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Just Scratching the Surface: How EPA Denied Renewable Energy **Developers the Liability Protection They Need to Repower America's Contaminated Land**

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NOTE

JUST SCRATCHING THE SURFACE: HOW EPA DENIED RENEWABLE ENERGY DEVELOPERS THE LIABILITY PROTECTION THEY NEED TO REPOWER AMERICA'S CONTAMINATED LAND

I. INTRODUCTION

Global¹ and domestic² efforts to curtail the emission of greenhouse gases ("GHGs")³ have created a strong impetus to accelerate renewable energy deployment throughout the United States. The scientific community in near unanimity identifies GHGs as the culprit of global climate change.⁴ Anthropogenic contributions of GHGs into the Earth's

^{1.} See United Nations Framework Convention on Climate Change art. 2, May 9, 1992, 1771 U.N.T.S. 107. International efforts began in earnest with the United Nation Framework Convention on Climate Change ("UNFCCC"), which at the urging of scientists and climatologists worldwide, seeks to limit the greenhouse gas emissions of member nations to avoid "dangerous anthropogenic interference" with the climate where future reductions will not reduce the effects of climate change. See id.; see also Kyoto Protocol to the United Nations Framework Convention on Climate Change arts. 3, 10, Dec. 10, 1997, 37 I.L.M. 22 [hereinafter Kyoto Protocol] (setting caps on Annex I developed nations while allowing for "common but differentiated responsibilities" to alleviate the need for caps of developing nations' emissions that did not contribute to the majority of historical anthropogenic carbon emissions).

^{2.} Massachusetts v. EPA, 549 U.S. 497 (2007). Domestic litigation recently culminated in a landmark Supreme Court decision requiring the Environmental Protection Agency ("EPA") to examine whether carbon emissions endanger the public health or welfare, thereby requiring regulation under the Clean Air Act (the "CAA"). See id. at 528-29, 532-33 (2007) (finding that greenhouse gases can be an "air pollutant" under the CAA, and requiring the EPA to determine if greenhouse gases cause, or contribute, to air pollution, which reasonably may be anticipated to endanger the public health or welfare).

^{3.} Glossary of Climate Change Terms, EPA, http://www.epa.gov/climatechange/glossary.html (last updated June 14, 2012) (identifying greenhouse gases as those that contribute to the greenhouse effect by trapping a portion of the sun's infrared rays in the atmosphere to create a homeostatic global climate in what is referred to as the "greenhouse effect"). Anthropogenic GHGs predominantly consist of Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), and fluorinated gases such as perfluorocarbons, hydrofluorocarbons, and Sulfur Hexafluoride (SF₆). Greenhouse Gas Emissions, EPA, http://www.epa.gov/climatechange/ghgemissions/gases.html (last updated Aug. 31, 2012).

^{4.} See generally, e.g., INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE

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atmosphere, from the Industrial Revolution to the present, increased the global concentration of these gases significantly.⁵ The impacts of climate change vary geographically but in the aggregate will severely affect most American populations and ecological services.⁶ The largest emitters of GHGs, by industrial sector, are fossil-fuel combusting electricity producers, with coal plants emitting an especially high amount of carbon and carbon equivalent⁷ relative to alternative forms of generation.⁸ Recent domestic litigation has targeted both the energy producers and the governmental agencies charged with regulating emissions into the ambient air from such power plants in order to force carbon emission reductions.⁹ Lawsuits seeking to enforce procedural rights granted by environmental statutes such as the Clean Air Act (the "CAA") have fared better than those seeking damages or abatement based on common law public nuisance.¹⁰

CHANGE 2007: SYNTHESIS REPORT (2007) (identifying anthropogenic GHG concentrations as the primary source of emerging climate change patterns).

^{5.} See, e.g., EPA, EPA 430-R-10-007, CLIMATE CHANGE INDICATORS IN THE UNITED STATES 14-16 (2010), available at http://www.epa.gov/climatechange/science/recentac.html (calculating that atmospheric CO₂ concentrations are approximately 36% higher than before 1750, methane 148%, and nitrous oxide 18%).

^{6.} See, e.g., Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,497–98 (Dec. 15, 2009) (to be codified at 40 C.F.R. pt. 1) (finding global climate change will cause or contribute to, inter alia, increased exposure to airborne pathogens and allergens, increased severity in weather events such as hurricanes, higher and more prolonged periods of drought, sea level rise, coastal erosion, famine, desertification, invasive species migration, and longer and more severe periods of summer heat).

^{7.} Glossary of Climate Change Terms, supra note 3 (internal quotation marks omitted). Carbon equivalency is a concept that allows for conversion of various GHGs into a measure of "million metric tons of carbon dioxide equivalents" by multiplying the volume of a particular gas by such particular gas's global warming potential. Id. The global warming potential of a gas is the cumulative radiative forcing effects of a gas over a specified time horizon (typically 100 years) resulting from the emission of a mass unit of gas relative to a reference gas (such as CO₂). Id.

^{8.} Compare INT'L ENERGY AGENCY, CO₂ EMISSIONS FROM FUEL COMBUSTION HIGHLIGHTS 122 figs.1, 5, 123 tbls.2-3 (2011), available at http://www.iea.org/co2highlights/co2highlights.pdf (collecting global carbon emissions data by energy and industrial sector), with Air Emissions, EPA, http://www.epa.gov/cleanenergy/energy-and-you/affect/air-emissions.html (last updated Dec. 28, 2007) (identifying renewable sources, including biomass, as producing only negligible amounts of GHG emissions when compared to fossil-fuel-based electricity generation).

^{9.} See Am. Elec. Power Co. v. Connecticut, No. 10-174, slip. op. at 1, 4 (U.S. June 20, 2011) (seeking abatement of carbon emissions by five of the nation's largest power producers and carbon emitters); Massachusetts v. EPA, 549 U.S. 497, 505 (2007) (seeking regulation of carbon emissions by EPA under the CAA); Native Vill. of Kivalina v. ExxonMobil Corp., 663 F. Supp. 2d 863, 868-69 (N.D. Cal. 2009) (seeking nearly four hundred million dollars in damages for forced relocation of an Eskimo village due to a sea level rise caused by climate change).

^{10.} See, e.g., Am. Elec. Power Co., at 1, 4, 10 (holding that plaintiffs' claim for abatement of public nuisance under federal common law is displaced by the CAA and denying relief); Massachusetts v. EPA, 549 U.S. at 528-29, 532-35 (holding that EPA must evaluate whether carbon emissions cause or contribute to climate change and whether such emissions endanger the public health or welfare); Kivalina, 663 F. Supp. 2d at 868-69, 883 (holding that plaintiffs lacked standing

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The ubiquity of electricity, and its correlation to economic growth, implicates electricity generation as an integral factor in any solution for the control of GHG emissions. Electricity demand is intimately tied to economic growth, with demand roughly tracking the performance of the domestic economy. Renewables have the promise to meet the increasing energy needs that economic growth requires without accelerating the amount of GHG emissions causing climate change. Despite increasing international political recognition of the imminent effects of climate change, the United States has not, unlike most developed nations, agreed to binding GHG emission limits or reductions. Domestic legislation enacted to address climate change has thus far focused on research, funding, and program development, rather than comprehensive, economy-wide limits or reductions of GHGs.

Concurrent with developing efforts to mitigate climate change in the United States and abroad is the domestic need to remediate contaminated lands, which are estimated to number over half a million discrete sites nationwide. These sites are the land-based results of American economic growth and industrial activity, which largely contributed to historic GHG emissions causing climate change. The state of the contributed to historic GHG emissions causing climate change.

and public nuisance claim seeking damages for village relocation was barred by the political question doctrine).

^{11.} See Energy Intensity Indicators: Economy-Wide Total Energy Consumption, U.S. DEP'T OF ENERGY, http://wwwl.eere.energy.gov/analysis/eii_total_energy.html (last updated Sept. 17, 2012) (noting that although energy intensity has decreased with an increase in energy use, the rate of consumption roughly corresponds to increases in gross domestic product); cf. U.S. DEP'T OF ENERGY, 2009 RENEWABLE ENERGY DATA BOOK 8-9 (2010) [hereinafter RED BOOK] (showing a roughly ten percent reduction in energy consumption following 2007 global recession).

^{12.} E.g., RED BOOK, supra note 11, at 11 (indicating that the percentage of renewable energy capacity, excluding renewable energy from hydropower, doubled during the 2000 to 2009 period).

^{13.} See Kyoto Protocol, supra note 1, at xx. Europe, Japan, Russia, and Canada were Kyoto signatories and agreed to reduce carbon emissions between five and eight percent by 2012. Id.

^{14.} See generally S. Res. 98, 105th Cong. (1997) (refusing unanimously to ratify the Kyoto Protocol and future protocols under the UNFCCC unless all nations, including undeveloped and developing nations like China, India, and Brazil, are subject to mandatory emission caps or reductions).

^{15.} See Global Change Research Act of 1990, Pub. L. No. 101-606, 104 Stat. 3096 (codified in scattered sections of 15 U.S.C.) ("[P]rovid[ing] for development and coordination of a comprehensive and integrated United States research program ..."); National Climate Program Act, 15 U.S.C. §§ 2901-08 (2006) (establishing national climate program to assist with understanding climate change); Global Climate Protection Act of 1987, 29 U.S.C. § 2901 (2006) (identifying carbon mitigation and adaptation strategies, increasing global cooperation, and proposing control methodologies to Congress).

^{16.} Basic Information, EPA, http://www.epa.gov/brownfields/basic_info.htm#plan (last updated July 16, 2012) (noting that contaminated sites capable of reuse or redevelopment but for complications with contamination exceed 450,000 nationwide).

^{17.} See Sector Based Initiatives, EPA, http://www.epa.gov/brownfields/policy/initiatives_sb.htm (last updated Apr. 24, 2012) (identifying ports, mines, manufacturing centers, railways, oil

remediation and redevelopment can convert contaminated land into useful parcels for a variety of projects from housing to recreation. However, renewable energy deployment has, in light of climate change, proposed emission reductions, and litigation by those frustrated with the lack of governmental action, become an increasingly important candidate for redevelopment efforts on contaminated (and formerly contaminated) land. 19

Efforts to protect the public from contaminated land expanded beyond traditional nuisance or tort²⁰ doctrines with the enactment of the Comprehensive Environmental, Response, Compensation, and Liability Act of 1980 ("CERCLA" or "Superfund").²¹ Congress enacted CERCLA in response to catastrophic land disasters of national concern, such as Love Canal, Valley of the Drums, and Times Beach.²² This comprehensive statutory scheme is administered by the U.S. Environmental Protection Agency ("EPA") with site-specific assistance

fields, and mills as primarily comprising the more than half a million contaminated sites subject to Brownfields programs and related enforcement regimes).

^{18.} Brownfields Success Stories, EPA, http://www.epa.gov/swerosps/bf/success/ (last updated Mar. 9, 2012) (highlighting successful Brownfield redevelopment projects nationwide).

^{19.} See, e.g., Siting Renewable Energy on Potentially Contaminated Land and Mine Sites, EPA, http://www.epa.gov/oswercpa/ (last updated July 30, 2012) (providing resources and information regarding renewable energy deployment on contaminated land through the RePowering America's Land Initiative, which is administered jointly by EPA and the National Renewable Energy Laboratory).

^{20.} See, e.g., Storley v. Armour & Co., 107 F.2d 499, 502-03 (8th Cir. 1939) (suing in nuisance and tort to enjoin pollution of river from packing plant effluent and for damages); The Panam, 54 F. Supp. 461, 462 (D.N.J. 1944) (suing for libel due to oil spill contaminating a shore).

^{21.} Pub. L. No. 96-510, 94 Stat. 2767 (codified in scattered sections of 42 U.S.C.).

^{22.} See United States v. Hooker Chems. & Plastics Corp., 680 F. Supp. 546 (W.D.N.Y. 1988); United States v. Bliss, 667 F. Supp. 1298 (E.D. Mo. 1987); JULIE KERR CASPER, CLIMATE SYSTEMS: INTERACTIVE FORCES OF GLOBAL WARMING 136-37 (2009). Love Canal is an abandoned Niagara Falls bypass canal in upstate New York, which became the repository of nearly forty-two million pounds of various hazardous wastes subsequently causing significant adverse health effects in the surrounding population. Hooker Chems., 680 F. Supp. at 549. Valley of the Drums, located on a twenty-three acre landfill outside of Louisville, Kentucky, was the disposal site for thousands of metal drums containing hazardous chemicals, which leeched into creeks connected to the Ohio River and caused birth defects, neurological damage, and organ failure. JULIE KERR CASPER, supra at 136-37. Times Beach, Missouri was contaminated with a high concentration of dioxin when waste oil mixed with chemicals recovered from tanks used in Agent Orange production was sprayed on the street to control ground-level dust. See Bliss, 667 F. Supp. at 1302-03; Jeff Flock, Clean-up Ends in Toxic Town, CNN (June 26, 1997), http://www.cnn.com/US/9706/26/times.beach/times.beach/

These disasters catalyzed public and political support for creating a comprehensive scheme to hold those responsible for land contamination liable for the human health effects and environmental degradation caused by such contamination. See, e.g., Superfund: Hearings on H.R. 4571, H.R. 4566, and H.R. 5290 Before the Subcomm. on Transp. & Commerce of the H. Comm. on Interstate & Foreign Commerce, 96th Cong. 210 (1979) (statement of Barbara Blum, Deputy Administrator, Environmental Protection Agency); ANDREW SZASZ, ECOPOPULISM: TOXIC WASTE AND THE MOVEMENT FOR ENVIRONMENTAL JUSTICE 51-55 (1994).

and participation provided by other governmental bodies when necessary. ²³ Congress amended CERCLA several times to address recurrent criticism that the Superfund program was too complex, stifled business development, and was less expeditious than the backlog of nearly half a million contaminated sites warranted. ²⁴

This Note suggests that intelligent land use and adherence to the Congressional goal of expediting redevelopment of contaminated land can assist in the reduction of GHG emissions through renewable energy deployments on these lands. By redeveloping contaminated land, undeveloped land outside of urban and dense suburban areas can remain undeveloped in an effort to curb sprawl, increase energy security, create jobs, feduce the land use footprint of renewable energy, and lessen strains on transmission infrastructure. Further, by encouraging contaminated site redevelopment to incorporate decentralized renewable energy generation, or serve as utility-scale electricity generation,

^{23.} See 42 U.S.C. § 9606(c) (2006); Exec. Order No. 13,016, 61 Fed. Reg. 45,871 (Aug. 30, 1996) (vesting Superfund enforcement authority in various executive departments); see also NOAA's Implementation of CERCLA § 106 Response Authority, DAMAGE ASSESSMENT, REMEDIATION, & RESTORATION PROGRAM, http://www.darrp.noaa.gov/about/106legis.html (last updated July 19, 2010).

^{24.} See Small Business Liability Relief and Brownfields Revitalization Act, Pub. L. No. 107-118, §§ 102, 222, 115 Stat. 2356, 2356, 2370-71 (2002) (codified as amended in scattered sections of 42 U.S.C.) (adding defenses for contiguous landowners, small business owners with de micromis contributions to site contamination, and for prospective purchasers who purchase land with knowledge of its contamination in order to redevelop the site); Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, § 111, 100 Stat. 1613, 1642 (codified as amended in scattered sections of 42 U.S.C.) (increasing size of trust fund to \$8.5 billion and providing new settlement tools).

^{25.} See Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, §§ 210-11, 92 Stat. 3117, 3135-37 (codified as amended in scattered sections of 16 and 42 U.S.C.) (mandating that utilities purchase electricity generated by independent producers at wholesale prices, allow these electrical generators to interconnect to the transmission grid, and wheel power to end-users). The Federal Energy Regulatory Commission undertook electric market deregulation primarily to facilitate the entry of new electricity producers into the market. See id. This need for new electricity producers arose primarily in response to the Arab oil embargo in the 1970s and increasing interest in developing cleaner sources of energy to decrease American dependence on foreign energy supplies. H.R. REP. No. 95-543, at 7 (1977), reprinted in 1978 U.S.C.C.A.N. 7673, 7680 ("[O]nly by effective conservation, reform of utility rate structure, conversion by industrial firms and utilities from oil and natural gas... will the United States be able to sustain its long-term economic growth.").

^{26.} See Patricia E. Salkin & Ashira Pelman Ostrow, Cooperative Federalism and Wind: A New Framework for Achieving Sustainability, 37 HOFSTRA L. REV. 1049, 1058-59 (2009) (developing wind energy produces approximately twenty-seven and sixty-six percent more jobs than coal and natural gas energy projects, respectively).

^{27.} See, e.g., Uma Outka, *The Renewable Energy Footprint*, 30 STAN. ENVTL. L.J. 241, 301-02 (2011) (explaining renewable generation typically requires more land than conventional sources).

^{28.} See Salkin & Ostrow, supra note 26, at 1062-63 (discussing the various benefits accruing to the community where land use includes ground leases to renewable energy developers but identifying concerns regarding the siting of such facilities among community stakeholders).

America's land can also reduce accelerated contributions of GHGs in the atmosphere caused by dependence on fossil-fuel electricity generation.²⁹ These two seemingly disparate issues—one land-based, the other air; one domestic, the other international—have the capacity to converge in a mutually beneficial system driven by energy production that redevelops contaminated land and reduces the amount of GHG emissions contributing to global climate change.³⁰

The need for renewable energy to reduce GHG emissions, create new jobs and technologies,³¹ and provide new sources of electric generation for ever-increasing peak demand periods converges with the desire to remediate and reuse contaminated land in programs like the RePowering America's Land Initiative (the "Initiative"). 32 The Initiative. which seeks to site renewable energy projects on formerly and lightly contaminated land,³³ appears to be a win-win program for both public and private interests. However, it faces significant hurdles from the complex liability scheme imposed under CERCLA, its inefficiency, and EPA's handling of tenant liability that discourages increased participation or independent redevelopment.³⁴ In light of the pressing need to reduce GHG emissions, redevelop contaminated land, and achieve appreciable renewable energy deployment, a critical analysis of the Initiative shows it to be inefficient, and reveals the antagonism of current redevelopment policies with broader renewable energy deployment.³⁵

This Note examines how EPA construes the CERCLA liability of developers of renewable energy projects on Brownfields, ³⁶ focusing

^{29.} See RED BOOK, supra note 11, at 11.

^{30.} See infra Part IV.C.

^{31.} E.g., Kate Galbraith, Study Cites Strong Green Job Growth, N.Y. TIMES: GREEN (June 10, 2009, 11:20 AM), http://green.blogs.nytimes.com/2009/06/10/study-cites-strong-green-job-growth/ (discussing several studies showing that the number of "green" jobs is accelerating nationwide and the majority of new clean-tech patent applications are for energy storage and renewable energy generation).

^{32.} See supra note 19 and accompanying text. This program, administered by the EPA with extensive assistance from the Department of Energy's National Renewable Energy Laboratory, encourages redevelopment of contaminated land and abandoned mine sites with renewable energy projects when aligned with community goals for these sites.

^{33.} See supra note 19 and accompanying text.

^{34.} See discussion infra Part III.

^{35.} See discussion infra Parts II-III.

^{36.} Brownfields, as used within this Note, will refer to lands that are contaminated, potentially contaminated, or formerly contaminated, but will not include sites on the National Priorities List. See 42 U.S.C. § 9601(39) (2006) (defining Brownfield as real property with reuse or development complicated by the presence of, or a history of, contamination). The worst cases of land contamination are subjected to Hazard Rank Scoring and included on the National Priorities List for expedited remediation and increased oversight. Id. §§ 9605(a)(8)(B), (c)(1).

particularly on how EPA's approach limits the opportunities for leasing contaminated lands to competitively market renewable generated electricity.³⁷ The analysis proceeds against the backdrop of climate change and the evolution of electricity generation regulation, which has enabled renewable energy development to catalyze land remediation and reduce GHG emissions. Part II provides a brief background of CERCLA with particular emphasis on the liability scheme promulgated thereunder, and how electricity regulation has concurrently evolved to allow entry of renewable energy developers into electricity markets independent of, and in competition with, vertically integrated utilities. Part III evaluates how EPA interprets tenant liability under CERCLA and demonstrates how this interpretation creates an unacceptable tension between the need for renewable energy deployment on contaminated sites and the ability of developers who have not contributed to site contamination to insulate themselves from such liability. Part IV will demonstrate how proper construal of the liability protections provided by the Brownfields Amendments of 2002, an aggressive program for issuing renewable energy developers' prospective purchaser agreements, or further amending CERCLA will adhere to the Congressional intent driving the Brownfields Amendments and spur renewable energy deployment on formerly contaminated sites. Part V proposes a unified program that will facilitate renewable energy deployment and reduce GHG emissions, including a proposed model amendment to CERCLA entitled the RePowering America's Land Act, which grants CERCLA liability immunization to bona fide ground tenants explored in Part IV.

II. LOCKING THE DOOR AND THROWING AWAY THE KEY: "POLLUTER PAYS" LIABILITY FORCES RENEWABLE ENERGY OUT OF SITE AND OUT OF MIND

Deploying renewable energy projects on Brownfields is a multifarious proposition due in large measure to the implications of competing agency and executive department mandates, the intersection of land-use policy with energy policy, and the market factors constraining the viability of wide-scale renewable energy projects.³⁸ An understanding of the statutory scheme governing site contamination, the history of electricity generation, and some market mechanisms

^{37.} Compare RED BOOK, supra note 11, at 13 (identifying the average costs per megawatt of renewable energy as falling between four and forty-three cents depending on source of generation), with U.S. ENERGY INFO. ADMIN., ELECTRIC POWER MONTHLY WITH DATA FOR OCTOBER 2012, tbl.5.3 (Dec. 2012), http://www.eia.gov/cneaf/electricity/epa/epat7p4.html.

^{38.} See supra notes 25-28 and accompanying text.

impacting the economic feasibility of renewable energy generation is necessary to recognize the benefits of renewable energy deployment on Brownfields.³⁹ Indeed, such understanding may be necessary to "doubledown on clean energy," rather than "walk away" from its promise.⁴⁰

A. The Superfund Law and the Super Liability Regime to Match

Responding to several catastrophic land contamination disasters, Congress in 1980 enacted CERCLA, which established a broad, strict liability regime with two overriding objectives: "cleaning up hazardous waste, and doing so at the expense of those who created it." To ensure these essential purposes were achieved, Congress provided that liability would extend to a wide range of individuals and entities contributing to contamination. These classes of potentially responsible parties ("PRPs") include the owners and operators of contaminated sites, those who arranged for the disposal of contaminants at the site, and transporters of the hazardous material. Only limited defenses are available to each class of PRP. Additionally, the liability scheme is

^{39.} See infra Part II.C.

^{40.} President Barack Obama, State of the Union Address (Jan. 24, 2012), in 158 Cong. Rec. H151-56 (daily ed. Jan 24, 2012), available at http://www.gpo.gov/fdsys/pkg/CREC-2012-01-24/pdf/CREC-2012-01-24-pt1-PgH151-4.pdf.

^{41.} Kelley v. E.I. DuPont de Nemours & Co., 17 F.3d 836, 843 (6th Cir. 1994).

^{42.} See, e.g., S. REP. No. 96-848, at 13-15 (1980) ("The goal of assuring that those who caused chemical harm bear the costs of that harm is addressed in the reported legislation by the imposition of liability. Strict liability, [is] the foundation of [CERCLA]....[It is CERCLA's] liability provisions that are the deterrent.").

^{43.} Commander Oil Corp. v. Barlo Equip. Corp., 215 F.3d 321, 327 (2d Cir. 2000). As discussed *infra* Part III, words used in CERCLA's provisions are not always what they first appear, and liberal interpretation of terms is common to effectuate the remedial purposes of the statute in order to promote the statute's expansive public policy focus. *Id.* (explaining that "owner" does not necessarily mean title owner and can apply for the purposes of liability to lessees who attain the requisite indicia of ownership, vis-à-vis the fee owner, to be regarded as de facto owners).

^{44. 42} U.S.C. § 9607(a)(2) (2006); United States v. Bestfoods, 524 U.S. 51, 65-67 (1998) (explaining that an operator is one who manages, conducts, or directs operations specifically related to pollution or makes decisions regarding environmental regulatory compliance).

^{45. 42} U.S.C. § 9607(a)(3). Arranger liability is not a pure form of strict liability in that it requires a showing that the party entering into an agreement for disposal of hazardous waste intended to dispose of the wastes, not merely store or move them. See Burlington N. & Santa Fe Ry. Co. v. United States, 556 U.S. 599, 611 (2009).

^{46. 42} U.S.C. § 9607(a)(4) (defining scope of transporter liability as adhering to anyone who accepts hazardous waste for transport, incineration, or on-site storage if selected by accepting individual).

^{47.} See id. § 9607(b) (limiting liability defenses to acts of war or god, and circumstances where contamination was caused solely by a third party); cf. H.R. REP No. 96-1016, pt. 1, at 34 (1980), reprinted in 1980 U.S.C.C.A.N 6119, 6137 ("[T]he defendant must demonstrate that he took all precautions with respect to the particular waste that a similarly situated reasonable and prudent person would have taken in light of all relevant facts and circumstances.").

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joint and several to avoid issues of judgment proof parties,⁴⁸ but the scheme also contains contribution provisions allowing for cost recovery actions by and among PRPs.⁴⁹

Such an expansive liability scheme is integral to achieving CERCLA's policy goal of "polluter pays" but may have a chilling effect on Brownfields redevelopment by private parties.⁵⁰ Developers face the risk of substantial liability when redeveloping a contaminated site, and if existing contamination is exacerbated, even absent new contribution, millions of dollars in clean-up costs under the "polluter pays" regime may be at stake.⁵¹ Such factors can create significant financing gaps for redevelopers and increase the cost of insurance, which inexorably results in the continued, indefinite backlogging of Brownfields.⁵²

Responding to criticism that CERCLA was failing to remediate contaminated lands at an appropriate pace, and on a necessary scale, Congress enacted the Superfund Amendments and Reauthorization Act

^{48.} See Burlington N. & Santa Fe Ry. Co., 556 U.S. at 606. However, joint and several liability does not attach in every case—apportionment can be accomplished based on factors demonstrated by the defendant such as: nature and duration of ownership, proof of contamination contributed by other parties; or proof of the defendant's lack of contribution. See id. (examining existence and application of CERCLA's joint liability scheme). The Court, upon demonstration that a reasonable basis exists to do so, may then allow apportionment of liability according to the level of contamination by each party. See id. at 615.

^{49.} See, e.g., 42 U.S.C. §§ 9606(b)(2)(D), 9613(f)(1). The avenues of cost recovery and contribution have been muddled through much of the last decade as a result of two holdings limiting the procedures for instituting actions among PRPs. See Cooper Indus., Inc. v. Aviall Servs., Inc., 543 U.S. 157, 160-61 (2004) (limiting contribution claims under CERCLA § 113(f)(1) to claims instituted after the PRP has been sued in a civil action under § 107(a)). Contra United States v. Atl. Research Corp., 551 U.S. 128, 131-32 (2007) (permitting cost recovery by PRPs who voluntarily cleanup sites under § 107(a)(4)(B) and removing the near total bar for cost recovery following voluntary cleanups caused by the Aviall decision).

^{50.} Cf. Blake A. Watson, Liberal Construction of CERCLA Under the Remedial Purpose Canon: Have the Lower Courts Taken a Good Thing Too Far?, 20 HARV. ENVIL. L. REV. 199, 279-82 (1996) (internal quotation marks omitted) (noting aggressive application to lessors, lessees, trustees, and lenders under "owner" and "operator" provisions of CERCLA (internal quotation marks omitted)).

^{51.} See, e.g., U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-10-380, SUPERFUND: EPA'S ESTIMATED COSTS TO REMEDIATE EXISTING SITES EXCEED CURRENT FUNDING LEVELS, AND MORE SITES ARE EXPECTED TO BE ADDED TO THE NATIONAL PRIORITIES LIST 11 (2010) [hereinafter GAO REPORT] (calculating that more than three billion dollars had been expended to remediate seventy-five sites and these sites still require significant investment for full remediation).

^{52.} See Robert A. Simons & Adam Saurwein, Creative Financing of Brownfields Sites, in BROWNFIELDS: A COMPREHENSIVE GUIDE TO REDEVELOPING CONTAMINATED PROPERTY 147, 152-60 (3d ed. 2010) [hereinafter BROWNFIELDS] (noting that financing gaps can be filled with grants, loans, in-kind services, and tax breaks, but the majority of these fillers are complicated when a project does not require full remediation as part of the ultimate proposed project). Where financing is secured, or not needed in the case of a highly liquid developer, insurance premiums are often excessive because of the potential liability arising from possible contamination in the underlying land. See William McElroy & Todd S. Davis, Environmental Insurance in Brownfield Transactions, in BROWNFIELDS, supra, at 188, 190-92.

of 1986 53 and Brownfields Amendments of 2002.54 These amendments strengthened liability protections available to the purchasers of contaminated sites in order to increase the speed and scope of Brownfield redevelopment.⁵⁵ The amendments were enacted to cut back on liability and afford protections to innocent landowners, 56 those who contributed to site contamination in negligible amounts, ⁵⁷ and developers who purchased with knowledge of contamination but did not contribute to, or exacerbate, existing contamination.⁵⁸ The reasons for limiting liability through a broader class of defenses than originally included were largely twofold. First, the number of contaminated sites kept growing and the Superfund⁵⁹ portion of CERCLA was rapidly depleted when the tax-funded provision expired, thus requiring Congressional appropriations to remain solvent. 60 Second, contaminated sites would lie idle rather than be redeveloped in order to avoid sweeping liability, which incentivizes the development of virgin Greenfields. 61 Properly implemented and absent crabbed interpretations, the amendments to CERCLA could greatly facilitate Brownfield redevelopment—especially in service of renewable energy projects.

^{53.} Pub. L. No. 99-499, 100 Stat 1613. (codified as amended in scattered sections of 42 U.S.C.) (adding ability of PRPs to seek cost recovery in contribution actions, an innocent landowner defense, and a *de micromis* exception to liability).

^{54.} Small Business Liability Relief and Brownfields Revitalization Act, Pub. L. No. 107-118, 115 Stat. 2356 (2002) (codified as amended in scattered sections of 42 U.S.C.).

^{55.} See id. §§ 221-22, 115 Stat. at 2368-71. The Brownfields Amendments allowed, for the first time, liability defenses to purchasers of contaminated property, landowners contiguous to contaminated property, and clarified the requirements of the innocent landowner defense. A Smarter Partnership: Removing Barriers to Brownfields Cleanups: Hearing Before the Subcomm. on Env't & Hazardous Materials of the H. Comm. on Energy and Commerce, 107th Cong. 2 (2001) [hereinafter A Smarter Partnership] (statement of Paul Gillmor, Chairman, H. Subcomm. on Env't & Hazardous Materials) ("The uncertainty regarding Federal regs, extra broad Superfund liability, and needless bureaucracy have stifled brownfield cleanups for years.").

^{56.} See 42 U.S.C. §§ 9601(35)(A), 9607(b)(3), (q)(1)(A) (2006).

^{57.} Id. § 9622(g).

^{58.} Id. §§ 9601(40), 9607(r).

^{59.} CERCLA is commonly referred to as "Superfund" or the "Superfund law" because of a massive fund initially established from a tax on oil and chemicals. See id. § 9611(a).

^{60.} See id. §§ 9631-33, repealed by Pub. L. No. 99-499, § 517(c)(1), 100 Stat. 1774 (1986) (codified at 26 I.R.C. § 9507 (2006)); see also Steven Ferrey, Inverting the Law: Superfund Hazardous Substance Liability and Supreme Court Reversal of All Federal Circuits, 33 WM. & MARY ENVIL. L. & POL'Y REV. 633, 644 (2009). Since the Superfund tax provisions have expired, congressional appropriations have averaged \$1.2 billion annually with the peak balance in 1997 reaching \$5 billion before dropping to \$137 million in 2009. See GAO REPORT, supra note 51, at 3.

^{61.} See Ferrey, supra note 60, at 675-77.

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B. The Heavy Hand of Electricity Regulation and How Renewable Energy May Be Losing Its Grip

Recent changes to energy policy removing renewable energy incentives may also limit the feasibility of significant renewable energy deployments on Brownfields, or elsewhere. Electric utilities have traditionally been structured as vertically integrated monopolies.⁶² The monopoly power exerted by electric utilities across large service territories and the resulting "Attleboro gap" distinctely led to the enactment of Title II of the Federal Power Act and creation of the Federal Power Commission ("FPC").64 now the Federal Energy Regulatory Commission ("FERC"). 65 FERC's mandate—and previously the FPC's—is to set "just and reasonable" rates for wholesale electricity sales and electricity transmission in interstate commerce. 66 The just and reasonable mandate was executed for nearly a century by reliance on a simple formula: $R = B(r) + O^{67}$ More so than the method used to calculate equation inputs such as the value of capital, the price the formula produced determined if FERC had achieved its mandate under § 205 of the FPA.⁶⁸ Disputes inevitably arose between various combinations of

^{62.} See Robert S. Handmaker, Deregulating the Transmission of Electricity: Wheeling Under P.U.R.P.A. Sections 203, 204, and 205, 67 WASH. U. L.Q. 435, 441 (1989) (identifying that the electricity industry is a paradigm for economies of scale realized when massive centralized stations result in decreasing marginal costs upon increases in production). Because power plants and the transmission network necessary to deliver electricity to the end-users is highly capital intensive, it is not possible to have multiple entities compete to deliver electricity to end-users in the same geographic area. Id. The result of such high-cost barriers to market entry was the granting of monopoly licenses to electricity producers by state and local governments to exclusively serve these geographic service territories. Id.

^{63.} See Pub. Utils. Comm'n v. Attleboro Steam & Elec. Co., 273 U.S. 83, 84-86 (1927). The "Attleboro gap" arose when two electrical utilities entered into an interstate wholesale power contract, but the exigencies of the market rendered the original price misaligned with the bulk market rate for wholesale power. Id. Because the contract was in interstate commerce, the Rhode Island Public Utilities Commission had its order altering the contract price of the seller abrogated under the Dormant Commerce Clause, resulting in a "gap" of governmental authority to regulate interstate wholesale prices absent the creation of a federal statute and agency to do so. See id. at 89-90.

^{64.} Federal Power Act, 16 U.S.C. § 824(a)-824w (2006).

^{65.} Department of Energy Organization Act, 42 U.S.C. § 7134 (2006).

^{66. 16} U.S.C. § 824d(a) ("All rates and charges made, demanded, or received by any public utility for or in connection with the transmission or sale of electric energy... and all rules and regulations affecting or pertaining to such rates or charges shall be just and reasonable....").

^{67.} R ("Total Revenue"), B ("Rate Base"), r ("Rate of Return"), and O ("Operating Costs") were the primary tools used first by states, then by FERC, to determine the revenue requirements of electric utilities for continued operation, economic growth, investor return, and enticement of future investing. See Charles G. Stalon & Reinier H.J.H. Lock, State-Federal Relations in the Economic Regulation of Energy, 7 YALE J. ON REG. 427, 437-38 (1990).

^{68.} See, e.g., Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591, 602 (1944) ("If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry under the

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FERC, ratepayers, and utilities as parties in litigation concerning costs with most litigation focused on the dollar amount assigned the Rate Base ("B") because with the rate of return relatively static, ⁶⁹ the primary way to increase profits represented by total Revenue ("R") was to inflate capital costs. ⁷⁰

The entrenchment of vertically integrated utilities began to erode with the passage of the Public Utilities Regulatory Policy Act of 1978 ("PURPA"), 71 which followed the tumultuous oil embargos and energy crisis of the 1970s. 72 PURPA's goal was to increase the proliferation of alternative fuels in the electrical market and increase cogeneration. 73 To accomplish this, the statute mandated that electric utilities purchase electricity from Qualifying Facilities ("QFs"). 74 The cost mandated to purchasers was the avoided cost of generation in absence of the supply generated from the QF. 75 An unintended consequence of PURPA, which is significantly affecting the electricity industry even today, was the creation of competition in the generation portion of the electricity cycle. 76 By allowing sellers to enter the market to generate power, and mandating that investor-owner utilities ("IOUs") purchase that power, PURPA created incentives for the generation of electricity from

Act is at an end. The fact that the method employed to reach that result may contain infirmities is not then important.").

^{69.} See Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679, 692-93 (1923) (explaining that the rate of return expected from a public utility is not that gained in highly profitable or speculative ventures but rather a function of that received by similar business in the region to sustain investor confidence and utility service).

^{70.} See generally Duquesne Light Co. v. Barasch, 48 U.S. 299 (1989) (challenging FERC inclusion of only amortized costs of nuclear plant abandoned after construction when approval to start the reactor was denied in the wake of Three Mile Island). The general rule that developed to avoid incentivizing large over-capitalization in power plants, transmission, and distribution services was that only equipment "used and useful" to serving end-users could be considered valid costs for purposes of calculating the Rate Base. See generally Jonathan A. Lesser, The Used and Useful Test: Implications for a Restructured Electric Industry, 23 ENERGY L.J. 349 (2002) (discussing the "used and useful" test).

^{71.} Pub. L. No. 95-617, 92 Stat. 3117 (codified as amended in scattered sections of 16 U.S.C.).

^{72.} Michael D. Hornstein & J.S. Gebhart Stoermer, The Energy Policy Act of 2005: PURPA Reform, The Amendments and Their Implications, 27 ENERGY L.J. 25, 25-26 (2006).

^{73.} See supra note 25 and accompanying text.

^{74. 16} U.S.C. § 824a-3(a) (2006); 18 C.F.R. §§ 292.201–.207 (2011) (defining a QF as an electrical generator of less than eighty megawatts, seventy-five percent of which is generated from non fossil-fuel source inputs, or from cogeneration).

^{75.} See 16 U.S.C. § 824a-3(b)–(d), (m)(1), as amended by Energy Policy Act of 2005, Pub. L. No. 109-158, sec. 1253(a), 119 Stat. 594, 967 (codified as amended in scattered sections of 16 and 42 U.S.C.) (suspending mandatory purchase of QF power at avoided cost rates where the QF has access to a competitive market, which is assumed in areas of the Northeast and Southwest).

^{76.} See, e.g., AMY ABEL, CONG. RESEARCH SERV., RL32728, ELECTRIC UTILITY REGULATORY REFORM: ISSUES FOR THE 109TH CONGRESS 2-3 (2005).

renewable resources.⁷⁷ Authority, however, was needed to mandate the "wheeling" of QF electricity to end-users.⁷⁸ Furthermore, IOUs could not be forced to wheel such power absent FERC ingenuity or court injunctions arising from anti-trust law rather than under the FPA.⁷⁹

Subsequent amendments to PURPA and the FPA, contained in the Energy Policy Act of 1992 ("EPAct of 1992")⁸⁰ permitted FERC to mandate IOUs interconnect with QFs and Independent Power Producers ("IPPs") to wheel power to retail.⁸¹ The cost of wheeling QF power was to be the cost that would have been incurred by utilities to serve the same customers.⁸² The structure in place after EPAct of 1992 was ideal for renewable energy market entry—mandatory interconnection and wheeling,⁸³ mandated purchase of renewable energy at avoided cost rates,⁸⁴ and access to ready markets for the electricity generated.⁸⁵

However, the Energy Policy Act of 2005 ("EPAct of 2005")⁸⁶ significantly restricted the provisions mandating that QF produced electricity be purchased pursuant to avoided cost pricing. Additionally, over-capitalization in facilities previously encouraged by cost-based regulation significantly decreased due both to deregulation and the encouragement of competitive markets, which ironically threatened severe under-capitalization in vital transmission assets.⁸⁷ Decreases in

^{77.} Id. at 2.

^{78.} Stalon & Lock, *supra* note 67, at 457-58 (noting that "wheeling" is industry jargon for transmission).

^{79.} See generally Otter Tail Power Co. v. United States, 410 U.S. 366 (1973) (refusing to wheel Bureau of Reclamation electricity purchased in bulk by municipal power companies was monopolistic behavior undertaken to prevent the municipal power companies from servicing customers); Utah Power & Light Co., 45 FERC ¶ 61,095 (1988) (conditioning merger approval between two electric utilities upon agreement to supply transmission to potential competitors).

^{80.} Pub. L. No. 102-486, 106 Stat. 2776 (codified as amended in scattered sections of 2, 15, 16, 30, 42, and 43 U.S.C.).

^{81.} See 16 U.S.C. § 824i-j (2006), as amended by Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (codified as amended in scattered sections of 16 and 42 U.S.C.).

^{82.} See 18 C.F.R. §§ 292.301-.304 (2011).

^{83.} See, e.g., Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities and Transmitting Utilities, 61 Fed. Reg. 21,540, 21,541 (1996) (codified at 18 C.F.R. pts. 35 & 385) (explaining that after the passage of EPAct of 1992, FERC began exploring ways that it could inject stronger competition into the electricity market and reinterpreted the FPA to allow functional unbundling—separation of transmission and generation—which would allow market side competition for all generators including IPPs who were not QFs, in part by mandating such wheeling).

^{84.} See 16 U.S.C. § 824a-3.

^{85.} See RED BOOK, supra note 11, at 8-9 (analyzing energy consumption and generation of approximately one hundred quadrillion British Thermal Units domestically).

^{86.} Energy Policy Act of 2005, 16 U.S.C. § 824a-3 (2006).

^{87.} See Joshua J. Franklin, Upgrading the National Power Grid: Electric Companies Need an Economic Incentive to Invest in New Technology, 31 RUTGERS COMPUTER & TECH. L.J. 159, 174-75, 179-81 (2004) (discussing the Northeast blackout of August 14, 2003, which left more than fifty

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spending on transmission exposes the electrical grid to the increased possibility of blackouts and instability, which renewable energy deployment on select Brownfields can alleviate based on careful site selection. 88 Also extinguished is the advantage renewable energy generation enjoyed relative to fossil fuel generation prior to enactment of the EPAct of 2005. 89 Preferential treatment for renewable energy deployment, including continued production tax credits, may be necessary for the continued short-term viability of electricity from renewables in competitive markets. 90

C. Renewable Energy on Brownfields Saves Dollars and Makes Sense

Climate change has the potential to impact nearly every aspect of American life and touch upon each member of the population. The changes in industry, agriculture, land-use, and health care precipitated by even small increases in the average global temperature could be farreaching, with mitigation and adaptation costs approaching two trillion dollars annually. Though there exists continued resistance to the acceptance of climate change by some, the scientific community advocates in almost total unison for a comprehensive, global mitigation and adaptation policy. Because fossil-fuel combustion for electricity generation is the largest stationary source category for carbon emissions,

million people without power due to overburdening of the electrical transmission grid caused by a power surge and identifying the lack of incentives after PURPA and EPAct of 1992 for utilities to invest in transmission infrastructure).

^{88.} See Steven Ferrey, Exit Strategy: State Legal Discretion to Environmentally Sculpt the Deregulating Electric Environment, 26 HARV. ENVTL. L. REV. 109, 116-17 (2002) (proposing that renewable energy deployment will tend to lead to smaller generation with greater proximity to enduse, which will require less transmission thereby allowing generation to substitute, rather than merely complement, transmission services in the electric cycle); cf. Piedmont Envtl. Council v. FERC, 558 F.3d 304, 309-10 (4th Cir. 2009) (holding that FERC lacks authority to issue siting permits for regional transmission lines when opposed by states and signaling a major impediment to national efforts at fortifying already strained transmission resources).

^{89.} Cf. RED BOOK, supra note 11, at 46, 59, 69 (showing that the increase in renewable energy deployment, and decrease in renewable energy prices, were slowed in the period immediately following 2005, when compared to the period immediately preceding 2005).

^{90.} Cf. U.S. ENERGY INFO. ADMIN., ANNUAL ENERGY OUTLOOK 2011 WITH PROJECTIONS TO 2035 75 figs.80-81 (2011), available at http://www.eia.gov/forecasts/aeo/pdf/0383(2011).pdf [hereinafter ENERGY OUTLOOK] (highlighting that the levelized cost of wind is only one cent per kilowatt hour lower than coal-fired electrical generation units and nearly four cents per kilowatt higher than less capital intensive natural gas fired generation units).

^{91.} See supra note 6 and accompanying text.

^{92.} See, e.g., Frank Ackerman & Elizabeth A. Stanton, Natural Res. Def. Council, The Cost of Climate Change: What We'll Pay if Global Warming Goes Unchecked 2 tbl.1 (2008).

^{93.} See supra note 4 and accompanying text.

it is increasingly clear that energy policy *is* climate policy.⁹⁴ To begin stabilizing and ultimately reducing GHG emissions, annual emission increases must be offset by deployment of renewable energy generation, which emit negligible amounts of GHGs relative to fossil-fuel sources of electricity.⁹⁵

Though the global community has failed thus far to create a comprehensive and enforceable scheme for GHG reductions, ⁹⁶ and the United States has stalled in adopting a comprehensive energy and climate policy, ⁹⁷ recent legal challenges against large GHG emitters and EPA have created incentives for the private sector to reduce carbon emissions ⁹⁸ as GHGs are now under the purview of the CAA after EPA decisions borne of *Massachusetts v. EPA*. ⁹⁹ Because they are regulated by the CAA, GHGs must be inventoried and reported, ¹⁰⁰ as well as controlled ¹⁰¹ at major stationary sources, adding to the transaction and

^{94.} See, e.g., U.S. DEP'T OF STATE, U.S. CLIMATE ACTION REPORT 2010: FIFTH NATIONAL COMMUNICATION OF THE UNITED STATES OF AMERICA UNDER THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE 13, 26-28 tbl.3-5 (2010) [hereinafter FIFTH CLIMATE REPORT], available at http://unfccc.int/resource/docs/natc/usa nc5.pdf.

^{95.} See id. at 29, 32, 76.

^{96.} See Lisa Schenck, Climate Change "Crisis"—Struggling for Worldwide Collective Action, 19 COLO. J. INT'L ENVTL. L. & POL'Y 319, 334-37 (2008) (discussing the Kyoto Protocol's failure to include enforceable caps for several of the world's largest GHG emitters, which implicates the free-rider problem and exacerbates the collective action problem for mobilizing carbon emission reduction efforts on a global scale).

^{97.} Indeed, the United States has failed to ratify the Kyoto Protocol, allowed the Waxman-Markey Bill to die in Congress, and has exerted Herculean efforts to avoid international and domestic obligations for reducing GHG emissions. See American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong (2009); Bill Summary & Status: 111th Congress (2009–2010): H.R. 2454: Major Congressional Actions, LIBR. CONGRESS, http://thomas.loc.gov/cgibin/bdquery/z?d111:HR02454:@@@R (last visited Feb. 7, 2013) (passing House with 219 to 212 vote but left on the Senate floor without debate); see also Patrick Parenteau, Anything Industry Wants: Environmental Policy Under Bush II, 14 DUKE ENVT'L L. & POL'Y F. 363, 368 (2004) (attacking the Bush administration for Enron-like "accounting gimmick[s]" for attempting to meet the non-binding reductions of the Rio Conference, which created the UNFCCC).

^{98.} See supra note 10 and accompanying text. Recent litigation has resulted in some success in prompting GHG regulation. Massachusetts v. EPA, 549 U.S. 497, 528-29 (2007) (holding that carbon dioxide is an "air pollutant" within the meaning of § 202(a) of the Clean Air Act). By holding that GHGs are air pollutants under the CAA, a cascade of determinations and rulemakings were necessitated in the wake of Massachusetts v. EPA. See, e.g., Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31,514, 31,514 (June 3, 2010) (to be codified at 40 C.F.R pts. 51, 52, 70, and 71); Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,496 (Dec. 15, 2009) (to be codified at 40 C.F.R. pt. 1).

^{99.} See sources cited supra note 98.

^{100.} Mandatory Reporting of Greenhouse Gases, 74 Fed. Reg. 56,260, 56,266 (Oct. 30, 2009) (to be codified in scattered parts of 40 C.F.R.) (requiring large sources across various industrial sectors to report GHG emissions to EPA).

^{101.} See, e.g., Petition Requesting that the Administrator Object to the Issuance of the Final Revised Title V Operating Permit at 5, 10 In re Louisville Gas & Elec. (E.P.A. Apr. 29, 2008)

operating costs of electric generation and transmission facilities.¹⁰² Industries falling within the ambit of CAA or regional¹⁰³ carbon regulation will increasingly look for methods to curb reported emissions to achieve future reduction credits,¹⁰⁴ to avoid a negative public image,¹⁰⁵ and to avoid energy input volatility.¹⁰⁶

While federal action has been prompted from influential judicial decisions, states are addressing the need for renewable energy through various mechanisms of their own design. The most widespread and promising state employed mechanisms are Renewable Portfolio Standards ("RPSs")¹⁰⁷ utilizing Renewable Energy Certificates ("RECs"), ¹⁰⁸ and Feed in Tariffs ("FITs"). ¹⁰⁹ An RPS is a mandated mix of electrical generation facilities represented as a total capacity output by source type (renewable versus fossil fuel). ¹¹⁰ A REC is a certificate specifying how much energy a utility generates from renewable resources and ultimately delivers to an end-user. ¹¹¹ Attainment of a REC

⁽No. 21-223-002), 2008 WL 8277210 (requesting Best Available Control Technology to reduce amount of carbon emissions from electric generation facility).

^{102.} See Mandatory Reporting of Greenhouse Gases, 74 Fed. Reg. at 56,363 tbl.VII-1 (estimating that the reporting and compliance costs of reporting GHG emissions to be nearly thirty million dollars across approximately 3000 covered electrical generation facilities).

^{103.} See Program Design, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/design (last visited Feb. 7, 2013) (identifying that the Regional Greenhouse Gas Initiative operates a carbon cap and trade system in the Northeast with periodic auctions for carbon emission credits that can then be traded to ensure sector caps, enforced by participating states according to state law, are not exceeded). The Western Climate Initiative is a similar program operating in the western United States and portions of Canada. See Program Design, W. CLIMATE INITIATIVE, http://www.westernclimateinitiative.org/designing-the-program (last visited Feb. 7, 2013).

^{104.} See generally American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong., (2009) (creating cap and trade program for the United States with reduction credits considered for legacy reductions and implemented efficiency programs).

^{105.} See, e.g., CARBON DISCLOSURE PROJECT, CDP GLOBAL 500 REPORT 2011: ACCELERATING LOW CARBON GROWTH 7, 56-73 (2011) (listing emissions of Fortune 500 companies voluntarily submitting such data to garner public support from emission transparency).

^{106.} Ferrey, *supra* note 88, at 117, 124 (stating that unlike fossil fuel electricity generation, most renewable energy sources do not require source inputs, which are subject to price volatility, embargos, and transportation needs because the sun and wind are free, plentiful, and globally distributed).

^{107.} See Patrick Jacobi, Renewable Portfolio Standard Generator Applicability Requirements: How States Can Stop Worrying and Learn to Love the Dormant Commerce Clause, 30 Vt. L. Rev. 1079, 1089-90 (2006).

^{108.} Joel B. Eisen, *The Environmental Responsibility of the Regionalizing Electric Utility Industry*, 15 DUKE ENVTL. L. & POL'Y F. 295, 308 (2005).

^{109.} KARLYNN CORY ET AL., NAT'L RENEWABLE ENERGY LAB., TECHNICAL REPORT NREL/TP-6A2-45549, FEED-IN TARIFF POLICY: DESIGN, IMPLEMENTATION, AND RPS POLICY INTERACTIONS 2 (2009).

^{110.} See Jacobi, supra note 107, at 1090.

^{111.} See Eisen, supra note 108, at 308.

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is typically used to satisfy the RPS standard for IOUs, even though the electricity generated was from electrical plants owned by third parties. 112

State RPS programs compel the private energy sector to avoid fines and forfeiture of tax incentives by meeting the imposed standard. Therefore, the proliferation of such programs will increase the private sector demand for renewable energy. By comparison, a FIT focuses not on a mandated quota of renewable energy on the demand side, but rather on creating a market for renewable energy by encouraging increases on the supply side. Renewable energy supply and demand is not created solely by the threat of loss, but instead by the guarantee of a robust market for renewable-generated electricity. FITs adopted abroad have been very successful more than doubling the amount of electricity generated from renewables and creating the potential for more than three-quarters of domestic need to be satisfied from these sources. A FIT and an RPS are not mutually exclusive, but rather could together far surpass renewable electricity gains realized from using either in isolation. 117

Renewable energy generation deployed on contaminated and remediated land has the potential to solve multiple environmental and energy issues simultaneously. Siting renewable energy projects on contaminated lands guarantees reuse of some urban and blighted land, ¹¹⁸ reduces the footprint of renewable energy, ¹¹⁹ eases strain on electric transmission resources, ¹²⁰ and reduces carbon emissions. ¹²¹ Renewable energy deployment on Brownfields can also insulate the projects from

^{112.} See Wheelabrator Lisbon, Inc. v. Conn. Dep't of Pub. Util. Control, 531 F.3d 183, 184-85 (2d Cir. 2008) (per curiam) (allowing the state public utility commission to transfer RECs produced by renewable energy generators to utilities actually distributing the power to end-users).

^{113.} See Jacobi, supra note 107, at 1090.

^{114.} CORY ET AL., supra note 109, at 8.

^{115.} See id. at 13.

^{116.} Christoph H. Stefes, *The German Solution: Feed-In Tariffs*, N.Y. TIMES (Sept. 21, 2011, 5:42 PM), http://www.nytimes.com/roomfordebate/2011/09/20/why-isnt-the-us-a-leader-in-greentechnology/us-should-emulate-germanys-renewable-energy-model (utilizing twenty-year feed-in tariffs allowed Germany to increase the amount of energy from renewable sources from less than five percent in 1991 to more than twenty percent in 2011).

^{117.} CORY ET AL., supra note 109, at 10-11, 13.

^{118.} Cf. John R. Nolon & Jessica Bacher, Zoning and Land Use Planning, 37 REAL EST. L.J. 234, 237-41 (2008) (identifying characteristics of blight including the presence of pollution on land in need of redevelopment to contribute to urban renewal).

^{119.} See Outka, supra note 27, at 297-98 (identifying studies estimating the available land savings from reusing land for energy projects as between two and eight million acres).

^{120.} See id. at 302 (highlighting the advantages of on-site and near end-use energy production to alleviate capacity constraints on the electrical grid).

^{121.} See id. at 287-88 (identifying scholarly debate centering on the notion that energy land use planning will reduce carbon emissions from avoiding development of land as sinks and increasing renewable deployment).

NIMBY¹²² challenges, thus reducing the transaction costs caused by litigation and adding to the certainty that the project will be completed.¹²³ Because solar and wind deployments do not result in significant emissions of carbon or other pollutants,¹²⁴ environmental justice issues are, like NIMBY opposition, largely neutralized.¹²⁵ No longer is the need for additional energy and the desire to protect the environment a Buridan's Ass paradox¹²⁶—such needs and desires are not mutually exclusive.

Unlike generation facilities, fossil-fuel renewable energy deployments are sited overwhelmingly on leased land, rather than on land owned by the generator in fee. 127 Leases are preferable to owning land in fee when deploying wind and solar technologies for two primary reasons. First, utility-scale wind and solar deployments are highly capital intensive on the front end of the project, whereas fossil fuel plants are capital intensive on the back end because of the costs of fuel, extraction and transportation, and environmental reporting. 128 This economic reality requires renewable projects to have as low an initial capital cost as possible in order to gain and maintain financing from inception to completion. 129 Second, utility-scale deployments (as well as smaller, decentralized projects) allow for underlying use of the land chosen for development, which reduces land costs and allows continued use for

^{122. &}quot;NIMBY" is an acronym for "not in my backyard," used to refer to those who challenge renewable energy projects because of environmental, wildlife preservation, and aesthetic concerns. Salkin & Ostrow, *supra* note 26, at 1052.

^{123.} By siting such projects on Brownfields, many of the NIMBY arguments are neutralized, because a Brownfield is unlike Nantucket Sound, Yosemite Valley, or other prized locales, which may stir community opposition to development of the parcel in question. See id. at 1070.

^{124.} See Ferrey, supra note 88, at 124.

^{125.} Sariyah S. Buchanan, Why Marginalized Communities Should Use Community Benefit Agreements as a Tool for Environmental Justice: Urban Renewal and Brownfield Redevelopment in Philadelphia, Pennsylvania, 29 TEMP. J. SCI. TECH. & ENVTL. L. 31, 40 (2010) (explaining that environmental justice focuses on the inequity arising when the poor are disproportionately located within close proximity of Brownfields, power plants, and other installations that threaten individual health).

^{126.} Margaret Levi et al., *Introduction* to THE LIMITS OF RATIONALITY 7 (1990) (discussing the Buridan's Ass paradox inspired by Aristotle's *De Caelo*, where an ass is placed equidistant between a haystack and pail of water, and because equally hungry and thirsty, is unable to choose one alternative over another, resulting in death from thirst and starvation).

^{127.} AM. WIND ENERGY ASSOC., WIND ENERGY SITING HANDBOOK \P 2.1.2 at 2-4 (2008) (indicating that, for example, wind projects are usually set-up on leased land).

^{128.} JOHN P. HARPER ET AL., ERNEST ORLANDO LAWRENCE BERKELEY NAT'L LAB., LBNL-63434, WIND PROJECT FINANCING STRUCTURES: A REVIEW & COMPARATIVE ANALYSIS i (2007), available at http://eetd.lbl.gov/ea/emp/reports/63434.pdf (analyzing the finance structures utilized for wind energy).

^{129.} Id. at 48.

farming,¹³⁰ parking,¹³¹ landfills,¹³² or continued remediation when sited on contaminated land.¹³³ Such leases typically last for twenty to thirty years to support secured financing through power purchase agreements¹³⁴ and create a severable right to sun or air, grant access easements for maintenance, and require the underlying landowner to refrain from interfering with sited electrical generation units.¹³⁵ Recognition by governments that underlying uses can be maintained while deploying renewable energy projects has prompted the opening of government lands for renewable energy leases, thereby allowing fulfillment of renewable energy quotas¹³⁶ without capital expenditures by the government itself.¹³⁷

In addition, contaminated sites allow renewable energy producers to offset the loss of government subsidies¹³⁸ for renewable power with those provided to redevelop Brownfields.¹³⁹ These redevelopment

^{130.} See RED Book, supra note 11, at 63; Groundbreaking Ceremony for the 205.5 MW Lakefield Wind Project, EDF (Nov. 10, 2010), http://www.enxco.com/about/press/groundbreaking_ceremony_for_the_205.5_mw_lakefield_wind_project/ (announcing two hundred plus megawatt wind energy deployment on more than twenty thousand acres of farmland in Minnesota). Because the average output of modern wind turbines is between 1.5 and 3.5 megawatts, in order for a wind farm to compete with fossil fuel plants, hundreds of turbines must be deployed with hundreds of meters spacing between. RED Book, supra note 11, at 63.

^{131.} John Collins Rudolf, *The Parking Lot as 'Solar Grove*,' N.Y. TIMES: GREEN (July 6, 2010, 4:28 PM), http://green.blogs.nytimes.com/2010/07/06/the-parking-lot-as-solar-grove/.

^{132.} Mike Breslin, *Bright Idea—Solar Power over Landfills*, AMERICAN RECYCLER (June 2011), http://www.americanrecycler.com/0611/971bright.shtml (identifying nearly one hundred thousand closed municipal landfill sites nationwide with the potential for flexible membrane solar generation to both cap landfills and provide municipalities with revenue from the electricity generated).

^{133.} See generally Gabriel Sampson, Office of Solid Waste & Emergency Response, EPA, Solar Power Installations on Closed Landfills: Technical and Regulatory Considerations (2009) (discussing solar power systems); Success Stories and Case Studies on Siting Renewable Energy Contaminated Land and Mine Sites, EPA, http://www.epa.gov/renewableenergyland/successstories.htm (last updated May 16, 2012) [hereinafter Success Stories].

^{134.} See, e.g., U.S. DEP'T OF ENERGY ET AL., DOE/EE-0307, GUIDE TO PURCHASING GREEN POWER: RENEWABLE ELECTRICITY, RENEWABLE ENERGY CERTIFICATES, AND ON-SITE RENEWABLE GENERATION 25-26 (2010) [hereinafter GREEN GUIDE].

^{135.} See generally Michelle M. McAtee & Vito M. Pacione, What You Should Know About Wind Farms, PRAC. REAL EST. LAW., May 2009, at 21 (discussing wind farms).

^{136.} See Energy Policy Act of 2005, 42 U.S.C. § 15852 (2006) (requiring not less than 5% of energy used by the federal government between 2010 and 2012 be from renewable sources and not less than 7.5% in subsequent years); Exec. Order No. 13,423, 72 Fed. Reg. 3919 (Jan. 26, 2007) (requiring that fewer than half of renewable energy generation required by EPAct of 2005 be from "new" sources and when feasible, these sources should be sited on federal land).

^{137.} See GREEN GUIDE, supra note 134, at 26.

^{138.} See 26 I.R.C. § 45(a) (2006) (allowing renewable energy producers eligible for electricity production tax credit to opt for treasury grant of up to \$200 per kilowatt plus 30% real estate deduction and 10% equipment deduction in lieu of 1.1 cents per kilowatt hour for solar technologies, or 2.2 cents per kilowatt hour for wind and biomass).

^{139.} See generally EPA, A GUIDE TO FEDERAL TAX INCENTIVES FOR BROWNFIELDS

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incentives combined with cost savings from leasing land could maintain renewable energy's competitiveness by keeping the cost per megawatt produced nearer to that of natural gas and coal. However, this elegant interaction of energy, land, and air is discouraged by several EPA actions described below, which establish a wall between the Agency and private developers. Erected to alleviate administrative burdens and protect power—neither a true threat—to enforce CERCLA, this wall prevents the realization of a scenario where half a million contaminated sites is reduced by private redevelopment for renewable energy projects.

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III. I'D DO ANYTHING FOR LOVE (BUT I WON'T DO THAT): EPA'S RELATIONSHIP WITH RENEWABLE ENERGY DEPLOYMENT ON BROWNFIELDS

The advantages of siting renewable energy projects on Brownfields have not escaped the attention of developers or EPA. However, governmental programs to develop renewable energy on Brownfields do not adequately address redevelopment considering the scope of the problem or the amount of renewable energy needed to compete meaningfully with fossil-fuel generation. Has cale of such programs is often circumscribed intentionally, merely attempting to show feasibility, but Agency interpretations of CERCLA also indirectly, but powerfully, limit the efficacy of the program's goals, even where feasibility is demonstrated. Has Further, Agency reticence to definitively foreclose much of the liability faced by private Brownfield redevelopers inhibits the promise of renewable energy deployments on these sites and leaves the door open for courts to find liability despite the best intentions of Agency guidance to the contrary. Has

REDEVELOPMENT (2011) (cataloging federal and state tax incentives and grants for Brownfield redevelopment including those for renewable energy deployment).

^{140.} See ENERGY OUTLOOK, supra note 90, at 75 & fig.81, 77 (projecting that by 2020 and 2035, costs of renewable energy will become lower than fossil fuels due in part to regulatory uncertainty of fossil fuel plants, higher fuel costs, incentives for renewables, and lower capital costs for renewables).

^{141.} See discussion infra Part III.B.

^{142.} See discussion infra Part III.A.

^{143.} See FIFTH CLIMATE REPORT, supra note 94, at 14 (noting domestic renewable electricity consumption in 2008 accounted for 3% of consumption—coal and natural gas approximately 48%).

^{144.} See infra Part III.A-B.

^{145.} See infra Part III.B-C.

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A. The RePowering America's Land Initiative and the Potential to Kill Two Dirty Birds with One Stone

The EPA, in a joint effort with the Department of Energy's National Renewable Energy Laboratory ("NREL"), created the Initiative in September 2008 to begin addressing the intersection of renewable energy and contaminated sites. 146 The Initiative aims to identify Brownfields, Superfund sites, and abandoned landfill or mine sites, which have wind, solar, geothermal, or biomass development potential. 147 EPA estimates the number of contaminated sites nationwide to be roughly 500,000, and efforts in conjunction with NREL have identified 11,000 sites, spanning in excess of 15 million acres, which are suitable for renewable energy deployment. 48 After reviewing applications solicited in early 2011, the agencies in November 2011, released 26 feasibility studies assessing contaminated sites located in 21 states, which are suitable for renewable energy deployments. 149 The majority of sites identified are categorized as suitable for solar (21), but also include those suited for biomass (7), wind (6), and geothermal (2). 150 Generation facilities constructed within the ambit of the Initiative account for a generating capacity of less than 80 megawatts.¹⁵¹ Tempering the excitement of such deployments is the fact that the output from these projects is roughly 10% of the generating capacity from only one new coal-fired central power plant. 152

While the goals of the Initiative are laudable, the feasibility of facilitating significant redevelopment of contaminated sites solely with

^{146.} See NAT. RENEWABLE ENERGY LAB., NREL/TP-6A20-50898, GUIDE FOR IDENTIFYING AND CONVERTING HIGH-POTENTIAL PETROLEUM BROWNFIELD SITES TO ALTERNATIVE FUEL STATIONS 1 (2011); Siting Renewable Energy on Potentially Contaminated Land and Mine Sites, EPA, http://www.epa.gov/renewableenergyland/ (last updated Oct. 31, 2012) (explaining that the goal of the joint effort is to identify contaminated and remediated land that can support renewable energy projects and highlight the viability of such projects for state and private developers).

^{147.} See, e.g., NAT. RENEWABLE ENERGY LAB., supra note 146, at 1, 3, 7-8 (2011) (outlining the steps NREL will take to identify and rate possible Brownfield sites for renewable energy deployment based on size, location, and type of generating source).

^{148.} Frequently Asked Questions on Renewable Energy on Contaminated Land and Mine Sites, EPA, http://www.epa.gov/renewableenergyland/faq info.htm (last updated Nov. 4, 2011).

^{149.} E.g., EPA/NREL Feasibility Studies, EPA, http://www.epa.gov/oswercpa/studies.htm (last updated May 16, 2012).

^{150.} Id. (discussing the various sites in attached materials).

^{151.} Success Stories, supra note 133 (listing the projects completed, consisting of seven generation facilities ranging in capacity from one megawatt to the thirty-five megawatt Steel Winds project).

^{152.} See KEITH BURNARD & SANKAR BHATTACHARYA, POWER GENERATION FROM COAL: ONGOING DEVELOPMENTS AND OUTLOOK 13 (2011) (evaluating deployment of supercritical coal generation plants worldwide, which range from 400 megawatts to 1100 megawatts with the majority generating approximately 800 megawatts).

the Initiative, or in conjunction with state Brownfield redevelopment programs, is unrealistic. Though EPA and NREL have stated that the program's goal is to "demonstrate the *potential* that contaminated land provides for developing renewable energy," the question naturally arises—is there an actual need for such demonstration, or is the potential for such projects already glaringly clear? With nearly 500,000 sites in various stages of contamination, the identification and evaluation of less than 30 sites per year simply will not achieve the dual purposes of the program on a sufficient scale. Nor will the addition of approximately 82 megawatts of renewable generating capacity to curb the construction of additional fossil fuel electricity generation facilities satisfy the energy demand of nearby residents or ultimately contribute to a reduction in carbon emissions in a meaningful way. 157

Additionally, very high transaction costs inhere in mobilizing multilateral agency action on a nationwide or even statewide scale. Transaction costs in this context arise from rallying community support, identifying sites, identifying sites,

^{153.} Compare id. (calculating that the average output of supercritical coal plants being developed is roughly eight hundred megawatts), with Success Stories, supra note 133 (noting that the total nameplate capacity of all completed Initiative projects listed is less than eighty megawatts).

^{154.} EPA OSWER CTR. FOR PROGRAM ANALYSIS, DATA GUIDELINES FOR "RENEWABLE ENERGY GENERATION POTENTIAL ON EPA AND STATE TRACKED SITES" MAPS 2 (2010), available at http://www.epa.gov/renewableenergyland/maps/epa_tracked_sites_data_guidelines.pdf. (emphasis added).

^{155.} E.g., RED BOOK, supra note 11, at 111-12 (discussing clean energy investments in recent years with domestic investment in renewable energy reaching nine billion dollars in 2009, of which, three billion was directed to solar and wind energy deployments); cf. EPA OSWER CTR. FOR PROGRAM ANALYSIS, supra note 154, at 2 (noting the many benefits of using contaminated land and mind sites for renewable energy purposes).

^{156.} Compare EPA/NREL Feasibility Studies, supra note 149, with BURNARD & BHATTACHARYA, supra note 152, at 13.

^{157.} Seth Bornstein, Biggest Jump Ever Seen in Global Warming Gases, ASSOCIATED PRESS FIN. WIRE, Nov. 9, 2011, available at 2011 WL 27320360 (reporting on a six percent increase in GHG emissions totaling over five hundred million tons from increased coal generation in the developing world).

^{158.} See generally Howard C. Landau, Building Consensus for the Project, in BROWNFIELDS, supra note 52, at 182-87 (providing a detailed analysis of common Brownfields redevelopment steps from communication with community stakeholders and media to arranging for public hearings with ancillary delays to the project).

^{159.} See Outka, supra note 27, at 269-70 (explaining that the dominance of local interest in plant siting and ability for local interests to be heard in the siting process may create significant impediments to ultimately developing a needed facility unless removed from population zones).

^{160. 42} U.S.C. § 4332(C) (2006). The National Environmental Policy Act ("NEPA") requires agencies to compile an Environmental Impact Statement ("EIS") for "major Federal actions significantly affecting the quality of the human environment" including "adverse environmental effects," "alternatives," and any "commitments of resources" to the proposed action or legislation. *Id.* Environmental groups, despite the benefits of renewable energy deployment, use the NEPA

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private transactions, the quantitative impact could potentially be less among private parties who could execute remediation on shorter timeframes¹⁶¹ and can create economies of scale not realized by the Initiative. EPA's expenditures, in both time and money, are best allocated to oversight and approval of responsible private party transactions and to general enforcement of its mandate.¹⁶²

B. Do as I Say, Not as I Do: How EPA Guidance Regarding Renewable Energy Deployments on Brownfields Is Incoherent in Light of Ground Lease Prevalence

Included expressly to reduce the liability developers faced when attempting to redevelop contaminated lands, ¹⁶³ the Bona Fide Prospective Purchaser ("BFPP") provision added to CERCLA by the Brownfields Amendments was written to apply to both owners and tenants. ¹⁶⁴ The BFPP provision provides a defense to CERCLA liability conditioned upon a purchaser or lessee making all appropriate inquiries ¹⁶⁵ prior to the purchase or lease of a contaminated site and causing no new contaminant discharges after the purchase or lease. ¹⁶⁶ The inclusion of the BFPP provision in CERCLA was seen as a vehicle to allow increased Brownfield redevelopment by reducing the chilling effect caused by expansive liability. ¹⁶⁷ However, EPA's adoption of two key policy positions erects significant barriers to the private

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process to challenge proposals conflicting with organizational preferences much to the detriment of more rapid renewable energy deployment. See W. Watersheds Project v. Bureau of Land Mgmt., 774 F. Supp. 2d 1089, 1091, 1093-94 (D. Nev. 2011) (challenging approval of wind energy facility); see also Domenic A. Cossi, Getting Our Priorities Straight: Streamlining NEPA to Hasten Renewable Energy Development on Public Land, 31 Pub. LAND & RESOURCES L. Rev. 149, 154 (2010) (describing the purpose and process of developing an EIS).

^{161.} CONG. BUDGET OFFICE, CBO MEMORANDUM: ANALYZING THE DURATION OF CLEANUP AT SITES ON SUPERFUND'S NATIONAL PRIORITIES LIST 2, 7-10 (1994) (estimating the average cleanup time of Superfund sites to be between thirteen and fifteen years with some estimated to require up to forty years for completion).

^{162.} See GAO REPORT, supra note 51, at 19-21 (concluding that the cost to remediate sites on the National Priorities List will far exceed both EPA estimates for those sites and corresponding appropriations).

^{163.} A Smarter Partnership, supra note 55, at 1-2 (statement of Paul Gillmor, Chairman, H. Subcomm. on Env't & Hazardous Materials).

^{164. 42} U.S.C. \S 9601(40) ("The term 'bona fide prospective purchaser' means a person (or a tenant of a person) that acquires ownership of a facility after January 11, 2002").

^{165. 40} C.F.R. § 312.20 (2010).

^{166. 42} U.S.C. § 9601(40). The provision defines the new class able to avoid CERCLA liability as: "a person (or a tenant of a person) that acquires ownership of a facility after January 11, 2002, and that establishes each of the following by a preponderance of the evidence" rather than adopting language providing liability protections to "a tenant of that person," or "their tenant." Id.

^{167.} See A Smarter Partnership, supra note 55, at 2 (statement of Paul Gillmor, Chairman, H. Subcomm. on Env't & Hazardous Materials).

redevelopment of contaminated sites by renewable energy developers. First, EPA has incorrectly interpreted the Brownfields Amendments by limiting the liability protections afforded to tenants to situations where their protection is either derivative as to a fee owner, or where the tenant has sufficient indicia of ownership to be regarded as if the tenant were a fee owner. Second, EPA construes the statute to be self-executing, which reinforces a longstanding policy to refrain from issuing Prospective Purchaser/Lessor Agreements ("PPAs") to private parties in transactions for the redevelopment of contaminated sites. Though the Agency does not completely bar the issuance of PPAs, the circumstances under which they actively issue PPAs are extremely limited. The small number of PPAs issued attests to the stringency of PPA requirements, which together with EPA's statutory interpretation frustrates renewable energy developers' Brownfield siting significantly.

Interpreting the BFPP provisions to allow tenants only derivative liability protection if the fee owner qualifies as a BFPP, or when the tenant has acquired sufficient indicia of ownership, renders the parenthetical inclusion of tenants nugatory. Such interpretation is patently at odds with canons of general statutory interpretation and the

^{168.} See EPA, ENFORCEMENT DISCRETION GUIDANCE REGARDING APPLICABILITY OF THE BONA FIDE PROSPECTIVE PURCHASER DEFINITION IN CERCLA SECTION 101(40) TO TENANTS: FREQUENTLY ASKED QUESTIONS 1 (2009) [hereinafter BFPP FAQs].

^{169.} *Id.* at 4. A PPA is an agreement entered into between the developer and EPA (with Attorney General approval) in order to facilitate contaminated site redevelopment by specifically stating the extent of contamination, planned enforcement actions, and steps necessary for the developer to avoid CERCLA liability. *See* Memorandum from Barry Breen, Dir., Office of Site Remediation Enforcement and Bruce Gelber, Chief, Envtl. Enforcement Section, Envtl. & Natural Res. Div., U.S. Dep't of Justice to Superfund Senior Policy Managers (Regions I-X) et al. 2 & n.2, 5-7 (Jan. 10, 2001) [hereinafter PPA Memo]; *see also* Memorandum from Barry Breen, Dir. Office of Site Remediation Enforcement to Superfund Senior Policy Managers (Regions I-X) and Regional Counsels (Regions I-X) 1-2 (May 31, 2002) [hereinafter BFPP Memo] (stating that since the Brownfields Amendments outline the steps necessary for BFPP liability protection to attach, PPAs are rendered "unnecessary").

^{170.} See BFPP Memo, supra note 169, at 4-5 (considering issuance of PPAs where the windfall lien on a site would preclude financing, the land to be purchased is owned by a third party engaged in CERCLA litigation and would likely sue the purchaser, or where significant environmental benefits would be derived, which is determined on an ad hoc, site-specific basis).

^{171.} See PPA Memo, supra note 169, at 2 (noting that only 140 PPAs were issued prior to 2000).

^{172.} Compare 42 U.S.C. § 9601(40) (2006) ("The term 'bona fide prospective purchaser' means a person (or tenant of a person) that acquires ownership of a facility...." (emphasis added)), with id. § 9607(r) ("[A] bona fide prospective purchaser whose potential liability for a release or threatened release is based solely on the purchaser's being considered to be an owner or operator of a facility shall not be liable...." (emphasis added)). Indeed, the interplay between the liability provision for BFPPs and the definitional provision for BFPPs would make the disjunctive in the liability provision useful only if in some way a fee owner could not be considered the fee owner of a particular site. See id. § 9607(r).

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specific canons that courts attach to interpretation issues arising under CERCLA.¹⁷³ EPA's flawed interpretation of the provision functionally alters the definition of a BFPP from including a "tenant" of a "person," to a BFPP being a "tenant" of a "BFPP."¹⁷⁴ Further, provisions explaining the liability exemptions for BFPPs provide that liability would not attach "based solely on the purchaser's being considered an owner or operator," a disjunctive purporting to provide protection directly to tenants.¹⁷⁵ Otherwise, given the narrow view of "owner" in § 107(a)(1), incorporated by reference, which attaches liability to a person who is an owner *and* operator, "operator" as used in § 107(r) would be superfluous.¹⁷⁶

A cramped reading of the BFPP provisions need not attach to maintain liability for both owner and lessee because under the affiliation exemption, "title" ought instead be read broadly to include leases. A reading that permits tenants to retain BFPP status independent of the owner, when the tenant's affiliation with an owner PRP is solely the lease, allows for statutory construction consistent with its purpose to bolster developer liability protection so as to facilitate Brownfield redevelopment, "while fully protecting human health and the environment." The affiliation provision combined with the liability provisions imply a clear situation anticipated by the drafters of the statute where the lessee would face potential liability based solely on the contractual relationship with an owner who is a PRP or has attained and lost BFPP status.

Additionally, rather than use the term "purchase" to refer to the action leading to ownership of land or a facility, the BFPP provisions use

^{173.} See Ferrey, supra note 60, at 703-07 (discussing how courts liberally construe CERCLA because of its remedial purpose).

^{174.} See 42 U.S.C. § 9601(40). The interpretation adopted by the EPA would be permissible if the words used in the statute were slightly different, i.e., if the parenthetical was phrased "or *their* tenant," or "or a tenant of *that* person," or even if "owner" replaced the term "person" throughout the provision. Cf. id.

^{175.} E.g., id. § 9607(r).

^{176.} Compare id. § 9601(40) (providing the definition of a BFPP), with id. § 9607(a)(1) (listing the "owner and operator" as a covered person), and id. § 9607(r) (stating that a BFPP who may potentially be liable, will not in fact be liable for a release or threatened release if such is based only on his being an "owner or operator").

^{177.} See id. § 9601(40)(H)(i)(II). Such a reading would preclude liability as between the owner and lessee based solely on the lease and the contemplation of such arrangement is clear from the plain meaning of another provision containing a parenthetical immediately modifying the preceding statement. See id. (allowing liability unless a BFPP is affiliated with a PRP through "any contractual corporate or financial relationship []other than a contractual, corporate, or financial relationship that is created by the instruments by which title to the facility is conveyed or financed").

^{178.} See, e.g., A Smarter Partnership, supra note 55, at 68-69 (statement of Christine Todd Whitman, Administrator, Environmental Protection Agency).

the word "acquisition" throughout. 179 Such diction is significant because "acquisition" is a term of breadth sufficient to subsume the narrower scope of both "lease" and "purchase." 180 The distinction of owner inheres throughout the provisions explaining the duties and liabilities of a BFPP, because the statute maintains that a "person," rather than an "owner," must: (1) not be affiliated with a PRP (other than in an instrument conveying title); (2) give notice of new releases; and (3) comply with any institutional controls in place at the site. 181 Through repetition in recent guidance documents, which were issued to interpret the affiliation exceptions to liability protections, EPA is attempting to erase the plain meaning of the provision to comport with that espoused in previous guidance on tenant BFPP liability availability. 182

Precluding independent liability for tenants results in a tenuous liability shield because tenants are powerless to maintain BFPP status when the owners fail to do so and are at the mercy of EPA to exercise discretion to recognize their innocence in such situations. This tension is particularly problematic, because renewable developers strongly favor ground leases for projects in lieu of acquiring underlying land in fee. Because ground leases are the norm when deploying renewable energy projects, EPA's interpretation of the BFPP provisions forecloses much of the available liability protection open to those willing to place these projects on Brownfields. PPAs could protect the tenant developers from liability, but EPA's less than impressive record of issuance, in conjunction with its view of tenants, suggests renewable developers will

^{179.} See, e.g., 42 U.S.C. § 9601(40); id. § 9607(r) (using the term purchaser but only after implicitly referencing a BFPP and its definition contained in § 101(40)).

^{180.} See BLACK'S LAW DICTIONARY 26 (9th ed. 2009) (defining "acquisition" as "[t]he gaining of possession or control" (emphasis added)), with id. at 970 (defining "lease" as "[a] contract by which a rightful possessor of real property conveys the right to use and occupy the property in exchange for consideration"), and id. at 1354 (defining "purchase" as an "act or an instance of buying").

^{181. § 9601(40)(}C)-(H) (using the term "person" rather than "owner" or "purchaser" to describe the entity, which must act to achieve and maintain liability protection as a BFPP).

^{182.} Compare Memorandum from Elliott J. Gilberg, Dir., Office of Site Remediation Enforcement to Reg'l Counsel, Regions I-X and Superfund Nat'l Policy Managers, Regions I-X 2 (Sept. 11, 2011) ("To be a BFPP, a purchaser must satisfy a number of statutory requirements...."), with BFPP FAQs, supra note 168, at 1 (providing tenants liability protection only where the fee owner has attained BFPP status or where the tenant has attained sufficient indicia of ownership to functionally be regarded as an owner).

^{183.} See BFPP FAQS, supra note 168, at 3.

^{184.} See discussion supra Part II.C.

^{185.} E.g., Frequently Asked Questions on Renewable Energy on Contaminated Land and Mine Sites, supra note 148. By interpreting the BFPP liability shield to apply to tenants only derivatively or when sufficient indicia of ownership are attained, EPA eliminates the acreage from hundreds of thousands of Brownfield sites from renewable energy developer consideration. Cf. id. (identifying in excess of fifteen million acres of Brownfields suitable for renewable energy deployments).

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fare no better and remain subject to the mercy of the Agency's CERCLA enforcement discretion.¹⁸⁶ But mercy may not be forthcoming when the developer has deeper pockets than the fee owner of a contaminated site.¹⁸⁷

C. Did You Get the Memo? Doubts Arise that EPA's BFPP Interpretation Is Correct

The decisions in Commander Oil Corp. v. Barlo Equipment Corp. ¹⁸⁸ and Ashley II of Charleston, LLC v. PCS Nitrogen, Inc. ¹⁸⁹ reveal the negative implications of EPA's BFPP interpretation as applied to tenant renewable energy developers. Ashley illuminates the extremely high bar required of Brownfield redevelopers in construction activities to avoid the imposition of CERCLA liability. ¹⁹⁰ Such perfection, though desirable, may not be attainable during the installation process of solar or wind projects, even when designed to minimize impact to the underlying land. ¹⁹¹ The holding in Commander Oil places developer liability protections further from the reach of renewable energy developers by eliminating one of the two categories of BFPP protection open to tenants according to EPA. ¹⁹² Taken together, the two decisions pierce the shield of liability protection offered by the BFPP provisions, with or without EPA's enforcement discretion and assurances of the provisions' self-executing nature. ¹⁹³

In Ashley, a Brownfield redevelopment company purchased a site contaminated with, inter alia, lead and arsenic. 194 Ashley, the redevelopment company, contracted with an environmental assessment and remediation firm to remove the contaminants, which subsequently migrated to groundwater supplies. 195 Ashley purchased the property specifically for the purpose of redevelopment under the Brownfields

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^{186.} See supra notes 166-67, 177 and accompanying text.

^{187.} GAO REPORT, supra note 51, at 21-22, 22 n.22 (supporting the inference that when PRPs face bankruptcy, they can no longer fund removal and remediation activities, which then displace the cost of site cleanup onto EPA and the Superfund). Cost shifts by a PRP to EPA due to bankruptcy incentivizes EPA to avoid PPAs to preserve possible enforcement authority that places the cost burden on another PRP, which in the case of a bankrupt PRP fee-owner would be the tenant. Cf. PPA Memo, supra note 169, at 5 ("[T]he Agency also recognizes that entering into a PPA affects EPA's ability to . . . recover its response costs.").

^{188. 215} F.3d 321 (2d Cir. 2000).

^{189. 791} F. Supp. 2d 431 (D.S.C. 2011).

^{190.} See infra notes 200-01 and accompanying text.

^{191.} See SAMPSON, supra note 133, at 9-13.

^{192.} See infra notes 208-09 and accompanying text.

^{193.} See infra notes 209-10 and accompanying text.

^{194.} Ashley, 791 F. Supp. 2d at 441.

^{195.} Id. at 468, 471.

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Amendments, 196 issued indemnification contracts to the sellers of the property, 197 and contacted EPA 198 to inquire as to any specific actions that needed to be taken regarding remediation above and beyond what was voluntarily implemented. 199 Despite undertaking significant steps toward remediating the site, conducting all appropriate inquiries, and cooperating with the involved environmental agencies, the court denied Ashley the protection of the BFPP defense. 200 The defense was denied because Ashley could not foreclose the possibility that remediation activities, prior to redevelopment, did not exacerbate contamination.²⁰¹ The holding vastly limits the application of the BFPP defense as it pertains to potential renewable energy developers on Brownfields, because it is difficult to see how one can ensure that any temporary exacerbation of contamination during remediation activities does not occur during or prior to completion of the Brownfield redevelopment project.²⁰² This holding casts additional doubt upon the validity of EPA's position that a tenant who attains sufficient indicia of ownership would, even with no demonstrated contribution to contamination, be able to utilize the BFPP defense where it is unavailable to a fee owner.²⁰³

Further doubt arises that BFPP status for tenants is best accomplished through the tenant acquiring sufficient indicia of ownership due to the court's holding in *Commander Oil*. Commander Oil owned two parcels of land and leased them to Barlo, who in turn, subleased one parcel to Pasley.²⁰⁴ Pasley operated a facility for the reclamation, revitalization, and repackaging of solvents, which contaminated Barlo's parcels due to solvent spills and improper handling.²⁰⁵ Commander Oil remediated the sites and initiated a cost recovery action against Pasley and Barlo.²⁰⁶ But, because Barlo did not fall under the court's interpretation of "CERCLA's miasmatic

^{196.} Id. at 467-68.

^{197.} Id. at 460-61.

^{198.} Id. at 468.

^{199.} Id. at 469-70.

^{200.} Id. at 503.

^{201.} Id. at 501, 503.

^{202.} Cf. SAMPSON, supra note 133, at 13-14, 21. Despite numerous methods of incorporating solar and wind energy platforms on land such that contaminants are not permanently disturbed, construction will require some movement of contaminated soil during excavation, installation, and maintenance. Cf. id. (providing examples of the complications and potential remedies involved with such projects and mentioning the further complication of meeting specific government requirements).

^{203.} See Ashley, 791 F. Supp. 2d at 503.

^{204.} Commander Oil Corp. v. Barlo Equip. Corp., 215 F.3d 321, 324 (2d Cir. 2000).

^{205.} Id. at 324-25.

^{206.} Id. at 325.

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provisions," liability did not attach.²⁰⁷ The court did, however, provide that a lessee could qualify as a *de facto* owner for purposes of strict CERCLA liability if requisite indicia of ownership, such as a long-term, non-terminable lease were present.²⁰⁸ By requiring a tenant to establish indicia of ownership to attain BFPP status and avoid liability for contamination, tenants would expose themselves to CERCLA liability by attaining indicia of ownership of a degree sufficient for courts to consider their leasehold equivalent to ownership.²⁰⁹ In conjunction with the holding in *Ashley*, the circumstances allowing a tenant to exercise the BFPP defense independent of derivative BFPP status render the availability of the defense merely illusory.

EPA's BFPP interpretation, though accounting for a significant deterrent to renewable energy developers initiating ground leases on Brownfield sites, is not alone in contributing to developer fears regarding potential CERCLA liability. EPA's construal of the BFPP provisions as self-executing,²¹⁰ to further its longstanding policy²¹¹ to abstain from entering into PPAs with private parties absent exceptional circumstances, deters expeditious and widespread deployment of renewable energy on Brownfields. EPA's hope is that by regarding the BFPP provision as self-executing, transaction costs and time necessitated by PPAs would be reduced.²¹² While the possibility of entering into PPAs with developers who qualify under the BFPP provision was not foreclosed by EPA's most recent guidance, the circumstances prompting the Agency's involvement remain vague and solely within Agency discretion.²¹³

The omission of any applicability to tenant BFPPs in EPA guidance is worrisome. If the omission were predicated on the interpretation of the avenues open to BFPP attainment for tenants,²¹⁴ then a tenant with

^{207.} Id. at 326, 332.

^{208.} Id. at 329-31.

^{209.} See id. (allowing owner liability to be applied to lessees under particular factual scenarios where the lessee has attained sufficient indicia of ownership so as to allow the relational considerations of ownership to inhere in the lease); see also Burlington N. & Santa Fe Ry. Co. v. United States, 556 U.S. 599, 616-17 (2009) (affirming District Court's decision to apportion arranger liability based on duration, size, and character of leasehold where contamination occurred).

^{210.} BFPP Memo, *supra* note 169, at 3 ("The Amendments provide a limitation on liability... thereby making a federal covenant not to sue under CERCLA unnecessary.").

^{211.} See Guidance on Agreements with Prospective Purchasers of Contaminated Property and Model Prospective Purchaser Agreement, 60 Fed. Reg. 34,792, 34,793 (July 3, 1995) (expanding the circumstances where the agency would consider entering into PPAs by reducing the benefit EPA must receive, but maintaining that the site must be on the National Priorities List or evaluated for listing).

^{212.} BFPP Memo, supra note 169, at 4-5.

^{213.} See id.

^{214.} BFPP FAQS, supra note 168, at 2.

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derivative BFPP status would be foreclosed from pursuing a PPA. Because EPA would seek enforcement when the owner loses BFPP status (and consequently the tenant), it would be incompatible to hold the tenant can be indemnified upon losing the BFPP defense necessarily due solely to the owner's status as a BFPP. If however, a PPA were available to a tenant whose BFPP status arises from sufficient indicia of ownership,²¹⁵ then the tenant would enjoy the protection of the covenant not to sue contained therein and avoid the liability that may attach to tenants after the holding in *Commander Oil*.²¹⁶

IV. BACK TO THE DRAWING BOARD: CONGRESS MUST GIVE RENEWABLE ENERGY THE FRAMEWORK TO REPOWER AMERICA'S LAND (AGAIN)

To encourage renewable energy deployment on Brownfields, adequate immunization from CERCLA liability needs to attach to explicitly and comprehensively, while developers enforcement power in EPA to adequately respond to new, or newly discovered contamination.²¹⁷ A legal challenge to EPA's interpretation would likely founder on the deference courts accord to Agency interpretations of statutes the Agency is charged with administering. ²¹⁸ If EPA granted BFPP status to tenants to accord with the legislative history and intent of the Brownfields Amendments, courts could adhere to a more rigorous analysis than EPA in evaluating the applicability of BFPP liability protection.²¹⁹ Because of the potential tension remaining even if EPA altered its interpretation, and the administrative infeasibility of satisfying the need for PPAs, the best method for linking Brownfield redevelopment and renewable energy deployment is to amend CERCLA to explicitly provide the needed tenant protections.²²⁰

^{215.} Id.

^{216.} See Commander Oil Corp. v. Barlo Equip. Corp., 215 F.3d 321, 330-31 (2d Cir. 2000).

^{217.} See discussion supra Part II.C.

^{218.} See infra note 221 and accompanying text.

^{219.} See supra Part III.C.

^{220.} See supra notes 170-71 and accompanying text. EPA's resistance to the liberal issuance of PPAs is caused by the desire to protect agency discretion to litigate against PRPs in possible future enforcement actions related to the site and the inability of the agency to administer PPAs on a significant scale in light of the number of Brownfield sites needing remediation. See supra notes 170-71 and accompanying text.

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A. Chevron Deference and Why Litigation Challenging EPA's Interpretation Will Run out of Gas

Administrative agencies are normally accorded a high level of deference by courts when challenged in litigation. In Chevron v. Natural Resources Defense Council, the Court evaluated EPA's interpretation of stationary source under the CAA, which permitted a plant with multiple points of emission to be conceptualized as a single source "bubble." Chevron deference is the resultant standard of review whereby an agency's interpretation of a statute, subsequent regulations to fill a statutory gap, or resolution of ambiguity left impliedly or expressly by Congress, is accorded a high level of deference. Reviewing courts will not upset the agency interpretation in such instances unless arbitrary, capricious, or plainly in contravention of statutory language. The determinative factor in the analysis of the agency's interpretation is whether Congress had an actual intent contrary to the interpretation, or absent an actual intent, if the agency interpretation is reasonable in light of the pertinent legislative history.

EPA's construal of the BFPP provisions as applied to tenants should not be accorded *Chevron* deference. The statutory language and legislative history clearly evinces the determination of Congress to insulate tenant developers from CERCLA liability if they did not contribute to the contamination.²²⁷ The progressive availability of liability defenses to CERCLA evidences a deliberate move toward spurring investment in contaminated land redevelopment and narrowing the focus of CERCLA liability to those who caused or contributed to site contamination.²²⁸ Additionally, the legislative history preceding enactment of the Brownfields Amendments should counsel EPA to

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^{221.} See Chevron U.S.A., Inc., v. Natural Res. Defense Council, Inc., 467 U.S. 837, 844 (1984) (establishing the well-recognized test for evaluating the validity of an agency's interpretation of statutes it is charged with administering).

^{222. 467} U.S. 837 (1984).

^{223.} Id. at 840 (internal quotation marks omitted).

^{224.} *Id.* 842-44 ("If Congress has explicitly left a gap for the agency to fill, there is an express delegation of authority to the agency... [and] a court may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency.").

^{225.} *Id.* at 844 ("Such legislative regulations are given controlling weight unless they are arbitrary, capricious, or manifestly contrary to the statute.").

^{226.} See id. at 863.

^{227. 147} Cong. Rec. 27,541, 27,548 (2001) (statement of Rep. Paul Gillmor) (explaining that Brownfields have been neglected by developers because of the expansive liability scheme under CERCLA and both owners and tenants operating businesses on Brownfields must be protected where their activity did not, and does not, contribute to serious threats to the public health and environment from contamination).

^{228.} See supra notes 54-59 and accompanying text.

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modify its interpretation outside of litigation.²²⁹ When signing the Brownfields Amendments into law, President George W. Bush articulated that the federal government must move beyond the "mandate, regulate, and litigate" model to allow faster redevelopment with "less Federal meddling."²³⁰

Litigation against EPA by a party with adequate standing²³¹ could be a valuable tool to overcome the faulty interpretation of the BFPP provisions. This is especially true if primary agency motivations for the interpretation are perceived burdens in administering the provisions or the desire to retain enforcement powers that are not in jeopardy.²³² Ultimately the threat of litigation could solve the liability-redevelopment paradox by forcing EPA's hand to reevaluate the BFPP provision interpretation.²³³

However, a challenge to EPA's BFPP interpretation through litigation would likely be unsuccessful for three reasons. First, though the legislative history suggests that the Brownfields Amendments should be read broadly to curtail as much liability as possible for those not responsible for site contamination, the overriding tone of CERCLA as a strict liability regime would be difficult to overcome. Though the strict liability provisions are meant to realize a "polluter pays" paradigm, necessity (i.e., the lack of adequate liquidity in the Superfund) motivates EPA to enforce CERCLA against a potentially wider base of parties than

^{229.} E.g., A Smarter Partnership, supra note 55, at 68 (statement of Christine Todd Whitman, Administrator, Environmental Protection Agency).

^{230.} President George W. Bush, Remarks on Signing the Small Business Liability Relief and Brownfields Revitalization Act in Conshohocken, Pennsylvania (Jan. 11, 2002), in WEEKLY COMP. PRES. DOC., Jan. 14, 2002 at 53.

^{231.} A state suing on its behalf may have the best chance of satisfying standing in light of the "special solicitude" accorded to states suing in their "quasi-sovereign" capacity concerning matters of conservation and protection of state resources such as air and land. See Massachusetts v. EPA, 549 U.S. 497, 520 (2007); accord Georgia v. Tenn. Copper Co., 206 U.S. 230, 237 (1907) (explaining that a state suing in its quasi-sovereign capacity "has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain").

^{232.} See Natural Res. Defense Council, Inc. v. Costle, 568 F.2d 1369, 1379-81 (D.C. Cir. 1977) (rejecting EPA claims that hundreds of thousands of permits required by proper interpretation of non-point source permitting provisions under the Clean Water Act allow narrow interpretation of such provisions in light of the congressional purpose). But see supra note 166.

^{233.} Compare Massachusetts v. EPA, 549 U.S. at 528-29 (rejecting EPA position that GHGs are not "air pollutants" under § 202 of the CAA) (internal quotation marks omitted), and Control of Emissions from New Highway Vehicles and Engines, 68 Fed. Reg. 52,922, 52,925 (denied Sept. 8, 2003) (stating that the CAA does not permit regulation of GHGs as air pollutants), with Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,496 (Dec. 15, 2009) (to be codified at 40 C.F.R. pt. 1) (finding that GHGs as air pollutants pose threat to human health and welfare).

^{234.} See supra notes 41-48 and accompanying text.

those who actually contributed to contamination.²³⁵ Second, the inclusion of tenant liability protection in the BFPP provisions by way of parenthetical may have created some level of ambiguity, which would allow a court to sustain EPA's interpretation under a generous exercise of Chevron deference.²³⁶ Though the importance of statutory language should depend "not on its punctuation, but on its meaning," some courts construe the language within a parenthetical as having less import than the language outside of said parenthetical.²³⁸ Lastly, any litigation brought against EPA for failing to give proper effect to the BFPP provision as to tenant liability protection would have difficulty surviving a motion to dismiss for lack of standing. Because EPA has interpreted the BFPP provision to offer tenant's liability protection derivatively from the fee owner BFPP status or upon sufficient indicia of ownership, ²³⁹ EPA could successfully argue that tenant BFPP status is not foreclosed, thereby calling into question the existence of the "injury in fact" element required under Article III standing jurisprudence. 240

B. Prospective Purchaser Agreements Used as Paper Shields: Their Infeasibility and Administrative Burdens

Were EPA to alter its interpretation of the BFPP provisions, either as the result of successful litigation challenging the Agency, or solely from the threat of such litigation, it is not clear the new construal of the Brownfields Amendments would adequately protect renewable energy developers. Because of the prevalence of long-term ground leases to coincide with power purchase agreements, renewable energy developers who pay taxes for their projects, have unfettered access for maintenance, and do so for a sufficient time, may still be liable under the

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^{235.} See supra note 51 and accompanying text.

^{236.} See supra note 221.

^{237.} Chicksaw Nation v. United States, 534 U.S. 84, 98 (2001) (O'Connor, J., dissenting).

^{238.} Disabled in Action of Pa. v. Se. Pa. Transp. Auth., 539 F.3d 199, 212 (3d Cir. 2008) (stating that the language in the parenthetical is related to, not separate from the language before the parenthetical, and though a reading giving the parenthetical separate weight would be consonant with the legislative history, it would be "unfaithful to the structure" rather than meaning of the statute); Peters v. Ashcroft, 383 F.3d 302, 308-09 (5th Cir. 2004).

^{239.} See supra note 168 and accompanying text.

^{240.} See Lujan v. Defenders of Wildlife, 504 U.S. 555, 560-61 (1992) (explaining that Article III standing requires: (1) "concrete and particularized" injury that is "actual or imminent;" (2) an injury that is "fairly trace[able]" to actions of the defendant; and (3) redressability such that a "favorable decision" will alleviate the injury (alteration in original) (internal quotation marks omitted)) (internal quotation marks omitted).

^{241.} See discussion supra Part III.C.

^{242.} See supra text accompanying note 134.

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holding in *Commander Oil*.²⁴³ Even where liability protection is given to tenants independent of attaining sufficient indicia of ownership, the standard for avoiding liability is set quite high.²⁴⁴ Therefore, though EPA may change its interpretation, more is needed to protect renewable energy developers than the BFPP provisions provided alone or buttressed by EPA guidance and discretion.²⁴⁵

EPA can additionally alter its policy regarding the systematic issuance of prospective purchaser agreements²⁴⁶ and release guidance stating that those developing renewable energy projects on Brownfields would be granted such agreements provided all statutory and regulatory requirements have been met. Revising both the PPA and BFPP policies to accommodate the typical lease-based structure for renewable energy development would create a complimentary system whereby the interpretations of the courts would be less likely to conflict. ²⁴⁷ EPA is authorized to enter into PPAs under CERCLA, which include covenants not to sue for future releases, and such PPAs define the scope of liability for the parties subject to the agreement. ²⁴⁸ Courts evaluate covenants not to sue under any such agreement to ensure the agreement is in the public interest, expedites site response actions, and otherwise accords with CERCLA. ²⁴⁹ If fair to the public, courts will not upset EPA determinations regarding the agreement. ²⁵⁰

PPAs may in theory be able to shield renewable energy developers from court decisions such as Ashley²⁵¹ and Commander Oil,²⁵² but EPA

^{243.} Commander Oil Corp. v. Barlo Equip. Corp., 215 F.3d 321, 330-31 (2d Cir. 2000) (holding that sufficient indicia of ownership will inhere to a lease where the lessee has control of land for an extended term, lease cannot be terminated by lessor prior to term end, the lessee pays for taxes or assessments, and the lessee is responsible for repairs and maintenance).

^{244.} See supra Part III.C.

^{245.} See BFPP Memo, supra note 169, at 1-2 (stating that PPAs are "unnecessary" after BFPP enactment).

^{246.} See Announcement and Publication of Guidance on Agreements with Prospective Purchasers of Contaminated Property and Model Prospective Purchaser Agreement, 60 Fed. Reg. 34,792, 34,793 (July 3, 1995) (requiring EPA to have taken, be taking, or anticipate taking response action at the property and EPA or the community to not derive a substantial development from the agreement to ensure that "EPA does not become unnecessarily involved in purely private real estate transactions"); BFPP Memo, *supra* note 169, at 3 (maintaining unwillingness to involve EPA in purely private real estate transactions on Brownfields because bona fide prospective purchaser provisions are self-executing and thus do not require pre-purchase agreements).

^{247.} See supra Part III.C.

^{248. 42} U.S.C. § 9622(a) (2006) (allowing EPA to enter into settlement agreements with PRPs, which, *inter alia*, define the scope of liability, actions to be taken on site, money to be paid, and include covenants not to sue).

^{249.} Id. § 9622(f)(1).

^{250.} E.g., United States v. Azko Coatings of Am., Inc., 949 F.2d 1409, 1435 (6th Cir. 1991).

^{251.} Ashley II of Charleston, LLC v. PCS Nitrogen, Inc., 791 F. Supp. 2d 431, 501, 503 (D.S.C. 2011) (holding that BFPP defense was unavailable to Brownfield redeveloper who could

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cannot be forced to issue these agreements.²⁵³ Further, the amount of PPAs necessary to convert the eleven thousand Brownfields identified by NREL as capable of supporting renewable energy deployments,²⁵⁴ may pose a significant administrative burden to EPA because until 2005, EPA only issued approximately one hundred forty PPAs.²⁵⁵ Because the PPA could be construed as an approval or permitting of the underlying project on behalf of EPA, environmental review may be triggered under the National Environmental Policy Act of 1969.²⁵⁶ The need to undertake an Environmental Impact Statement presents a process open to challenge by outside stakeholders antagonistic to the underlying project, and increases the transaction costs to the developer.²⁵⁷ For these reasons, an interpretive change of the BFPP provisions, even where accompanied by liberal administration of PPAs, is not feasible to adequately foster a scheme of liability protection for renewable energy developers.

C. All Quiet on the Western Front: The Golden State Warms the Chill by Extending Liability Protection to Tenants (Without Parentheses)

To best facilitate renewable energy deployment on Brownfields without the fear of liability from EPA, or courts strictly interpreting the BFPP provisions, the statutory protections for tenants need to be made explicit. Explicit protection could be extended to tenants either through amendment of the current BFPP provision to remove the parenthetical inclusion of tenants, or by inserting a separate section pertaining specifically to bona fide prospective tenants. The advantage

not foreclose that construction activities did not in some way cause additional site contamination).

^{252.} Commander Oil Corp. v. Barlo Equip. Corp., 215 F.3d 321, 330-31 (2d Cir. 2000) (holding that a lessee attaining sufficient indicia of ownership would be regarded as a fee owner, which would allow imposition of CERCLA "owner" liability).

^{253. 42} U.S.C. § 9622(a) ("The [EPA], in [its] discretion, may enter into an agreement ... [and a] decision of the [EPA] to use or not to use the procedures in this section is not subject to judicial review." (emphasis added)).

^{254.} See supra text accompanying note 148.

^{255.} See PPA Memo, supra note 169, at 2.

^{256. 42} U.S.C. § 4332(C) (2006) (requiring environmental impact statements when major federal action may significantly affect the quality of the human environment and specifies the impacts and evaluates alternatives); 40 C.F.R. § 1508.18 (2011) (including in the definition of "Major Federal action" policies, procedures, systematic agency decisions, and approval of specific projects).

^{257.} See, e.g., Alliance to Protect Nantucket Sound, Inc. v. U.S. Dep't of the Army, 398 F.3d 105, 115-16 (1st Cir. 2005) (challenging NEPA procedures taken by the Army and off-shore wind developer in order to stop or delay the wind farm project, which would obstruct ocean views from Nantucket Sound).

^{258.} See supra Part III.B-C.

^{259.} See supra notes 236-38 and accompanying text. Because the parenthetical structure

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of the latter approach is that precedent exists on the state level that could serve as a template for the new bona fide prospective tenant provision needed to motivate renewable energy developers to site projects on Brownfields.²⁶⁰

California enacted the California Land Reuse and Revitalization Act of 2004²⁶¹ to mirror the added liability protections, such as the BFPP provisions, included in the Brownfields Amendments to CERCLA.²⁶² Like the Federal Brownfields Amendments, the California revisions were somewhat ambiguous as to whether tenants could attain BFPP status independent of the fee owner.²⁶³ Recognizing that redevelopers often look to contaminated land to develop pursuant to a long-term ground lease, rather than by purchasing the land, the Daehnke Cruz Law Group, LLP, drafted and sponsored SB 989²⁶⁴ through the California legislative process in 2006. 265 SB 989 created a bona fide ground tenant ("BFGT") category for liability protection in order to avoid the stockpiling of Brownfield properties, which allows tenant redevelopment without significant risk of liability. 266 The BFGT provisions require tenants to demonstrate that all contaminant releases occurred prior to the leasehold, the leasehold exceeds twenty-five years, and the lessee is not affiliated with parties responsible for contamination.²⁶⁷ If the tenant receives certification from an appropriate agency, city, or municipality then immunity from liability attaches so long as institutional controls are observed, no new releases occur, and the tenant conducts a site assessment prior to construction to identify the boundary and scope of contamination.²⁶⁸ This temporal bifurcation of liability functionally accomplishes what the current form of CERCLA prohibits to be done

including tenants in coverage of the BFPP provision may be held to be dependent on, or subsidiary to, the language including owners despite the legislative history, removal of the parenthetical may be needed to realize congressional intent. *See supra* notes 236-38 and accompanying text.

^{260.} See infra notes 266-68 and accompanying text.

^{261. 2004} Cal. Stat. 5490.

^{262.} CAL. HEALTH & SAFETY CODE § 25395.81 (West 2006) (including defenses to liability for BFPPs, innocent landowners, and contiguous property owners).

^{263.} CAL. HEALTH & SAFETY CODE § 25395.69 (West 2006). The California statute contained language similar to that in the Brownfields Amendments by defining a bona fide purchaser as "a person, or tenant of a person," though the California statute did not utilize a parenthetical to refer to the tenant—a punctuation choice which prompted years of EPA interpretive guidance under the federal analog. *Id.*

^{264. 2006} Cal. Stat. 910.

^{265.} See Our SB 989 Legislative Accomplishment, DAEHNKE CRUZ L. GRP., LLP, http://www.daehnkecruz.com/sb989.php (last visited Feb. 7, 2013).

^{266.} S. 989-2006, Reg. Sess., at 4 (Cal. 2006).

^{267.} CAL. HEALTH & SAFETY CODE § 25395.102(b) (West Supp. 2013).

^{268.} See id. § 25395.103(a).

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spatially, the separation of the land into contaminated and non-contaminated parcels. Liability and immunity attach, respectively.

Amending CERCLA to include a BFGT provision is the solution to both EPA's reluctance to granting tenants immunization from liability and the danger of courts interpreting the current statute in a way that does not adequately protect renewable energy projects conducted pursuant to ground leases. 269 It is not enough to merely leave the issue of tenant immunization to the legislatures of the states, because although CERCLA does not expressly preempt state site contamination laws, the conflicting nature of express immunity at the state level, and discretionary immunity from EPA on the federal level, strongly suggests courts will find conflict preemption.²⁷⁰ Unlike the California BFGT provision requiring a twenty-five year ground lease, an amendment on the federal level would encompass more renewable energy projects, such as solar photovoltaic deployments, if a shorter ground lease term threshold were chosen.²⁷¹ Nor should the federal BFGT provision require agency approval because of the administrative burdens inhering in sitespecific approvals.²⁷² However, the redeveloper ought to submit a site assessment, site plan, and signed acknowledgment verifying completion of all appropriate inquiries to the EPA to assist the agency in subsequent enforcement actions if the tenant does cause, or contribute, to a future release of contaminants.²⁷³

A federal BFGT provision should also integrate the functional bifurcation of the underlying estate to require only the site assessment and clean-up activity necessary to guarantee the site is safe for the purpose of the proposed redevelopment project.²⁷⁴ Conceivably, such

^{269.} See supra notes 207-09 and accompanying text. Relying on EPA's interpretation alone will make liability protection for renewable energy developers utilizing ground leases at contaminated sites derivative of the underlying owner's BFPP status or subject to attaining sufficient indicia of ownership leading to potential owner liability pursuant to the reasoning in Commander Oil. See supra notes 207-09 and accompanying text.

^{270.} E.g., Ronald G. Aronovsky, A Preemption Paradox: Preserving the Role of State Law in Private Cleanup Cost Disputes, 16 N.Y.U. ENVTL. L.J. 225, 278-83 (2008).

^{271.} See Solar Power Purchase Agreements, EPA, http://www.epa.gov/greenpower/buygp/solarpower.htm (last updated May 24, 2012) (stating most solar leases fall within range of six to twenty-five years because solar photovoltaic deployments, while capital intensive, require a shorter term to recoup initial capital costs and a fair return through use of a PPA than do wind farms, partially because the footprint and necessary leased acreage is smaller and equipment cheaper).

^{272.} See supra notes 169-70 and accompanying text.

^{273.} See supra notes 43-47. By reporting to EPA, the agency is able to monitor the locations and number of sites that are attempting to be remediated and can adjust its enforcement actions against other PRPs accordingly. See supra notes 43-47.

^{274.} See CAL HEALTH & SAEFTY CODE § 25395.103(c) (West Supp. 2013) (providing that the BFGT need only provide site assessment and response activities necessary to ensure the land is safe for the proposed project and to ensure the project does not cause or contribute to

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limitations in the context of renewable energy deployments would be limited to the soil surface and where support pylons or wind turbines are located, and only to depths required for excavation and maintenance.²⁷⁵ Like the California provisions, the federal provision, to be palatable to Congress, ought to require the funds for the ground lease either be paid to the underlying fee owner to continue full site remediation or to the EPA for replenishment of the Superfund.²⁷⁶ In this way the bifurcation of the underlying estate does not result in the diminishment of non-redeveloped Brownfields without a corresponding decrease in the total number of Brownfields generally.²⁷⁷

The goal of the proposed amendments should be not to spur redevelopment in a vacuum, but to recognize that renewable energy Brownfield deployments in particular are suitable for liability protection, and the BFGT amendment should reflect that goal before expanding such protections generally. Any amendment to include explicit liability immunization for renewable energy developers' activity on the surface of contaminated land should be narrowly drawn but unwaveringly followed to encourage renewable energy, reduce carbon emissions, and remove the hundreds of thousands of contaminated sites across America. The attached Appendix presents a model statute to amend CERCLA in the ways appropriate to protect its remedial goals while giving renewable energy developers who utilize ground leases the liability protection needed to minimize costs, attain financing, and responsibly avoid liability for contamination not caused through operation of renewable generation projects.

further contamination).

^{275.} See generally SAMPSON, supra note 133 (evaluating the various methods for solar deployment on contaminated land to mitigate impacts on underlying contaminants).

^{276.} See CAL. HEALTH & SAFETY CODE § 25395.102(b)(5)(A) (West Supp. 2013). In light of the massive budget shortfalls and large Congressional appropriations necessary to fund site remediation, Congress is likely to endorse a statutory amendment relieving the fiscal stress on the Superfund. See supra note 49 and accompanying text.

^{277.} Cf. Basic Information, EPA, http://www.epa.gov/brownfields/basic_info.htm#plan (last updated July 16, 2012). Indeed the purpose of the Brownfields Amendments is to decrease the amount of Brownfields, which currently number nearly half a million discrete sites. See supra note 16. By merely bifurcating the contaminated land into a contaminated and non-contaminated parcel without addressing remaining contamination, the remedial purpose of CERCLA would be undermined. See supra note 41 and accompanying text.

^{278.} See BFPP Memo, supra note 169, at 4. Initially limiting a proposed amendment granting liability immunization to BFGTs who are renewable energy developers, is consonant with EPA's current determination of when to grant a PPA. See BFPP Memo, supra note 169, at 4 (granting a PPA is advisable where necessary to ensure completion of the project, which will have substantial public benefit such as reusing blighted land, creating jobs, reimbursing EPA, or other significant environmental benefits).

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V. CONCLUSION

Though a comprehensive climate change policy has not been adopted in the United States, recognition of electricity production's significant contributions to anthropogenic carbon emissions is widely recognized.²⁷⁹ Climate science has, with greater certainty, identified the imminent, and far-reaching impacts of climate change, which has fortunately coincided with significant increases in the deployment of renewable energy generation capacity. 280 However, the current generation capacity of renewable projects is insufficient to adequately mitigate carbon emissions from the energy sector. 281 Renewable energy markets are increasingly important to incentivize development of low carbon electricity generation, comply with state mechanisms mandating renewable energy, and capitalize on government incentives available to clean energy technologies. 282 Siting renewable energy projects on Brownfields accrues significant public benefits by both meeting national renewable energy goals, and reducing the number of contaminated sites, which blight communities and threaten public health. 283 Despite the demonstrated feasibility of siting renewable energy on Brownfields, EPA and court interpretations of CERCLA's liability provisions have not kept pace with the needs of renewable energy developers, nor honored the congressional intent motivating subsequent CERCLA amendments.²⁸⁴ Recognizing the ground-lease paradigm of typical renewable energy deployments necessitates a reexamination of the current liability protections offered to those who seek to remediate Brownfields. 285 To promote renewable energy project siting on Brownfields, CERCLA must be amended to include provisions granting liability immunity to BFGTs who were not responsible for prior site contamination, and do not cause, or exacerbate, such contamination through on-site activities. 286 Such an amendment has the potential to

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^{279.} See supra notes 1-10 and accompanying text.

^{280.} See supra notes 4, 11 and accompanying text.

^{281.} See, e.g., FIFTH CLIMATE REPORT, supra note 94, at 28 & fig.3-5 (finding that fossil fuel combustion accounts for more than eight percent of U.S. carbon emissions annually).

^{282.} See id. at 40-42.

^{283.} See discussion supra Parts II.C, III.A.

^{284.} See discussion supra Part III.

^{285.} See discussion supra Part II.C.

^{286.} See discussion supra Part IV.C.

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foster renewable energy deployments that could remediate thousands of the more than half a million contaminated sites nationwide and provide clean energy to contribute to mitigation of the anthropogenic carbon emissions causing climate change.²⁸⁷

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287. See supra note 148 and accompanying text. NREL has already identified fifteen million acres of Brownfields with the potential for utility-scale renewable energy deployments and with

explicit liability protection for renewable energy developers and continued vitality in renewable energy demand, the United States could increase its percentage of renewable energy generation from three percent to more than a third as Germany has done. Compare FIFTH CLIMATE REPORT, supra note 94, at 27, with Stefes, supra note 116.

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members of the *Hofstra Law Review* who were instrumental in developing this Note to its current publishable state through their diligence, expertise, and flexibility, most notably Rebecca Sklar, Stephen Piraino, and Dave Gerardi in the managing office, and my fellow Notes & Comments editors Ana Getiashvili and Tiffani Figueroa who coordinated my work. I also could not have worked through the writing process without the inspiration and tutelage of Professor Katrina Fischer Kuh to whom I will always owe my interest in environmental law and opportunities for professional development. I would finally like to thank my parents, Joe and Lisa, for their pervasive support, my surrogate parents, Angelo and Eleanor Platis, for keeping me healthy and fed these three long years, and last but certainly not least, my partner, Stephanie Platis, for continuously inspiring me to try and be the person I want to be.

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APPENDIX PROPOSED MODEL STATUTE

An Act

To provide certain relief for renewable energy developers under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, and to amend such Act to promote the cleanup and reuse of Brownfields by the siting of renewable energy generation thereon, to provide the Environmental Protection Agency regulatory authority to promulgate rules in support of this goal, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 101. SHORT TITLE.

This Act may be cited as the "RePowering America's Land Act." **SECTION 102. BONA FIDE GROUND TENANT.**

- (a) DEFINITION OF BONA FIDE GROUND TENANT.—Section 101 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. § 9601) is amended by adding at the end the following:
- "(42) BONA FIDE GROUND TENANT.—The term 'bona fide ground tenant' shall mean a person who acquires a leasehold interest of no less than fifteen years in a Brownfield site as defined in this section after the date of enactment of this paragraph, and such leasehold interest grants rights only to the surface of the parcel leased.
- "(A) DISPOSAL PRIOR TO GROUND LEASE.—All disposal of hazardous substances occurred before the person acquires the leasehold and the proposed use of the leasehold will not involve the use, procurement, transportation, manufacture, or potential release of hazardous substances.
- "(B) INCORPORATION OF BONA FIDE PROSPECTIVE PURCHASER OBLIGATIONS.—The person adheres to all requirements applicable to BFPPs in this section regarding Inquiries, Notices, Care, Cooperation, Access, Assistance, Institutional Controls, and Affiliations.
- "(C) PUBLIC BENEFIT, PRESUMPTION OF BENEFIT FOR RENEWABLE ENERGY.—The person acquiring a qualifying leasehold under paragraph (A) will develop a project that accrues substantial public benefit including benefits to the environment, economy, community, or promotion of any municipal, state, or federal land use program. Projects for the generation, storage, transmission, or distribution of electricity from renewable sources, or technology, will be presumed to accrue the substantial public benefit required under this paragraph.

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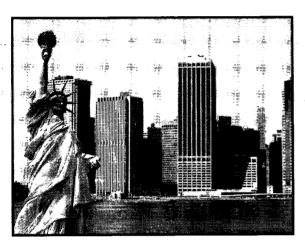
"(D) NOTICE TO EPA.—The person acquiring a qualifying leasehold must disclose the acquisition and proposed project to EPA within ninety days of acquiring the leasehold and submit project plans. site assessment results and the name of the person prior to construction."

SECTION 103. BONA FIDE GROUND TENANT RELIEF.

- (a) EXEMPTIONS.—Section 107 οf the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. § 9607) is amended by adding the following:
- "(s) BONA FIDE GROUND TENANT EXEMPTION.—Except as provided in subparagraph (1), a person shall not be liable with respect to response costs at a facility under this Act based solely on section (a), and the person can demonstrate that their activity did not cause or contribute to the release of hazardous substances on the site and the person did not impede the performance of a response action or natural resource restoration.
- "(1) EXCEPTIONS.—Subsection (s) shall not apply in a case in which-
- "(A) The President determines the person has failed to comply with an information request, administrative subpoena, or institutional control under this Act or has impeded or is impeding any response action or has otherwise contributed to the release of hazardous substances."

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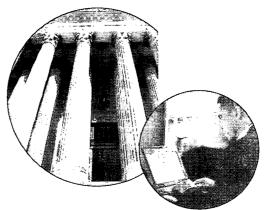
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