this jurisdictional division. At the heart of many of today's energy policy debates is the uncertainty of where the line between these two spheres of jurisdiction falls.").

361 DENNIS ET. AL, *supra* note 142, at 7 ("The new and emerging technologies that are gaining an increasing presence on the system today have significantly different operational characteristics than those that existed when the FPA and its jurisdictional "bright line" were written. Moreover, the structure of the industry has changed dramatically in some regions, from one characterized by vertically-integrated monopolies operating under cost-of-service regulation to one characterized by wholesale competition among diverse entities. These changes in technologies and generation sources, and significant changes in the structure of the electricity industry, can result in jurisdictional uncertainty and difficult market alignment issues.").

362 *Id.* at 8–9.

363 Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 PA. L. REV. 1, 44 (2014) ("While this process began as a cooperative, iterative effort involving both FERC and Congress, Congress went mostly silent after 1992. The Energy Policy Act of 2005 was Congress's lone significant intervention in electricity markets over that time period, leaving FERC to manage this transformation mostly on its own, using statutory guidance that dates to 1935.").

VI. Conclusion

ESRs have the potential to change how we operate our energy grid and open up new opportunities for the clean energy transition. FERC Order 841 is a big step towards ensuring that ESRs can operate to their full potential. The Order ensures barriers to ESR participation in wholesale markets are removed and sets the stage for further action at every level of the electric grid. However, the Order only goes so far. It leaves regulatory barriers in place for value stacking and participation as a transmission and generation resource. In order to resolve these issues, a continued and coordinated effort will be needed at the federal, state, and local levels to ensure ESRs can reach their full potential.

Thomas Kagerer, J.D. Candidate, University of Texas School of Law Class of 2021; B.S., Texas A&M University Class of 2018. *Special thanks to Professor David Spence for teaching his class, "Managing the Clean Energy Transition," and for providing feedback.*

"Take"-ing a New Approach to the Lacey Act: How the Commerce Clause Enables the Lacey Act to Prohibit Take of Protected Species

Lucas S. Stegman

I. INTRODUCTION

Poaching wildlife is often perceived as an overseas problem. The term "poaching" has become synonymous with large mammal killings, such as African elephants or lions.[1] However, poaching remains a serious problem in the United States.[2] It can take many forms: the unlawful killing of bears to be sold on the black market,[3] the clandestine ginseng harvesting in the Appalachian Mountains for Asian markets,[4] illegal shark finning,[5] and the theft of rare plants for landscaping or home décor use.[6] Poaching is a serious problem and can exacerbate the problems that American fauna and flora face from habitat destruction, climate change, and invasive species.[7]

Both the federal and state governments have taken steps to quash the domestic and international trade of poached species, known as the illegal wildlife trade. At the state level, many have enacted anti-poaching and species protection laws, though these vary in both reach and potency.[8] The federal government has many federal statutes to combat the illegal wildlife trade,[9] including the Endangered Species Act (ESA),[10] the Migratory Bird Treaty Act,[11] and the Bald and Golden Eagle Protection Act.[12] However, the most

---

1 *See, e.g.*, Leah Asmelash & Saeed Ahmed, *African elephant poaching has declined, but study warns they are still vulnerable*, CNN (June 6, 2019), https://www.cnn.com/2019/06/06/world/elephants-poaching-decrease-trnd/index.html.

2 *See* Rachel Bale, *Can the United States stop poaching at home?*, NAT'L GEOGRAPHIC NEWSLS. (Oct. 17, 2019), https://www.nationalgeographic.com/newsletters/animals/2019/10/can-united-states-stop-poaching-october-17/.

3 *See Testimony of Luis Santiago Before the Committee on Oversight and Government Reform, Subcommittee on Government Operations*, U.S. FISH & WILDLIFE SERV. (June 19, 2015), https://www.fws.gov/laws//Testimony/displaytestimony.cfm?ID=260 (discussing Operation Something Bruin).

4 *See* Gary Peeples, *Poaching our natural heritage*, U.S. FISH & WILDLIFE SERV. (Mar. 16, 2010), https://www.fws.gov/southeast/podcasts/2010/03/poaching-our-natural-heritage/.

5 *See* Rachel Fobar, *Shark fin is banned in 12 U.S. states—but it's still on the menu*, NAT'L GEOGRAPHIC (Jan. 16, 2019), https://www.nationalgeographic.com/animals/2019/01/restaurants-sell-shark-fin-soup-despite-state-bans/.

6 *See, e.g.*, United States v. Miller, 981 F.2d 439, 441 (9th Cir. 1992) (poaching of saguaro cactus); Dillon Ancheta, *Visitors accused of poaching 2 rare silverswords from Haleakala slopes*, HAW. NEWS NOW (last updated Aug. 13, 2018), https://www.hawaiinewsnow.com/story/38516703/visitor-accused-of-poaching-2-rare-silverswords-from-haleakala-slopes/ (poaching of Hawai'ian silverswords).

7 *See generally* U.N. ENV'T PROGRAMME, ANALYSIS OF THE ENVIRONMENTAL IMPACTS OF ILLEGAL TRADE IN WILDLIFE 3 (Neville Ash et al. eds., 2016) (describing the important and impact of safeguarding biodiversity).

8 *See generally* Deborah F. Buckman, Annotation, *Construction and Application of State Endangered Species Acts*, 44 A.L.R. 6th 325 (2009) (discussing the variability and application of a variety of state endangered species laws).

9 *See* John T. Webb, *Prosecuting Wildlife Traffickers: Important Cases, Many Tools, Good Results*, 2 VT. J. ENV'T. L. 1, 7 (2001).

10 16 U.S.C. §§ 1531–1544.

11 *Id.* §§ 703–712.

12 *Id.* §§ 668–668(d).

powerful is one of the oldest wildlife protection laws in the nation: the Lacey Act.[13] From humble beginnings as an anti-poaching law, the Lacey Act has become one of the most powerful weapons against the illegal wildlife trade.[14]

However, the Lacey Act suffers from a critical flaw: for the most part, it only prohibits the *sale*, *trade*, or *acquisition* of illegal wildlife.[15] Unlike other statutes, most notably the ESA, the Lacey Act does *not* actually prohibit the take or destruction of any species.[16] This stops the Lacey Act from being as effective a weapon against the illegal wildlife trade as it could be. This raises an interesting question: could the Lacey Act reach further and actually prohibit the take of species?

Even if the Lacey Act were redrafted to include an anti-take provision, we must consider whether this would be a legitimate use of legislative power. The federal government must ground each legislative action in its constitutionally-enumerated powers.[17] The Lacey Act proposed amendments are no different: they must be grounded in one of Congress's enumerated powers, likely in its power to regulate interstate commerce (the Commerce Power), which most of the existing Lacey Act rests upon.[18]

The Commerce Power provides the national government with broad authority and has been used to justify government activities that, on first glance, seem only marginally related to interstate commerce.[19] In some cases, the Commerce Power allows the federal government to regulate intrastate activity if that activity, taken in the aggregate, has a substantial impact on interstate commerce.[20] However, the Supreme Court has made it clear that the Commerce Power is *not* a substitute for the state-reserved police powers.[21] Accordingly, there are limits to what actions Congress can take pursuant to the Commerce Power.

This Note will attempt to answer whether these proposed amendments to the Lacey Act prohibiting take fall within those limits. This is an especially relevant question given the fact that a similar ESA take provision, as applied to purely intrastate species, has recently (and repeatedly) been challenged for falling outside of Congress's constitutional authority.[22] Though these challenges have not yet succeeded, there is a legitimate

---

13 *Id.* §§ 3371–3378.

14 *See* Robert S. Anderson, *The Lacey Act: America's Premier Weapon in the Fight Against Unlawful Wildlife Trafficking*, 16 PUB. LAND L. REV. 27, 29 (1995).

15 16 U.S.C. § 3372.

16 *Compare* 16 U.S.C. § 3372 (Lacey Act prohibitions against importation, sale, acquisition of covered species), *with* 16 U.S.C. § 1538(a)(1)(A), (E) (Endangered Species Act prohibitions against importation and transportation in interstate commerce of covered species).

17 *See* Screws v. United States, 325 U.S. 91, 109 (1945) (explaining Congress must act within the scope of its delegated powers).

18 *See* United States v. Romano, 929 F. Supp. 502, 507 (D. Mass. 1996) (upholding the Lacey Act as a valid exercise of the Commerce Power).

19 *See, e.g.*, Perez v. United States, 402 U.S. 146, 154 (1971) (upholding the prosecution of local loan sharks who did business intrastate as a legitimate exercise of the Commerce Power).

20 Wickard v. Filburn, 317 U.S. 111, 118–19 (1942).

21 *See* United States v. Lopez, 514 U.S. 549, 567–68 (1995).

22 *See, e.g.*, People for the Ethical Treatment of Property Owners v. U.S. Fish & Wildlife Serv., 852 F.3d 990, 994 (10th Cir. 2017) (challenging a Fish & Wildlife Service regulation limiting the take of the Utah Prairie Dog as being beyond Congress's Commerce Power);

possibility the ESA's take provision will be severely limited in its application to intrastate species. The proposed Lacey Act amendments could potentially fill the gaps left by this limitation and would, additionally, reach species that the ESA cannot. Furthermore, for the reasons described in this Note, there is reason to believe that such a provision would be upheld as a legitimate exercise of the interstate commerce power, even if the comparable ESA provision is not.

Part II discusses the problem the Lacey Act is designed to solve: wildlife trafficking, at both the international and domestic levels. Part III describes the Lacey Act's unique history and structure and how it has been transformed into the premier weapon in the wildlife trafficking fight. Part IV discusses a potential Lacey Act amendment that would allow it to reach the underlying take behind the trafficking that it currently regulates. Part V discusses Congress's authority to regulate interstate commerce and the limitations on that authority, and how the existing Lacey Act is anchored to the Commerce Power. Part VI discusses whether the Lacey Act's proposed amendments would be a legitimate exercise of the federal government's Commerce Power. Finally, Part VII discusses the differences between the amended Lacey Act and the ESA and how the amended Lacey Act might fare better against constitutional attacks than the ESA.

II. The Problem of Wildlife Trafficking

The illegal wildlife trade is one of the largest criminal enterprises in the world.[23] The United Nations Environmental Programme (UNEP) and Interpol have found that wildlife-related crime is the fourth largest crime sector, behind drug trafficking, counterfeit crimes, and human trafficking, and is growing at an astonishing rate, between double and triple the pace of the global economy.[24] Other scholars see an even greater impact, finding that the illegal wildlife trade is either the second-largest[25] or third-largest[26] criminal

---

Markle Interests, L.L.C. v. U.S. Fish & Wildlife Serv., 827 F.3d 452, 475 (5th Cir. 2016) (challenging the designation of critical habitat for the dusky gopher frog as outside of Congress's authority under the Commerce Clause), *vacated on other grounds*, 139 S. Ct. 590; San Luis & Delta-Mendota Water Auth. v. Salazar, 638 F.3d 1163, 1167–68 (9th Cir. 2011) (challenging a Fish & Wildlife Service Biological Opinion for the delta smelt fish as beyond the reach of the Commerce Clause); Gibbs v. Babbitt, 214 F.3d 483 (4th Cir. 2000) (challenging a Fish & Wildlife Service regulation protecting the red wolf).

23 *See* U.N. Env't Programme & Interpol, The Rise of Environmental Crime 4 (Christian Nellemann et al. eds., 2016), https://wedocs.unep.org/bitstream/handle/20.500.11822/7662/-The_rise_of_environmental_crime_A_growing_threat_to_natural_resources_peace%2C_development_and_security-2016environmental_crimes.pdf.pdf?sequence=3&isAllowed=y [hereinafter UNEP-Interpol Report].

24 *Id.*

25 *See* Christine Fisher, *Conspiring to Violate the Lacey Act*, 32 Env't. L. 475, 375 (2002) ("[I]llegally taken wildlife is the second largest trade on the black market, second only to the drug trade.") (citing Charles Bergman, *Wildlife Trafficking*, Smithsonian Mag. (Dec. 2009), https://www.smithsonianmag.com/travel/wildlife-trafficking-149079896/).

26 *See* Melissa M. Morgan, *Exotic Addiction*, 65 Duke L.J. Online 1, 2 (2015) ("With an annual profit between $10 and $20 billion, animal smuggling has become the third-largest illegal trade in the world, behind only drugs and firearms.").

enterprise in the world. In total, Interpol estimates the illegal wildlife trade alone can cause losses of up to twenty-three billion dollars annually.[27]

The illegal wildlife trade is broadly defined. It includes the unlawful traffic in live animals, either for the pet trade or for consumption.[28] It also includes the trafficking of plants, including timber, against state or national laws, as well as the trade in animal products.[29] Lastly, the illegal trade in animal parts or remains, which are sold as trophies, fashion items, or for use in traditional medicines, are also included in the illegal wildlife trade definition.[30]

Given the scientific consensus that Earth is in the throes of a mass extinction crisis,[31] combatting the illegal wildlife trade is of paramount importance. The illegal wildlife trade puts a stress on wild species, "increas[ing] the fragility of an already brittle planet."[32] There is a clear connection between animals being killed and captured for the illegal wildlife trade and the decline in wild populations.[33] For example, elephants are killed at an alarming rate for their ivory tusks—over 100,000 elephants were poached between 2010 and 2012.[34] Similarly, shark finning has led to substantial declines in wild shark populations.[35] Plants are also not immune. Orchids, for example, are poached and trafficked for sale to collectors, breeders, and practitioners of traditional medicine.[36] Orchids are particularly vulnerable to extinction through overharvesting because of their low population densities, leading scientists to wonder if some species have already been driven to extinction.[37] Sadly, many species are already too far gone to save. For example,

---

27 *Id.* at 7; *see also* Am. Society of Int'l L., *United States Takes Steps to Combat Illegal Trade in Wildlife*, 108 AM. J. INT'L L. 334, 334 (2014) (citing a report by then-Secretary of State John Kerry, then-Attorney General Eric Holder, and then-Secretary of the Interior Sally Jewell). *But see* Bergman, *supra* note 25 ("Wildlife trafficking is thought to be the third most valuable illicit commerce in the world, after drugs and weapons, worth an estimated $10 billion a year, according to the U.S. State Department.").

28 *Illegal Wildlife Trade*, U.S. FISH & WILDLIFE SERV., https://www.fws.gov/international/travel-and-trade/illegal-wildlife-trade.html. (last visited Apr. 15, 2021).

29 *See id.*

30 *See id.*

31 *See, e.g.*, Damian Carrington, *Earth's sixth mass extinction event under way, scientists warn*, THE GUARDIAN (July 10, 2017), https://www.theguardian.com/environment/2017/jul/10/earths-sixth-mass-extinction-event-already-underway-scientists-warn.

32 UNEP-INTERPOL REPORT, *supra* note 24, at 4.

33 *See, e.g.*, John C. Cruden & David S. Gualtieri, *Toward a More Coordinated, Integrated Response to Wildlife Trafficking and Other Natural Resource Crime*, 12 U. PENN. ASIAN L. REV. 23, 26–29 (2016) (discussing the connection between wildlife trafficking and species extirpation).

34 *Id.* (citing *Statistics*, SAVE THE ELEPHANT, https://www.savetheelephants.org/about-elephants-2-3-2/statistics/ (last visited Apr. 15, 2021)).

35 *See* Fobar, *supra* note 5.

36 *See* Rachel Bale, *Are Traders and Traffickers Winning the Orchid Battle?*, NAT'L GEOGRAPHIC (Nov. 27, 2017), https://www.nationalgeographic.com/news/2017/11/wildlife-watch-illegal-orchid-trade-ornamental-food-medicine/ (explaining the value of orchids).

37 *See id.* (discussing the issues that make orchids susceptible to extinction).

the beautiful Spix's Macaw, known for its brilliant blue plumage, was overharvested into practical extinction, largely by pet trade collectors.[38]

Beyond the damage to wildlife and natural resources, the wildlife trade has been linked to increased human conflict.[39] Many terrorist and paramilitary groups have obtained significant funding through wildlife trafficking.[40] Additionally, the illegal wildlife trade is largely run by multinational criminal enterprises,[41] who are involved in other criminal ventures, including drug trafficking and the weapons trade.[42] Finally, the criminal organizations running the illegal wildlife trade facilitate their poaching and trafficking through bribery and corruption, undermining the rule of law.[43]

In the United States, the wildlife trade takes two distinct forms. The country serves as both a *destination for* and a *source of* illegally trafficked wildlife.[44]

A. The Wildlife Trade: United States as Destination

The United States is a major destination for illegally traded wildlife, plants, and wildlife parts.[45] The United States Fish and Wildlife Service has acknowledged that "[m]uch of the world's trade—both legal and illegal—in wild animal and plant species is driven by U.S. consumers, originates in our country or passes through our ports on the way to other nations."[46]

---

38 *See* William H. Rodgers, Jr. & Elizabeth Burleson, Rodgers Environmental Law § 40:10 (2nd ed. 2019). The Spix's Macaw is now presumed to be extinct in the wild. *Id.*

39 *See* Vanda Felbab-Brown, *Wildlife and drug trafficking, terrorism, and human security*, Brookings (Nov. 8, 2018), https://www.brookings.edu/articles/wildlife-and-drug-trafficking-terrorism-and-human-security/. However, the author notes that the connection between militant criminal organizations and wildlife crime may be overstated. *See id.*

40 *See generally* Tanya Wyatt, *The Security Implications of the Illegal Wildlife Trade*, J. Soc. Criminology (Special Issue) 130 (2013) (discussing the connection between organized crime, terror, and the international wildlife trade).

41 *See* UNEP-Interpol Report, *supra* note 24, at 41 ("Organized environmental criminal networks increasingly operate like global multinational businesses, connecting local resources to global markets through complex and interlinked networks often embedded in the business community and in government, sometimes including those tasked with protecting wildlife. Crime groups coordinate through harvesting, trading, and transporting networks to subvert national and international laws and move wildlife products to market."); *see also* Jonathan P. Kazmar, *The International Illegal Plant and Wildlife Trade: Biological Genocide?*, 6 U.C. Davis J. Int'l L. & Pol'y 105, 106–07 (2000) ("International crime syndicates now execute the mafia-style contracts, hits and abductions seen in "The Godfather", [sic] against critters great and small with alarming regulatory. In Japan, the *Yakuza* deal in illicit whale meat, the Russian *Organizatsiya* conducts transactions in tiger skins and bear gall bladders, while in Columbia, the Medellin cartel prefers rare birds and snakes.").

42 *See* Wyatt, *supra* note 40, at 147.

43 *See* UNEP-Interpol Report, *supra* note 24, at 4.

44 *See What is Wildlife Trade?*, U.S. Fish & Wildlife Serv. (Sept. 19, 2017), https://www.fws.gov/wildliferepository/wildlifetrade.php ("The United States is a destination and transit point for trafficked wildlife and wildlife products, including exotic pets, reptile skin products, traditional medicine ingredients, elephant ivory, and rhino horn.").

45 *Id.*

46 *Id.*

Wildlife trafficking into the United States can take many forms. Commonly, animals will be trafficked for the illegal pet trade.[47] For example, parrots have been illegal to import into the United States since the passage of the Wild Bird Conservation Act of 1992.[48] Nevertheless, thousands of parrots have continued to flow into the United States, often across the United States-Mexico border.[49] This trade can be particularly devastating for wild populations, as a high mortality rate is associated with bird trafficking.[50] In addition to birds, many species of reptiles[51] and tropical fish[52] are smuggled into the United States for the pet trade.

Wildlife parts and remains are also smuggled for sale as trophies or for consumption.[53] The United States is the second-largest destination for trafficked pangolins,[54] a scaly anteater that has the unfortunate distinction of being the "most widely trafficked mammal in the world."[55] Pangolins are particularly prized in Eastern Asia for consumption and traditional medicine,[56] and are trafficked into the United States for the same reasons. Humane Society International has found many products containing pangolin scales for sale in the United States.[57]

---

47 *See, e.g.*, *The Reptile Black Market is Still Around*, U.S. FISH & WILDLIFE SERV. (Aug. 30, 2017), https://www.fws.gov/news/blog/index.cfm/2017/8/30/The-Reptile-Black-Market-Still-Around; Rachel Bale, *The Horrific Way Fish Are Caught for Your Aquarium—With Cyanide*, NAT'L GEOGRAPHIC (Mar. 10, 2016), https://www.nationalgeographic.com/news/2016/03/160310-aquarium-saltwater-tropical-fish-cyanide-coral-reefs/.

48 16 U.S.C. §§ 4901–4916.

49 *See* Bergman, *supra* note 25 ("The estimated number of parrots taken illegally from Mexico to the United States declined from 150,000 a year in the late 1980s to perhaps 9,400 now."); José L. Tella & Fernando Hiraldo, *Illegal and Legal Parrot Trade Shows a Long-Term, Cross-Cultural Preference for the Most Attractive Species Increasing their Risk of Extinction*, PLOS ONE 2 (2014) (identifying over 1,200 parrots seized at the United-States Mexican border between 1992 and 2005); *see also* United States v. Santillan, 243 F.3d 1125, 1126–27 (9th Cir. 2001) (discussing Lacey Act prosecution of defendant who smuggled parrots across the United States-Mexico border).

50 *See* Timothy F. Wright et al., *Nesting Poaching in Neotropical Parrots*, 15 CONSERVATION BIOLOGY 710, 712 (2001) (studying mortality rates in parrot nests).

51 *See The Reptile Black Market is Still Around*, U.S. FISH & WILDLIFE SERV. (Aug. 30, 2017), https://www.fws.gov/news/blog/index.cfm/2017/8/30/The-Reptile-Black-Market-Still-Around.

52 *See* Rachel Bale, *The Horrific Way Fish Are Caught for Your Aquarium—With Cyanide*, NAT'L GEOGRAPHIC (Mar. 10, 2016), https://www.nationalgeographic.com/news/2016/03/160310-aquarium-saltwater-tropical-fish-cyanide-coral-reefs/.

53 *See What is Wildlife Trade?*, *supra* note 45.

54 *See* SARAH HEINRICH ET AL., THE GLOBAL TRAFFICKING OF PANGOLINS: A COMPREHENSIVE SUMMARY OF SEIZURES AND TRAFFICKING ROUTES FROM 2010–2015, TRAFFIC vi (2017), https://www.traffic.org/site/assets/files/1606/global-pangolin-assessment.pdf.

55 Helen Briggs, *Pangolins: Rare insight into the world's most trafficked mammal*, BBC NEWS (Feb. 13, 2019), https://www.bbc.com/news/science-environment-47200816.

56 *See Pangolins*, U.S. FISH & WILDLIFE SERV. (June 24, 2015), https://www.fws.gov/international/animals/pangolins.html.

57 *See generally* HUMANE SOC'Y INT'L, PANGOLIN PRODUCTS AVAILABLE ONLINE IN THE UNITED STATES, (2015) https://www.biologicaldiversity.org/species/mammals/pangolin/pdfs/HSI-Report-Pangolin-Products-Available-Online-in-US.pdf.

B. The Wildlife Trade: United States as Source

Wildlife trade in the United States does not exclusively flow *into* the country. On the contrary, the United States is also a major *source* of trafficked wildlife.

An example is the growing export trade in American eels. Due to high consumption in the Asian sushi industry, worldwide eel populations began to collapse in 2010.[58] American eels are captured in great quantities along the Atlantic coast, often in contravention of wildlife laws and quotas, smuggled across state lines, and then exported to Asian aquaculture farms.[59] The American eel is just the latest eel species to be overexploited due to the sushi industry's demands. The Asian eel has already been driven to extinction and the European eel was exploited to its breaking point.[60] Exporting eels is a highly lucrative business: a United States Fish & Wildlife Service investigation and subsequent Department of Justice prosecution showed that eighteen defendants trafficked juvenile American eels worth over $4.5 million dollars.[61] The former United States Fish and Wildlife Service director observed that the American eel export market revealed an important truth about the wildlife trade, saying that "[t]his case underscores the role U.S. citizens often play in wildlife trafficking and demonstrates that this deadly trade does not solely impact large, charismatic mammals in distant countries."[62]

Another notable export is American ginseng, a plant that is popularly used as a medicinal supplement in Asian nations.[63] Ginseng harvesting is legal, with restrictions, in several Appalachian states, though harvesting is limited due to overexploitation concerns.[64] Despite the legal mechanisms for trade, there is a robust illegal trade in ginseng: ginseng poachers steal plants from licensed growers,[65] poach ginseng from public lands,[66]

---

58 *See* Rene Ebersole, *19 Eel Smugglers Sentenced, but Lucrative Trade Persists*, Nat'l Geographic (June 27, 2018), https://www.nationalgeographic.com/news/2018/06/wildlife-watch-eel-smuggling-operation-broken-glass-maine/.

59 *See* Rene Ebersole, *Inside the Multimillion-Dollar World of Eel Trafficking*, Nat'l Geographic (June 7, 2017), https://www.nationalgeographic.com/news/2017/06/glass-eel-elver-trafficking-fishing-unagi/.

60 *See* Madeline Ann Brezin, *The Lacey Act and Illegal Eel Trafficking*, Fla. Bar Animal L. Section (Jan. 2, 2018), https://www.flabaranimals.org/single-post/2018/01/02/The-Lacey-Act-and-Illegal-Eel-Trafficking.

61 *Three Men Plead Guilty to Illegally Trafficking American Eels*, U.S. Dep't of Just. (Oct. 5, 2017), https://www.justice.gov/opa/pr/three-men-plead-guilty-illegally-trafficking-american-eels.

62 *See* Brezin, *supra* note 60.

63 *See* Suzy Khimm, *China's Gold Rush in the Hills of Appalachia*, Foreign Pol'y (Sep. 7, 2016), https://foreignpolicy.com/2016/09/07/the-thrill-of-the-hunt-ginseng-smuggling-poaching-boone-north-carolina-china/.

64 *See* Peeples, *supra* note 4 ("As a result of declining ginseng populations, a permit is required to export it out of North Carolina and out of the United States. This permitting process isn't meant to be onerous, but rather to help ensure that the trade in ginseng is done in a sustainable manner.").

65 *See* Khimm, *supra* note 63.

66 *See id*; William Funk, *Tangled Roots: Ginseng Poaching in Appalachia*, Blue Ridge Outdoors (Sept. 17, 2019), https://www.blueridgeoutdoors.com/go-outside/tangled-roots/.

and falsify records to conceal illegal purchase and growth.[67] Ginseng and eels are far from the only species exported from the United States —there is a vibrant illegal market in black bear parts,[68] as well as an international black market for cacti dug out of American Southwest deserts.[69]

Not all wildlife products that originate in the United States are exported. There is a robust domestic trade in the United States where animals like deer and elk are poached and sold as trophies,[70] and plants like the Venus Fly Trap are illegally overharvested for sale.[71]

C. United States' Laws Regulating the Wildlife Trade

Both the international and domestic wildlife markets flourish despite a robust system of laws designed to protect species from being trafficked. For example, the United States is a party to the Convention on the International Trade on Endangered Species (CITES), an international agreement that aims to regulate the wildlife trade across most nations in the world.[72] The ESA is key to meeting many of the United States' obligations under CITES[73] and, additionally, prohibits the importation of other listed spe-

---

67 *See, e.g.*, *Ginseng Dealer Pleads Guilty to Multiple Felonies*, US. Dep't of Justice (Feb. 20, 2020), https://www.justice.gov/usao-edtn/pr/ginseng-dealer-pleads-guilty-multiple-felonies (highlighting the guilty plea of a Tennessee Ginseng dealer for illegally falsifying required documentation of ginseng purchases).

68 *See Domestic Trade*, Animal Welfare Inst., https://awionline.org/content/domestic-trade (last visited Apr. 15, 2021).

69 *See* J. Weston Phippen, *Busting Cactus Smugglers in the American West*, Atlantic (Feb. 22, 2016), https://www.theatlantic.com/science/archive/2016/02/cactus-thieves/470070; *see also* Annette McGivney, *'Yanked from the ground': cactus theft is ravaging the American desert*, The Guardian (Feb. 20 2019), https://www.theguardian.com/environment/2019/feb/20/to-catch-a-cactus-thief-national-parks-fight-a-thorny-problem ("Across the south-west, cacti are being stolen from public lands in increasing numbers.").

70 *See, e.g.*, *Texas Man Sentenced to Jail in Connection with Kansas Deer Hunting and Guiding Operation*, US. Dep't of Justice (June 21, 2011), https://www.justice.gov/opa/pr/texas-man-sentenced-jail-connection-kansas-deer-hunting-and-guiding-operation ("[The defendants] conspired together to knowingly transport and sell in interstate commerce deer that had been hunted in violation of Kansas state law.").

71 *See* Christopher Mele, *Venus Flytraps Need Protection from Poachers in North Carolina*, N.Y. Times (Nov. 28, 2016), https://www.nytimes.com/2016/11/28/us/venus-flytraps-poaching-north-carolina.html; *see also Venus flytrap*, U.S. Fish & Wildlife Serv., https://www.fws.gov/southeast/wildlife/plants/venus-flytrap/#:~:text=Venus%20flytrap%20occupies%20distinct%20longleaf,for%20much%20of%20the%20year ("Poaching is also a serious threat to Venus flytrap and incidents of theft appear to have increased in recent years.") (last visited Apr. 16, 2021).

72 *See How CITES Works*, U.S. Fish & Wildlife Serv., https://www.fws.gov/international/cites/how-cites-works.html (explaining how CITES organizes member countries to work together to protect species from unsustainable trade) (last visited Apr. 20, 2021).

73 *See Endangered Species Act*, U.S. Fish & Wildlife Serv., https://www.fws.gov/international/laws-treaties-agreements/us-conservation-laws/endangered-species-act.html ("By providing States with financial assistance and incentives to develop and maintain conservation programs the Act serves as a method to meet many of the United States' international respon-

cies.[74] There is also a variety of laws that, more specifically, prohibit the importation of certain species, including the Wild Bird Conservation Act,[75] the Marine Mammal Protection Act,[76] the Migratory Bird Treaty Act,[77] and the Bald and Golden Eagle Protection Act.[78] One of the most important tools in the fight, however, is a law that lays out criminal and civil penalties for engaging in the protected wildlife: the Lacey Act.

III. The Lacey Act

The Lacey Act, America's "oldest national wildlife protection statute,"[79] has been lauded by commentators as "a valuable federal weapon against illegal wildlife trafficking,"[80] as well as "the real teeth behind CITES"[81] and the "premier weapon" to combat the illegal wildlife trade.[82] The Lacey Act is a federal criminal law that imposes fines and prison sentences against defendants who traffic, sell, or purchase wildlife in violation of state, federal, or international law.[83]

A. History of the Lacey Act

The Lacey Act was the brainchild of Iowa Congressman John F. Lacey, a noted conservationist.[84] The Act was passed in response to a significant decline in bird populations in the late 1800s, which Congressman Lacey believed could lead to significant agricultural damage.[85] Congressman Lacey identified the three main causes of the decline in bird populations as (1) excessive hunting of game birds and insectivorous birds by opportunistic market hunters, known as pot hunters;[86] (2) the overhunting of birds for use in the millinery (women's hats and clothing) trade;[87] and (3) the introduction of invasive species that displaced and outcompeted native birds.[88]

---

sibilities to treaties and conventions such as the Convention on International Trade of Endangered Species of Wild Fauna and Flora . . . .") (last visited Apr. 20, 2021).

74 *See* 16 U.S.C. § 1538(a)(1)(A) (making it unlawful to "import any such [listed] species into, or export any such species from the United States"); *Lacey Act*, U.S. Fish & Wildlife Serv., https://www.fws.gov/international/laws-treaties-agreements/us-conservation-laws/lacey-act.html (The Lacey Act also makes it illegal to import any CITES-listed species into the United States.) (last visited Apr. 20, 2021); *see also* Kazmar, *supra* note 41, at 119.

75 *See* 16 U.S.C. §§ 4904, 4907.

76 *See id.* §§ 1371–1372.

77 *Id.* § 703(a).

78 *Id.* § 668(a).

79 Anderson, *supra* note 14, at 29.

80 Fisher, *supra* note 25, at 476.

81 Kazmar, *supra* note 41, at 118.

82 *See* Anderson, *supra* note 14, at 29.

83 *See* 16 U.S.C. §§ 3371–78.

84 *See* C. Jarrett Dieterle, *The Lacey Act: A Case Study in the Mechanics of Overcriminalization*, 102 Geo. L.J. 1279, 1286 (2014).

85 *See* Anderson, *supra* note 14, at 37.

86 *See id.*; Dieterle, *supra* note 84, at 1286.

87 *See* Anderson, *supra* note 14, at 37; Dieterle, *supra* note 84, at 1286.

88 *See* Anderson, *supra* note 14, at 37; Dieterle, *supra* note 84, at 1286.

The Lacey Act was intended to enlarge the Department of Agriculture's preservationist powers,[89] increase the Department's power to prevent endangered species' extinction,[90] and to "'supplement' state laws that protected wildlife by 'forbidding interstate commerce' in birds and animals that were 'killed or caught in violation of local laws.'"[91] Though the Lacey Act originally focused on remedying harm to bird populations, it also forbade the trafficking of other illegally-killed animals in interstate commerce.[92]

The Lacey Act's prohibition on the trafficking of illegally-killed wildlife in interstate commerce was designed to solve the problem of pot hunters. According to Congressman Lacey, pot hunters were easily able to avoid prosecution by poaching game in one state and then crossing into a second state to sell the product.[93] Because the state's jurisdiction where the poaching took place ended at its borders, that state's authorities could do little to remedy the conduct once the wildlife had left the state.[94] Likewise, the state where the wildlife was trafficked to could do relatively little because of the limits imposed by the Dormant Commerce Clause.[95]

The Lacey Act has been amended many times since its original passage. The 1935 amendments significantly expanded its reach, allowing the federal government to directly enforce the Act[96] and prohibit the trade of species that were taken or killed in violation of foreign law.[97] The pre-1935 Lacey Act only considered state and federal laws

---

89 *See* Anderson, *supra* note 14, at 36–37.

90 *See* Dieterle, *supra* note 84, at 1286.

91 *Id.* at 1286–87 (quoting H.R. REP. NO. 56-474, at 1–2; H.R. REP. NO. 56-474, at 1–2 (1900)).

92 *See* Anderson, *supra* note 14, at 37 ("Although its coverage extended to animals, the Lacey Act was essentially a bird preservation and restoration measure designed to enhance and protect agriculture.").

93 Jonathan Gonzales, *Putting the Illegal Wildlife Trade in the Crosshairs: How Global Conservation Crisis Demonstrated the Need for Lacey Act Enforcement of Foreign Laws*, 41 WM. & MARY ENV'T L. AND POL'Y REV. 321, 325–326 (2016).

94 *See* Anderson, *supra* note 14, at 38 ("[I]t was common at the time for large numbers of game to be killed by poachers (known as market hunters or 'pothunters') in one state, fraudulently mismarked to avoid detection, and shipped to another state for sale to the public. Once the pothunter had removed the game from its state of origin, that state lacked the jurisdiction necessary to prosecute him.").

95 *See id.* ("When the unlawfully killed game entered a second state, the laws of that state were often unable to prohibit its sale, as all power to regulate interstate commerce was vested in the federal government."). Notably, Dormant Commerce Clause challenges to state regulations which are Lacey Act predicate laws are still relatively commonplace, but are outside the scope of this Article. *See, e.g.*, Maine v. Taylor, 477 U.S. 131, 151 (1986) (holding that a state ban on the importation of baitfish did not violate the Dormant Commerce Clause); United States v. Gehl, 852 F. Supp. 1150, 1160 (N.D.N.Y. 1994) (holding that a state's regulation of salmon eggs taken in certain waters did not violate the Dormant Commerce Clause).

96 Previously, the Lacey Act had been enforced by state game wardens. *See* Dieterle, *supra* note 84, at 1294.

97 *Id.* at 1298.

as predicate offenses.[98] Further amendments in 1969 increased the maximum penalty and increased coverage to include amphibians, reptiles, mollusks, and crustaceans.[99]

In 1981, the Lacey Act was amended again. This time, Congress combined the Lacey Act and the similar Black Bass Act, effectively extending Lacey Act jurisdiction over fish.[100] The Lacey Act's criminal penalties were also strengthened—authorizing strict liability forfeiture of illegal wildlife and permitting some violators to be charged with felonies and others with misdemeanors.[101] In 2008, the Lacey Act was amended yet again, this time to extend to coverage to any plant taken or possessed in violation of any state, federal, or foreign law or regulation.[102]

B. Terms and Structure of the Lacey Act

The Lacey Act makes a number of actions unlawful. First, Section 3372(a)(1) makes it unlawful "to import, export, transport, sell, receive, acquire, or purchase any fish or wildlife or plant taken, possessed, transported, or sold in violation of any law, treaty, or regulation of the United States or in violation of any Indian tribal law."[103]

In important respects, the Lacey Act is expansive in scope. Violations of the ESA, which prohibits importing CITES-listed species, have been upheld as federal "predicate" laws, the violation of which creates liability under the Lacey Act.[104] Moreover, the Act goes significantly further than just prohibiting trade in species regulated by federal law. Section 3372(a)(2) of the Lacey Act makes it a crime to "import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce . . . any fish or wildlife taken, possessed, transported, or sold in violation of any law or regulation of any State or in violation of any foreign law."[105] The breadth of this clause cannot be overstated. In one sentence, Congress essentially incorporated *any* wildlife-related state law or regulation as a predicate law under the Lacey Act. When doing so, Congress was careful not to preempt states from "making or enforcing laws or regulations not inconsistent" with the Lacey Act.[106] More controversially, Congress also incorporated almost *any* foreign wildlife law as a predicate law.[107] Courts have construed § 3372(a)(2) to also apply to non-

---

98 *See* 16 U.S.C. § 3372 (violation of any predicate law, i.e., taking, selling, or possessing any species "in violation of any law, treaty, or regulation of the United States or in violation of any Indian tribal law" triggers Lacey Act penalties).

99 *See* Anderson, *supra* note 14, at 47–49. The 1969 amendments also changed the *mens rea* requirement of the Lacey Act and removed migratory birds from Lacey Act coverage, though these changes were reversed by subsequent amendment in 1981. *Id.*

100 *See id.* at 49–50. The 1981 amendments also introduced Lacey Act protection for indigenous plant species.

101 *See id.* at 50.

102 *See* Dieterle, *supra* note 84, at 1298 ("In 2008, when the [Lacey] Act was amended to prohibit taking any plant in violation of a state or foreign law, the United States was wading into literally unprecedented waters: it was the first country in the world to ban the importation of illegal wood.").

103 16 U.S.C. § 3372(a)(1).

104 *See, e.g.*, United States v. Bernal, 90 F.3d 465, 466 n.1 (11th Cir. 1996) (applying a violation of the Endangered Species Act as a predicate law for application of the Lacey Act).

105 16 U.S.C. § 3372(a)(2)(A).

106 *See id.* § 3378(a).

107 *See* Dieterle, *supra* note 84, at 1298.

statutory provisions, including "foreign regulations and other legally binding provisions that have the force and effect of law."[108] As one commentator noted, "'with a single sentence in a single legislative act,' Congress could literally 'make it a crime to violate any and every law of every nation on [E]arth.'"[109]

Notably, the predicate law or regulation violated, though it does have to be related to wildlife, does not need to be focused on conservation or wildlife protection.[110] The Lacey Act's applicability to plants is slightly narrower: only state or foreign laws that "protect[ ] plants" or regulate "the theft of plants," "the taking of plants from" specific areas, or "the taking of plants without . . . required authorization" count as predicate offenses.[111] State law violations may still count as predicate offenses even if the statute of limitations on the underlying state law offense has run.[112] Finally, the Lacey Act also makes it a crime to possess any fish or wildlife taken in violation of any federal, state, or foreign law within the "special maritime and territorial jurisdiction of the United States . . . ."[113]

The Lacey Act imposes civil penalties on defendants who unknowingly violate the Lacey Act, including fines of up to $10,000 for some violations.[114] Stricter are the Lacey Act's criminal penalties, punishing knowing violators of the Act with fines up to $20,000 or five years of imprisonment.[115] The wildlife contraband may also be forfeited under the Act,[116] as can certain vehicles or equipment used in the violation.[117]

In sum, to prosecute a defendant under the Lacey Act, the United States must show that four elements are present:

> (1) the wildlife at issue is covered by the Lacey Act; (2) the wildlife was taken, possessed, transported, or sold in violation of a wildlife-related state, federal, or foreign law or regulation; (3) the defendants imported, exported, transported, receive, acquired, or purchased the illegal wildlife or attempted to do so; and (4) the defendants knew or should have known of the wildlife's illegality.[118]

---

108 United States v. McNab, 331 F.3d 1228, 1235 (11th Cir. 2003); *see also id.* at 1239 ("[W]e have determined that the phrase 'any foreign law' includes nonstatutory provisions such as Resolution 030-95 and regulation 0008-93. . . ."); United States v. Lee, 937 F.2d 1388, 1391–92 (9th Cir. 1991).

109 *See* Dieterle, *supra* note 84, at 1298. (quoting Brian W. Walsh, *The Over-federalization of Crime*, 20 F??. S???'?. R??. 295, 296 (2008)).

110 *See* Anderson, *supra* note 14, at 74–75 ("[T]he Senate stated that a predicate law, treaty, regulation, or tribal law that has revenue as one of several purposes is sufficient to ground a Lacey Act charge.").

111 *See* 16 U.S.C. § 3372(a)(2)(B).

112 *See* United States v. Borden, 10 F.3d 1058, 1062 (4th Cir. 2003).

113 *See* 16 U.S.C. § 3372(a)(3) (other prohibitions of § 3372, such as § 3372(b) (marking offenses), (c) (sale and purchase of guiding and outfitting services), (d) (false labeling offenses), and (f) (plant declaration offenses) are not germane to this article).

114 *See id.* § 3373(a).

115 *See id.* § 3373(d).

116 *See id.* § 3374(a)(1).

117 *See id.* § 3374(a)(2).

118 United States v. Labs of Va., Inc., 272 F. Supp. 2d 764, 768 (N.D. Ill. 2003).

C. Lacey Act Criticisms

The Lacey Act, in its current form, has its fair share of critics. Some decry the statute as too expansive.[119] Most controversial is the incorporation of foreign law.[120] Critics were especially vociferous after the federal government conducted a high-profile raid on Gibson Guitar Corporation on suspicions that the guitar company was importing wood in violation of Indian laws, violating the 2008 Lacey Act amendments.[121] The 2008 amendments have been heavily criticized as being administrable,[122] being fully detached from the Lacey Act's original focus,[123] and even being a form of protectionism on behalf of the domestic lumber industry.[124] At a more general level, the statute has been decried as over-criminalizing conduct that many Americans may not find objectionable.[125]

Additionally, some commentators have been critical of some of the "absurd" results of predicating violations of the Lacey Act upon foreign law.[126] For example, in *United States v. McNab*, a group of American businessmen were sentenced under the Lacey Act for violating a Honduran law regulating the size and transportation method of wild-caught lobsters.[127] Their conviction was upheld even though the Honduran government later disavowed the pertinent regulation as not being an officially recognized law.[128] Additionally, there has been criticism of the fact that the Lacey Act makes it a criminal act to violate foreign regulations that themselves would not carry any criminal penalties.[129]

---

119 *See supra* text accompanying notes 121–125.

120 *See* Dieterle, *supra* note 84, at 1298.

121 *See* Dieterle, *supra* note 84, at 1280–81; *see also* Matthew S. White, *Overcriminalization Based on Foreign Law: How the Lacey Act Incorporates Foreign Law to Overcriminalize Importers and Users of Timber Products*, 12 Wash. U. Global. Stud. L. Rev. 381, 381–85 (2013).

122 *See* Dieterle, *supra* note 84, at 1298 ("In 2008, when the Act was amended to prohibit taking any plant in violation of a state or foreign law, the United States was wading into literally unprecedented waters: it was the first country in the world to ban the importation of illegal wood. The reporting requirements for imported plants and timber that were part of the new law could affect up to 40% of the United States' total imports. It is not hard to see the potential problems inherent in holding individuals and businesses criminally liable for acting in contravention of a virtually infinite number of foreign regulations and civil laws. Legislative hearings on the proposed 2008 amendments noted that a single country could have nearly 1000 laws concerning forests.").

123 *See id.* at 1291 ("If the 1981 amendments demonstrated the Lacey Acts drifting purpose, the 2008 amendments could be said to mark a full detachment from the law's original anti-poaching focus.").

124 *See, e.g.*, Francis G. Tanczos, *A New Crime: Possession of Wood—Remedying the Due Care Double Standard of the Revised Lacey Act*, 42 Rutgers L.J. 549, 559–60 (2011).

125 *See* Dieterle, *supra* note 84, at 1305 (predicating violations of the Lacey Act upon foreign law).

126 *See* Tanczos, *supra* note 124, at 573–74.

127 *Id.* at 573–74 (discussing United States v. McNab, 331 F.3d 1228, 1235 (11th Cir. 2003)).

128 *Id.*

129 *See* Victor J. Rocco, *Wildlife Conservation Under the Lacey Act: International Cooperation or Legal Imperialism*, 80 N.Y. St. B. Ass'n J. 10, 11 (criticizing that the Lacey Act applies to "mere transgressions of technical administrative rules and regulations"); *id.* at 11 n.4 (citing United States v. Lee, 937 F.2d 1388, 1392–93 (9th Cir. 1981) (holding that prosecution under the Lacey Act is proper for violation of a Taiwanese fishing regulation that carried no independent criminal sanctions).

Other critics argue that the Act does not go far enough to combat the illegal wildlife trade that is at the heart of its prohibitions.[130] Critics have claimed that the Lacey Act's financial penalties are not strong enough to deter criminals from participating in the extremely lucrative illegal wildlife trade, especially when compared with other schemes that regulate contraband.[131] Some commentators have suggested various methods for improving the Lacey Act's efficiency and reach, such as allowing it to serve as a predicate offense for the Money Laundering Control Act[132] and adding a conspiracy count to the Lacey Act prosecutions.[133] This Note proposes another revision: to regulate the poaching ("take") of wildlife directly, in addition to the already-regulated traffic and trading of wildlife. This amendment borrows from the similar ESA provision but is less vulnerable to Commerce Clause challenges than the analogous provision.

IV. The Lacey Act Should Be Amended to Prohibit Take

At first, the ESA seems to be the ideal tool to combat the illegal wildlife trade. Under the ESA, the Secretary of the Interior, working with the United States Fish and Wildlife Service, has the authority to determine whether wildlife species warrant protection because of their threatened or endangered status.[134] If listed, it becomes unlawful to import the species,[135] export the species,[136] or to "take" a species within the United States.[137] These protections appear to be significant tools for deterring wildlife trafficking.

Yet, in many ways, the Lacey Act is a better deterrent. Though both statutes restrict the importation and sale of covered species,[138] the Lacey Act allows for felony prosecu-

---

130 For transparency, these critics include the author of this paper. *See* L.S. Stegman, *Fighting Tooth and Nail: Deterring Wildlife Trafficking in the Era of Mass Extinction*, 57 Am. Crim. L. Rev. Online 45 (2020).

131 Other critics have suggested an additional justification for why wildlife-related crimes are under-punished compared to other contraband crimes: prosecutors and judges enforcing the Lacey Act are unlikely to seek harsh penalties, undercutting the law's deterrent effect. *See* Kazmar, *supra* note 41, at 123–24; *see also* Stegman, *supra* note 130, at 48–51. *But see* Fisher, *supra* note 25, at 483–84; Stegman, *supra* note 130, at 49–50.

132 *See* Vanessa Dick, *Dirty Money and Wildlife Trafficking: Using the Money Laundering Control Act to Prosecute the Illegal Wildlife Trade*, 49 Env't L. Rep. News & Analysis 10334, 10335 (2019).

133 *See* Fisher, *supra* note 25, at 476–77.

134 *See* 16 U.S.C. § 1533(a)(1)–(2). The Secretary of Commerce, working with the National Marine Fisheries Service, is responsible for the same duties with respect to many species of marine wildlife. *Id.*

135 *See id.* § 1538(a)(1)(A).

136 *See id.*

137 Other protections, including the requirement that federal agencies consult with the Secretary of Interior before taking actions that may jeopardize the continued existence of a listed species, also attach after listing. *See id.* § 1538(a)(1)(B); 16 U.S.C. § 1536(a).

138 *Compare* 16 U.S.C. § 3372 (Lacey Act prohibitions against importation, sale, acquisition of covered species), *with* 16 U.S.C. § 1538(a)(1)(A), (E) (Endangered Species Act prohibitions against importation and transportation in interstate commerce of covered species).

tions of violators and has more severe penalties.[139] Furthermore, its reach is broader than the ESA's by regulating traffic in almost every species that is regulated by state, federal, or foreign law.[140]

There is, however, one area[141] where the ESA regulates something that the Lacey Act does not: the ESA prohibits, subject to enumerated exceptions,[142] the "take" of any covered species by any person within the United States.[143] The Lacey Act has no comparable provision; it only prohibits trade-related activities, including the "import, export, transport, s[ale], recei[pt], acquir[ing], or purchase in interstate or foreign commerce" of any species that is protected by a federal, state, or foreign law.[144] The Lacey Act does prohibit the *possession* of illegally taken wildlife, but only within the "special maritime and territorial jurisdiction of the United States,"[145] which restricts enforcement to areas under federal control, including the high seas,[146] "[a]ny lands reserved or acquired for the use of the United States,"[147] and certain aircraft.[148]

A. What is a Take?

The ESA's "take provision"[149] is a powerful tool that directly regulates the poaching and killing of United States wildlife. The ESA defines actions under the "take provision" to include activities that "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" against a listed species.[150] This prohibition has been broadly interpreted. The Supreme Court has held that "take" can include harm that occurs indirectly, such as through "'significant habitat modification or degradation that actually kills or injures wildlife.'"[151] "Take" has even been extended to apply to listed animals in captivity that are killed or injured due to a lack of veterinary

---

139 *Compare* 16 U.S.C. § 3373 (Lacey Act penalties), *with* 16 U.S.C. § 1540 (Endangered Species Act penalties).

140 A full discussion of the Endangered Species Act is outside the scope of this Article, but ESA take prohibitions, critical habitat protections, and requirements of consultation only apply to species that are listed under the Act pursuant to the process set out in 16 U.S.C. § 1533.

141 There are also administrative requirements in the Endangered Species Act that are not mirrored in the Lacey Act, such as the interagency consultation requirement. *See* 16 U.S.C. § 1535; *see also* Tenn. Valley Auth. v. Hill, 439 U.S. 153, 160 (1978) (discussing the scope of the consultation requirement under the Endangered Species Act); Env't Prot. Info. Ctr. v. Simpson Timber Co., 255 F.3d 1073, 1075–76 (9th Cir. 2001) (discussing the scope of the consultation requirement under the Endangered Species Act).

142 *See* 16 U.S.C. § 1539.

143 *Id.* § 1539(a)(1)(B).

144 *See id.* § 3372(a)(1)–(2).

145 *See id.* § 3372(a)(3).

146 *See* 18 U.S.C. § 7(1) (2018).

147 *Id.* § 7(3).

148 *See id.* § 7(5)–(6).

149 16 U.S.C. § 1538(a)(1)(B).

150 *Id.* § 1532(19) (defining "take").

151 *See* Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 708 (1995). Takes can occur even if the primary damage is impairment of breeding patterns due to habitat destruction. *See* Marbled Murrelet v. Babbitt, 83 F.3d 1060, 1067 (9th Cir. 1996).

care.[152] Notably, the ESA's take provision does not apply to plants—only to "fish or wildlife."[153]

The broad construction of the ESA's "take provision" provides significant protection for wildlife, as it imposes a duty on citizens not to take listed wildlife intentionally, such as through hunting, or indirectly, such as through development that leads to habitat modification. This is in contrast to other ESA provisions that impose duties on regulators and government agencies.[154]

B. Proposed Amended Language

The Lacey Act contains no such "take provision." The Lacey Act only prohibits the traffic (including sale, purchase, import, export, transport, receipt, and acquisition) of wildlife that has been taken contrary to a predicate law.[155] In fact, courts have rejected Lacey Act readings that read an "anti-take provision" into the law's existing text. For example, in *United States v. Carpenter*,[156] the Ninth Circuit considered whether the Lacey Act prohibits the shooting of wildlife protected by the Migratory Bird Treaty Act because of the Lacey Act's prohibition on "acquir[ing]" illegally taken wildlife.[157] The Ninth Circuit rejected this broader interpretation of the Lacey Act, commenting:

> [It would] collapse[ ] the two steps required by the statute into a single step—the very act of knowingly taking the bird in violation of laws [would be] . . . the act of acquiring the bird. That is not the meaning of the statute. The bird must be taken before acquiring it violates the Lacey Act.[158]

The *Carpenter* decision shows the Lacey Act's limitations: it cannot reach actual take; instead, it can only reach trafficking offenses that occur after a predicate law violation. This allows Lacey Act violators, like those in *Carpenter*, to escape consequences under the nation's most punitive wildlife protection law.

A hypothetical scenario further showcases the limitations of the Lacey Act. As discussed above,[159] American glass eels are captured in great quantities along the Atlantic Coast, even though they are protected under state law. As part of "Operation Broken Glass," the United States Fish & Wildlife Service prosecuted a number of eel traffick-

---

152 *See* People for the Ethical Treatment of Animals v. Tri-State Zoological Park of W. Md., 397 F. Supp. 3d 768, 776 (D. Md. 2019); *see also* Kuehl v. Sellner, 161 F. Supp. 3d 678, 711–712 (N.D. Iowa 2016) (holding that failing to provide adequate socialization for lemurs constituted a take under the ESA).

153 *See* 16 U.S.C. § 1538(a)(1); *see also* Ctr. for Biological Diversity v. Bureau of Land Mgmt., 833 F.3d 1136, 1145 (9th Cir. 2016) ("[O]ne can neither 'take' nor 'incidentally take' a plant.").

154 *See, e.g.*, 16 U.S.C. § 1535 (mandating cooperation with state authorities "to the maximum extent practicable").

155 *See id.* § 3372(a); *see also* United States v. Carpenter, 933 F.2d 748, 750 (9th Cir. 1991) ("In order to violate the Lacey Act a person must do something to wildlife that has already been 'taken or possessed' in violation of law.").

156 *Carpenter*, 933 F.2d at 748.

157 *Id.* at 750–51.

158 *Id.* at 750.

159 *See supra* text accompanying notes 58–62.

ers.[160] If federal agents found a fishing ship with a hold full of illegally-harvested eels, it is likely those eels would be destined for traffic to Asia. Actual export of the eels would constitute a Lacey Act violation, as would selling them in interstate or foreign commerce.[161] But because the actual *taking* of the eels is not prohibited under the Lacey Act, the federal government might not be able to prosecute the illegal fishing operation's perpetrators. Therefore, the fisherman may escape punishment for poaching the eels because they have not yet sold or exported the eels, even though they are active participants in the illegal wildlife trade.

Consequently, the current Lacey Act's structure is insufficient to reach all of the actual harm that is done by wildlife trafficking. Though it may be possible to charge poachers who do not directly "import, export, sell, receive, acquire, or purchase [fish and wildlife] in interstate or foreign commerce" with *conspiracy* to violate the Lacey Act,[162] this poses an additional burden for the prosecution.[163]

It would be simpler and more effective to amend the Lacey Act to directly prohibit the take of species contrary to any federal, state, or foreign laws. This amendment would increase the Lacey Act's deterrent effect and make it simpler for Fish and Wildlife Service enforcement agents to reach the actual poachers and takers of wildlife. Additionally, as described below, such a provision is less vulnerable to constitutional challenge than the ESA's take provision.

A take prohibition could fit into 16 U.S.C. § 3372, which lays out the conduct prohibited by the Lacey Act. For instance, the language could read:

> (5) [It shall be unlawful for any person] to take with intent to export, transport, or sell—
>
> (A) any fish or wildlife in violation of any law, treaty, or regulation of the United States or in violation of any Indian law;
>
> (A) any fish or wildlife in violation of any law or regulation of any State or in violation of any foreign law.[164]

This language would suffice to create a new Lacey Act offense—prohibiting take of any species in violation of any federal, state, or foreign law, so long as that take is in-

---

160 U.S. Fish & Wildlife Serv., Operation Broken Glass 2 (2019), https://www.fws.gov/le/pdf/Operation-Broken-Glass.pdf.

161 *See* 16 U.S.C. § 3372.

162 *See* United States v. Thomas, 887 F.2d 1341, 1345 (9th Cir. 1989) (upholding conviction of defendant who did not actually provide guide services for conspiracy to violate the Lacey Act); United States v. McDougall, 25 F. Supp. 2d 85, 96 (N.D.N.Y. 1998) (holding that the government did not need to show that each defendant had actually committed a violation of a substantive Lacey Act provision for conspiratorial liability to be applicable). The author cannot find any cases where someone who had only committed a take was charged with conspiracy, but it would appear to be sustainable if the elements of conspiracy were met. *See supra* footnote 163.

163 The government must independently prove the elements of a conspiracy, which requires "an agreement to accomplish an illegal objective," "one or more acts in furtherance of the illegal purpose," and "the requisite intent to commit the underlying offense." *See* United States v. Atkinson, 966 F.2d 1270, 1275 (9th Cir. 1992).

164 The proposed language could fit, for example, either before or after the existing prohibition. 16 U.S.C. § 3372(4).

tended to enter the species into the wildlife trade. There would, however, be an inconsistency with the ESA's "take" definition. While "take" under the ESA is defined broadly to include harms that may even be unintentional or indirect,[165] a plant or animal "taken" for the purposes of a Lacey Act violation means a plant or animal "captured, killed, or collected and, with respect to a plant, also means harvested, cut, logged, or removed."[166] For example, cutting a tree containing a nest of listed red cockaded woodpeckers would potentially be an ESA's take provision violation.[167] The same act would not constitute a take under the Lacey Act.[168] However, the unauthorized shooting of these woodpeckers would conceivably be a take under both the Lacey Act and the ESA.[169] This Note will assume the Lacey Act's definition of "take" would remain constant under this proposed amendment to remain consistent with the Lacey Act's history as an anti-poaching law.[170]

There are many reasons this Lacey Act amendment would result in better enforcement. However, there is a threshold question to be considered: would the application of the Lacey Act to individual instances of take be constitutional, or would it fall outside of the authority granted to the federal government?

V. The Federal Government's Power to Regulate Interstate Commerce

Many of our nation's criminal and environmental laws are based on the federal government's power to regulate interstate commerce.[171] The Lacey Act is no different. For example, 16 U.S.C. § 3372(a)(2) makes it a crime "to import, export, transport, sell, receive, acquire, or purchase *in interstate or foreign commerce* . . . any fish or wildlife taken . . . in violation of any law or regulation of any State or in violation of any foreign law."[172] Accordingly, any amendment making it a crime to "take" fish or wildlife in violation of any federal, state, or foreign law would also have to be anchored in Congress's Commerce Power. Before discussing the proposed Lacey Act Amendment, it is important to discuss the extent of the federal government's Commerce Power and its limitations.

---

165 *See* 16 U.S.C. § 1532(19) (defining "take"); Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 708 (1995).

166 16 U.S.C. § 3371(j)(1).

167 *See* § 1532(19); *Babbitt*, 515 U.S. at 708.

168 *See* 16 U.S.C. § 3371(j)(1).

169 *Compare id.*, *with* 16 U.S.C. § 1532(19). The shooting of the red cockaded woodpecker, however, would only violate the take prohibition suggested in this Article if it was done with "intent to export, transport, or sell" the wildlife.

170 *See* Dieterle, *supra* note 84, at 1292 (describing the Lacey Act as having an "original anti-poaching focus").

171 *See, e.g.*, 18 U.S.C. § 844(h) (2018) (premising the exercise of federal jurisdiction over arson on private property upon that property's participation in interstate commerce).

172 16 U.S.C. § 3372(a)(2) (emphasis added).

A. The Extent of the Federal Government's Commerce Power

It is axiomatic that the federal government may only act pursuant to its delegated or implied powers.[173] In contrast, states "have broad authority to enact legislation for the public good—what [the courts] have often called a 'police power.'"[174] However, the federal government has many powers with which to regulate. Perhaps the strongest is the power "to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes[,]" commonly known as the Commerce Power.[175]

Many of the United States' laws and regulations are authorized pursuant to the Commerce Power.[176] Among other examples, the Commerce Power has been used to justify regulation of discrimination in business,[177] the traffic and distribution of lottery tickets,[178] the prohibition of controlled substances under the Controlled Substances Act,[179] and surface coal mining.[180]

Modern Commerce Power jurisprudence allows federal regulation of three kinds of activities. As Chief Justice Rehnquist explained in *United States v. Lopez*:

> First, Congress may regulate the use of the channels of interstate commerce. Second, Congress is empowered to regulate and protect the instrumentalities of interstate commerce, or persons or things in interstate commerce, even though the threat may come only from intrastate activities. Finally, Congress' commerce authority includes the power to regulate those activities having a substantial relation to interstate commerce, i.e., those activities that substantially affect interstate commerce.[181]

1. The Power to Regulate the "Channels" of Interstate Commerce

Turning first to the "channels" of interstate commerce, this authority goes to the core of Congress's Commerce Clause powers. "Under this category, Congress regulates not conduct *related to* interstate commerce but rather interstate commerce itself—barring from the channels of interstate commerce a class of goods or people."[182] For example, Congress has legitimately prohibited lottery ticket shipment in interstate

---

173 *See* Nat'l Fed'n of Indep. Bus. v. Sebelius, 567 U.S. 519, 533 (2012) ("In our federal system, the National Government possesses only limited powers; the State and the people the remainder."); Screws v. United States, 325 U.S. 91, 109 (1945) ("Our national government is one of delegated powers alone. Under our federal system, the administration of justice rests with the States except as Congress, acting within the scope of those delegated powers, has created offenses against the United States.").

174 *See* Bond v. United States, 572 U.S. 844, 854 (2014).

175 U.S. Const. art. I, sec. 8, cl. 3.

176 *See Bond*, 572 U.S. at 854 ("The Government frequently defends federal criminal legislation on the ground that the legislation is authorized pursuant to Congress's power to regulate interstate commerce.").

177 *See* Katzenbach v. McClung, 379 U.S. 294, 295 (1964); *see also* Heart of Atlanta Motel, Inc. v. United States, 379 U.S. 241, 251–52 (1964).

178 *See* Champion v. Ames, 188 U.S. 321, 354 (1903).

179 *See* Gonzales v. Raich, 545 U.S. 1, 32–33 (2005).

180 *See* Hodel v. Va. Surface Mining & Reclamation Ass'n, 452 U.S. 264, 276–80 (1981).

181 United States v. Lopez, 514 U.S. 549, 558–59 (1995) (citation omitted).

182 United States v. Patton, 451 F.3d 615, 621 (10th Cir. 2006) (emphasis added).

commerce.[183] It has also prohibited the interstate shipping of goods produced in violation of labor laws.[184] The Lacey Act's prohibition on interstate sale or transport of goods taken in violation of state or foreign laws[185] is a regulation of interstate commerce "channels" because it aims to keep interstate channels free of contraband goods.[186] The fact that the Lacey Act *prohibits* interstate commerce does not change whether or not the Act is a legitimate exercise of the Commerce Power because the Supreme Court has held that the power to "regulate" interstate commerce includes the power to prohibit interstate commerce.[187]

2. The Power to Regulate the "Instrumentalities" of Interstate Commerce and "Persons or Things in Commerce"

Congress also has the power to regulate the "instrumentalities" of commerce and "persons or things in commerce."[188] The "instrumentalities" are the *means* of interstate commerce, such as ships and railroads.[189] Regulation of interstate commerce instrumentalities may extend to intrastate activities that threaten these instrumentalities.[190] Additionally, Congress may protect "the persons or things that the instrumentalities are moving."[191] For example, the Supreme Court, in *United States v. Coombs*, upheld a statute prohibiting the looting of shipwrecked vessels' goods as a legitimate exercise of the Commerce Power.[192] Though it has not been adjudicated, it would appear that the Lacey Act offenses, which make it unlawful for "any person to import, export, or transport in interstate commerce any container or package containing any fish or wildlife unless the container or package has previously been plainly marked,"[193] is an exercise of the Commerce Clause power.

3. The Power to Regulate Activity that Substantially Affects Interstate Commerce

Most contentious is the third category of regulation—Congress's power to regulate activities that substantially affect interstate commerce, even if the activities themselves are intrastate.[194] Congress's ability to regulate activities that substantially affect interstate commerce stems from two sources: the Constitution's Commerce Clause and the

---

183 *See Champion*, 188 U.S. at 354.

184 *See* United States v. Darby, 312 U.S. 100, 112–14 (1941).

185 *See* 16 U.S.C. § 3372(a)(2)(A).

186 *See* United States v. Romano, 929 F. Supp. 502, 507 (D. Mass. 1996).

187 *See id.* (citing *Darby*, 312 U.S. at 100 (1941)) ("It is well established that Congress has the power to remove goods acquired or incident to some unlawful activity from the channels of interstate commerce."); *see also id.* ("[I]n passing the Lacey Act, Congress established a policy of removing all illegally taken, possessed, or transported wildlife from the channels of interstate commerce, and, by penalizing sales and purchases of such wildlife, it chose a reasonable means to achieve that end.").

188 Perez v. United States, 402 U.S. 146, 150 (1971).

189 United States v. Patton, 451 F.3d 615, 621 (10th Cir. 2006).

190 *See id.* at 622.

191 *Id.*

192 *See* United States v. Coombs, 37 U.S. 72, 74 (1838).

193 *See* 16 U.S.C. § 3372(b).

194 *See, e.g.*, Gonzales v. Raich, 545 U.S. 1, 17 (2005).

Necessary and Proper Clause.[195] Writing separately in *Gonzales v. Raich*, Justice Scalia explained:

> [U]nlike the channels, instrumentalities, and agents of interstate commerce, activities that substantially affect interstate commerce are not themselves part of interstate commerce, and thus the power to regulate them cannot come from the Commerce Clause alone. Rather . . . Congress's regulatory authority over intrastate activities that are not themselves part of interstate commerce (including activities that have a substantial effect on interstate commerce) derives from the Necessary and Proper Clause.[196]

This third category has formed the basis of many congressional actions that seemingly regulate intrastate activity,[197] perhaps most famously the regulation of the production and consumption of homegrown wheat in *Wickard v. Filburn*.[198] In *Wickard*, the Agricultural Adjustment Act's application was upheld as to a purely intrastate wheat grower because such conduct, taken in the aggregate, could substantially affect interstate commerce.[199] Similarly, in *Gonzales v. Raich*, the Supreme Court upheld the Controlled Substances Act's prohibition on marijuana possession as applied to a purely intrastate medical marijuana producer because failure to do so would undercut the primary goal of the Controlled Substances Act—stamping out the interstate marijuana market.[200] The government, to achieve the legitimate end of fulfilling important regulatory goals, may regulate even intrastate conduct if Congress would have a rational basis for concluding that the intrastate conduct, taken in the aggregate, would have a substantial impact on interstate commerce.[201] Congress's power to regulate intrastate activity as necessary to carry out a "comprehensive regulatory regime" has been upheld in subsequent cases.[202]

---

195 U.S. CONST. art. I, sec. 8, cl. 18.

196 *Raich*, 545 U.S. at 34 (Scalia, J., concurring in the judgment).

197 *See* United States v. Lopez, 514 U.S. 549, 559–60 (1995) (listing activities upheld under the Commerce Power because they substantially affected interstate commerce).

198 *See* Wickard v. Filburn, 317 U.S. 111, 118–19 (1942).

199 *See id.* at 127–28 ("That [Filburn's] own contribution to the demand for wheat may be trivial by itself is not enough to remove him from the scope of federal regulation where, as here, his contribution, taken together with that of many others similarly situated, is far from trivial.").

200 *Raich*, 545 U.S. at 22, 39–40 (Scalia, J., concurring in the judgment) ("In the [Controlled Substances Act], Congress has undertaken to extinguish the interstate market in Schedule I controlled substances, including marijuana. . . . To effectuate its objective, Congress has prohibited almost all intrastate activities related to Schedule I substances—both economic activities . . . and noneconomic activities.").

201 *See id.* at 19, 40.

202 *See* People for the Ethical Treatment of Property Owners v. U.S. Fish & Wildlife Serv., 852 F.3d 990, 1004 (10th Cir. 2017) (upholding the Endangered Species Act's regulation of intrastate takes because the Endangered Species Act is a comprehensive scheme substantially affecting interstate commerce).

However, the Commerce Power is not unlimited; the federal government may not use the Commerce Power to contravene the federalist system of government that divides power between the national government and the states.[203]

For example, in *United States v. Lopez*,[204] the Supreme Court considered whether the Gun-Free School Zones Act, a federal law prohibiting the firearm possession in a school zone, was a constitutional exercise of Commerce Clause power.[205] The Court concluded that the Gun-Free School Zones Act could not be sustained under the Commerce Power because it regulated *noneconomic* activity,[206] and that the commercial impact of having a gun in the school zone could only by explained by "pil[ing] inference upon inference."[207] The Court distinguished *Wickard* and other commerce clause precedents as being quintessentially economic in nature and part of a regulatory scheme related to markets in a way that possession of guns in school zones was not.[208]

The Court reached a similar holding in *United States v. Morrison*, a case about the constitutionality of the Violence Against Women Act's civil remedy.[209] The Court "reject[ed] the argument that Congress may regulate noneconomic, violent criminal conduct based solely on that conduct's aggregate effect on interstate commerce."[210] However, *Lopez* and *Morrison* do not necessarily support the proposition that Congress can *never* regulate noneconomic activity under the Commerce Power, for reasons that Justice Scalia explained in his concurring opinion in *Raich*:

> Congress's authority to enact laws necessary and proper for the regulation of interstate commerce is not limited to laws directed against economic activities that have a substantial effect on interstate commerce. Though the conduct in *Lopez* was not economic, the Court nevertheless recognized that it could be regulated as "an essential part of a larger regulation of economic activity, in which the regulatory scheme could be undercut unless the intrastate activity were regulated."[211]

Accordingly, Congress, through its Necessary and Proper Clause power, could enact laws that regulated intrastate activity, even if it is noneconomic, if that regulation would be necessary to the execution of an overarching regulatory scheme.[212] However, neither the Gun-Free School Zones Act in *Lopez* nor the Violence Against Women Act in *Morrison* were part of a "larger regulation of economic activity."[213]

---

203 *See* United States v. Lopez, 514 U.S. 549, 557 (1995) (citing NLRB v. Jones & Laughlin Steel Corp., 301 U.S. 1, 37 (1937)). Additionally, the federal government may not "compel[ ] individuals to become active in commerce by purchasing a product, on the ground that their failure to do so constitutes interstate commerce." Nat'l Fed'n of Indep. Bus. v. Sebelius, 567 U.S. 519, 552 (2012).

204 *Lopez*, 514 U.S. at 557.

205 *Id.* at 551.

206 *Id.* at 560.

207 *Id.* at 567.

208 *See id.* at 560.

209 United States v. Morrison, 529 U.S. 598, 601 (2000).

210 *Id.* at 617.

211 Gonzales v. Raich, 545 U.S. 1, 36 (2005) (Scalia, J., concurring in the judgment).

212 *Id.* at 39–40.

213 *Id.*

There has been relatively little discussion in the courts about how the limitations in *Lopez* and *Morrison* affect the Lacey Act prohibitions. The only case directly examining the issue, *United States v. Romano*,[214] concluded that "[t]he Lacey Act embodies a valid exercise of Congress's [C]ommerce [P]ower."[215] The *Romano* court discussed whether the Lacey Act's prohibition against the receipt of "guiding, outfitting, or other services or [an] illegal taking, receiving, transporting, or possessing of fish or wildlife"[216] could constitutionally extend to the hiring of an intrastate hunting guide by a single, unlicensed hunter.[217] The *Romano* court concluded that the Lacey Act could constitutionally regulate this conduct under the Commerce Power because "[a] solitary unlicensed hunter, who employs the services of a guide and kills wildlife for sport, poses little or no threat to interstate commerce; a rash of illegal hunting, on the other hand, may well result in a reduction in wildlife-related goods and services."[218] Though the decision in *Romano* was reversed on appeal,[219] this was only because the First Circuit Court of Appeals disagreed with the district court's interpretation of the Lacey Act.[220] The appellate decision did not cast any doubt on the validity of the district court's Commerce Power analysis,[221] which has been cited in subsequent cases.[222]

B. Jurisdictional Elements & Interstate Commerce

In some statutes, Congress includes a jurisdictional element that requires an express connection to interstate or foreign commerce. In *United States v. Lopez*, the Supreme Court indicated that such a jurisdictional element would change the analysis: courts would examine whether the activity at issue had a connection to interstate commerce "through case-by-case inquiry," rather than by looking at the regulated activity as a whole.[223] For example, the Supreme Court has stated that because the Hobbs Act contains a jurisdictional element, the Act may apply even to "conduct that, even in the aggregate, may not substantially affect commerce" so long as a connection with interstate commerce exists.[224] Generally, jurisdictional elements function to anchor every

---

214 United States v. Romano, 929 F. Supp. 502, 507–09 (D. Mass. 1996). *Romano* was also decided before *Morrison*. *Id.*

215 *Id.* at 507.

216 16 U.S.C. § 3372(c)(2)(A).

217 *See Romano*, 929 F. Supp. at 504.

218 *Id.* at 507.

219 United States v. Romano, 137 F.3d 677, 683 (1st Cir. 1998).

220 *See id.* ("[Section] 3373(d) does not encompass the conduct underlying . . . [these] convictions. We therefore reverse . . . and remand.").

221 *See id.* (not addressing the district court's Commerce Power analysis).

222 *See* United States v. Bramble, 103 F.3d 1475, 1482 (9th Cir. 1996) (quoting *United States v. Romano* and discussing the Lacey Act's reliance on the Commerce Power while upholding the constitutionality of the Eagle Protection Act); *see also* Conservation Force, Inc. v. Manning, 301 F.3d 985, 994 n.8 (9th Cir. 2002) (discussing § 3372(a)(2) of the Lacey Act in the context of valid regulations of wild species under the Commerce Clause).

223 *See* United States v. Lopez, 514 U.S. 549, 561–62 (1995) (holding that the Gun-Free School Zones Act "contains no jurisdictional element which would ensure, through case-by-case inquiry, that the firearm possession in question affects interstate commerce.").

224 *See* Taylor v. United States, 136 S. Ct. 2074, 2081 (2016).

exercise of government authority to a specific activity that relates to interstate commerce.[225]

Notably, some of the Lacey Act's prohibitions include jurisdictional elements. For example, 16 U.S.C. § 3372(a)(2) makes it unlawful to "import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce . . . any fish or wildlife taken, possessed, transported, or sold in violation of any law or regulation *of any State* or in violation of *any foreign law*."[226] As a result, the prosecution must show a direct link between the activity and interstate or foreign commerce.[227]

Courts have upheld wide definitions of what sale, receipt, or purchase "in interstate or foreign commerce" means for satisfying the Lacey Act's jurisdictional elements. Some cases have been relatively straightforward; for example, courts have held that a defendant violates the Lacey Act by receiving, through shipment across state lines, illegally taken wildlife[228] and by transporting illegally harvested wildlife across state lines.[229] In some cases, the nexus with interstate commerce is less clear. Courts have considered whether there is still a nexus with interstate commerce when the defendant merely arranges for the transportation of wildlife across state lines, rather than personally selling or transporting the wildlife in interstate commerce.[230] The two courts that have considered this question determined that merely arranging for transport created a sufficient nexus with interstate commerce to violate the Lacey Act.[231] Courts have also considered whether the predicate state law violated in a Lacey Act violation must be itself related to commerce or interstate commerce and concluded that it does not.[232]

However, other prohibitions under the Lacey Act do not include jurisdictional elements. For example, 16 U.S.C. § 3372(a)(1) prohibits the trafficking of wildlife "taken . . . in violation of any law, treaty, or regulation of the United States or in violation of

---

225 *Id.* ("The [Hobbs] Act's [jurisdictional element] ensures that applications of the [Hobbs] Act do not exceed Congress's authority.").

226 16 U.S.C. § 3372(a)(2) (emphasis added). This subsection also prohibits the trafficking of plants in interstate or foreign commerce if the plants were taken in violation of certain state or foreign predicate laws. *Id.*

227 *See* United States v. Gardner, 244 F.3d 784, 788 (10th Cir. 2001) ("It is only necessary to plead and prove an interstate commerce nexus where § 3372(a)(2) is implicated.").

228 *See* United States v. Bryant, 716 F.2d 1091, 1093–94 (6th Cir. 1983) (affirming a Lacey Act prosecution of Tennessee defendant received foxes killed in contravention of North Carolina Law).

229 *See* United States v. Borden, 10 F.3d 1058, 1060 (4th Cir. 1993) (affirming a Lacey Act prosecution of a West Virginia defendant who transported illegally harvested mussels to Tennessee for sale).

230 *See* United States v. Atkinson, 966 F.2d 1270, 1275 (9th Cir. 1992) (holding that arranging or assisting in the transportation of wildlife across state lines satisfies the interstate commerce requirement); United States v. Gay-Lord, 799 F.2d 124, 126 (4th Cir. 1986) (holding that the sale of wildlife to a party conducted with the knowledge that that party will transport the wildlife in interstate commerce violates the Lacey Act).

231 *See Atkinson*, 966 F.2d at 1275; *Gay-Lord*, 799 F.2d at 126.

232 *See* United States v. Wainwright, 89 F. Supp. 3d 950, 954–55 (S.D. Ohio 2015) (holding that the Lacey Act does not require that the predicate state law violation relate to interstate commerce).

any Indian tribal law."[233] Accordingly, the prosecution does not need to show a direct connection with interstate commerce when the predicate law violated is federal or tribal.[234]

The take prohibition proposed in this Note would likely fit into the Lacey Act's structure whether or not it has a jurisdictional element. If a jurisdictional element were included, this would pose an additional hurdle for the prosecution; they would have to show an actual connection with interstate or foreign commerce in each case.[235] Because of this additional burden, and because the proposed Lacey Act amendment could be sustained under the Commerce Power even without a jurisdictional element,[236] the remainder of this Note will discuss the proposed amendment as drafted above—without a jurisdictional element.

VI. A Take Amendment to The Lacey Act Would Be A Valid Exercise of Congressional Power

As detailed above, the Lacey Act's current structure is well-grounded in Congress's Commerce Power.[237] The Lacey Act regulates quintessential economic activity: importing, exporting, selling, receiving, acquiring, and purchasing of fish or wildlife.[238] Additionally, some Lacey Act provisions have a jurisdictional element to ensure, on a case-by-case basis, that the prohibited activity falls within Congress's power to regulate.[239]

This Note's proposal to add a "take" prohibition may seem controversial because applications of the ESA's "take" prohibition have been repeatedly challenged and have gotten traction with some judges. However, a "take" provision in the Lacey Act would be on stronger footing under the Commerce Power than the "take" provision of the ESA. Because the Lacey Act is a "comprehensive regulatory regime" designed to combat the illegal traffic in wildlife, the federal government has the authority to prohibit conduct, even if intrastate, that would threaten that regime.[240]

A. The Lacey Act is part of a comprehensive regulatory regime designed to combat the illegal wildlife trade

Congress has enacted the Lacey Act as part of a comprehensive regulatory scheme to limit and, if possible, extinguish the interstate market for illegally harvested fish and wildlife. One of the justifications for the Lacey Act's initial passage and repeated amendments is Congress's "concern for the commercial effects of the illegal trade in fish and

---

233 16 U.S.C. § 3372(a)(1).

234 *See* United States v. Gardner, 244 F.3d 784, 788 (10th Cir. 2001) (holding, based on the plain language of 16 U.S.C. § 3372(a)(1), that the government need not show a connection with interstate commerce when the predicate law violated was a tribal law).

235 *See id.*

236 *See supra* Part V.

237 *See* United States v. Romano, 929 F. Supp. 502, 507–09 (D. Mass. 1996) (discussing the Commerce Clause underpinnings of the Lacey Act).

238 *See* 16 U.S.C. § 3372(a).

239 *See id.* § 3372(a)(2).

240 *See* Gonzales v. Raich, 545 U.S. 1, 33 (2005).

wildlife."[241] The Lacey Act amendment's legislative history support this conclusion, expressing an interest in preserving species for future exploitation and research. In a 1969 Senate Committee Report, the Committee on Commerce explained that:

> From a pragmatic point of view, the protection of an endangered species of wildlife with some commercial value may permit the regeneration of that species to a level where controlled exploitation of that species can be resumed. In such a case[,] businessmen may profit from the trading and marketing of that species for an indefinite number of years, where otherwise it would have been completely eliminated from commercial channels in a very brief span of time.[242]

Additionally, Congress explicitly proclaimed an interest in preventing the illegal trade in fish and wildlife to sustain "healthy wildlife populations for hunting and other recreational purposes."[243] Accordingly, Congress enacted the Lacey Act as part of a "comprehensive regime to combat the international and interstate traffic" in illegally harvested wildlife.[244] The fact that Congress, in enacting the Lacey Act, was attempting to *prohibit the traffic of unlawful contraband* is "of no constitutional import" to the question of whether it is a legitimate exercise of the Commerce Power.[245]

There is little to distinguish the Lacey Act's attempts to regulate and extinguish the interstate traffic of wildlife from the regulatory regime under the Controlled Substances Act upheld in *Gonzales v. Raich*.[246] Both regulate a national economic market in contraband goods; additionally, a failure to enforce the proposed anti-take provision in the Lacey Act would leave a "gaping hole" of the kind discussed in *Raich*.[247]

Accordingly, there can be little doubt the Lacey Act was enacted as a means to achieve a legitimate end: the regulation and prohibition of the interstate trade in illegally harvested wildlife.

B. Prohibition of take, even if intrastate, is a legitimate means of achieving the Lacey Act's goal of regulating the interstate market in wildlife

The Commerce Power, as explained above, does not limit the federal government to regulating activities that have a measurable, significant impact on interstate commerce. Instead, Congress must only have a rational basis for finding that the regulated activity, taken in the aggregate, would substantially impact interstate commerce.[248] This is true even if the regulated activity is intrastate.[249]

If the regulated activity is economic or commercial in nature, the activity can more easily be aggregated to show a substantial impact on interstate commerce. For example, the *Lopez* Court distinguished between the "economic activity" inherent in *Wickard v.*

---

241 *Romano*, 929 F. Supp. at 508.
242 *Id.* (quoting S. Rep. No. 526, (1969), *as reprinted in* 1969 U.S.C.C.A.N. 1413, 1969) (discussing a "forerunner of the Act").
243 S. Rep. No. 123, at 1–2 (1981).
244 *Raich*, 545 U.S. at 12.
245 *Id.* at 19 n.29.
246 *See id.* at 33.
247 *See id.* at 22.
248 *See* United States v. Patton, 451 F.3d 615, 623 (10th Cir. 2006).
249 *See Raich*, 545 U.S. at 19; *see also* Perez v. United States, 402 U.S. 146, 154 (1971).

Filburn (the growing of wheat in violation of an act designed to regulate wheat prices) from the noncommercial nature of bringing a gun into a school zone.[250] Similarly, the *Raich* Court concluded that marijuana growth and production regulation, even if not for sale, was economic activity regulation.[251] Regulating wildlife take is more akin to regulating the growth of wheat than it is to the possession of a gun in a school zone. Wildlife taken under the Lacey Act, wheat, and marijuana are all fungible commodities for which there is an interstate commercial market.[252] Therefore, the take of wildlife with an intent to sell that wildlife is an economic activity that is within Congress's power to regulate, and Congress may make laws that are "necessary and proper" for regulating that interstate market, even if that means prohibiting some intrastate activity.[253]

However, even if the actual take of wildlife was not considered economic activity, it can still be regulated pursuant to the limits set forth in *Lopez* and *Morrison*. For example, Congress may regulate the simple possession of a commodity as a means of enforcing regulations on the national market for that commodity.[254] However, according to *Lopez* and *Morrison*, if there is no comprehensive scheme regulating an interstate market, Congress may not regulate purely intrastate economic activity.[255]

The amended Lacey Act steers clear of these Commerce Power limitations. There is still an active market for wildlife,[256] and wildlife, even wildlife taken intrastate, is "never more than an instant from the interstate market[.]"[257] And just like the Controlled Substances Act upheld in *Raich*, the amended Lacey Act would regulate the "production, distribution and consumption of commodities for which there is an established, and lucrative, interstate market."[258] Regulating take under the Lacey Act is constitutionally indistinguishable from regulating the "intrastate possession or manufacture" of wheat or marijuana. Taken in the aggregate, individual instances of take, even ones that occur intrastate, can contribute to the interstate and international illegal wildlife trade. Failing to regulate these individual instances would leave a gaping hole in Congress's ability to regulate the interstate wildlife market.[259]

A parallel can be drawn with the Bald and Golden Eagle Protection Act, which courts have upheld against commerce clause challenges.[260] The Bald and Golden Eagle Protection Act prohibits possession of eagle feathers, as well as commerce in eagle parts

---

250 *See* United States v. Lopez, 514 U.S. 549, 560–61 (1995).

251 *See Raich*, 545 U.S. at 25–26.

252 *See id.* at 22 (describing wheat and marijuana as "fungible commodit[ies]" for which there is an interstate market).

253 *See Perez*, 402 U.S. at 154 ("Extortionate credit transactions, though purely intrastate, may in the judgment of Congress affect interstate commerce.").

254 *See* United States v. Patton, 451 F.3d 615, 626 (10th Cir. 2006).

255 *See id.* at 627 ("Where the statute is not part of a comprehensive scheme of regulation, however, the Court has not upheld federal regulation of purely intrastate noneconomic activity.") (citing United States v. Morrison, 529 U.S. 598, 610 (2000)).

256 *See supra* Part I.

257 *See* Gonzales v. Raich, 545 U.S. 1, 40 (2005) (Scalia, J., concurring in the judgment).

258 *Id.* at 26.

259 *See* United States v. Romano, 929 F. Supp. 502, 507–08 (D. Mass. 1996).

260 *See* United States v. Bramble, 103 F.3d 1475, 1481 (9th Cir. 1996); United States v. Lundquist, 932 F. Supp. 1237, 1244–45 (D. Or. 1996).

and the take of eagles.[261] Courts have found that these prohibitions are a valid exercise of Congress's power to regulate the market.[262] For example, in *United States v. Lundquist*, the court said that:

> The [Bald and Golden Eagle Protection Act] prohibits a class of activities, *e.g.*, sale, purchase, or possession, and is aimed at controlling the interstate market for eagle feathers and parts by creating criminal liability for those who create the demand for them . . . . By regulating the market for eagle parts, the [Bald and Golden Eagle Protection Act] controls a form of economic activity for which the federal government has ultimate responsibility.[263]

This is very similar to the proposed Lacey Act amendment regulating the take of protected species as a means of controlling the interstate market wildlife. A single take, like the sale of a single eagle feather, might not have a substantial impact on interstate commerce; however, the federal government would be unable to regulate the market if it could not reach these actions, even if they did take place wholly intrastate.

VII. The Lacey Act's Take Provision Could Withstand More Scrutiny than the Endangered Species Act's Take Provision

Having concluded that it would be constitutionally permissible for the Lacey Act to regulate take, it is important to discuss *why* this would be preferable to the current system. As the wildlife protection laws are currently structured, the Lacey Act regulates the trade and traffic of protected species,[264] while the ESA and other species-specific statutes, like the Bald and Golden Eagle Protection Act, prohibit the actual take of species.[265] In addition to the Lacey Act's strength and reach,[266] there is an important reason why adding a take provision to the Lacey Act would help to preserve wild species.

The ESA's anti-take provision has been the subject of constitutional challenges going back decades. These challenges invariably involve purely intrastate species and often

---

261 *See* 16 U.S.C. § 668(a).

262 *See Lundquist*, 932 F. Supp. at 1244; *see also Raich*, 545 U.S. at 26 n.36 (citing a prohibition on the take of eagles, 16 U.S.C. § 668(a) as a legitimate regulation of commerce). Notably, other courts have upheld the Bald and Golden Protection Act on other Commerce Power rationales. For example, in *United States v. Bramble*, the Ninth Circuit upheld the Bald and Golden Eagle Protection Act's prohibitions against possession of eagle feathers because "commerce in and possession of eagle parts, each taken as a class, have substantial effects on interstate commerce, because both activities, even when conducted purely intrastate, threaten the eagle with extinction." *Bramble*, 103 F.3d at 1481. This is slightly different than the rationale in *Lundquist*: the *Bramble* court held that Congress may regulate the possession of eagle feathers because eagle extinction directly impacted interstate commerce, not because it was actually tied to an existing market for eagle feathers. *See id.*

263 *Lundquist*, 932 F. Supp. at 1244.

264 *See* 16 U.S.C. §§ 3372(a)(1)–(2).

265 *See id.* §§ 1538(a)(1)(B)–(C).

266 *See supra* notes 138–140 and accompanying text (discussing why the Lacey Act provides a greater deterrent than the Endangered Species Act).

one that is not particularly charismatic.[267] These challenges represent a significant threat to the ESA; should a court conclude that Congress does not have the authority to regulate purely intrastate species, 68% of all species protected under the ESA would be jeopardized.[268] However, for the reasons described below, a take provision under the Lacey Act would likely be immune to the constitutional challenges raised in the ESA, even when the Lacey Act is applied to purely intrastate species. Accordingly, even if the ESA is eventually limited, take could still be regulated through the amended Lacey Act.

All the cases thus far challenging the ESA's application have failed because the "regulation of purely intrastate species is an essential part of the ESA's regulatory scheme."[269] Accordingly, Congress has the "authority under the Commerce Clause to regulate purely intrastate species, including regulating the take thereof[.]"[270] However, ESA constitutional challenges are a constant threat because there is always the chance that circuits will split (as district courts have) on the statute's application to purely intrastate species. This could limit the ESA's reach in certain parts of the country—or even lead to a Supreme Court certiorari grant, which could permanently restrict the ESA's nationwide reach.

However, some of the arguments that litigants rely on when challenging the ESA's application to intrastate species are far less convincing when applied to the proposed Lacey Act take provision. In *People for the Ethical Treatment of Property Owners v. United States Fish & Wildlife Service*, the plaintiffs argued that the impacts of take of Utah prairie dogs could not be aggregated pursuant to *Gonzales v. Raich* because the ESA "'is a comprehensive scheme to provide for environmental conservation, not [to] regulate a market.'"[271] The plaintiff argued that Congress may only reach intrastate activity while

---

267 *See* People for the Ethical Treatment of Property Owners v. U.S. Fish & Wildlife Serv., 852 F.3d 990, 994 (10th Cir. 2017) (challenging a Fish & Wildlife Service regulation limiting the take of the Utah Prairie Dog as being beyond Congress's Commerce Power); Markle Interests, L.L.C. v. U.S. Fish & Wildlife Serv., 827 F.3d 452, 475 (5th Cir. 2016) (challenging the designation of critical habitat for the dusky gopher frog as outside of Congress's authority under the Commerce Clause), *vacated on other grounds*, 139 S. Ct. 590; San Luis & Delta-Mendota Water Auth. v. Salazar, 638 F.3d 1163, 1167–68 (9th Cir. 2011) (challenging a Fish & Wildlife Service Biological Opinion for the delta smelt fish as beyond the reach of the Commerce Clause); Alabama-Tombigbee Rivers Coal. v. Kempthorne, 477 F.3d 1250, 1271 (11th Cir. 2007) (challenging the application of the Endangered Species Act to the purely intrastate and non-traded Alabama sturgeon); Gibbs v. Babbitt, 214 F.3d 483, 488 (4th Cir. 2000) (challenging a Fish and Wildlife Service regulation prohibiting the take of an experimental population of purely intrastate red wolves); Nat'l Ass'n of Home Builders v. Babbitt, 130 F.3d 1041, 1045 (D.C. Cir. 1997) (challenging the application of the Endangered Species Act's take prohibition as applied to the intrastate Delhi Sands Flower-Loving Fly); Am. Stewarts of Liberty v. Dep't of the Interior, 370 F. Supp. 711, 732 (W.D. Tex. 2019) (challenging the application of the take provision of the Endangered Species Act to the purely intrastate bone cave harvestman arachnid), *appeal docketed* No. 19-50321.

268 *See People for the Ethical Treatment of Property Owners*, 852 F.3d at 1007.

269 *Id.* (describing the cases in other circuits upholding the application of the Endangered Species Act to purely intrastate species).

270 *Id.*

271 *Id.* at 1004–05 (alteration in original).

regulating an active market, as it did when regulating the marijuana market in *Raich*.[272] Though the Court ultimately rejected this argument,[273] this is not an area the Supreme Court has clarified, and it will likely continually be raised in subsequent challenges.

The amended Lacey Act would not be subject to the same infirmity. It is beyond dispute that Congress, in enacting and amending the Lacey Act, sought to regulate the *market* for illegally traded wildlife, similar to the market regulated in *Gonzales v. Raich*.[274] The Lacey Act is therefore different in kind from the ESA, which is not primarily intended to regulate a market.[275] Accordingly, Congress could regulate intrastate take under the Lacey Act so long as it had a rational basis for concluding that take, when aggregated, substantially affects wildlife interstate commerce.

Additionally, in light of *Lopez*'s admonition that Congress cannot "pile inference upon inference" to justify legislation under the Commerce Power,[276] some judges have expressed skepticism about the number of inferences needed to connect the taking of a species under the ESA with interstate commerce.[277] Indeed, the attenuation between the value of the Utah prairie dog and interstate commerce is one of the reasons why the district court in *People for the Ethical Treatment of Property Owners* determined that the regulation at issue in that case exceeded Congress's authority.[278]

There is far less attenuation between interstate commerce and the regulation of wildlife under the Lacey Act. Unlike the ESA, the Lacey Act appertains to regulation of an interstate market in wildlife. There are very few, if any, inferential steps needed to connect the "taking" of a species—similar to the "production" of marijuana under *Raich*—and the interstate market for that species.[279] Therefore, it is likely that the Lacey Act's take provision would better withstand scrutiny compared to the ESA's take provision.

The addition of a take provision to the Lacey Act would not reduce the ESA's take provision to surplusage. As explained above, the definition of "take" under the ESA is broader than the definition of "take" under the Lacey Act.[280] Therefore, the ESA's take provision will remain critically important, especially in the context of indirect harms.[281]

---

272 *Id.* at 1005.

273 *Id.* at 1005–06; *see also* San Luis & Delta-Mendota Water Auth. v. Salazar, 638 F.3d 1163, 1177 (9th Cir. 2011).

274 *See* Gonzales v. Raich, 545 U.S. 1, 22 (2005).

275 *See People for the Ethical Treatment of Property Owners*, 852 F.3d at 1004–05.

276 *See* United States v. Lopez, 514 U.S. 549, 567 (1995).

277 *See* Gibbs v. Babbitt, 214 F.3d 483, 507–08 (4th Cir. 2000) (Luttig, J., dissenting) ("The number of inferences (not even to mention the amount of speculation) necessary to discern in [the taking of red wolves] a substantial effect on interstate commerce is exponentially greater than the number necessary in *Lopez* . . . or in *Morrison*.").

278 *See People for the Ethical Treatment of Property Owners*, 852 F.3d at 1000.

279 *See Raich*, 545 U.S. at 22.

280 See *supra* text accompanying notes 149–154.

281 *See* Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 708 (1995).

VIII. Conclusion

We live in a rapidly changing world. As the human population grows larger and more consumptive, the natural world comes under ever more strain. We are destroying our planet's forests, polluting and overfishing our planet's oceans, causing the very atmosphere of our planet to warm, and we are causing our planet's wild companions to dwindle in numbers and even go extinct.

As our planet changes, our legal weapons to protect it must change as well. The Lacey Act has been a reliable ally of wildlife for over a century; however, there is more that it can do. In our world, with a multi-billion-dollar international wildlife trade and a growing extinction crisis, there is more that it must do.

This Note examined one of the ways the Lacey Act can adapt to the modern world—by amending it to allow the federal government to use the Act against those who actually take protected species, rather than only those that traffic in them. Amending the Lacey Act to prohibit take would be beneficial for wild species because the federal government could use the Act to prosecute the poachers and thieves who supply the illegal wildlife trade.

This Note also discussed an important threshold question: whether this proposed amendment would be a valid exercise of Congress's power to regulate interstate commerce, even if it is applied to a purely intrastate species. By examining the broad, but not unlimited, grant of authority to Congress in the Commerce Clause and Necessary and Proper Clause, this Note concluded that such an amendment would be a legitimate exercise of Congress's constitutional authority.

Lucas S. Stegman is a third-year Juris Doctor candidate and Blume Public Interest Law Scholar at Georgetown University Law Center. Before enrolling at Georgetown Law, Lucas Stegman studied Conservation Medicine at the Tufts Cummings School of Veterinary Medicine and Biology and Neuroscience at Boston University. *Lucas would like to thank the many faculty members, fellow students, friends, and family who have encouraged him to pursue a career in law. He would like to dedicate this Note to his parents, Kenneth Stegman and Jeanmarie Savage, who instilled a life-long love of animals and wildlife that has profoundly shaped Lucas' career, and to Professors J. Peter Byrne and Hope M. Babcock, who helped to guide his journey through law school.*

No Carbon Left Behind: Carbon Pricing and the Role of Supplementary Policies

Humzah Q. Yazdani

I. Introduction

Global temperatures are estimated to increase by as much as 3.9 degrees Celsius by the end of the century—twice the limit needed to avoid climate change's worst effects.[1] The Intergovernmental Panel on Climate Change (IPCC) recommends that greenhouse gas emissions (GHG) need to be reduced between 50% and 85% below year-2000 levels by 2050 to limit the planet's increase in temperature to 2.0 degrees Celsius.[2]

Carbon dioxide (CO_2) is the chief culprit, accounting for 76% of total GHG emissions worldwide and 81% in the U.S.[3] CO_2 also stays in the atmosphere longer than any other greenhouse gas.[4] Experts suggest that CO_2 emissions need to be reduced by 45% of

1 UNEP, Emissions Gap Report 2019 27 (2019).

2 Jody Freeman, *The Obama Administration's National Auto Policy: Lessons from the "Car Deal"*, 35 Harv. Env't L. Rev. 344, 348 (2011).

3 *Sources of Greenhouse Gas Emissions*, Env't Prot. Agency, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions (last visited Apr. 11, 2021).

4 Richard Cooper, *The Case for Pricing Greenhouse Gas Emissions*, in Global Carbon Pricing: The Path to Climate Cooperation 91 (Peter Cramton et al. eds., 2017).

2010 levels by 2030, and we are not on track to achieve this target. In 2018, global CO_2 emissions had increased to 112% of the 2010 levels.[5] The negative effects of anthropogenic CO_2 emissions are wide ranging and impact nearly every ecosystem. For instance, CO_2 emissions have altered our oceans' pH factor, which has not been below 8.1 in approximately 2 million years.[6] Our unsustainable lifestyles and unabated CO_2 emissions are contributing to the oceans' acidification, forever altering the marine ecosystem.[7]

The climate emergency is incontestable, and the deep decarbonization necessary to counteract the emergency requires a multifaceted approach. Pursuant to the Paris Climate Agreement in 2015, over sixty jurisdictions have implemented, or are planning to implement, carbon pricing mechanisms, with twenty-nine jurisdictions preferring national carbon, and twenty-eight opting for regional, national, and subnational emission trading systems (ETSs).[8] Eighty-eight countries have included some form of carbon pricing mechanism in their National Determined Contributions (NDCs), which are required to comply with the Paris Agreement.[9]

With burgeoning interest in carbon pricing and rapid enactments of legislative and policy initiatives across the globe, it is important to not only assess whether current initiatives are having their desired effect but also identify the gaps or loopholes that hamper existing regulatory frameworks' abilities to reduce CO_2 emissions. More importantly, countries must consider whether carbon pricing alone is sufficient to tackle this multivalent problem and, if not, what else countries can do.

II. Carbon Pricing and Why It Has Not Worked

The biggest impediment to having an effective carbon price is most governments' unwillingness to have a high enough price acting as a deterrent.[10] According to policy experts, this is because of "at least four substantial and interlinked issues: the political power of incumbent energy interests, low consumer tolerance for high energy prices, the economic impacts that substantially raising energy prices will have on key energy-intensive sectors of the economy, and—most importantly—the substantial price gap that continues to exist between fossil fuels and clean-energy alternatives."[11] For too long, environmentalists have focused on and "sunk enormous political and intellectual capi-

---

5 S. Sorcar et al., *A review of recent progress in gas phase CO_2 reduction and suggestions on future advancement*, 16 Materials Today Chemistry 1 (2020).

6 *Id.* at 3.

7 *Id.*

8 *Carbon Pricing Dashboard*, The World Bank, https://carbonpricingdashboard.worldbank.org/ (last visited on Apr. 11, 2020).

9 Robert N. Stavins, The Future of U.S. Carbon-Pricing Policy 2, https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/working.papers/FWP_2019-02rev.0529.pdf.

10 Ted Nordhaus & Michael Shellenberger, *The Flawed Logic of the Cap-and-Trade Debate*, Yale Env't 360 (May 19, 2009), https://e360.yale.edu/features/the_flawed_logic_of_the_cap-and-trade_debate.

11 *Id.*

tal" into a carbon pricing mechanism, either carbon taxes or cap-and-trade framework, that "simply can't succeed" in the current market.[12]

Over the years, countries, states, and regions have adopted numerous carbon pricing policies. These policies, however, are frequently implemented for symbolic or political purposes and are often riddled with exemptions—making them toothless. Nevertheless, putting a price on emissions can hardly be deemed a radical concept. The Scandinavian countries and the Netherlands implemented a carbon tax as early as 1990, with prices in Sweden ranging from $122.04–$140.67 per ton of CO_2.[13] These programs were hampered by multiple exemptions and overlap with the European ETS, resulting in a reduced carbon price due to multiple ETS limitations.[14] However, Sweden's carbon tax has had an overall positive impact on CO_2 emissions and economic growth: Swedish emissions dropped by approximately 24% between 1990 and 2014 despite 60% GDP growth.[15] Sweden's economic growth in this timeframe was more than the "European average by a significant margin."[16]

In North America, well before the Paris Agreement's execution, various U.S. and Canadian state governments attempted to adopt some form of carbon pricing, including Massachusetts in 2001 and New Hampshire in 2002.[17] The hope was these regions could create a cross-jurisdictional framework to have a large carbon market.[18] The Canadian province of Manitoba also embraced carbon pricing in 2007 and joined two separate, regional cap-and-trade organizations: the Western Climate Initiative (WCI), comprised of three other Canadian provinces and six U.S. states, and the Midwestern Greenhouse Gas Reduction Accord (MGGRA).[19] It also became one of the founding members of the Chicago Climate Exchange (CCX), which considers itself "a self-regulatory exchange that administered the world's first multi-national marketplace for reducing and trading GHG emissions."[20] CCX and MGGRA dissolved in 2010 and 2011, respectively.[21]

Despite the long, arduous process of building a large enough coalition to get carbon pricing through a legislature, passing carbon pricing legislation is the easiest part of the process. The real difficulties begin in the implementation and operational phases, which entail initial spikes [in] everyday commodities' prices and require politicians to make unpopular decisions.[22] The challenge is even harder in regions dependent on carbon-

---

12 *Id.*

13 Barry G. Rabe, Can We Price Carbon? 85–86 (2018).

14 Brendan Frank, *Carbon Pricing Works in Sweden*, Can. Ecofiscal Comm'n (Apr. 11, 2018), https://ecofiscal.ca/2018/04/11/carbon-pricing-works-in-sweden/ ("Despite this success, Sweden's carbon tax comes with some exceptions and caveats, namely that it doesn't apply equally to polluters across different sectors. Manufacturing, agriculture and forestry, for instance, pay a lower rate. And industries that are covered by the European Union's cap-and-trade system are exempt.").

15 Rabe, *supra* note 13, at 86.

16 Frank, *supra* note 14.

17 Rabe, *supra* note 13, at 37.

18 *Id.*

19 *Id.* at 40.

20 *Id.*

21 *Id.* at 42.

22 *Id.* at 44–45.

intensive industries.[23] The results of such unpopular decisions are neither immediately tangible nor visible and may not manifest until years later.

Carbon pricing can be unpopular for constituents whose livelihoods depend on the industries that will be most affected. This makes efforts to curb GHG emissions challenging, and exceptions often render efforts to curb emissions ineffective. This is especially true if the oil and gas exploration and production industry is exempted. For instance, studies have shown that in Utah's Uintah Basin, "oil and gas sources emitted 98–99% of the area's [volatile organic compounds] and 57–61% of its [nitrous oxide]."[24] This is primarily because carbon pricing initiatives have largely focused on the consumption side of emissions, not on fossil fuel production.[25] George Marshall, a leading climate change psychologist, analogizes that "a policy on climate change that ignores production of fossil fuels is like a policy on drugs that ignores the poppy fields, cocaine labs, smuggling networks, and dealers and focuses exclusively on the addicts."[26] Marshall further elaborated that the IPCC and other environmental organizations have never focused on "controlling production at the wellhead."[27] The issue could be simplified significantly by putting "a cap on oil and gas at the wellhead [and] a cap on coal at the minehead."[28] Instead, most governments not only fail to put a price on fossil fuels' production but also encourage and subsidize "ever-larger investments into exploring and developing new fossil fuels."[29]

Carbon pricing can help mitigate climate change consequences by minimizing emission reduction costs.[30] However, putting a meaningful price on carbon dioxide in any political context is not an easy task, as it requires communities to accept higher prices for essential commodities.[31] It also requires foregoing an energy-intensive lifestyle, as the energy sources powering them have to be curtailed, burdened, or made more expensive.[32] The public is likely to resist if it believes an initiative is likely to increase consumption costs "in absence of tangible and offsetting benefits."[33] "Any legislation that imposes costs through creation of new taxes, increased tax rates, or reduced tax preferences runs considerable political risks. These may be particularly significant in cases where any offsetting benefits are difficult to discern or prove unconvincing despite political framing."[34]

---

23 *Id.* at 19.

24 Joel Minor, *Completing the Bridge to Nowhere: Prioritizing Oil and Gas Emissions Regulations in Western States*, 34 STAN. ENV'T L.J. 57, 70 (2015).

25 *Id.*

26 GEORGE MARSHALL, DON'T EVEN THINK ABOUT IT: WHY OUR BRAINS ARE WIRED TO IGNORE CLIMATE CHANGE 169–70 (2015).

27 *Id.* at 171.

28 *Id.* at 170.

29 *Id.* at 173.

30 Erik Haites et al., *Experience with Carbon Taxes and Greenhouse Gas Emissions Trading Systems*, 29 DUKE ENV'T L. & POL'Y F. 109, 111 (2018).

31 RABE, *supra* note 13, at 191.

32 Daniel Rosenbloom et al., *Why Carbon Pricing is not Sufficient to Mitigate Climate Change—and How "Sustainability Transition Policy" Can Help*, 117 PROC. OF THE NAT'L ACAD. OF SCI. 8664, 8667 (2020).

33 RABE, *supra* note 13, at 57.

34 *Id.* at 60.

States and regions make these compromises hoping that neighboring regions will make similar sacrifices to reduce GHG emissions. If neighboring regions do not attempt to reduce emissions, there is a risk that regional carbon emissions will not significantly decrease and that the compromising region will be less competitive for business, which may result in the exit of business entities that prefer places with lower or no carbon prices, thereby causing local unemployment and a loss of taxes.[35] Therefore, these policies are easy political targets and are often attacked by rival political parties playing to the local population's intrinsic fears. Frequently, carbon pricing policies are rescinded after one election cycle, as was the case in Australia, France, and Arizona.[36] British Columbia and Sweden are the only examples where the carbon pricing laws have been sustained over a lengthy period.[37]

"[I]n an ideal world, a carbon price would be linked to the social cost of carbon. Such a robust price would then drive emission reductions across all economic sectors and lead to full compliance with Paris accord pledges."[38] However, due to the aforementioned restraints and other pressures, even the most well-meaning governments fail to implement policies reflecting the total GHG emission social cost. Carbon prices are often either too low to be consequential or riddled with so many exemptions that they effectively leave many sectors, including the worst emitters, "essentially free to pollute."[39]

In the U.S., carbon pricing, especially at the federal level, has been difficult. The Clinton administration, with environmental champion Al Gore as Vice President, attempted carbon pricing in the form of a BTU tax, which endeavored to tax fossil fuels' heat content. Their efforts resulted in a modest gasoline tax hike.[40] The American Clean Energy and Security Act of 2009, better known as the Waxman-Markey Bill, was one of the first Obama-administration initiatives. The bill was over 1,400 pages long and included provisions for a cap-and-trade program with national emission targets and a national renewable portfolio standard.[41] The bill barely passed the House and never made it past the Senate.[42] "Even with generous allocations for large oil and coal interests to buy off their resistance, the bill was doomed to fail."[43]

Policy adoption and implementation is just the beginning. Despite initial adoption of cap-and trade policing by some U.S. states and Canadian provinces, cap-and-trade "lost more than half of its early adopters . . . within a few years after adoption."[44] Arizona is a prime example, where, immediately after winning the election and becoming the state's governor, Jan Brewer reversed the state's adoption of cap-and-trade because it

---

35 INT'L MONETARY FUND, FISCAL MONITOR: HOW TO MITIGATE CLIMATE CHANGE 10–11 (2019).

36 Rosenbloom et al., *supra* note 32, at 8667.

37 INT'L MONETARY FUND, *supra* note 35, at 3; RABE, *supra* note 13, at 192.

38 INT'L MONETARY FUND, *supra* note 35, at 3; RABE, *supra* note 13, at 192.

39 Jeffrey Ball, *Why Carbon Pricing Isn't Working: Good Idea in Theory, Failing in Practice*, 97 Foreign Affs. 134, 135 (2018).

40 RABE, *supra* note 13, at 47.

41 *Id.*

42 *Id.* at 50.

43 MARSHALL, *supra* note 26, at 165.

44 RABE *supra* note 13, at 61.

burdened the state's economy and would have "cost investment and jobs in Arizona."[45] New Zealand adopted their carbon tax at $15 (USD $11) per ton in 2005, which was rescinded within months of adoption.[46] A subsequent attempt at an emissions trading system was scrapped after the scheme was riddled with exemptions and allocated allowances free of charge.[47] It was also criticized because it failed to set an emissions cap and "did not fully meet the definition of a cap-and-trade program."[48]

Exemptions for sectors most responsible for GHG emissions are a common deficiency in carbon pricing instruments. However, these exemptions may also be deemed necessary for political reasons (e.g., the agricultural sector),[49] technical reasons (e.g., emissions from landfills and forests),[50] or religious reasons (e.g., cremation of dead bodies or sacrificial goats).[51] Furthermore, any policy imposing a carbon price must also grapple with how to treat industries already regulating prices (like electric utilities). The European Union's (EU's) ETS model best exemplifies this challenge: utilities were given free allowances and the cost of electricity still increased, resulting in large profits for the electric utilities.[52]

III. Problems with Cap-and-trade

Some economists argue that cap-and-trade is a "cumbersome and economically inefficient means of establishing a carbon price" that is susceptible to exploitation by polluters and politicians.[53] The caps are not binding and provide little certainty of reduced emissions if the maximum amount emitters must pay is limited.[54]

Cap-and-trade model proponents relentlessly point to America's success in reducing sulfur dioxide.[55] In 1990, the U.S. used a cap-and-trade mechanism to tackle the pressing issue of acid rain caused by sulfur-emitting power plants.[56] It solved the problem without resorting to command-and-control regulation and, therefore, became a popular policy tool to address climate change.[57] It embraced free market as a means "to reward innovation and protect powerful economic interests," obviating the "need to abandon fossil fuels or constrain growth."[58]

---

45 *Id.* at 61.
46 *Id.* at 67.
47 *Id.*
48 *Id.*
49 Haites et al., *supra* note 30, at 120.
50 *Id.*
51 Becky Little, *The Environmental Toll of Cremating the Dead*, Nat'l Geographic (Nov. 5, 2019), https://www.nationalgeographic.com/science/2019/11/is-cremation-environmentally-friendly-heres-the-science/.
52 Haites et al., *supra* note 30, at 121.
53 Nordhaus & Shellenberger, *supra* note 10.
54 *Id.*
55 David M. Driesen, *Emissions Trading Versus Pollution Taxes: Playing Nice with Other Instruments*, 48 Env't L. 29, 38 (2018).
56 *Id.*
57 Rabe, *supra* note 13, at 43.
58 Marshall, *supra* note 26, at 164.

The European Union Emission Trading Scheme (EU ETS) was modeled after the U.S.' successful use of cap-and-trade regulations to reduce sulfur emissions.[59] It is very similar to the acid rain cap-and-trade model as they both focus on gases, which are merely by-products of fossil fuel combustion.[60] This is believed to be "more of a flukish case rather than a reliable model for carbon," due to an "unusual political advantage of an alternative and domestically available coal source with low sulfur content, technically feasible emissions abatement technology, and flexible transportation agreements for coal shipment in the era of rail deregulation."[61] Additionally, existence of a feasible technology that emitted sulfur dioxide was crucial in solving the acid rain problem and is often underestimated when crediting cap-and-trade policies.[62]

Carbon dioxide presents a much harder and more complicated challenge than sulfur dioxide. For one, carbon emissions come from a variety of sources rather than just coal-fired power plants.[63] Experts believe that models used to tackle sulfur emissions and ozone depletion "should never have been chosen as models for action on climate change in the first place," because acid rain and ozone depletion were relatively "tame" challenges when compared with climate change.[64] Climate change, on the other hand, "is a 'wicked' problem of altogether more daunting scale, complexity, and uncertainty."[65] Moreover, and rather critically, the successful federal acid rain program did not have an offset program, as most cap-and-trade programs do.[66]

The EU ETS struggles and failures are well documented. The program "struggled mightily during its first decade of operations from 2005 through 2015. Rather than a model worthy of diffusion, it serves as an example of how not to operate carbon pricing, filled with management stumbles and an inability to secure a political fix."[67] Moreover, national policy initiatives by individual countries to reduce carbon emissions through other supplementary policies have been unenforceable due to their conflict with the EU ETS.[68]

Other reasons for the EU ETS' failure included no prior experience with a cap-and-trade policy, the existence of "little reliable data on their historic carbon emissions," the fact that "the EU was not prepared to credibly track future releases, much less oversee all key components of a carbon trading system that would require collaboration" across the European continent, and a commitment from all members.[69] The EU ETS experience

---

59 LUCAS M. BROWN ET AL., THE EU EMISSIONS TRADING SYSTEM: RESULTS AND LESSONS LEARNED 17 (2012), https://www.edf.org/sites/default/files/EU_ETS_Lessons_Learned_Report_EDF.pdf.

60 MARSHALL, *supra* note 26, at 164.

61 RABE, *supra* note 13, at 189–90.

62 Stewart Elgie & Stephanie Cairns, *Shifting to a Low-Carbon Economy: It Starts with a Price on Emissions*, POL'Y OPTIONS (Dec. 1, 2009), https://policyoptions.irpp.org/magazines/the-2010-olympics/shifting-to-a-low-carbon-economy-it-starts-with-a-price-on-emissions/.

63 RABE, *supra* note 13, at 44.

64 MARSHALL, *supra* note 26, at 166.

65 *Id*.

66 Alan Ramo, *The California Offset Game: Who Wins and Who Loses?*, 20 HASTINGS W.–N.W. J. ENV'T L. & POL'Y 109, 116 (2014).

67 RABE, *supra* note 13, at 68.

68 Driesen, *supra* note 55, at 31; Frank, *supra* note 14.

69 RABE, *supra* note 13, at 72.

prompted European leaders to consider alternatives to carbon pricing.[70] The program has frequently allocated an excessive number of emission allowances, putting more into circulation than actual emissions warranted. By 2013, European "polluters had banked so many cut-price permits that they could expand emissions enough to outweigh the savings of all the European renewable and energy efforts combined."[71] Such free permits, coupled with a global recession, resulted in the carbon market plummeting "from more than 25 euros per metric ton in 2008 to less than five euros in 2013."[72] The problem of over-allocation of allowances in the EU ETS still persists. A surplus of 2.6 billion European Allowance Units in the EU ETS has been projected by 2020.[73] Economists have also concluded that granting free allocations results in an increase of regulatory costs, which "are considerably greater than with auctioning."[74]

Another problem the EU faced was dependence on fossil fuel extraction and incompatible energy generation, both of which created barriers to implementing emission reduction policies.[75] The EU ETS also struggled due to heavy reliance on some countries, including Poland and Germany, on coal for energy generation.[76]

Europe has not been alone. Alberta's dependence on oil sands' development hindered Canada's carbon emission reduction commitment implementation under the Kyoto Protocol.[77] Alberta implemented Specified Gas Emitters Regulations (SGER) in 2007, a hybrid approach with both carbon taxes and carbon pricing and littered with so many exceptions and loopholes that it was barely effective.[78] Data suggests that "more than 80% of the approved offsets during the first three years of SGER operation were for projects such as wind turbine siting."[79]

Another cap-and-trade policy criticism is that they have, generally, been steeped in complexity and confusion.[80] The complex Waxman-Markey Bill would have likely encountered a significant "administration launch process and possible years of delay had it been adopted."[81] Whereas carbon taxes automatically adjust to varying levels of emissions and external economic conditions, "such temporal flexibility needs to be built in through provisions of banking and borrowing of allowances, which redefines the cap as a limit on cumulative emissions over a period of years, rather than a cap on annual emissions."[82] These considerations make the framework either inadequate or extremely difficult to implement. Even local- and state-level cap-and-trade programs have needed a long period of interpretation and administrative preparation to begin implementation.[83]

---

70 *Id.* at 70.
71 MARSHALL, *supra* note 26, at 165.
72 Ball, *supra* note 39, at 140.
73 RABE, *supra* note 13, at 71.
74 STAVINS, *supra* note 9, at 7.
75 RABE, *supra* note 13, at 72–74.
76 *Id.*
77 *Id.* at 76.
78 *Id.*
79 *Id.* 80.
80 *Id.* at 94–95.
81 *Id.* at 95.
82 STAVINS, *supra* note 9, at 12–13.
83 RABE, *supra* note 13, at 95.

The EU ETS was plagued with similar problems: either the caps were not stringent enough or the offsets were too lax.[84] Generous offset programs accompany most cap-and-trade policies and have been exploited to claim credits for activities that would have reduced pollution from unregulated sources anyway.[85] Egregiously, some entities in India created a highly potent and deleterious greenhouse gas, HFC-23, only so "they could claim credits for destroying it."[86] Research suggests such "use of external offset credits for compliance leads to higher actual emissions."[87] Offsets allow one location's emissions to be based on reductions elsewhere, which requires reliable measurement of both places' emissions.[88] It is especially difficult to measure emissions for offset regimes if the scheme includes other GHGs, like methane, which are harder to measure and monitor than CO_2.[89]

Most carbon pricing schemes have limited applicability with the Regional Greenhouse Gas Initiative (RGGI), which only applies to the electricity sector in Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, and Vermont.[90] Even within the electricity sector, RGGI only regulates emissions from plants located within the RGGI states with a capacity of 25 megawatts (MW) or more.[91] However, the initiative does not extend to "other emissions, even from facilities with a capacity of 25 MW or greater located in non-RGGI states that generate electricity consumed in RGGI states."[92] Since launched, the price has ranged from $2.40 to $8.50 per ton of CO_2.[93] "Prices for RGGI allowances have remained well below economists' estimates of the social cost of carbon."[94] In 2019, the RGGI market price for a CO_2 allowance was $5 per ton, and it covered only 21% of the region's emissions.[95]

RGGI was, however, quite innovative. In contrast to other programs, it auctioned off its allowances, albeit at a relatively low price, rather than distributing them freely, and it used the revenue to fund energy efficiency programs and programs to reduce greenhouse gas emissions.[96] In September 2017, the RGGI allowance auction generated a price of $4.35 per ton of CO_2.[97] However, at the program's launch, "the number of available allowances was greater than market demand, resulting in a surplus of unsold allowances and low allowance prices."[98] Nonetheless, these auctions have generated a total revenue of $3 billion.[99] While RGGI's implementation coincided with a reduction

84 *Id.* at 72–74.
85 Driesen, *supra* note 55, at 37.
86 MARSHALL, *supra* note 26, at 165.
87 Haites et al., *supra* note 30, at 126.
88 *Id.* at 119.
89 Driesen, *supra* note 55, at 52.
90 RABE, *supra* note 13, at 128.
91 JOEL EISEN ET AL., ENERGY, ECONOMICS AND THE ENVIRONMENT 349 (5th ed. 2019).
92 Justin Gundlach, *To Negotiate a Carbon Tax: A Rough Map of Interactions, Tradeoffs, and Risks*, 43 COLUM. J. ENV'T L. 269, 295 (2018).
93 *Id.*
94 EISEN ET AL., *supra* note 91, at 351.
95 INT'L MONETARY FUND, *supra* note 35, at 3.
96 RABE, *supra* note 13, at 129.
97 Gundlach, *supra* note 92, at 295.
98 EISEN ET AL., *supra* note 91, at 351.
99 *Id.*

in carbon emissions, it is difficult to estimate how much is attributable to the cap-and-trade initiative, as the U.S. was undergoing a major recession leading to "suppressed demand for electricity, high coal and oil prices."[100] Even neighboring states, like Pennsylvania and Virginia, which were not part of RGGI, saw similar carbon emissions reductions.[101] Still, it is estimated the RGGI program saved a cumulative total of 18,934 gigawatt-hours (GWh), added 2,997 GWh decarbonized electricity to the grid, and reduced electricity prices.[102] Various studies project that RGGI had a net positive effect on the region's greenhouse emissions.[103]

Economists argue that cap-and-trade frameworks result in short-term price volatility that "could undermine political support for climate policy and discourage investment in new technologies, as well as research and development."[104] Cap-and-trade frameworks also pose a significant challenge for developing countries that have difficulty in adequately monitoring emission levels and assessing whether the cap is being met or not.[105] The difficulty could stem from a lack of historical records, employment of deficient technology, or insufficient regulatory capacity.[106] The International Monetary Fund (IMF) also acknowledges that for emissions trading systems to be successful, "government capacity is needed to monitor trading markets and firms' emissions" and, "in some countries, this could be impractical given capacity constraints and limited trading."[107]

It has been argued that changes in program design can address the high caps, volatility in emissions allowance prices, and allowance over-allocation that plague cap-and-trade policies.[108] For example, "emissions caps can be set more stringently, price floors and ceilings can avoid volatility, and emissions allowances can be auctioned instead of given away."[109] Giving away emission allowances, popular among most cap-and-trade programs, "is an open invitation to corruption" and leads to favoritism by the regulators and governmental authorities.[110] Cap-and-trade programs, including RGGI and California's cap-and-trade framework, also have loopholes for leakages, i.e. they disregard the "emissions emitted beyond their borders as a result of activity within their borders."[111] These leakages also permit utilities to import carbon-emitting electricity rather than pay for cleaner energy generated within the region.[112]

---

100 RABE, *supra* note 13, at 157.
101 *Id.* at 157–58.
102 *Id.* at 161.
103 *Id.*
104 STAVINS, *supra* note 9, at 12.
105 Ramo, *supra* note 66, at 109, 121.
106 *Id.* at 121.
107 INT'L MONETARY FUND, *supra* note 35, at 6–7.
108 Noah Kaufman, *Carbon Tax vs. Cap-and-Trade: What's a Better Policy to Cut Emissions?*, WORLD RES. INST. (Mar. 1, 2016), https://www.wri.org/blog/2016/03/carbon-tax-vs-cap-and-trade-what-s-better-policy-cut-emissions.
109 *Id.*
110 Cooper, *supra* note 4, at 93.
111 Gundlach, *supra* note 92, at 296.
112 William Funk, *Constitutional Implications of Regional CO2 Cap-and-Trade Point*, 27 UCLA J. ENV'T L. POL'Y 353, 363–64 (2009).

In short, cap-and-trade policies often create programs "where costs are intentionally opaque, implementation is corrupt, and benefits are few."[113]

IV. California's Experiment with Cap-and-Trade and AB 32

California alone is responsible for 2% of global carbon emissions.[114] In 2006, California passed its California Global Warming Solutions Act of 2006 (Global Warming Act), to curb its emissions. The bill was comprehensive and included a host of initiatives, including a cap-and-trade program.[115] Michael Wara claimed that, "in many respects, California has decided not to trust carbon pricing incentives to reduce its emissions."[116] However, to its credit, California never intended for it to operate exclusively.

At the bills passing, California estimated that cap-and-trade would only be responsible for 30% of its emissions reductions with "about 70 percent of emission reductions . . . expected to result from complementary measures."[117] A government report described the cap-and-trade framework as a backstop arrangement to "achieve GHG emissions targets in the covered sectors . . . For example, if energy efficiency programs fail to meet their planned emissions targets, the cap would encourage additional GHG reductions from other sources to ensure overall emissions do not exceed the specified limit. Alternatively, if technological advancements or slow economic growth result in lower than projected emissions, the cap is needed to reduce fewer emissions in order to stay below the limit."[118]

In fact, the cap-and-trade scheme was not expressly provided for in the Global Warming Act.[119] Rather, it was established after then-Governor Schwarzenegger used his legislative interpretation powers to adopt the cap-and-trade as part of the state's strategy.[120]

Since 2006, California has passed fourteen new pieces of legislation and thirty-two new regulatory rulemaking processes.[121] In 2018, California also passed senate bill (SB) 100 to produce 100% zero-carbon electricity by 2045.[122] California adopted a menu of alternatives to formulate an effective climate strategy, including a low-carbon fuel standard, energy efficiency and conservation, an aggressive renewable portfolio standard (aiming to have 60% of California's retail sales by December 31, 2030, to be generated by renewables),[123] refrigerant tracking and reporting program, landfill methane control,

---

113 Nordhaus & Shellenberger, *supra* note 10.
114 Eisen et al., *supra* note 91, at 353.
115 *Id.*
116 Michael Wara, *California's Energy and Climate Policy: A Full Plate, but Perhaps Not a Model Policy*, Bull. of Atomic Scientists 26, 27 (2014).
117 Legis. Analyst's Office Report, The 2017–18 Budget: Cap-and-Trade 9 (2017).
118 *Id.*
119 Rabe, *supra* note 13, at 166–67.
120 *Id.* at 165.
121 Eisen et al., *supra* note 91, at 353.
122 *Id.*
123 *California – Renewables Portfolio Standard*, NC Clean Energy Tech. Center, https://programs.dsireusa.org/system/program/detail/840 (last visited on Feb. 12, 2021).

and clean vehicles.[124] The California Air Resources Board (CARB) concluded that these supplementary policies would be responsible for a 71% reduction of the state's carbon emissions.[125] Additionally, the legislature mandated the investor-owned utilities (IOUs) to procure an aggregate of 1,325 MW of energy storage by 2020, whereas other electricity providers were required to arrange for storage capacity of 1% of their annual peak load.[126]

Overall, it appears California will be able to achieve its 2020 targets, mostly due to its electricity sector's emission reductions.[127] Analysts believe the electricity sector's emission reductions are "largely exhausted and likely unable to provide a sustained source of low-cost mitigation going forward."[128] Moreover, experts have discounted cap-and-trade's role in reducing California's CO_2 emissions because "the supply of emissions instruments in the program has been significantly larger than the emissions covered by the program."[129] Staggeringly, even a government report has stated the "cap is likely not having much, if any, effect on overall emissions in the first several years of the program."[130] While the state intended the cap-and-trade framework to lead to a 30% CO_2emissions reduction, a climate policy think tank has estimated that, in 2015 and 2016, the cap-and-trade was responsible for "only 4% to 15% of the state's reductions."[131]

Researchers conclude that California's carbon emissions decline cannot be attributed to cap-and-trade but is largely due to an increase in electricity from hydropower sources, which are dependent on "rainfall and water management, not carbon prices."[132] Another reason for California's electricity sector's carbon emission decline was its renewable portfolio standard, requiring 60% of all retail electricity to come from renewable sources and its net metering policy.[133] The researchers illustrated that carbon emissions in the transportation sector and refining emissions have actually increased and have been rising.[134]

---

124 Michael Wara, *California's Energy and Climate Policy: A Full Plate, but Perhaps Not a Model Policy*, BULL. OF ATOMIC SCIENTISTS 26, 28 (2014).

125 *Id.*

126 Felix Mormann et al., *A Tale of Three Markets: Comparing the Renewable Energy Experiences of California, Texas, and Germany*, 35 STAN. ENV'T L. J. 55, 88–89 (2016).

127 Michael D. Mastrandrea et al., *Assessing California's Progress Toward its 2020 Greenhouse Gas Emissions Limit*, 138 ENERGY POL'Y 1, 9 (2020).

128 *Id.*

129 *Id.*

130 LEGIS. ANALYST'S OFF., THE 2017–18 BUDGET: CAP-AND-TRADE 14 (2017).

131 Lisa Song, *Cap and Trade Is Supposed to Solve Climate Change, but Oil and Gas Company Emissions Are Up*, PROPUBLICA (Nov. 19, 2019), https://www.propublica.org/article/cap-and-trade-is-supposed-to-solve-climate-change-but-oil-and-gas-company-emissions-are-up.

132 Danny Cullenward et al., *California's Climate Emissions are Falling, but Cap-and-Trade is Not the Cause*, NEARZERO (Nov. 10, 2017), http://wp.nearzero.org/wp-content/uploads/2017/11/Near-Zero-2016-MRR-Research-Note.pdf.

133 *Database of State Incentives for Renewables & Efficiency*, U.S. DEP'T OF ENERGY, https://programs.dsireusa.org/system/program/detail/840 (last visited on Apr. 18, 2021); Cullenward et al., *supra* note 131.

134 Cullenward et al., *supra* note 131; Mastrandrea et al., *supra* note 126, at 9; Song, *supra* note 130.

The state also adopted another piece of legislation regulating the carbon emissions from newly manufactured car and truck engines.[135] Unlike the RGGI, which only applied to the electricity sector, California's cap-and-trade was later expanded to include the transportation sector.[136] However, unlike RGGI, the relatively generous offset policy has prompted concern regarding its efficacy.[137] CARB is aware of the problems caused by excess offsets, which may render the economic and environmental benefits nugatory and "delay the transition to low-carbon energy systems."[138]

Additionally, the California cap-and-trade program started out with free allowance allocation with the requirement to purchase auctioned allowances later.[139] Even now, allowances can be allocated in one of three ways: (1) given away for free, (2) auctioned by the state, or (3) some portion can be freely allocated while the other portion is auctioned.[140] In 2019, the number of available permits was a staggering 346 million.[141] Other research has shown that, in 2018, companies had banked 200 million allowances, which is "comparable to the cumulative mitigation expected from the program over the period 2021 through 2030, raising questions about the program's ability to achieve its expected reductions."[142] This problem is not limited to California; companies based in the EU have "accumulated surplus allowances–some equivalent to more than a year's emissions."[143] Such profligacy of free, readily available allowances means that regulated or covered entities have little to no incentive to curb their emissions. Reports suggest that the state gave several industries it feared would retaliate, including the oil and gas industry, free allowances through 2020.[144]

California may, however, be turning a corner soon. In 2017, the Environmental Justice Committee, convened by CARB, recommended that offsets and free allowance allocations be eliminated if the cap-and-trade program continued.[145]

Another problem California has failed to address is the effective allocation of revenue generated from auctioning off the allowances. Ambiguous legislation has led to constant debate and jockeying on this issue.[146] This failure could represent a major missed opportunity, as California generates significant revenue from its cap-and-trade program, including $680 billion in 2018 alone.[147]

As illustrated earlier, exceptions and exemptions are a bane of carbon policies. California, too, exempts sources and sectors that are responsible for significant emissions.[148]

---

135 RABE, *supra* note 13, at 164.
136 *Id.* at 169.
137 *Id.* at 170.
138 Ramo, *supra* note 66, at 124.
139 EISEN ET AL., *supra* note 91, at 354.
140 LEGIS. ANALYST'S OFF., THE 2017–18 BUDGET: CAP-AND-TRADE 9 (2017).
141 Song, *supra* note 130.
142 Danny Cullenward et al., *Tracking Banking in the Western Climate Initiative Cap-and-Trade Program*, 14 ENV'T RES. LETTERS 1, 3 (2020).
143 Haites, *supra* note 30, at 170.
144 Song, *supra* note 130.
145 CAL. AIR RES. BD., CALIFORNIA'S 2017 CLIMATE CHANGE SCOPING PLAN 17 (2017), https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.
146 RABE, *supra* note 13, at 176.
147 EISEN ET AL., *supra* note 91, at 356.
148 RABE, *supra* note 13, at 180.

The cap-and-trade started for the electric utilities and large industrial facilities in 2013, followed by distributors of transportation, natural gas, and other fuels in 2015.[149] However, the cap-and-trade framework does not apply to energy extraction.[150] The fossil fuel industry has remained untouched; the state's oil and gas exploration and production activities have proceeded unhindered, despite the industry owning substantial shale reserves in the state.[151] California oil and gas emissions have risen by 3.5% since the inception of its cap-and-trade framework in 2013.[152]

Policy experts have criticized California's cap-and-trade for being "weak" and said that "a well-designed regulation on oil and gas can have an effect."[153] An oil and gas industry group, Western States Petroleum Association, has lobbied on every aspect of California's cap-and-trade program, including "offsets, fees and the allocation of permits," spending a staggering $88 million in the process.[154] There are multiple instances where California oil and gas companies have staunchly lobbied and spent significant amounts against meaningful framework changes, including proposals for banked permits to expire by 2020 and reducing refinery emissions 20% by 2030.[155]

Notwithstanding all the shortcomings of its cap-and-trade framework, California is a model for the world when it comes to having a dynamic, multifarious approach to mitigate climate change's threat. The main takeaway from California's successful model lies largely in complementary policies it adopted. It is essential that any carbon pricing is a backstop arrangement, like in California, and not the only solution.

V. Carbon Tax and Why It Is a Better Policy Tool

There is an argument that carbon taxes are a better and a more efficient policy tool than cap-and-trade because a carbon tax is easier to establish and implement, more transparent, and more cost effective.[156] In theory, economists suggest a tax and an emissions trading system "would yield identical results for equivalent emission reductions if there is no uncertainty regarding future prices, perfect competition in all markets, no interaction with other policies, and universal coverage (all sources of GHG emissions)."[157] However, in practice, carbon taxes have certain advantages making it a more viable and alluring option than cap-and-trade.

Establishing a carbon tax merely requires a regulator to set a uniform tax rate on the sources responsible.[158] The proof is in the pudding: British Columbia's carbon tax had a nearly seamless administrative launch, being operational within five months of passing,

149 Eisen et al., *supra* note 91, at 354.
150 Rabe, *supra* note 13, at 180.
151 *Id.* at 180–81.
152 Song, *supra* note 130.
153 *Id.*
154 *Id.*
155 *Id.*
156 Reuvan Avi-Yonah & David Uhlmann, *Combating Global Climate Change: Why Carbon Tax is a Better Response to Global Warming than Cap and Trade*, 28 Stan. Env't L. J. 3, 7 (2009).
157 Haites et al., *supra* note 30, at 112.
158 Driesen, *supra* note 55, at 46.

and was applied to approximately twenty-four fossil fuel variants.[159] Straight-forward legislation and existing, long-established taxation authorities were tasked with its implementation based on established legal precedents to tax gasoline and motor fuels. "These changes did not require any consequential ministry costs, staffing additions, or administrative configurations."[160] The taxation is applied at a gasoline service station's last point of sale and natural gas suppliers apply it to monthly customer bills.[161]

The launch was also eased by a clear, five-year phase-in strategy.[162] The tax was immediately applied to all fossil fuel sources but only at a tax rate of CA$10 per ton on CO_2 emissions, in July 2008, and gradually increased to CA$30 per ton in 2012 (originally scheduled to reach CA$38 per ton in 2021).[163] This ensured there was more public acceptability and that prices were not subject to market volatility as was common under cap-and-trade frameworks.[164] The tax was intended to cover a significant portion of emissions—applicable to 70–75% of emissions—and covered "carbon emissions of all hydrocarbons burned in the province."[165] It is heralded as "a carbon tax that comes closest to the version of an ideal carbon tax typically recommended by economists . . . ."[166]

British Columbia also mitigated any public backlash by offering tax rebates, credits, reductions, or exemptions.[167] The government assured its citizens the tax was revenue neutral instead of an additional burden on them, reduced property taxes for farms, and reduced existing corporate and personal taxes.[168] Therefore, the government had no intention to use this revenue to increase its spending budget.[169] Initially, "100% of the tax revenue was to be refunded through tax cuts to businesses and individuals, with low-income individuals further protected through a targeted tax credit."[170] With immediate and tangible benefits accessible to the citizens, with no additional fiscal burdens, there was significant public acceptance of a carbon tax in British Columbia.[171] At present, the tax revenue is apportioned by allocating 50% to business tax reductions and corporate income tax credits, 23% to personal income tax cuts, and 25% to equal, lump-sum household rebates.[172] The carbon tax has been such a success that it has managed to change the public's perception. At the time of its implementation in 2008, 60% of peo-

159 RABE, *supra* note 13, at 95.
160 *Id.* at 98.
161 *Id.*
162 *Id.* at 99.
163 Haites et al., *supra* note 30, at 138 (explaining the tax progression from 2008 to 2012); STAVINS, *supra* note 9, at 25 (explaining the planned 2021 tax level).
164 *See* RABE, *supra* note 13, at 100.
165 STAVINS, *supra* note 9, at 24–25.
166 *Id.* at 24.
167 RABE, *supra* note 13, at 101.
168 *See id.* at 103.
169 Brian C. Murray & Nicholas Rivers, *British Columbia's Revenue-Neutral Carbon Tax: A Review of the Latest "Grand Experiment" in Environmental Policy*, NICHOLAS INST. FOR ENV'T POL'Y SOLS. 1, 4 (2015).
170 *See* STAVINS, *supra* note 9, at 25.
171 RABE, *supra* note 13, at 104.
172 STAVINS, *supra* note 9, at 25.

ple somewhat or strongly opposed the tax.[173] That number fell to 45% in 2015, as more people witnessed its positive economic impacts.[174]

Contrary to other region's situations, the political party arguing against the carbon tax lost the subsequent election and acknowledged that it was their "axe the tax" policy that cost them the election.[175] Despite the carbon tax implementation, British Columbia's economy grew within the tax's first five years when compared to the rest of Canada.[176] While that growth may not have been attributable to the tax itself, it dispelled any concerns about the regressivity of such measures.[177] In fact, economists have called it "progressive in its distributional impacts" without even considering the effects of its revenue allocation and use.[178] It also has the advantage of being sustained in the long-term as it "creates a large constituency in favor of enacting and keeping the plan . . . and the public may feel that the government does not have the option to 'waste' the carbon tax revenues."[179]

The tax was also successful in reducing transportation fuel and natural gas use between 2012–2015.[180] Reports indicate that British Columbia's fuel consumption "declined by 17 percent compared to the year prior to implementation, and by 19 percent compared to the rest of Canada."[181]

While there is a lot to appreciate about British Columbia's carbon tax, it is far from perfect. Ironically, the exemptions are provided to the most carbon intensive industries, which should be taxed the most.[182] As mentioned above, the carbon tax covers fossil fuels used within the province, resulting in at least two-thirds of the energy extracted in British Columbia being consumed outside of the province.[183] British Columbia itself relies heavily on the production of abundant hydro power for self-consumption and exports.[184] In fact, the carbon tax had little impact on fossil fuel production, and British Columbia is the second Canadian province behind Alberta in fossil fuel exploration and production activities.[185] This, combined with minimal severance tax, has barely affected the exploration and production sector and the tax failed to include methane emissions.[186] The tax exempted methane fugitive emissions from fossil fuel production and transmission,[187] greenhouse growers, and gasoline or diesel used in farming.[188] The exemptions, coupled with exploration and production bans or restrictions in other Canadian provinces, like Quebec, resulted in British Columbia's share of Canada's overall

---

173 *Id.* at 29.
174 *Id.*
175 RABE, *supra* note 13, at 106.
176 *Id.* at 108.
177 *Id.*
178 STAVINS, *supra* note 9, at 25.
179 INT'L MONETARY FUND, *supra* note 35, at 17.
180 Kaufman, *supra* note 108.
181 KAUFMAN ET AL., PUTTING A PRICE ON CARBON: REDUCING EMISSIONS 20 (2016).
182 Driesen, *supra* note 55, at 48.
183 RABE, *supra* note 13, at 90.
184 *Id.* at 89.
185 *Id.*
186 RABE, *supra* note 13, at 116.
187 Murray & Rivers, *supra* note 168, at 4.
188 RABE, *supra* note 13, at 113.

natural gas production to increase from 12.2% in 2000 to 27% in 2012.[189] While British Columbia's government estimates that its carbon tax would reduce three million tons of carbon annually by 2020, researchers are skeptical and have "questioned whether emissions have been reduced."[190] Additionally, due to public pushback against rising taxes, the carbon tax was frozen at CA$30, resulting in an increase of emissions again.[191]

Ireland also imposed a carbon tax of approximately $20 per ton and, unlike British Columbia, did not pursue revenue neutrality.[192] The tax went into operation soon after approval, generated one billion euros within the first three years of operations, and reduced greenhouse gas emissions by 15% between 2008 and 2012.[193]

Unlike regions that implemented a carbon tax, experiments with cap-and-trade have made it clear these policy initiatives do not self-implement and require a careful policy design, substantial funds, resources, and a significant lead time between conception and implementation. Together, these factors demonstrate a requirement for a high degree of public management. For perspective, it took the experienced and resourceful CARB six years to implement California's cap-and-trade mechanism compared to British Columbia's carbon tax implementation, which occurred within five months.[194] Economists suggest that "the simplest cap-and-trade system will involve greater complexity than the simplest carbon tax," with the former having "greater complexity in design elements [which] frequently translates into greater administrative burden for the system's implementation."[195]

Instead, carbon taxes "build on decades of experience with commodity taxation and rely principally on a small set of policy professionals based in finance departments" and have a quick implementation period.[196] Taxes generate more revenue than cap-and-trade frameworks and do not have generous offset mechanisms.[197] The highest tax rate is $140 per ton of CO_2 (in Sweden), compared to the highest cap-and-trade price of $ 24 (in Alberta), and analysis has shown that the average carbon tax is also "65% higher than the average ETS allowance price."[198] In 2017, carbon taxes, in aggregate, generated $21 billion compared to $11 billion generated by cap-and-trade mechanisms.[199] Another reason for a carbon tax's ability to generate more revenue is the absence of free allowances and a generous offset scheme, which give non-compliers significant wiggle room to avoid the regulatory regime.[200]

Additionally, where a tax remains constant to externalities and uncertainties, cap-and-trade prices drop and rise depending on whether the economy is experiencing a

189 *Id.* at 117.
190 STAVINS, *supra* note 9, at 25.
191 Ball, *supra* note 39, at 142.
192 RABE, *supra* note 13, at 122.
193 *Id.*
194 *Id.* at 169.
195 STAVINS, *supra* note 9, at 15.
196 RABE, *supra* note 13, at 201.
197 Haites et al., *supra* note 30, at 130.
198 *Id.* at 116.
199 *Id.* at 130.
200 *Id.* at 130–31.

recession or a boom.[201] A carbon tax also "eliminates the potential for short-term price volatility," which is inevitable under a cap-and-trade framework.[202] This price stability is better for businesses, allowing them to be better informed and "better evaluate potential mitigation options."[203] An added carbon tax benefit is the double dividend it generates, relative to other policies such as renewable portfolio standards, by making fossil fuel-based power less competitive and viable, while simultaneously sending a price signal to investors to build more renewable energy capacity.[204]

Taxes also have their fair share of challenges in terms of implementation, coverage, tax base, exemptions, and differential tax rates.[205] Researchers have been unable to find "a single jurisdiction that regularly tracks emissions subject to its carbon tax."[206]

One major advantage that cap-and-trade has over carbon taxes is that taxes generally require super majorities in legislatures, while cap-and-trade frameworks require a simple majority,[207] making it difficult to build sufficient political buy-in in the current hyper-partisan environment. For instance, in California, cap-and-trade is more feasible because it requires a legislative simple majority as opposed to "two thirds of the legislature when it comes to taxes."[208] The EU, too, preferred its ETS over carbon taxes for the same reason, as fiscal measures like carbon taxes require "unanimity in the Council of the European Union," compared to a simple majority for cap-and-trade measures.[209]

Another common criticism of carbon taxes is that the overall amount of emissions is uncertain relative to cap-and-trade—where the governments can set a cap and then gradually reduce that cap, giving the amount of emissions reduced a degree of certainty.[210] However, that carbon tax impediment is not insurmountable and can be mitigated through various methods, including a tax readjustment formula, periodic government review, or dedicated tax revenue for emission mitigation activities.[211] There is also a risk that a simple tax proposal might become significantly more complex as it passes through the legislature, so there is no guarantee that a carbon tax would always be uncomplicated and easy to establish.[212]

VI. Is Carbon Pricing an Adequate Tool On Its Own?

Carbon pricing attempts have been inadequate to prevent global temperatures from increasing. "As of 2019, existing carbon pricing schemes only cover about 20% of global

201 *Id.* at 129.
202 STAVINS, *supra* note 9, at 12.
203 Haites et al., *supra* note 30, at 129.
204 David Adelman & David Spence, *U.S. Climate Policy and the Regional Economics of Electricity Generation*, ENERGY POL'Y 268, 271 (2018).
205 Haites et al., *supra* note 30, at 118, 120.
206 *Id.* at 125–26.
207 RABE, *supra* note 13, at 9, 19.
208 Haites et al., *supra* note 30, at 117.
209 STAVINS, *supra* note 9, at 26.
210 Song, *supra* note 130.
211 STAVINS, *supra* note 9, at 16.
212 *Id.* at 15.

emissions and more than two-thirds of these have prices below US$20 per ton of CO_2 equivalent."[213] Only a handful of jurisdictions have attained actual emission reductions while most that have implemented a carbon tax have only achieved reductions relative to a business-as-usual scenario.[214] Research suggests that only Sweden, Switzerland, Finland, and Liechtenstein have a high enough carbon tax to meet the goals of Paris Agreement.[215]

Notwithstanding the actual tax amount imposed, any policy as polarizing as carbon pricing must undergo various political lifecycles. First, there must be a sufficient political foundation "to adopt a carbon pricing policy" and "to allow for the initial and successful launch of a policy prior to any subsequent election or change of political leadership."[216] Second, any carbon pricing policy must be able to "survive a subsequent election that delivers a change of leadership or partisan control of government" and "set performance goals linked to reduced emissions and achieve these in a cost-effective manner over time" to be successful.[217]

An optimal carbon tax should impose a uniform price per ton of CO_2 emitted, which is reflective of emissions' true social cost.[218] The IPCC provides some price ranges for carbon, which even the most determined politicians would balk at: $135–$6,050 per ton of CO_2 in 2030, $245–$14,300 per ton of CO_2 equivalent in 2050, $420–$19,300 per ton of CO_2 in 2070, and $690–$30,100 per ton of CO_2 in 2100.[219] According to the World Bank's estimates, by 2030, carbon dioxide's average price will be $75 per ton, compared to the average price of $2 per ton of CO_2 in 2019.[220] For perspective, in 2019, Mexico's carbon tax was between $1–$3 per ton of CO_2 (covering 47% of emissions), Japan's tax was $3 per ton (covering 68% of the country's emissions), Chile's and Columbia's carbon tax was $5 per ton (covering 39% and 40% of emissions, respectively), and South Africa's carbon tax was at $10 per ton (covering only 10% of the country's emissions).[221]

Even when the carbon tax is too low to account for all social costs, supplementing it with additional programs "at a higher cost than the tax would likely move the overall carbon abatement level closer to optimality."[222] And while the cost of businesses may increase due to additional taxes, which will most likely be passed on to consumers, those taxes will go to the government, which has the option to either use those revenues for social programs or offer taxpayers rebates, as the British Columbia government did.

Carbon pricing alone cannot significantly curb carbon emissions. Governments need to supplement even an effective carbon pricing regime with additional programs. "The dominant logic of contemporary climate policy, in which carbon pricing is the central policy response, is deeply flawed. Given the aforementioned shortcomings, carbon pric-

213 Rosenbloom et al., *supra* note 32, at 8665.
214 *Id.*
215 Haites et al., *supra* note 30, at 155.
216 *Id.* at 45, 54.
217 *Id.* at 59, 77.
218 *Id.* at 118.
219 The World Bank, State and Trends of Carbon Pricing 22 (2019).
220 Int'l Monetary Fund, *supra* note 35, at 3.
221 *Id.*
222 Driesen, *supra* note 55, at 69.

ing should not be the primary policy strategy to combat climate change."[223] The IMF notes this issue acknowledging that "in absence of accompanying measures, carbon pricing may face stiffer opposition from energy-using industries and the public at large."[224]

Studies have demonstrated that a carbon tax, with additional government programs, works better than a cap-and-trade program.[225] The reason is that supplementary programs result in emissions' reductions, slashing the tax bill, and the taxpayers, therefore, have an incentive to back such supplementary programs.[226] In fact, economists have argued that, if a cap-and-trade framework is paired with supplemental policies, there is no emissions' net reduction but there is an increase in abatement costs and lower allowance prices, disincentivizing emitters to innovate or find ways to reduce their emissions.[227] On the contrary, "when a carbon tax is paired with complementary policies, the emissions-leakage effect (and allowance price suppression) does not occur, and the complementary policy will serve to reduce emissions below the level that tax alone would achieve."[228]

In contrast, traders wishing to sell credits under a cap-and-trade program would be opposed to emissions' reductions as it would negatively affect credit demand and, therefore, disincentivize them from reducing their carbon emissions to generate those credits. "[T]rading in the offset context may add an opportunity cost to the compliance costs generated by a new program and intensify resistance to new programs for that reason."[229] While both taxes and cap-and-trade generate opportunity costs, taxes' lack of price certainty benefits the environment, as it would encourage more cooperation amongst polluters.[230] Supplemental programs "clearly become less effective in conjunction with a trading program than they would be if enacted in conjunction with a pollution tax" and a trading program "clearly impedes realization of environmental benefits through supplemental programs."[231] California epitomizes this, as "factors other than the carbon market led power producers to curb their emissions, leaving companies with extra permits that they had gotten from the state for free," resulting in a low price of carbon.[232]

Notwithstanding that cap-and-trade does not play well with supplementary policies, critics of the framework are also skeptical of its efficiency as a standalone policy instrument to curb emissions. It is argued that "cap and trade is rarely stringent enough when used alone."[233]

---

223 Rosenbloom et al., *supra* note 32, at 8668.
224 INT'L MONETARY FUND, *supra* note 35, at 6.
225 Driesen, *supra* note 55, at 54–55.
226 *Id.* at 55.
227 STAVINS, *supra* note 9, at 13.
228 *Id.*
229 Driesen, *supra* note 55, at 59.
230 *Id.* at 61.
231 *Id.* at 61–62.
232 Ball, *supra* note 39, at 141.
233 Song, *supra* note 130.

VII. Need for Supplemental Policies

To address the climate emergency, countries and regions need to adopt a dynamic approach, which includes a carbon price. Experts indicate that even a $25 per ton, CO_2 tax, over an extended period, would have a meaningful impact in reducing CO_2 emissions.[234] It is estimated that a carbon tax of $25 per ton of CO_2 would reduce 56% of China's carbon emissions.[235] Additionally, it would make carbon intensive fuels less competitive, allowing cleaner technology to fill that void. A $75 per ton of CO_2, as recommended by the World Bank, would increase the price of coal by 200% and the price of natural gas by 70%, on average, resulting in carbon and methane emissions reduction.[236]

Carbon taxation gives price signals that give "the most powerful and efficient incentives for households and firms to reduce CO_2 emissions."[237] A carbon tax is necessary not only for the revenue it generates—in 2018, carbon pricing initiatives collectively raised $44 billion—but also because it incentivizes the private sector to find innovative ways to curb emissions.[238] The manner in which revenue is allocated "could further raise or lower emissions," but would likely lower CO_2 emissions if used to fund mitigation measures.[239]

Carbon pricing mechanisms, despite their limitations, have nonetheless positively contributed to emission reduction. In 2015, the U.S. produced the same amount of electricity as 2005 but with 19% lower CO_2 emissions and 12% lower emissions from greenhouse gases, despite economic growth and recovery from a major recession.[240] It is debatable whether this can be attributed to carbon pricing mechanisms, but at least these programs have not had a grossly negative impact.

Nevertheless, carbon pricing policies alone are not silver bullets that drastically cut carbon-based fuel consumption. Accordingly, carbon pricing initiatives need to be supplemented with other policies.[241] Experts agree that, "as climate change intensifies, it becomes increasingly important to pursue all elements of an integrated climate response."[242] It is postulated that "most political economies are highly resistant to high carbon prices" and no government is willing to impose a price high enough to drive deep emission reductions.[243] Because our lifestyles are so intertwined with and reliant on fossil-fuel-based energy, overcoming the climate emergency by transitioning to cleaner energy will require more than a mere price signal. "These transitions entail profound and

---

234 Adelman & Spence, *supra* note 203, at 271; David Adelman, *Modeling the Evolution of a Greener Grid*, EnergyTradeoffs.com (May 12, 2019), https://www.energytradeoffs.com/2019/05/12/david_adelman/.

235 Int'l Monetary Fund, *supra* note 35, at 11–12.

236 *Id.* at 8.

237 *Id.* at 22.

238 The World Bank, State and Trends of Carbon Pricing 11, 22 (2019).

239 Haites et al., *supra* note 30, at 124.

240 Rabe, *supra* note 13, at 185–86.

241 *Id.* at 84.

242 Andrew E. Dessler & Edward A. Parson, The Science and Politics of Global Climate Change: A Guide to the Debate 175 (3rd ed. 2019).

243 Nordhaus & Shellenberger, *supra* note 10.

interdependent adjustments in sociotechnical systems that cannot be reduced to a single driver, such as shifts in relative market prices."[244]

Ideally, any carbon tax should be industry-agnostic and apply to all emitters uniformly to create a fair, level playing field. According to economists, any attempt to tax carbon should be such that the "tax rate is the marginal benefit of the emissions reduction or, equivalently, the monetized damages from emitting an additional ton of carbon dioxide (CO_2). The carbon externality will then be internalized, and the market will find cost-effective ways to reduce emissions up to the amount of the carbon tax."[245] Exempting the worst offenders and biggest CO_2 emitters, which has been the case for most carbon pricing frameworks until now, is inexcusable. "The use of fossil fuels is the major cause of greenhouse gas emissions, and any genuine effort to reduce emissions must begin with fossil fuels."[246] The narratives around climate change must include not only consumer lifestyles and emissions but also production and transmission of fossil fuels.[247]

Additionally, carbon pricing is better at squeezing some sectors than others. It has worked well in the electricity sector because cleaner and cheaper alternatives are readily available.[248] Residential consumers and businesses are often better off locking in cheaper electricity for a considerable duration of time.[249] On the other hand, emissions from building, responsible for 6% of global carbon emissions, are not influenced by carbon pricing initiatives, as the builders often do not inhabit the building and will neither benefit nor be responsible for the energy bills.[250] Similarly, the transportation sector's billions of vehicles, dependent on fossil fuels, is made of individual owners who neither have a reasonably affordable alternative nor are responsive to modest hikes in petroleum prices.[251] Industries such as cement and steel production, which are very carbon intensive, face a similar problem of not having reasonable alternatives and, therefore, with no price on carbon, there is little incentive to alter their processes.[252]

The revenue generated from carbon taxes or auctioning off allowances pale in comparison with severance taxes; therefore, governments are reluctant to axe major sources of revenue.[253] For perspective, in its best year, British Columbia's carbon tax generated $918 million, compared to the $6 billion that Texas generated from severance tax in the same year.[254] Even the most successful carbon-pricing models have been forced to create revenue-neutral incentives and return the benefits back to the community.

---

244 Rosenbloom et al., *supra* note 32, at 8665.

245 Kenneth Gillingham & James H. Stock, *The Cost of Reducing Greenhouse Gas Emissions*, 32 J. ECON. PERSP. 53, 53 (2018).

246 Robert Howarth, *A Bridge to Nowhere: Methane Emissions and the Greenhouse Gas Footprint of Natural Gas*, 2 ENERGY SCI. & ENG'G, 47, 57 (2014).

247 MARSHALL, *supra* note 26, at 172.

248 *See How Falling Costs Make Renewables A Cost-Effective Investment*, INT. RENEWABLE ENERGY ASS'N (June 2, 2020), https://www.irena.org/newsroom/articles/2020/Jun/How-Falling-Costs-Make-Renewables-a-Cost-effective-Investment.

249 *Should I Lock in My Electric Rate?*, CONSTELLATION, https://www.constellation.com/energy-101/should-i-lock-in-my-electric-rate.html (last visited Apr. 16, 2021).

250 Ball, *supra* note 39, at 138.

251 *Id.*

252 *Id.* 138, 144.

253 RABE, *supra* note 13, at 196.

254 *Id.* at 197.

Critics of carbon pricing overreliance to effectuate deep decarbonization suggest that, "because carbon pricing is giving humanity the illusion that it is dealing responsibly with climate change, it is reducing the pressure to adopt other carbon-cutting measures, ones that would hit certain sectors harder and that would produce faster reductions."[255]

To tackle this global emergency, it is imperative that governments are willing to impose carbon pricing, comprehensively and without exception, across the global economy.[256] Carbon pricing needs to operate alongside other alternatives that are less polarizing and have broader appeal.

VIII. Supplementary Policies

A. Public Investment in Technological Advancements

Some argue that, by putting a meaningful price on carbon, governments "can unlock trillions of dollars in climate finance from companies and investors in the private sector," which can then be used to finance the low-carbon, clean energy transition.[257] Environmental policy experts have touted public investment, instead of market or private sector innovation, as the key driver "to help bring competitive technologies to market" and transition towards clean technology.[258] According to the World Bank, "annual global investment in low-carbon technologies would have to rise by about US$700 billion by 2030" to meet the Paris Agreement's goals.[259] Revenue needs to be allocated towards essential, high-cost technological innovation to ensure that: (a) workable technologies are scaled to become viable at a faster pace, and (b) minimal disruptions are caused to businesses that must limit their carbon emissions. Public support for research and development is one effective way to address market distortions and "provide more certainty over the demand for clean technologies."[260] Public infrastructure investment also helps tackle network externalities, where additional infrastructure is needed to access energy generated from cleaner sources.[261] On their own, carbon pricing initiatives have done little to stimulate such technological investment, even in places such as Sweden where the carbon price has been as high as $140 per ton of CO_2.[262]

It is essential that public investments are directed towards clean energy to achieve deep decarbonization "because no effort to achieve deep reductions in carbon emissions, domestic or international, will succeed as long as low-carbon energy technologies cost vastly more than current fossil fuel-based energy."[263] Numerous industries, including transportation, oil and gas, electricity, agriculture, smelting, and heating and cooling

255 Ball, *supra* note 39, at 138, 143.
256 Elgie & Cairns, *supra* note 62.
257 Feike Sijbesma, *Why Carbon Tax is Crucial to Curbing Climate Change*, World Econ. Forum (Sept. 22, 2019), https://www.weforum.org/agenda/2019/09/how-do-we-fund-the-sdgs-by-putting-a-price-on-carbon/.
258 Nordhaus & Shellenberger, *supra* note 10.
259 Ball, *supra* note 39, at 138–39.
260 Int'l Monetary Fund, *supra* note 35, at 20.
261 *Id.* at 20–21.
262 Rosenbloom et al., *supra* note 32, at 8665.
263 Nordhaus & Shellenberger, *supra* note 10.

emit significant carbon emissions.[264] A uniform carbon tax would enable governments to generate significant revenues that could be directed towards green initiatives, such as upgrading electricity transmission and distribution networks or subsidizing the costs of solutions that are either on the fringes (like hydrogen-based energy) or are currently too costly (like carbon capture technology). Scientists also propose CO_2 photoreduction, which entails mixing CO_2 with water and exposing it to direct sunlight; this process converts CO_2 into "hydrocarbon fuels that can be readily used within our current energy infrastructure."[265] "Those who emit carbon will help fund the investments to reduce it—'user pay'—and benefit themselves along the way."[266]

The rapid growth of photovoltaic technology to generate electricity from the sun, and the side benefits of reduced electricity prices, are clear indicators that money raised through carbon pricing needs to be used to provide subsidies to the research and development sector.[267] Economists recommend that the focus should be on long-term policies, as any attempt to achieve deep decarbonization would require "new technology deployed on a vast scale."[268] Congress appropriated $5.4 billion towards research and development in 2014, which included funding research towards renewables, energy efficiency, advanced nuclear power, reliable electricity transmission and distribution, and fossil fuel research and development, which "includes both the development of methane hydrate for energy use and carbon capture, storage, and utilization."[269] This is a not a radical concept. In the 1950s, the U.S. imposed taxes on gasoline, tires, and other transportation related items and used the revenue to fund interstate highways.[270]

Alternatively, in the U.S., fifteen states and the District of Columbia have public benefit funds that are collected through trivial charges on consumer bills or through utilities' contributions.[271] Rather than imposing a carbon tax, these charges are imposed on all commercial and residential electricity consumption, "not just that drawn from fossil fuels, and are so best described as a user fee or a charge on consumption rather than a pure carbon tax."[272] The public benefit funds are used to facilitate and support renewable-energy and energy-efficient programs.[273] They have also been used for renewable energy research and development and the development of renewable energy education programs.[274] These programs vary from state to state, in terms of their design, sizes, and

---

264 *See Sources of Greenhouse Gas Emissions*, ENV'T PROT. AGENCY, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions (last visited Apr. 12, 2021). *See also Greenhouse Gas Reporting Program*, ENV'T PROT. AGENCY, https://www.epa.gov/ghgreporting/ghgrp-metals (last visited Apr. 12, 2021) (providing an overview of emissions from smelting).

265 Sorcar et al., *supra* note 5, at 3.

266 Elgie & Cairns, *supra* note 62.

267 Gernot Wagner, *Carbon Taxes Alone Aren't Good Climate Policy*, BLOOMBERG (Feb. 6, 2020), https://www.bloomberg.com/news/articles/2020-02-06/carbon-taxes-alone-aren-t-good-climate-policy-gernot-wagner.

268 Gillingham & Stock, *supra* note 244, at 69.

269 Gundlach, *supra* note 92, at 29.

270 EISEN ET AL., *supra* note 91, at 1183.

271 *Id.* at 870.

272 RABE, *supra* note 13, at 237.

273 *Id.* at 345.

274 *Id.* at 870.

extra revenue utilization.[275] In Texas, for example, where carbon taxes are hotly opposed, the public benefit funds were used to upgrade transmission and distribution networks and increase transmission capacity.[276]

Public policy think tanks argue that "there is a need for a major investment in public infrastructure to support a low-carbon economy. The list of key investments includes a smart electrical grid (to support more efficient energy use and enable clean power producers to feed in); public transit (more buses, rails and trains to replace cars and planes); clean energy generating facilities (both public and private); distribution capacity to support carbon capture and storage; energy-efficient public building and housing; and research to advance low-carbon technology."[277]

B. Renewable Portfolio Standards and Feed-in Tariffs

Similarly, aggressive renewable portfolio standards (RPS) or clean energy standards (CES) can accelerate the transition towards cleaner electricity sources, as has happened across various U.S. states. It is estimated that such RPS and CES programs have contributed towards creating one-third of U.S. non-hydro renewable electricity.[278] Experts suggest that only an aggressive RPS, requiring retailers to procure more than half of their electricity from renewable sources, would effectively decrease CO_2 emissions.[279]

In the U.S., there have been calls to have a federal RPS because "state policies alone simply have not prompted the development of enough renewable energy projects."[280] Barriers that a federal RPS system would have to overcome include the need for affordable transmission and a "more just, diverse, and predictable national market for renewable resources without significantly increasing aggregate electricity prices."[281] The lack of transmission lines considerably hampers the increase of renewable capacity being added to the grid. Because state Public Utility Commissions (PUCs) still have the siting authority for transmission lines, cross-state transmission lines require approvals and certificates from multiple states. In the event a transmission line confers no benefits to a particular state, a state PUC may decide not to approve the line, jeopardizing the entire project.[282] Furthermore, new transmission line construction projects are costly, raising the issue of who pays for them.[283] A federal RPS "would decrease the capitalization costs of new transmission, speed cost recovery on transmission infrastructure, and provide new avenues for conventional generation, buying time for carbon sequestration technologies to become commercially viable."[284]

---

275 *Id.*
276 Rabe, *supra* note 13, at 237.
277 Elgie & Cairns, *supra* note 62.
278 Eisen et al., *supra* note 91, at 837–38.
279 *See* Adelman & Spence, *supra* note 203, at 272 (However, the authors are comparing a model where a jurisdiction has either carbon tax or RPS and is subject to that region's dependence on coal-fired power.).
280 Eisen et al., *supra* note 91, at 862.
281 Christopher Cooper, *A National Renewable Portfolio Standard: Politically Correct or Just Plain Correct?*, 21 The Elec. J. 9, 16 (2008).
282 Eisen et al., *supra* note 91, at 875.
283 Cooper, *supra* note 280, at 16.
284 *Id.*

A lack of a federal RPS is also hindering the states' pursuit of their RPS programs due to the extensive interconnectivity of the western and eastern grids, respectively. This situation is worsened "in states where utilities participate in wholesale markets for electricity."[285] A recent federal court judgment epitomizes this issue. A court found that a Minnesota statute attempting to regulate CO_2 emissions, from out-of-state, imported electricity, by prohibiting its utilities from entering into long-term agreements with other states' non-renewable electricity producers was invalid because it violated the commerce clause and was preempted by the Clean Air Act and Federal Power Act.[286]

Beyond state RPS mandates that require utilities to procure a certain percentage of electricity from renewables, local governments can have their own RPS and take an active role in ensuring their city is powered through clean energy. Austin, Texas, is a great example. The entire City's municipal-owned facilities are powered with 100% renewable energy, and Austin has committed that 65% of its energy will be procured from renewable sources by 2025.[287] By 2035, it plans to source 100% of its electricity from renewables.[288] It easily achieved its 2020 target: Austin aimed to have 50% of its electricity from renewable sources by 2020 and instead procured 56% of its energy from renewable sources in 2019.[289] Further, Austin will "no longer purchase, contract for or build long-term generation or storage resources that emit new carbon" except for emergency back-up generation.[290] Austin is also looking to add fast-response storage and has a target of 200 MW to store electricity.[291] However, such initiatives are only possible where the local government, instead of investor-owned utilities, generate and provide electricity to customers.[292]

A well-structured feed-in tariff (FIT) policy instead of RPS programs could better accelerate renewable energy source deployment to the grid, as it provides investors long-term certainty by guaranteeing above-market rates for a fixed term, making it easier for investors to secure financing.[293] FIT proponents often cite Germany as an example. Germany adopted a FIT policy instead of an RPS program, resulting in the country exceeding all of its targets—well ahead of schedule.[294] In 2019, 46% of its total energy was

285 EISEN ET AL., *supra* note 91, at 863.

286 North Dakota v. Heydinger, 825 F.3d 912, 922 (8th Cir. 2016).

287 *City of Austin—Renewables Portfolio Standard*, NC CLEAN ENERGY TECH. CTR., https://programs.dsireusa.org/system/program/detail/897 (last updated Apr. 27, 2015); EISEN ET AL., *supra* note 91, at 864.

288 AUSTIN ENERGY, AUSTIN ENERGY RESOURCE, GENERATION AND CLIMATE PROTECTION PLAN TO 2030 2 (2020), https://austinenergy.com/wcm/connect/6dd1c1c7-77e4-43e4-8789-838eb9f0790d/2027+Austin+Energy+Resource+Plan+20171002.pdf ?MOD=AJPERES&CVID=lxv4zHS.

289 *Latest Wind Contract Gets Austin to 56% Renewable Energy, 80% Carbon Neutral*, SIERRA CLUB (Apr. 3, 2019), https://www.sierraclub.org/texas/blog/2019/04/latest-wind-contract-gets-austin-56-renewable-energy-80-carbon-neutral.

290 AUSTIN ENERGY, *supra* note 287, at 2.

291 *City of Austin—Renewables Portfolio Standard*, *supra* note 286.

292 EISEN ET AL., *supra* note 91, at 864.

293 *Id.* at 821, 840.

294 Mormann et al., *supra* note 125, at 82.

sourced from renewable sources.[295] In the first quarter of 2020, renewable sources were responsible for 52% of Germany's total electricity.[296] Germany's FIT policy is quite dynamic, with "some thirty different FITs custom-tailored to address the needs of over ten distinct renewable energy technologies and applications while also accounting for differences in size, location, etc."[297] Some researchers, however, consider RPS and FIT to be mutually exclusive, as the former prescribes "how much customer demand must be met with renewables," and FIT encourages "new supply development by providing investor certainty."[298]

Economists credit FITs for substantially and swiftly reducing solar panel price and for making solar competitive with natural gas and coal in a short period of time.[299] The high, guaranteed prices offered through FITs created a high demand and an early push towards innovation with a view to reduced costs.[300] The German Energiewende is credited for subsidizing solar cost for the rest of the world.[301]

Rapid and extensive adoption of solar PVs in Germany, despite less-than-ideal solar resources, is considered to be another bright spot in Germany's narrative.[302] Experts point towards the crucial role of "'soft costs,' such as the cost of financing, permitting, installation, and grid access," along with a well-structed FIT policy, in such widespread deployment of solar PVs.[303] These soft costs are more essential and play a more critical role than financial incentives.[304]

There have been concerns that an increase in intermittent electricity would jeopardize the grid.[305] However, there is little merit in these claims, as Germany and California evidence, where an increase in solar and wind energy has simultaneously resulted in reduced outages and fewer grid interruptions.[306] Renewable energy source deployment will also create significantly more jobs per GWh than the coal and natural gas sectors.[307]

---

295 Vera Eckert & Jan Harvey, *Renewable Energy's Share of German Power Mix Rose to 46% Last Year: Research Group*, REUTERS (Jan. 3, 2020), https://www.reuters.com/article/us-germany-power-outputmix/renewable-energys-share-of-german-power-mix-rose-to-46-last-year-research-group-idUSKBN1Z21K1.

296 *Renewables Make Up Over Half of Germany's Power Mix*, DEUTSCHE WELLE (Jan. 4, 2020), https://www.dw.com/en/renewables-make-up-over-half-of-germanys-power-mix/a-52986924.

297 Mormann et al., *supra* note 125, at 91.

298 EISEN ET AL., *supra* note 91, at 840.

299 Silvio Marcacci, *Renewable Energy Prices Hit Record Lows: How Can Utilities Benefit from Unstoppable Solar and Wind?*, FORBES (Jan. 21, 2020), https://www.forbes.com/sites/energyinnovation/2020/01/21/renewable-energy-prices-hit-record-lows-how-can-utilities-benefit-from-unstoppable-solar-and-wind/.

300 Gillingham & Stock, *supra* note 244, at 64.

301 *Id.* at 64. Energiewende, literally meaning energy transition, is a government-led initiative to reduce Germany's dependency on fossil fuels and transition towards toward cleaner sources of energy.

302 Mormann et al., *supra* note 125, at 63.

303 *Id.* at 59.

304 *Id.* at 85.

305 *Id.* at 59.

306 *Id.* at 87.

307 *Id.* at 74.

C. Increase in Transmission and Distribution Network

Any increase in energy generation from cleaner sources must be accompanied with an increase in the capacity of associated transmission and distribution networks. Investors are likely to be disincentivized to build clean power plants if electricity from newly installed plants would not be transmitted to the grid or would face curtailment due to transmission line congestion. Furthermore, even if new, clean energy facilities are built, transmission network congestion will result in electricity being curtailed and not dispatched to the grid.

California illustrates this problem. California has a clean energy goal of producing 100% clean energy by 2045, and it has been installing new renewable capacity at a rapid pace.[308] However, in absence of adequate facilities to store such electricity and without a corresponding increase in its transmission network, a significant amount of energy generated from wind and solar is curtailed and wasted.[309] For example, 223,195 MWh were curtailed from California wind and solar energy facilities in May 2019, and a total of 630,864 MWh of renewable energy was curtailed from January to May 2019, an increase of 2.19 times for the same period in 2018.[310] Between 2018 and 2019, transmission constraints were responsible for 50–60% of such curtailment.[311]

Texas's Competitive Renewable Energy Zones (CREZ) project's $7 billion investment in the state's transmission and distribution network epitomizes how best to tackle the issue.[312] The Texas CREZ project is a model to enhance and expand existing transmission networks in a short span of time and could be implemented in other regions facing transmission constraints.[313]

The Texas Legislature tasked the state's Public Utility Commission (PUC) to identify potential development areas for large wind farms to construct new transmission lines in these areas.[314] Accordingly, to overcome the "chicken and the egg" problem, the Electric Reliability Council of Texas (ERCOT) was instructed by the PUC to assess wind resources and "assess the transmission constraints most likely to limit transmission from wind energy resources."[315] ERCOT's assessment led the PUC to designate multiple CREZ and select routes for building new transmission lines.[316] To facilitate construction and incentivize developers, the Texas Legislature permitted the PUC to "disregard two key factors—the adequacy of existing service and the need for additional service."[317] The

---

308 Peter Maloney, *Calif. Sets Record for Solar, Renewable Curtailments*, Am. Pub. Power Assoc. (June 25, 2019), https://www.publicpower.org/periodical/article/calif-sets-record-solar-renewable-curtailments.

309 *See id.*

310 *Id.*

311 Mark Specht, *Renewable Energy Curtailment 101: The Problem that's Actually Not a Problem at All*, Union of Concerned Scientists (June 25, 2019), https://blog.ucsusa.org/mark-specht/renewable-energy-curtailment-101.

312 *See* Mormann et al., *supra* note 125, at 81.

313 Ernest E. Smith et al., Wind Law §7.03 (2019).

314 Eisen et al., *supra* note 91, at 874.

315 Ernest E. Smith et al., *supra* note 312.

316 *Id.*

317 Mormann et al., *supra* note 125, at 81.

Certificate of Convenience Necessity process for these transmission lines was expedited and these lines were completed in 2014.[318]

This was quite an avant-garde approach to incentivize producers to install wind generation facilities, and it has paid off. CREZ was "instrumental in reducing wind energy curtailment in Texas from 17% in 2009 to 0.5% in 2014."[319] CREZ projects have added approximately 3,600 miles of transmission lines to cater to 18,500 MW of wind energy.[320] Not only did Texas cross its 1999 and 2005 RPS targets well before schedule, it has now installed approximately 30,000 MW of wind energy—more wind capacity than the next three states combined (Iowa, Oklahoma, and California).[321] In 2019, Texas accounted for approximately 28% of all U.S. wind-powered electricity.[322] This would not have been possible without a significant amount of investment in its transmission and infrastructure network.[323] Most of this was funded by adding monthly surcharges to consumers' electricity bills, as approved by the PUC.[324]

D. Biofuels

Emissions are also a major issue in the transportation sector. In 2018, the transportation sector accounted for 28.2% of CO_2 emissions in the U.S., the most of any sector.[325] Globally, the transportation sector contributes 14% of the total GHG emissions.[326] "Transportation GHG emissions have been growing steadily in recent decades and are the fastest growing source of U.S. emissions."[327] Therefore, any meaningful deep decarbonization efforts would require CO_2 emissions reductions from the transportation sector. The challenge is not easy, with billions of oil-dependent cars on the road. In 2018, petroleum products constituted 92% of the total fuels consumed in the U.S. transportation energy.[328] Having a carbon price would incentivize consumers to alter their petroleum consumption, as illustrated by British Columbia's example. However, there is a relatively easy and quick solution to the problem: biofuels.

These are fuels derived from plant matter, such as ethanol used cooking oil, and have been touted as a substitute to gasoline and fossil fuels.[329] In Sweden, biofuels now "provide 60% of heat to buildings, a figure which doubled during the first 10 years of the carbon tax."[330]

---

318 Ernest E. Smith et al., *supra* note 312.
319 Mormann et al., *supra* note 125, at 81.
320 *Id.*
321 Rabe, *supra* note 13, at 238–39.
322 *Texas: State Profile and Energy Estimates*, U.S. Energy Info. Admin., https://www.eia.gov/state/?sid=&TX (last updated Mar. 19, 2020).
323 Mormann et al., *supra* note 125, at 81.
324 Rabe, *supra* note 13, at 239.
325 *Sources of Greenhouse Gas Emissions*, Env't Prot. Agency, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions, (last visited Apr. 12, 2021).
326 *Id.*
327 Freeman, *supra* note 2, at 348.
328 *Use of Energy Explained: Energy Use For Transportation*, Energy Info. Admin., https://www.eia.gov/energyexplained/use-of-energy/transportation.php. (last visited Apr. 12, 2021).
329 Eisen et al., *supra* note 91, at 1196.
330 Frank, *supra* note 14.

Henry Ford in 1925 deemed ethanol as "the fuel of the future."[331] Blending ethanol with gasoline substantially reduces the fuel's carbon content.[332] According to the EPA, "the life-cycle emissions reductions in comparison to gasoline are about 20 percent for corn-based ethanol and 60 percent for sugarcane-based ethanol."[333] Ethanol can be made from any biomass feedstock, including corn, sugarcane, agricultural waste, wood, grasses, beets, sugar, and forest residues, and has about "two-thirds the energy content of gasoline."[334] For farmers, there is also the added benefit of high-energy animal feed as a by-product of ethanol production.[335]

To curb its energy dependence, the U.S. has mandated the use of renewable fuels in gasoline through the Energy Policy Act 2005 (EP Act) and Energy Independence and Security Act (EISA).[336] "The renewable fuel requirements call for 4 billion gallons of renewable fuel to be used in gasoline in 2006 and the amount increases in steps each year to 36 billion gallons in 2022. Thereafter EPA will set the applicable annual volumes."[337]

Research has confirmed that 10% ethanol "can be substituted for gasoline without damaging conventional engines" and "does not affect vehicle performance and the increased fuel consumption is relatively low."[338] Cars manufactured after 2001 can easily accept a blend of 15% ethanol "without causing exceedances of air pollution standards."[339] In any event, "blends of up to 5% ethanol do not cause technological difficulties in any country."[340] In 2012, the EPA approved the 15% blend of ethanol in gasoline, and lawsuits challenging that order have been dismissed.[341] CARB has estimated that corn-based ethanol has approximately 70 percent of the life-cycle CO_2 emissions of petroleum, including the carbon effects of induced land use change. Thus, for blends up to 10 percent, ethanol has negative greenhouse gas emissions reductions costs, and indeed is the market choice. Blending ethanol up to approximately 30 percent continues to enhance octane. The U.S. fueling infrastructure generally cannot handle blends above 10 percent, nor are engines designed to harness those octane advantages to improve energy efficiency, a situation known as the "E10 blend wall." As a result, subsidies are needed to incentivize ethanol consumption in blends higher than E10, and those costs increase quickly when measured in dollars per ton of CO_2 avoided.[342]

---

331 Arnold W. Reitze, Jr., *Biofuel and Advanced Biofuel*, 33 UCLA J. ENV'T L. & POL'Y 309, 310 (2015).

332 Humzah Yazdani, *Why Policy-Makers Need a Climate Toolbox, Not a Silver Bullet*, WORLD ECON. FORUM (Jan. 18 2021), https://www.weforum.org/agenda/2021/01/carbon-pricing-isnt-a-silver-bullet.

333 KAUFMAN ET AL., *supra* note 180.

334 Arnold W. Reitze, Jr., *Biofuels–Snake Oil for the Twenty-First Century*, 87 OR. L. REV. 1183, 1189 (2008).

335 Reitze, *supra* note 333, at 321.

336 *Id.* at 312–13.

337 *Id.* (footnote omitted).

338 Gundlach, *supra* note 92, at 287; Suani Teixeira Coelho et al., *Brazilian Sugarcane Ethanol: Lessons Learned*, 10 ENERGY FOR SUSTAINABLE DEVELOP. 26, 33 (2006).

339 EISEN ET AL., *supra* note 91, at 1198.

340 Coelho et al., *supra* note 337, at 33.

341 Reitze, *supra* note 330, at 316–17.

342 Gillingham & Stock, *supra* note 244, at 60–61.

There are different kinds of biofuels, which can be processed from a variety of feedstocks, allowing countries to utilize and maximize their resources.[343] Brazil, for example, accounts for 25% of the world's ethanol production and produces ethanol from sugarcane instead of corn.[344] Ethanol sourced from sugar cane is the "cheapest source of ethanol" in the world.[345] Brazil has experimented with "fuel flex" cars, which can be operated on any mixture of ethanol and gasoline, up to 100% ethanol.[346] Volkswagen, one of the leading car manufacturers, ensures that all engines manufactured for Brazil can withstand and burn any mixture of gasoline and ethanol.[347] "Brazilian ethanol refining, however, produces twice as much fuel from an acre of sugar cane (about 600 gallons) as U.S. production does from an acre of corn (about 300 gallons)."[348] However, given the U.S. government's control of sugar prices, "which is almost double the world price," experts believe it is unlikely that sugarcane would be utilized for ethanol production in the U.S.[349]

Critics of ethanol-based fuel argue the conversion of corn starch to ethanol requires more energy "than the energy provided by the ethanol produced," as the manufacturing process requires burning significant petroleum product amounts.[350] However, there are studies concluding that, on balance, "corn ethanol has a favorable net energy balance, even before subtracting the energy allocated to byproducts."[351] In comparison with corn-based ethanol, sugar-cane ethanol requires lower energy inputs and, therefore, emits less CO_2 in the manufacturing process.[352] There are also concerns that production of ethanol emits, in significant quantities, carbon monoxide, nitrogen oxides, VOCs, and other hazardous air pollutants.[353] Other documented concerns about conventional biofuels include food shortages, riots and protests, deforestation, and rising food prices.[354] There are also adverse environmental effects of additional corn production, such as excessive water consumption, which have the potential to exacerbate negative environmental change.[355] Production of corn feedstock also relies on fossil fuel-powered equipment for cultivation and harvesting.[356] Studies show that converting forest and grassland to farm land to produce corn-based ethanol "doubled the GHG emissions attributable to corn-based eth-

343 Reitze, *supra* note 330, at 313–14; EISEN ET AL., *supra* note 91, at 1196.
344 Reitze, *supra* note 330, at 322.
345 EISEN ET AL., *supra* note 91, at 1202.
346 Coelho et al., *supra* note 337, at 32–33.
347 John Voelcker, *Driving Entirely on Ethanol: Brazil's Volkswagen Gol Flex-Fuel Vehicle*, GREEN CAR REPORTS (May 19, 2014), https://www.greencarreports.com/news/1092180_driving-entirely-on-ethanol-brazils-volkswagen-gol-flex-fuel-vehicle.
348 *Id.*
349 Reitze, *supra* note 330, at 350.
350 EISEN ET AL., *supra* note 91, at 1199.
351 *Id.*
352 Carolina Cardoso Lisboa et al., *Bioethanol Production from Sugarcane and Emissions of Greenhouse Gases—Knowns and Unknowns*, 3 GCB BIOENERGY 277, 278 (2011).
353 Reitze, *supra* note 333, at 1205.
354 Nadia Ahmad, *Responsive Regulation and Resiliency: The Renewable Fuel Standard and Advanced Biofuels*, 36 VA. ENV'T L.J. 40, 43 (2018).
355 Reitze, *supra* note 330, at 321, 328.
356 *Id.* at 324.

anol."[357] Another argument against ethanol-based biofuels is the food waste that occurs—at a time when significant parts of the world are suffering from famine and malnutrition.[358] However, as mentioned earlier, biofuels can be sourced from a variety of feedstocks.

Research shows that ethanol is "a superior energy source compared to gasoline" and that "ethanol combustion emissions are less harmful than those from gasoline or diesel."[359] Additionally, burning biofuels "produces no net increase in atmospheric carbon," unlike fossil fuels.[360]

To address the concerns surrounding ethanol production, the biofuels industry is pursuing the second generation of biofuels, called advanced biofuels, which include fuels derived from algae, seaweed, plant or animal residues, and food waste.[361] Advanced biofuels are a renewable fuel subset. "It is ethanol not derived from corn that has fifty percent or less lifecycle greenhouse gas (GHG) emissions than the gasoline or diesel it is replacing."[362] Companies like Exxon Mobil are aiming to produce 10,000 barrels a day of algae-based biofuels by 2025.[363] Algae-based biofuels are considered to have more potential as a fuel source in the long run, as they "can be processed to produce both ethanol and biodiesel," and require considerably less water for ethanol production.[364] It also requires considerably less land use, making it a more appealing than growing soybeans and corn for ethanol production.[365]

While cost is currently a huge barrier for algae-based biofuels, with a barrel ranging from $140–$900, there is hope the industry will be competitive with petroleum-based fuel in the near future.[366] There is a lot of interest in the potential of algae-based fuels, with the U.S. and Middle Eastern countries expending significant resources towards its research and development.

Overall, biofuels have immense potential to reduce our carbon emissions in a cost-effective manner and can stimulate economic development in rural areas by increased income for farmers.[367]

E. Simplicity of any Carbon Pricing Framework

Notwithstanding the complexity of carbon pricing, the need for simple legislation cannot be underscored enough. The Waxman-Markey Bill, for example, was an ambitious 1,428-paged legislation piece, which was rejected by Republicans and conservative Democrats, and would have been very costly and difficult to administer even if it

---

357 *Id.* at 326.
358 Nadia B. Ahmad, *Blood Biofuels*, 27 Duke Env't L. & Pol'y F. 265, 282–83 (2017).
359 Eisen et al., *supra* note 91, at 1200; Coelho et al., *supra* note 337, at 33.
360 Eisen et al., *supra* note 91, at 1200.
361 Ahmad, *supra* note 357, at 315.
362 Reitze, *supra* note 330, at 336.
363 *Advanced Biofuels and Algae Research: Targeting the Technical Capability to Produce 10,000 Barrels Per Day by 2025*, ExxonMobil (Sept. 7, 2018), https://corporate.exxonmobil.com/Energy-and-innovation/Advanced-biofuels/Advanced-biofuels-and-algae-research.
364 Reitze, *supra* note 333, at 1250.
365 Reitze, *supra* note 330, at 351–52.
366 Ahmad, *supra* note 357, at 311–12; Reitze, *supra* note 330, at 352.
367 Reitze, *supra* note 330, at 364.

passed.[368] Staunch critics of the bill have argued it would have done little to reduce U.S. carbon emissions, transferred "pollution permits," and had a very dubious offsets regime.[369]

Similarly, the EU ETS "serves as an important reminder that even policies designed to tap into economic power require careful attention to the design of governing institutions, the cultivation of capable staff, and the flexibility to make adjustments after initial launch. Elected officials rarely get all elements of policy design right the first time."[370]

It is imperative that any framework be simple and avoid multiple exceptions and loopholes. Policies "with shorter lead times to take effect are preferable, since fast implementation will make long-term deep emission reductions less expensive."[371] "Simplicity of policy design can mightily assist timely policy launches," as it provides clear direction to implementing regulatory authorities and enables them to achieve the end goals with lucidity.[372] More importantly, with fewer implementation hurdles, governments would save on administrative costs and obviate the need to hire new staff or create new administrative structures.[373] "Well-designed climate policies can also generate self-reinforcing political dynamics that can set in motion transformative processes."[374] British Columbia epitomizes this phenomenon, as voters back the carbon tax to such an extent that political parties promising to abolish it have suffered in the polls.

There should be complete transparency in both the tax and the use of its revenues. The tax price and any subsequent modifications should be locked in "through legislation to provide clarity and certainty," allowing businesses to plan ahead and households to prepare before a tax is rolled out.[375] Early stakeholder participation is essential, as is providing relief to vulnerable communities and workers to ensure any purported tax is not regressive.[376] It is also essential for policymakers to provide support for workers in the industries and sectors most affected by the uniform carbon tax implementation like the coal mining and fossil fuel industries. These programs should vary depending on each region's exact circumstances and the extent of impact the tax has on each industry and corresponding workers. Regardless, policymakers should consider programs for such displaced workers and services required for their training and re-employment. A sufficient carbon tax would provide enough income to accomplish this, as "the estimated costs of programs providing comprehensive benefits is less than 2 percent of carbon tax revenues for China, India, the United Kingdom and the United States under a US$50 a ton carbon tax."[377]

---

368 David Kreutzer et al., *The Economic Consequences of Waxman-Markey: An Analysis of the American Clean Energy and Security Act of 2009*, THE HERITAGE FOUND. (Aug. 6, 2009), https://www.heritage.org/environment/report/the-economic-consequences-waxman-markey-analysis-the-american-clean-energy-and.

369 Nordhaus & Shellenberger, *supra* note 10.

370 RABE, *supra* note 13, at 68.

371 Elgie & Cairns, *supra* note 62, at 62.

372 RABE, *supra* note 13, at 94.

373 *Id.* at 94–95.

374 Rosenbloom et al., *supra* note 32, at 8667.

375 INT'L MONETARY FUND, *supra* note 35, at 13 (noting that such slashed income taxes "tend to be skewed toward better households").

376 *Id.*

377 *Id.* at 19.

A carbon tax also allows governments to swap them for other taxes, as in the case of British Columbia. Cap-and-trade policies do not provide that certainty. In fact, in a recession, the price may plummet to a point where it is barely a consideration.[378] Not only does the carbon tax build on experience and capacities already existing within almost every government, but the costs are also transparent and the framework is easily comprehendible by the majority of the public.[379] Carbon tax experiences in Ireland and British Columbia also demonstrate that implementation is quick, within a matter of months, with tangible benefits to the public in terms of rebates and reductions in income taxes and corporate taxes.[380] In fact, the International Monetary Fund estimates that "cutting personal and corporate income taxes likely provides significant efficiency gains for the economy (through better incentives for work effort, investment, and lowering incentives for tax-sheltering behavior)."[381]

IX. Policies that Were Intentionally Excluded

A. Problems with Natural Gas as a Transition Fuel

Natural gas is often heralded as the ideal substitute to replace coal as a cleaner alternative.[382] In the following section, this Note addresses why natural gas as a bridge fuel should not feature in the list of supplementary policies, why any such suggestion is a facile attempt to achieve deep decarbonization, and how natural gas, on a lifecycle basis, is no better than coal and, by some estimates, worse than coal.

Climate experts and scientists are imploring a transition towards cleaner energy and a phasing out of coal-fired power, but no country has completely phased out coal-based power to address the climate emergency.[383] On the contrary, recently, developing countries have heavily invested in coal power plants to address frequent blackouts and to benefit from the tumbling price of coal.[384] A prime example is Pakistan, which has historically relied on natural gas for its energy generation.[385] Before 2016, Pakistan had one coal power plant and it now has nine, with four to five additional coal power plants under construction and expected to achieve commercial operations by the 2021 summer.[386] "China and India sit on massive supplies of [coal], and even as both countries rapidly scale up renewable power from a tiny base, they will be hard-pressed to get rid of coal anytime soon."[387] A solar magazine in 2018 reported that, based on satellite im-

---

378 Elgie & Cairns, *supra* note 62, at 66.
379 *Id.* at 62.
380 *Id.* at 66.
381 Int'l Monetary Fund, *supra* note 35, at 16.
382 *Id.* at 9.
383 Driesen, *supra* note 55, at 31.
384 *See, e.g.*, Adam Majendie & Faseeh Mangi, *Huge Pakistan Mine Shows the Power of Coal*, The Japan Times (Aug. 9, 2019), https://www.japantimes.co.jp/news/2019/08/09/asia-pacific/science-health-asia-pacific/mile-wide-open-mine-pakistan-shows-coal-wont-go-away/#.Xo0NQoOSlyw.
385 *Id.*
386 *Id.*
387 Ball, *supra* note 39, at 138, 144.

agery, China is "set to add 259 GW of new coal-fired capacity to its grid," which is more than twice the energy produced by Texas from all sources.[388] India's coal production is projected to double within the next decade.[389]

The challenge is equally great for developed countries, where coal is still an integral part of the energy sector. Even in developed countries, coal power generates a huge portion of energy generation and is unlikely to be completely phased out, as it provides a secure and stable source of energy, which is essential for long term planning. Germany, for example, still relies heavily on coal for energy generation, with 29% of Germany's total electricity being generated by coal in 2019.[390] 30% of Japan's electricity is sourced from coal and, even as it recommissions its nuclear power plants, it still intends to generate 26% of its electricity from coal by 2030.[391] Japan has recently approved the addition of twenty-two new coal power plants in the next five years, with more than half of them already under construction.[392] Australia is on course to be the largest exporter of coal by 2020 to, as the economics principle goes, "leave no money on the table."[393] The U.S., on the other hand, has retired numerous coal power plants and has replaced a majority of them with natural gas. This has led to a reduction in U.S. carbon emissions over the last fifteen years but coal still generates 16% of U.S. power.[394] The shuttering of coal power plants has, however, led to a rise in its coal exports.[395] U.S coal exports rose 38% in the first half of 2018, "marking the 20th straight month of gains for U.S. producers shipping abroad."[396] As a result, the U.S. is still the third largest exporter of coal.[397]

---

388 Marian Willuhn, *China to Add 259 GW of Coal Capacity, Satellite Imagery Shows*, PV MAGAZINE (Sept. 27, 2018), https://www.pv-magazine.com/2018/09/27/china-to-add-259-gw-of-coal-capacity-satellite-imagery-shows/.

389 Richard N. Cooper et al., *Why Paris Did Not Solve the Climate Dilemma*, in GLOBAL CARBON PRICING: THE PATH TO CLIMATE COOPERATION 1, 2 (Peter Crampton et al. eds., 2017).

390 RABE, *supra* note 13, at 72–73; Eckert & Harvey, *supra* note 294.

391 *Japan's Energy Plan*, MINISTRY OF ENERGY, TRADE & INDUS., https://www.meti.go.jp/english/publications/pdf/EnergyPlan_160614.pdf (last visited Apr. 15, 2021); Hussein Moghaddam, *Japan's 2030 National Energy Plan, and its Future Gas Demand*, GAS EXPORTING COUNTRIES F., (Sept. 23, 2018), https://www.gecf.org/events/japan%E2%80%99s-2030-national-energy-plan-and-its-future-gas-demand.

392 Hiroko Tabuchi, *Japan to Build Up to 22 New Coal Power Plants Despite Climate Emergency*, THE INDEPENDENT (Feb. 4, 2020), https://www.independent.co.uk/news/world/asia/japan-new-coal-power-plant-climate-change-tokyo-a9316271.html; Umair Irfan, *Why the World's Third-largest Economy is Still Betting on Coal*, VOX (Feb. 18, 2020), https://www.vox.com/2020/2/18/21128205/climate-change-japan-coal-energy-emissions-pikachu.

393 Cooper et al., *supra* note 388, at 2.

394 *U.S. Energy Facts Explained*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/us-energy-facts/ (last updated May 7, 2020).

395 Cooper et al., *supra* note 388, at 2.

396 *U.S. Coal Exports Continue Rise*, U.S. COAL EXPORTS COAL. (Aug. 3, 2018), http://uscoalexports.org/2018/08/03/u-s-coal-exports-continue-rise/.

397 Jude Clemente, *The U.S. Coal Export Boom to Asia*, FORBES (Oct. 7, 2018), https://www.forbes.com/sites/judeclemente/2018/10/07/the-u-s-coal-export-boom-to-china/#1fb1f54d3454.

In the midst of this, natural gas is frequently leveraged as a bridge fuel to replace coal in the efforts to transition to cleaner energy.[398] In the U.S., the share of tight gas and shale gas is expected to rise to 75% of total U.S. natural gas production by 2035.[399] While the majority of concerns regarding hydraulic fracturing (more commonly known as fracking) pertain to earthquakes, contamination of underground water, or regurgitation of naturally occurring radioactive materials (NORMs) found deep underground, there are growing concerns about GHG emissions and its effects on air quality.[400]

While natural gas does burn cleaner than coal during the electricity generation phase, as there are no nitrogen or sulfur oxide emissions, methane emissions over the entire lifecycle of natural gas are frequently overlooked.[401] Beyond electricity generation, exploration for and production of natural gas emits methane, as does converting the gas to liquified natural gas, and shipping across the globe.[402] Finding and producing natural gas also involves fugitive methane leaks, which are so numerous that the resulting methane emissions measurements are not reliable.[403] These leaks occur throughout natural gas's lifecycle, including its production, processing, and transmission.[404]

Curbing methane emissions is critical to preventing global warming, as methane is significantly more potent than carbon dioxide.[405] It traps eighty-six times more heat than CO_2 over a twenty-year period and thirty-four times more over a 100-year time period.[406] Some experts suggest that, on a mass-to-mass basis, methane is more than "100 times more powerful than carbon dioxide as an agent of global warming for the time when both gases persist in the atmosphere."[407] Even avid fracking proponents acknowledge that it "traps twenty times more heat than carbon dioxide."[408] Even though the amount of methane in the atmosphere is significantly lower than the amount of carbon dioxide, and it stays in the atmosphere for a much shorter duration (twelve years),[409] it is

398 *See generally* Howarth, *supra* note 245.
399 *Id.*
400 Minor, *supra* note 24, at 71.
401 *Id.* at 59–60.
402 Driesen, *supra* note 55, at 52.
403 *Id.*
404 Minor, *supra* note 24, at 71, 86–87, 113–14 (quoting Anna Karion et al., *Methane Emissions Estimate from Airborne Measurements over a Western United States Natural Gas Field*, 40 GEOPHYSICAL RES. LETTERS 4393, 4396 (2013)) (conservatively estimating that "8.4–15.9% of the natural gas produced was leaking into the atmosphere").
405 *Id.* at 62.
406 *Environmental Impacts of Natural Gas*, UNION OF CONCERNED SCIENTISTS (June 19, 2014), https://www.ucsusa.org/resources/environmental-impacts-natural-gas#references; Minor, *supra* note 24, at 84.
407 Robert Howarth, *Methane Emissions and Climatic Warming Risk from Hydraulic Fracturing and Shale Gas Development: Implications for Policy*, ENERGY & EMISSION CONTROL TECHS., 45, 46 (2015).
408 Thomas W. Merrill & David M. Schizer, *The Shale Oil and Gas Revolution, Hydraulic Fracturing, and Water Contamination: A Regulatory Strategy*, 98 MINN. L. REV. 145, 166 (2013).
409 Howarth, *supra* note 245, at 52.

"contributing about 25% of the current rate of global warming."[410] Additionally, scientists have concluded that U.S. methane emissions are greater than the amount reported for multiple reasons, including outdated emissions factors, which predate fracking, and under-sampling.[411]

In addition to methane emissions, natural gas also emits a significant amount of carbon dioxide. Proponents of natural gas always pit it against coal, which is the most carbon-intensive fossil fuel, to argue natural gas be used as a bridge fuel because it is environmentally friendly, but using natural gas to generate electricity still emits half as much CO_2 as using coal to generate electricity.[412] "Policies that would promote fuel switching to natural gas may reduce emissions in the short-run," but run the risk of "investments in long-lived capital assets, and possibly even technological lock-in" for a considerable number of years, thereby deterring future investment in cleaner technologies.[413]

Studies have illustrated that natural gas does not reduce greenhouse gas emissions relative to coal over its entire lifecycle.[414] Worse, replacing coal with natural gas results in greater depletion of our ozone "by 0.2-0.7 ppb."[415] The reason behind this phenomenon is that "ozone only forms during the day, increasing natural gas production, which results in roughly constant daily emissions, decreases ozone formation. This is because coal generation peaks during the late afternoon when ozone levels are already high."[416] Due to methane's shorter duration in the atmosphere when compared to carbon dioxide, studies extrapolate that natural gas is more sustainable and cleaner than coal.[417] However, this is a fallacy because twenty years, not 100 years, is the critical time frame to ensure that climate change is not irreversible.[418] "At the 20-year timescale, total global emissions of methane are equivalent to over 80% of global carbon dioxide emissions," and, given that methane is eighty-six times more potent than CO_2 in that twenty-year span, natural gas has a larger GHG footprint than coal when used for electricity, and is worse than coal and oil in other sectors, including industrial and commercial use, heating for water, and more.[419]

---

410 Jeff Berardelli, *Satellite Images Reveal Huge Amounts of Methane Leaking from U.S. Oil Fields*, CBS NEWS (Apr. 16, 2021), https://www.cbsnews.com/news/methane-permian-basin-oil-gas-climate-change/.

411 Minor, *supra* note 24, at 90.

412 Merrill & Schizer, *supra* note 407, at 165.

413 Gillingham & Stock, *supra* note 244, at 68.

414 Merrill & Schizer, *supra* note 407, at 166.

415 Minor, *supra* note 24, at 77–78 (citing Adam P. Pacsi et al., *Regional Air Quality Impacts of Increased Natural Gas Production and Use in Texas*, 47 ENV'T SCI. & TECH. 3521, 3525 (2013)) ("[R]eplacing coal with gas-generated electricity, and increasing natural gas production as a result, would decrease average regional ozone levels by 0.2-0.7 ppb.").

416 *Id.* at 78.

417 Howarth, *supra* note 406, at 46.

418 Howarth, *supra* note 245, at 52–53 (2014) (citing UNEP & World Meteorological Org., Integrated Assessment of Black Carbon and Tropospheric Ozone: Summary for Decision 10, 12 (2011)) ("[U]nless emissions of methane and black carbon are reduced immediately, the Earth's average surface temperature will warm by 1.5°C by about 2030 and by 2.0°C by 2045 to 2050 whether or not carbon dioxide emissions are reduced.").

419 *Id.* at 53–54.

Another natural gas-based-power negative externality is that cheap power from natural gas power plants in the short term may inhibit construction of new renewable generation capacity. Research suggests this held true when gas prices were low-to-moderate in all four U.S. electricity markets.[420] This deterrence of renewables' entry into the market actually preserves the market's coal-fired power plants.[421] By themselves, low natural gas prices are "not low enough to cause closure of significant coal-fired generation capacity."[422] In fact, low natural gas prices create a barrier to entry for renewables, which ultimately results in higher CO_2 emissions.[423]

With rising export and import terminals' investment for liquified natural gas (LNG), and re-gasified LNG transportation infrastructure and power plants in both developed and developing countries, it will be increasingly politically and financially difficult for countries to extricate themselves from these long-term commitments to pursue deep decarbonization.[424] Due to these reasons, experts quip that natural gas is either a bridge that leads to nowhere, or a bridge "too far to reach a safe climate."[425]

B. Tax Credits

The role of federal tax, such as production tax credits and investment tax credits in the U.S., cannot be discounted. Federal tax credits have played a key role in the burgeoning development of wind and solar power facilities across the U.S.[426] The Texas CREZ project gets a lot of plaudits for the wind sector's growth but the "boom and bust" cycles of wind energy development show a correlation between development and these tax credits. Production tax credits have been a "significant factor in investment decisions–regardless of whether wind is economically viable without the" production tax credit.[427]

However, the U.S.'s tax credits model has been criticized as a barrier to market entry. "The need for hefty tax bills in order to benefit from these breaks limits the pool of eligible investors to about two dozen banks and other highly profitable firms who can use a developer's tax benefits to offset tax liabilities from other sources."[428] This criticism might be without merit, because small-scale investors have the opportunity to participate by engaging in the initial stages of a project's development and during its eventual sale. Another criticism is that, because the pool of eligible investors is limited, investors exploit their exclusive status to "exact high rates of return for their investment in renewable energy, reportedly raising the cost of financing," thus making wind and solar projects

---

420 Adelman & Spence, *supra* note 203, at 271.
421 *Id.* at 271–72.
422 *Id.*
423 *Id.* at 273–74; Adelman, *supra* note 233.
424 Rosenbloom et al., *supra* note 32, at 8665–66.
425 Patrick Parenteau & Abigail Barnes, *A Bridge Too Far: Building Off-Ramps on the Shale Gas Superhighway*, 49 Idaho L. Rev. 325, 365 (2013).
426 Ernest E. Smith et al., Wind Law §5.01 (2019) (discussing federal incentives and mandates).
427 Victoria Chang, *Wind Energy Incentives in Texas*, 14 Tex. J. Oil, Gas, & Energy L. 189, 196–97 (2019).
428 Mormann et al., *supra* note 125, at 85.

less competitive.[429] Policy experts believe these higher returns and "premium yields for tax equity divert up to half of their tax dollars away from the wind farms and solar installations they were intended to subsidize and into the pockets of Wall Street banks and other high-profit corporations."[430]

C. Global Carbon Pricing

Similarly, global carbon pricing may play a critical role in achieving emission targets. Economists and academics believe that "a global carbon price—so far excluded from consideration in international negotiations—would be the ideal basis for a common commitment."[431] According to them, empirical data indicates that individual commitments—compared to collective commitments—are never effective because countries have no incentive to act.[432] This, in turn, gives to the free-rider problem.[433] On the other hand, through collective commitment and a "referee" to monitor compliance with all the collective commitments, everyone will benefit.[434] Critics argue that global prices will fail without a global sovereign to monitor compliance in a "fragmented international climate policy landscape" because "the required levels of coordination and cooperation are unrealistic."[435] A uniform global carbon price will also "require well-functioning institutional structures and high levels of regulatory competences and monitoring systems, which do not exist everywhere."[436] This may explain why the Paris Agreement did not require countries to have a global carbon price. Instead of moving towards a global carbon price involving national governments, carbon pricing and climate change initiatives have become more decentralized. The Paris Agreement, which gives a country significant leeway to manage their internal reductions, reflects this decentralization.[437] This model also encourages countries to enter into voluntary agreements, in the hope they will eventually lead to an international carbon price.[438]

The rest of the U.S., when compared to Texas, epitomizes the problem of coordination and cooperation even amongst regions within the country. Texas has been able to install over 33,000 MW of wind generation capacity and construct 3,600 miles of transmission network to serve those wind facilities, enabling wind to be the second biggest energy source in Texas, surpassing coal; this is primarily because Texas has complete autonomy over its energy generation and transmission facilities.[439] On the other hand,

---

429 *Id.* at 85–86.

430 Felix Mormann, *Beyond Tax Credits: Smarter Tax Policy for A Cleaner, More Democratic Energy Future*, 31 Yale J. On Reg. 303, 327 (2014).

431 David KC MacKay et al., *Price Carbon—I Will If You Will*, 526 Nature 315, 316 (2015).

432 *Id.*

433 *Id.*

434 *Id.*

435 Rosenbloom et al., *supra* note 32, at 8666.

436 *Id.*

437 Rabe, *supra* note 13, at 203.

438 Paris Agreement art. 4, 6, Dec. 12, 2015, T.I.A.S. 16-1104.

439 *WindExchange*, Off. of Energy Efficiency & Renewable Energy, https://windexchange.energy.gov/maps-data/321 (last visited Apr. 13, 2021).

despite various attempts by the federal government to promote and encourage interstate transmission line construction, efforts outside of Texas have failed.[440]

X. Conclusion

In summation, countries should pursue carbon pricing, preferably carbon taxes, over cap-and-trade frameworks. However, it is essential for governments to have a dynamic, multifaceted approach to supplement carbon pricing with additional policies to achieve deep decarbonization and tackle the "wicked" problem of climate change. Such an approach may also be required to sustain political support for pricing instruments.[441] The supplementary policies this Note explores are not exhaustive. Some regions are pursuing other promising initiatives that have the potential of curbing greenhouse gases.

Technologies such as battery storage, carbon capture and storage, and development of alternative fuels, like hydrogen, are essential for a carbon-free world. Unfortunately, countries are unlikely to deploy them until they are cheaper. This is especially true in developing countries. Likewise, "scale economies may deter firms from investing in a clean technology until they are confident about the size of the market."[442] Nuclear power, especially small nuclear reactors, also promise to play a crucial part in helping regions meet their clean energy targets.

This Note aims to identify the bright spots: initiatives that have either worked effectively and can be scaled and policies that regions can use to quickly reduce their carbon emissions. While the solutions discussed are not an exhaustive list, they should help policymakers meet their climate action goals and supplement their carbon pricing initiatives.

Humzah Q. Yazdani was a 2019–2020 MD Anderson Research Fellow at the Institute for Transnational Law. LL.M. 2020, The University of Texas School of Law. BPTC 2012, BPP Law School (London), LL.B. 2011, University of London. Humzah is licensed to practice law in Texas (2020) and Pakistan (2012). He was also called to the bar of England & Wales (2012).

440 *See, e.g.*, Mormann, *supra* note 431, at 360–61 (assessing the relative efficacy of federal incentives for renewables and discussing policy-based reform proposals to enhance federal efforts through capital markets and crowdfunding).

441 Haites et al., *supra* note 30, at 179.

442 Int'l Monetary Fund, *supra* note 35, at 19.