

IDENTIFYING AND AVOIDING CONFLICTS BETWEEN HISTORIC PRESERVATION AND THE DEVELOPMENT OF RENEWABLE ENERGY

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INTRODUCTION

This paper explores actual and potential conflicts between the preservation of historic resources and the development of new renewable energy projects and transmission infrastructure.

In recent years, laws protecting historic resources have increasingly conflicted with the development of utility-scale renewable energy sources and with the essential high-voltage transmission lines that connect such sources to the end users.¹ Conflicts between efforts to preserve historic resources on the one hand, and efforts to develop utility-scale renewable energy² and transmission projects on the other, arise when such projects either directly disturb historic sites or introduce adverse aesthetic and other effects on historic landmarks and landscapes.³ Some efforts to develop renewable energy sources have been stalled or thwarted entirely upon meeting with friction from historic preservation

¹ See, e.g., *Harrison v. United States Dep't of Army*, No. 3:08CV-105-H, 2009 WL 3347109, at *1 (W.D. Ky. 2009) (involving a challenge brought under federal historic preservation laws by owners of historic properties in an effort to prevent the alignment of a transmission line in Kentucky from affecting historic properties) (discussed in Section II.B, *infra*); *Quechan Tribe of the Fort Yuma Indian Reservation v. U.S. Dep't of the Interior* (*Quechan Tribe I*), 755 F. Supp. 2d 1104, 1106 (S.D. Cal. 2010) (also involving a challenge brought under federal historic preservation laws by members of a California tribe against a proposed utility-scale solar project on federal land) (discussed in Section III.A, *infra*). Cases addressing similar concerns are addressed throughout.

² This research is concerned primarily with solar, wind, and geothermal because those three sources are relatively newly emerging, yet established enough to raise systemic concerns about historic preservation conflicts under federal law. See, e.g., Martin J. Pasqualetti, *Opposing Wind Energy Landscapes: A Search for Common Cause*, 101 ANNALS ASS'N AM. GEOGRAPHERS 907, 907–08 (2011) (noting that wind energy is one of the most widely adopted renewable energy sources and that wind energy faces pervasive land use conflicts). However, many of the issues raised and conclusions drawn herein will apply also to long-established renewable sources (e.g., hydro) as well as to those that are still at various stages of development and not yet available at utility scales (e.g., tidal). On the other hand, certain bio-fuels (e.g., corn-derived ethanol) may have natural synergies with the preservation of historic agricultural landscapes. Bio-fuels are not discussed in this research.

³ See Alan P. Buchmann, *Electric Transmission Lines and the Environment*, 21 CLEV. ST. L. REV. 121, 123 (1972) (“As the chairman of one of the most affected electric companies has put it: ‘There is no known way to produce, transmit, and distribute electric energy without some effect on the natural environment.’”) (citations omitted); Sean F. Nolon, *Negotiating the Wind: A Framework to Engage Citizens in Siting Wind Turbines*, 12 CARDOZO J. CONFLICT RESOL. 327, 337–42 (2011) (describing impacts to sites of archaeological, cultural, and religious significance, among other resources impacted by wind turbines); see also Uma Outka, *The Energy-Land Use Nexus*, 27 J. LAND USE & ENVTL. L. 245, 251–52 (2012) (recognizing the conflict between utility-scale solar energy generation facilities and conservation goals); Dean B. Suagee, *Consulting with Tribes for Off-Reservation Projects*, 25 NAT. RESOURCES & ENV'T. 54, 54–55 (2010) (describing the adverse effect that geothermal projects can have on historic tribal sites); Lynne Gillette et al., *Using Collaboration to Address Renewable Energy Siting Challenges*, FED. LAW., June 2009, at 50, 51 (describing concerns with solar, wind and transmission projects).

laws.⁴ On other occasions, renewable energy and transmission project developers, working with federal officials, have sought to circumvent or weaken historic preservation laws in an attempt to speedily construct new energy generation and transmission infrastructure.⁵ Both outcomes are undesirable. The emerging pattern of conflict between long-standing historic preservation laws on one side, and the relatively new development of carbon-free, renewable energy sources on the other, concerns advocates of both because preservation and renewable energy share many common goals.⁶

Developers of utility-scale energy sources and transmission lines routinely run into conflicts with competing land use interests.⁷ Conventional power sources, especially coal and nuclear

⁴ See *La Cuna de Aztlan Sacred Sites Prot. Circle Advisory Comm. v. Dep't of Interior*, No. 2:11-CV-00395-ODW, 2012 WL 2884992, at *3 (C.D. Cal. July 13, 2012) (challenging a utility-scale solar project on federal land in California and alleging violations of federal historic preservation laws). The Cape Wind project in the Nantucket Sound off of the coast of Massachusetts, discussed *infra* in Section III, has faced multiple citizen-led challenges and has led to delaying the development of the what would be the country's first offshore wind project. See Kenneth Kimmell & Dawn Stolfi Stalenhoef, *The Cape Wind Offshore Wind Energy Project: A Case Study of the Difficult Transition to Renewable Energy*, 5 GOLDEN GATE U. ENVTL. L.J. 197, 211–12 (2011); see also Iva Ziza, *Siting of Renewable Energy Facilities and Adversarial Legalism: Lessons from Cape Cod*, 42 NEW ENG. L. REV. 591, 613–20 (2008).

⁵ See *Pit River Tribe v. U.S. Forest Service*, 469 F.3d 768 (9th Cir. 2006) (ruling that federal agencies responsible for permitting a geothermal project in California failed, *inter alia*, to properly follow federal historic preservation laws' requirements to consult with Native Americans reversing long-delayed leases between the geothermal project's developer and the federal government), (discussed in Section III, *infra*); see also *Quechen Tribe I*, 755 F. Supp. 2d at 1104 (granting an injunction to delay a utility-scale solar project because the federal Bureau of Land Management failed to comply with federal historic preservation laws).

⁶ See discussion *infra* Section I on the parallel goals of historic preservation and renewable energy development. See also A. Kandt et al., NATIONAL RENEWABLE ENERGY LABORATORY, DEP'T OF ENERGY, NREL/TP-7A40-51297, IMPLEMENTING SOLAR PV PROJECTS ON HISTORIC BUILDINGS AND IN HISTORIC DISTRICTS 1 (2011); Jennifer Kuntz, *A Guide to Solar Panel Installation at Grand Central Terminal: Creating a Policy of Sustainable Rehabilitation in Local and National Historic Preservation Law*, 10 VT. J. ENVTL. L. 315, 328 (2009) (noting common goals of preservation and sustainability and the need for compromise and tradeoffs among competing objectives); George Musser, *Solar Panels Versus Historic Districts: A Conflict We Need to Resolve*, SCI. AM. (Jul. 28, 2010), <http://blogs.scientificamerican.com/solar-at-home/2010/07/28/solar-panels-versus-historic-districts-a-conflict-we-need-to-resolve>.

⁷ See generally, Mary A. Moran, *Transmission Line Siting: Local Concerns Versus State Energy Interests*, 19 URB. L. ANN. 183 (1980) (discussing conflicts with state and local land use regulations arising in transmission facility siting

power plants, are often treated as unwelcome neighbors and are often opposed through protest,⁸ litigation,⁹ and targeted regulation.¹⁰ Renewable energy projects seemingly would be more

efforts and collecting cases involving such conflicts); Mason Willrich, *The Energy-Environment Conflict: Siting Electric Power Facilities*, 58 VA. L. REV. 257 (1972) (identifying regulatory regimes implicated in transmission facility siting). One of the seminal cases involving opposition to utility-scale power facilities and transmission infrastructure occurred at the dawn of the modern environmental movement and implicated renewable power, transmission lines to carry that power to market, and historic preservation. See *Scenic Hudson Pres. Conference v. Fed. Power Comm'n*, 354 F. 2d 608 (2d Cir. 1965). In *Scenic Hudson*, nascent environmental groups challenged the development of a \$162,000,000 pumped storage facility in the Hudson River Valley of upstate New York. *Id.* at 611. The Second Circuit specifically found that the Federal Power Commission was required to consider “conservation of natural resources, the maintenance of natural beauty, and the *preservation of historic sites*” in planning the development of the hydro resources, *id.* at 614 (emphasis added), and reversed the Commission order authorizing the facility as having neglected to consider the full record, including the environmental and historical impacts. *Id.* at 624 (“The Commission’s renewed proceedings must include as a basic concern the preservation of natural beauty and of national historic shrines . . .”).

⁸ See Michael B. Gerrard, *The Victims of NIMBY*, 21 FORDHAM URB. L.J. 495, 496 (1993) (discussing “not in my backyard” protests); see also Denis Binder, *NEPA, NIMBYs and New Technology*, 25 LAND & WATER L. REV. 11, 19 (1990). See generally Hilary Schaffer Boudet & Leonard Ortolano, *A Tale of Two Sitings: Contentious Politics in Liquefied Natural Gas Facility Siting in California*, 30 J. PLANNING EDUC. & RES. 5 (2010) (highlighting cases involving opposition to energy infrastructure development).

⁹ See Elise N. Zoli, *Power Plant Siting in a Restructured World: Is There Light at the End of the Tunnel?*, 16 NAT. RESOURCES & ENV'T 252, 256 (2002); see also *Coal Victories Across the Nation!*, SIERRA CLUB, <http://www.sierraclub.org/environmentallaw/coal/victories.aspx> (last visited Mar. 2, 2013) (collecting recent lawsuits in opposition to coal-fired power plants particularly). See generally, James R. Tourtellotte, *Nuclear Licensing Litigation: Come on in, The Quagmire Is Fine*, 33 ADMIN. L. REV. 367 (1981) (discussing the regulatory regime for nuclear power facility development and associated litigation).

¹⁰ The relatively recent increase in natural gas extraction through the process known as “hydrofracking” has led state and local governments to regulate the practice more stringently. *Wallach v. Dryden*, 16 N.E.3d 1188 (N.Y. 2014); see also, e.g., Michelle L. Kennedy, *The Exercise of Local Control Over Gas Extraction*, 22 FORDHAM ENVTL. L. REV. 375, 386–90 (2011) (collecting cases and describing local regulations impacting natural gas extraction in Mid-Atlantic and Northeastern states); John M. Smith, *The Prodigal Son Returns: Oil and Gas Drillers Return to Pennsylvania with a Vengeance, Are Municipalities Prepared?*, 49 DUQ. L. REV. 1, 18–23 (2011) (advocating for local control over fracking). With regard to renewable sources, the trend has been for targeted land use controls to encourage solar but to regulate the adverse effects of wind. See Patricia E. Salkin, *Renewable Energy and Land Use Regulation (Part 1)*, ALI-ABA BUS. L. COURSE MATERIALS J. 47, 59–62 (Feb. 2010) (collecting regulation and incentive programs for small-scale solar projects). See generally Patricia E. Salkin, *Renewable Energy and Land Use Regulation (Part 2)*, ALI-ABA BUS. L. COURSE MATERIALS J. 27 (Apr. 2010) (collecting regulations and cases regarding

welcome neighbors than coal or nuclear plants because of the air pollution and climate-related environmental benefits of renewable source projects.¹¹ However, renewable energy projects are instead often subject to vigorous opposition,¹² and are moreover at a disadvantage relative to conventional generators from the perspective of land use conflict because of their size. Utility-scale renewable energy and transmission projects benefit from economies of scale,¹³ so solar and wind developments tend to have very large physical “footprints.”¹⁴ Whereas coal-fired plants require anywhere from a few hundred to one or two thousand acres, utility-scale solar and wind projects frequently occupy footprints extending over thousands of acres.¹⁵ The larger

wind generation facilities).

¹¹ See Benjamin K. Sovacool, *Exploring and Contextualizing Public Opposition to Renewable Electricity in the United States*, 1 SUSTAINABILITY 702, 708 (2009) (noting that renewable sources have clear environmental advantages over conventional sources of electricity supply even taking into account the problems that renewable sources create).

¹² See, e.g., Robert Glennon & Andrew M. Reeves, *Solar Energy's Cloudy Future*, 1 ARIZ. J. ENVTL. L. & POL'Y 91, 116 (2010) (describing objections to utility-scale solar projects); Ophir Stemmer, *Clearing the Air: A Comparison of Regulatory Frameworks for Siting Wind Farms*, J. ENERGY & ENVTL. L., 85, 88 (2011) (describing opposition to wind projects); Randy T. Simmons & Ryan M. Yonk, *Energy Regulation: Impacting Traditional and Green Energy Projects*, CENTER FOR PUB. LANDS AND RURAL ECON. 15–22 (discussing opposition to solar, hydro, and geothermal projects).

¹³ See, e.g., MICHAEL MENDELSON ET AL., UTILITY-SCALE CONCENTRATING SOLAR POWER AND PHOTOVOLTAICS PROJECTS: A TECHNOLOGY AND MARKET OVERVIEW 1 n.8 (2012) (discussing the benefits of economies of scale inherent in utility-scale solar projects); CHI-JEN YANG, ELECTRICAL TRANSMISSION: BARRIERS AND POLICY SOLUTIONS 12 (2009); Martin Junginger et al., *Global Experience Curves for Wind Farms*, 33 ENERGY POL'Y 133 (2005) (showing that the price per turbine for wind farms decreases dramatically as the size of the order increases).

¹⁴ See Gillette et al., *supra* note 3 at 50 (noting that wind turbines are widely dispersed and that solar technologies require large amounts of land). Geothermal projects are a notable exception, and such projects may occupy only a couple of hundred of acres. See MASSACHUSETTS INSTITUTE OF TECHNOLOGY, THE FUTURE OF GEOTHERMAL ENERGY: IMPACT OF ENHANCED GEOTHERMAL SYSTEMS (EGS) ON THE UNITED STATES IN THE 21ST CENTURY 8-7 to 8-8 (2006) [hereinafter FUTURE OF GEOTHERMAL]; Sara C. Bronin, *Curbing Energy Sprawl with Microgrids*, 43 CONN. L. REV. 547, 553–58 (2010) (discussing the adverse environmental and landscape effects of large footprint renewable energy projects). The concept of renewable energy projects having large landscape “footprints” should not be confused with the concept of fossil fuel energy sources having large “carbon footprints” (i.e., generating large emissions of carbon dioxide, methane, or similar gases).

¹⁵ Glennon & Reeves, *supra* note 12 at 104 (listing average land-area-per-megawatt generated for various energy sources). For example, designs for Cape

renewable source projects are more likely to conflict with historic resources than the smaller conventional sources merely because there is greater opportunity for such conflicts to occur over the large footprint of renewable sources.¹⁶ Transmission lines face a similar problem, requiring narrow but uninterrupted corridors that run for dozens to hundreds of miles.¹⁷ The large footprints of solar, wind, and transmission projects increase the likelihood that some portion of the project will adversely affect a historic resource, setting up either a potential or an actual conflict between preservation and renewable energy development.¹⁸

Wind propose the project will be constructed over twenty-four square miles. *See* ADVISORY COUNCIL ON HISTORIC PRES., COMMENTS OF THE ADVISORY COUNCIL ON HISTORIC PRESERVATION ON THE PROPOSED AUTHORIZATION BY THE MINERALS MANAGEMENT SERVICE FOR CAPE WIND ASSOCIATES, LLC TO CONSTRUCT THE CAPE WIND ENERGY PROJECT ON HORSESHOE SHOAL IN NANTUCKET SOUND, MASSACHUSETTS (Apr. 2, 2010) [hereinafter ACHP COMMENTS]. Although renewable projects often have a larger footprint than conventional projects at the generation site, conventional sources frequently also have significant land use effects far away from the generation site. For example, coal plants require mining operations that are generally not colocated but that can disturb huge land areas. *See generally* Vasilis Fthenakis & Hyung Chul Kim, *Land Use and Electricity Generation: A Life-Cycle Analysis*, 13 RENEWABLE & SUSTAINABLE ENERGY REVS. 1465 (2009) (describing the land use effects of renewable energy projects as compared to conventional projects, including the effects of obtaining fuel for conventional projects).

¹⁶ *See* Suagee, *supra* note 3 (describing significance of historic landscapes to Native Americans and recognizing that renewable energy projects have large footprints).

¹⁷ For instance, the proposed Zephyr Project from Wyoming to California is expected to be nine hundred fifty miles long. Alexandra B. Klass & Elizabeth J. Wilson, *Interstate Transmission Challenges for Renewable Energy: A Federalism Mismatch*, 65 VAND. L. REV. 1801, 1826 (2012). The CapX2020 transmission project between North Dakota and Minnesota is planned to stretch six hundred miles, and another Midwest project, stretching from Iowa to Chicago will run approximately five hundred miles. *Id.* at 1834–35. The SunZia transmission line between Arizona and New Mexico is proposed to be four hundred sixty miles. *Id.* at 1826. *See also* *SunZia Transmission Line Project*, BUREAU OF LAND MGMT., http://www.blm.gov/nm/st/en/prog/more/lands_realty/sunzia_southwest_transmission.html. A final example, though hardly the last long transmission project under consideration or under construction, is the Atlantic Wind Connection, a “backbone” transmission line proposed to run offshore from New Jersey to Virginia along an expanse of eight hundred twenty miles or more. *See Commercial Renewable Energy Transmission on the Outer Continental Shelf (OCS) Offshore Mid-Atlantic States, Notice of Proposed Grant Area and Request for Competitive Interest (RFCD) in the Area of the Atlantic Wind Connection Proposal*, 76 Fed. Reg. 79206 (Dec. 21, 2011).

¹⁸ *See* Pasqualetti, *supra* note 2, at 910–11 (describing the impacts on historic resources as well as the size of various wind projects as part of the basis of concern raised by opponents to such projects). Many objections to renewable energy sources, wind in particular, relate to the visual impact of the energy

The adverse effect on historic resources by utility-scale renewable energy and transmission projects slows development of such resources when federal historic preservation laws are triggered.¹⁹ Parties opposed to renewable energy and transmission line projects have used historic preservation laws to slow or stop utility-scale renewable energy projects and are likely to do so again in the future.²⁰ Yet the objectives animating historic preservation and renewable energy development are surprisingly similar.²¹ Moreover, federal historic preservation laws do not prohibit all adverse effects on historic resources; rather, federal preservation laws prescribe planning and consultation to encourage agency decisions that avoid the worst effects.²² Historic preservation can both protect historic resources and play an important role in the progressive efforts required to mitigate climate change, provided historic preservation laws and advocates are flexible enough to respond to and assimilate new technologies. Existing federal historic preservation laws can remain faithful to

collection devices on landscapes of great import to surrounding communities. *Id.* at 914–15. Often historic resources are part of those landscapes, and historic resources are frequently an important part of a communities' identity. Even geothermal projects, which are largely subterranean, have effects on historic resources; some tribes regard hot springs as sacred places. *See* Suagee, *supra* note 3, at 55.

¹⁹ This research focuses primarily on the influence of federal laws, although state and local land use laws also play an important role in facility and transmission siting. *See, e.g.,* Hannah Wiseman et al., *Formulating a Law of Sustainable Energy: The Renewables Component*, 28 PACE ENV'T L. REV. 827, 870 (2011) (describing state and local laws relevant in the siting of wind facilities); Klass & Wilson, *supra* note 17, at 1827 (noting that it is “impossible to discuss renewable energy or interstate transmission siting without placing a significant emphasis on the states.”).

²⁰ *See infra* Sections II–III; *see also* Glennon & Reeves, *supra* note 12, at 116–23 (describing challenges to the development of solar projects and new transmission on public lands in the western United States); Susan Lorde Martin, *Wind Farms and NIMBYs: Generating Conflict, Reducing Litigation*, 20 FORDHAM ENVTL. L. REV. 427 (2010) (discussing opposition to wind projects generally, describing causes of action raised in litigation opposing wind projects, and suggesting that opposition to wind farms is unlikely to abate).

²¹ *See infra* Section I.A–B.

²² *See* National Mining Ass'n. v. Fowler, 324 F.3d 752, 753 (D.C. Cir. 2003) (noting that federal historic preservation law is “essentially a procedural statute . . . [that] imposes no substantive standards . . .”) (internal quotations and citations omitted); Narragansett Indian Tribe v. Warwick Sewer Auth., 334 F.3d 161, 166 (1st Cir. 2003) (holding that federal agencies subject to federal historic preservation laws are not directed to “reach particular outcomes”); *see also* Melissa A. MacGill, *Old Stuff Is Good Stuff: Federal Agency Responsibilities Under Section 106 of the National Historic Preservation Act*, 7 ADMIN. L.J. AM. U. 697, 700 (1993).

policy objectives while still accommodating new technologies that promise other benefits.²³ As discussed below, modest administrative reforms to encourage coordination and planning are necessary to forestall future conflicts between preservation and renewable energy development and to allow much-needed renewable energy development to proceed in earnest.

Section II provides important background information for this discussion. The Section first identifies the animating goals of historic preservation and the equally laudable (and surprisingly parallel) objectives of renewable energy development. Section II then examines barriers to the development of new renewable energy sources and transmission capacity. Finally, Section II concludes with an overview of federal historic preservation law, focusing on those aspects of federal law most germane to renewable energy and transmission projects, especially those that affect tribal lands.

This analysis distinguishes between renewable energy *generation* projects and energy *transmission* (i.e., high voltage power line) projects because these two types of development operate in different markets and face different issues and obstacles.²⁴ However, the two types of projects are inextricably linked, and barriers to the development of one will impact the viability of the other.²⁵ Adding transmission capacity is essential to

²³ See Kuntz, *supra* note 6 at 334 (arguing that preservation of historic structures is compatible with installing new technologies, such as improved windows, solar panels, and modern building materials); see also Christopher Parkin, *A Comparative Analysis of the Tension Created by Disability Access and Historic Preservation Laws in the United States and England*, 22 CONN. J. INT'L L. 379, 416 (2006) (discussing historic preservation laws' ultimate acceptance of technologies enabling universal access to historic buildings by engaging in "[c]reative planning and construction").

²⁴ See Ashley C. Brown & Damon Daniels, *Vision Without Site; Site Without Vision*, 16 ELECTRICITY J. 23 (2003) (noting that generation, transmission, and distribution are separate and unbundled businesses); Klass & Wilson, *supra* note 17, at 1803, 1829 (discussing differences between renewable energy development and transmission development). Compare YANG, *supra* note 13, with CHI-JEN YANG ET AL., WIND POWER: BARRIERS AND POLICY SOLUTIONS (2008) and Glennon & Reeves, *supra* note 12 (outlining issues and obstacles in the development of transmission, wind, and solar projects, respectively).

²⁵ Renewable sources are entirely reliant upon transmission lines to be economically viable. See AM. WIND ENERGY ASS'N & SOLAR ENERGY INDUS. ASS'N, GREEN POWER SUPERHIGHWAYS: BUILDING A PATH TO AMERICA'S CLEAN ENERGY FUTURE 1 (2009). Unlike coal and natural gas, wind, solar, and geothermal fuel sources must be "harvested" where located, so transmission lines are necessary to move the electricity from the windy or sunny place to the load center where electricity is needed. See Klass & Wilson, *supra* note 17, at 1802.

developing utility-scale renewable sources.

Section III of this paper examines transmission projects, the impacts of such projects on historic landscapes, and the relationship between historic preservation and new transmission development. Section III addresses two issues likely to be relevant to the development of future transmission projects. The first issue examines when federal preservation review is required in the planning and development of transmission projects. The second issue considers the treatment, under federal preservation laws, of efforts to “segment” large projects into multiple shorter, discrete projects to minimize or avoid review on those segments that do not independently trigger the federal laws. This Section concludes with recommendations that preservation of historic resources be included in transmission planning from the earliest stages such that spatial planning and transmission capacity planning occur simultaneously. This Section also recommends that transmission projects be subject to segmentation analysis only if the segmented project has an independent justification for its development. Finally, this Section concludes with the recommendation that substantive review of transmission projects’ effects on historic resources should be considered only after other options are exhausted.

Section IV examines utility-scale renewable energy projects with an emphasis on the impacts of such projects on historic tribal resources and federally controlled lands, two areas where multiple conflicts have occurred to date. This Section first analyzes whether federal laws adequately protect historic resources from the adverse effects of utility-scale renewable energy projects on federal lands. This Section then addresses whether historic designation in the National Register of Historic Places is the appropriate mechanism for protecting vast seascapes that are likely to be the location for offshore wind resource development. This Section recommends that federal agencies engage in zoning-like spatial planning to identify areas for renewable energy development. This spatial planning process should include more stringent, substantive historic preservation requirements as well as an exception to allow projects of special merit.

Similarly, transmission lines, which are quite costly to erect, are useless if they are not carrying power from generation sites to load centers. AMERICAN WIND ENERGY ASS’N & SOLAR ENERGY INDUS. ASS’N, GREEN POWER SUPERHIGHWAYS: BUILDING A PATH TO AMERICA’S CLEAN ENERGY FUTURE 7 (2009) (describing the remoteness of wind resources).

Sections III and IV examine recent cases, federal regulations, and policies to identify conflicts arising between historic and renewable energy resources. These two analytical Sections then look to analogous situations involving land use conflicts to assess how the historic preservation efforts have addressed new and conflicting development product types in the past. Both Sections conclude that historic and renewable energy resources can coexist in such a way that both meet their objectives. Section V offers closing thoughts on the future of conflicts between historic preservation and the development of renewable resources and new transmission lines.

I. BACKGROUND INFORMATION ON HISTORIC PRESERVATION AND ENERGY PROJECT DEVELOPMENT

Conflicts between historic preservation and the development and transmission of new renewable energy sources are similar to other land use conflicts. Land use conflicts generally result from either differing visions of the shaping of the built environment²⁶ or the adverse effects of one development on a neighbor.²⁷ Often in

²⁶ Conflicts between neighbors over the shaping of the built environment include disputes about demographic changes (e.g., gentrification), opposition to various types of new projects (e.g., apartments, roads, shopping malls, factories, mines), and concerns about land use changes in general (e.g., sprawl and the conservation of land), among numerous others. See JOHN C. BERGSTROM ET AL., *LAND USE PROBLEMS AND CONFLICTS: CAUSES, CONSEQUENCES AND SOLUTIONS* 1 (2004); see also Donald C. Bryant Jr. & Henry W. McGee Jr., *Gentrification and the Law: Combatting Urban Displacement*, 25 WASH. U. J. URB. & CONTEMP. L. 43, 50–53 (1983) (describing conflicts with historic preservation and other urban policy objectives); Buchmann, *supra* note 3 (collecting cases involving disputes over the aesthetic impacts of transmission lines); David R. Godschalk, *Land Use Planning Challenges: Coping with Conflicts in Visions of Sustainable Development and Livable Communities*, 70 J. AM. PLAN. ASS'N 5, 5 (2004); Nolon, *supra* note 3 (discussing conflicts between wind farms and neighbors); Sager A. Williams Jr., *Limiting Local Zoning Regulation of Electric Utilities: A Balanced Approach in the Public Interest*, 23 U. BALT. L. REV. 565, 587 (1994) (discussing conflicts between transmission lines and other land uses).

²⁷ See Orlando E. Delogu, *The Dilemma of Local Land Use Control: Power Without Responsibility*, 33 MAINE L. REV. 15, 17–18 (1981) (listing development types that communities frequently oppose); Barak D. Richman, *Mandating Negotiations to Solve the NIMBY Problem: A Creative Regulatory Response*, 20 J. ENV'T'L L. 223 (2001) (describing “NIMBY” land use conflicts as a result of a project’s opponents bearing the costs of the project without receiving any of the benefits). Another way of framing these two categories of disputes is in regards to “entitlements” and “liabilities,” two theories described in the seminal property rights and torts paper by Calabresi and Melamed. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972).

land use conflicts each of the competing interests has worthy objectives.²⁸ Such is the case with historic preservation and renewable energy development: each has independent value, and neither is intrinsically more worthy of preferential treatment than the other, but historic preservation and renewable energy development occasionally conflict with respect to land use.²⁹ However, the existence of a federal historic preservation regime and the absence of analogous federal land use law encouraging the development of renewable energy sources³⁰ gives some advantage to parties interested in protecting historic resources.³¹

This Section provides important context for understanding the conflicts between historic preservation and renewable energy development. First is an examination of the objectives of historic

²⁸ See R. Lisle Baker, *My Tree Versus Your Solar Collector or Your Well Versus My Septic System?—Exploring Responses to Beneficial but Conflicting Neighboring Uses of Land*, 37 B.C. ENV'TL AFF. L. REV. 1, 4 (2010) (describing how incompatible neighboring uses can both be “good” uses even when they impose adverse effects on a neighbor or neighbors, and examining the role of zoning, nuisance law, first in time preference, and other conflict resolution mechanisms to resolve such incompatibilities).

²⁹ See *infra* Section I.A.

³⁰ A broad array of federal, state, and local laws affect renewable energy and transmission development. See Wiseman et al., *supra* note 19 (describing the regulatory regime relevant to renewable energy and transmission project siting and development); David H. Meyer & Richard Sedano, *Transmission Siting and Permitting*, in DEP'T OF ENERGY, NATIONAL TRANSMISSION GRID STUDY ISSUE PAPERS, at E-11 (2002). Compared to renewable power generation, transmission line development is subject to a much more comprehensive set of federal laws: the Federal Power Act and subsequent legislation, which together coordinate federal activity pertaining to developing new transmission capacity. Klass & Wilson, *supra* note 17, at 1814. However, even the federal transmission regime is largely silent on the siting of new transmission capacity, because siting falls largely in the realm of land use regulation, an area of law long reserved to the states. *Id.* at 1828; Uma Outka, *Environmental Law and Fossil Fuels: Barriers to Renewable Energy*, 65 VAND. L. REV. 1679, 1693–96 (describing the lag in affirmative federal law for renewable energy development).

³¹ See Wiseman et al., *supra* note 19, at 891–901 (describing the absence of a well-formed law regarding the development of renewable energy sources). Although the requirements of federal historic preservation laws applicable to renewable energy and transmission projects are procedural and do not dictate substantive outcomes, courts have routinely required projects to adhere to the requisite procedures. See *Cal. Wilderness Coal. v. Dep't of Energy*, 631 F.3d 1072, 1083 (9th Cir. 2011) (reversing a decision by the United States Department of Energy to engage in a process for planning transmission corridors without first complying with applicable federal historic preservation laws); *Pit River Tribe v. U.S. Forest Serv.*, 469 F.3d 768 (9th Cir. 2006) (delaying the commencement of federal leases to geothermal energy developers due to the United States Forest Service's failure to comply with historic preservation laws). These cases and other are discussed in detail *infra* in Sections II and III.

preservation and renewable energy development. Next, this Section summarizes barriers to new renewable source and transmission projects. These barriers demonstrate the imperative to move thoughtfully and expediently past preservation-related land use conflicts stalling renewable energy development. Finally, this Section sets forth the federal procedures for reviewing the effects on historic resources caused by federally authorized renewable energy generation and transmission projects.

The objectives of historic preservation are important and the laws protecting historic resources must be faithfully followed, but federal historic preservation laws ought not and need not be a continued barrier to renewable energy development.

A. *Objectives of Historic Preservation*

The fundamental purpose of historic preservation is to preserve historic resources.³² Multiple factors animate this overriding objective. Despite what some developers might think, historic preservation is not motivated by mere nostalgia for the past or by obstinacy against new developments.³³ Rather, as described below, the animating objectives of historic preservation include patriotism, community building, local economic development, and, increasingly, environmentalism.³⁴

1. *Patriotism*

Patriotism motivates historic preservation by seeking to

³² See *Te-Moak Tribe of W. Shoshone of Nev. v. U.S. Dep't of Interior*, 608 F.3d 592, 609 (9th Cir. 2010) (citations omitted). Historic resources include buildings and other structures, as well as archeological and culturally significant sites, objects, urban districts and natural landscapes. See JULIA H. MILLER, A LAYPERSON'S GUIDE TO HISTORIC PRESERVATION LAW 1 (2005). Historic resources include those places and objects noteworthy for national or local reasons, as well as those known for specific people or events. The National Register of Historic Places, a federal listing of historic resources—although by no means an exhaustive list of historic resources—is discussed *infra* at Section I.D.

³³ However, slowing new development often *is* an objective of historic preservation. See Jess R. Phelps, *Moving Beyond Preservation Paralysis? Evaluating Post-Regulatory Alternatives for Twenty-First Century Preservation*, 37 VT. L. REV. 113, 136 (2012).

³⁴ Additional objectives include preserving architectural treasures for aesthetic and cultural reasons and using preservation to foster a “sense of place.” See Carol M. Rose, *Preservation and Community: New Direction in the Law of Historic Preservation*, 33 STAN. L. REV. 473, 480 (1981); see also MacGill, *supra* note 22, at 703–05 (describing the legislative climate leading up to the passage of modern federal historic preservation law).

protect connections to the United States' beginnings, to important moments and individuals in its history, and to cultures pre-dating the nation's founding.³⁵ Communities rightly take pride in the preservation and display of their historic resources exemplifying patriotism and achievement.

2. *Community Building*

Community building is a second important motivator of historic preservation. The preservation of historic buildings, areas, and places is quite often the most meaningful and lasting physical representation of collective cultural memories, especially in communities that are minority, disenfranchised, or under-represented in other ways.³⁶

3. *Economic Development*

Preserved and restored historic resources can be a competitive advantage for cities and towns and rural areas alike.³⁷ Examples abound of towns and cities using historic preservation as a strategy

³⁵ Rose, *supra* note 34, at 479; *see also* Robert Stipe, *Why Preserve Historic Resources?*, in READINGS IN HISTORIC PRESERVATION: WHY? WHAT? HOW? 59 (Norman Williams, Jr. et al. eds., 1983) (discussing how patriotism influences historic preservation). The origins of formal historic preservation policy decisions in the United States date back to the sale of George Washington's Mount Vernon estate in the mid-1800s (Congress was offered the opportunity to buy the estate, declined, and ultimately the estate was sold to a non-profit preservation society called the Mount Vernon Ladies' Association). *See* MacGill, *supra* note 22, at 703. A second important milestone in the history of historic preservation law in the United States involves the battlefield at Gettysburg. *See* *United States v. Gettysburg Elec. Ry. Co.*, 160 U.S. 668 (1896) (upholding the federal government's use of eminent domain to take property for the preservation and study of the battle of Gettysburg and setting forth an understanding of at least some of the objectives of historic preservation). This author's experience of having lived for several years in Gettysburg can confirm that the economic development benefits of historic preservation, discussed *infra* at Subsection I.A.3, have undoubtedly followed.

³⁶ Rose, *supra* note 34, at 491; *see also* Melinda J. Milligan, *Buildings as History: The Place of Collective Memory in the Study of Historic Preservation*, 30 SYMBOLIC INTERACTION 105 (2007).

³⁷ Economic benefits of historic preservation were at least one objective of federal historic preservation laws. *See* 16 U.S.C. § 470(b)(6) (2006) ("[T]he increased knowledge of our historic resources, the establishment of better means of identifying and administering them, and the encouragement of their preservation . . . will assist economic growth and development . . .") (emphasis added); J. Peter Byrne, *Historic Preservation and Its Cultured Despisers: Reflections on the Contemporary Role of Preservation Law in Urban Development*, 19 GEO. MASON. L. REV. 665 (2012).

in developing local economic activity.³⁸ Tourists delight in exploring unique historic places in other towns and cities.³⁹ Communities that protect and highlight their heritage can attract tourist revenue as well as benefit from the development of support industries.⁴⁰

4. *Environmental Benefits*

Finally, historic preservation has become increasingly associated with efforts to “green” the built environment. Preserving existing structures avoids destroying the “embodied

³⁸ See David Listokin et al., *The Contributions of Historic Preservation to Housing and Economic Development*, 9 HOUSING POL’Y DEBATE 431, 443 (1998); see also RANDALL MASON, *ECONOMICS AND HISTORIC PRESERVATION: A GUIDE AND REVIEW OF THE LITERATURE*, BROOKINGS INSTITUTION METROPOLITAN POL’Y PROGRAM (2005) (surveying economic and policy literature examining the economic benefits of historic preservation); ECONOMIC BENEFITS OF HISTORIC PRESERVATION ACTIVITIES IN PENNSYLVANIA 30–34 (2011) (summarizing individual towns’ and cities’ experiences with historic preservation as an economic development strategy in Pennsylvania); John I. Gilderbloom et al., *Historic Preservation’s Impact on Job Creation, Property Values, and Environmental Sustainability*, 2 J. URBANISM 83 (2009) (describing historic preservation efforts in Louisville, Kentucky); Alison Kootstra, *Historic Preservation: Washington, D.C. Neighborhoods and Economic Change*, 10 EXPLORATIONS 42 (2007) (providing analysis of the effects of economic development in Washington, D.C.); Alexander J. Reichl, *Historic Preservation and Progrowth Politics in U.S. Cities*, 32 URB. AFF. REV. 513 (1997) (describing historic preservation and economic development in New York City, Atlanta, and New Orleans).

³⁹ See ARKANSAS HISTORIC PRESERVATION PROGRAM, *ECONOMIC BENEFITS OF HISTORIC PRESERVATION* 53–54 (2006) (describing the popularity of heritage travel) (citations omitted); N.J. HERITAGE TOURISM TASK FORCE, N.J. HISTORIC TRUST, *LINKING OUR LEGACY TO A NEW VISION: A HERITAGE TOURISM PLAN FOR NEW JERSEY 1* (June 2010) (reporting that 78 percent of leisure travelers in the United States participate in cultural or heritage activities while traveling and summarizing tourism interest in historic and heritage sites more generally) (citations omitted); Cheryl M. Hargrove, *Heritage Tourism*, 1 CULTURAL RES. MGMT. 10 (2002) (“Visiting historic and cultural sites is one of the most popular tourist activities today.”); see also Alan A. Lew, *Authenticity and Sense of Place in the Tourism Development Experience of Older Retail Districts*, 27 J. TRAVEL RES. 15, 18–19 (1989) (discussing place-based historic preservation efforts as especially important in retail districts); Patricia Mooney-Melvin, *Harnessing the Romance of the Past: Preservation, Tourism, and History*, 13 PUB. HISTORIAN 35, 36 (1991) (noting surveys that indicate historic sites rank highly among potential destinations for tourists).

⁴⁰ See Mooney-Melvin, *supra* note 39, at 40–42. For an example of one city that has benefitted greatly from a historic preservation-based tourism strategy see, for example, Rich Harrill & Thomas D. Potts, *Tourism Planning in Historic Districts: Attitudes Toward Tourism Development in Charleston*, 69 J. AM. PLANNING ASS’N 233, *passim* (2003) (describing the benefits in Charleston, South Carolina of tourism-based historic preservation strategies).

energy” of existing buildings,⁴¹ prevents the demolition and waste of existing construction materials,⁴² and capitalizes on traditional energy-efficient building materials and techniques.⁴³ Preservation also takes advantage of historic structures often being located in existing urban, walkable areas and not in far-flung, sprawling, auto-dependent “greenfields.”⁴⁴ Moreover, historic preservation and the preservation of environmental integrity generally are often closely related.⁴⁵

B. Objectives of Renewable Energy Development

Utility-scale renewable energy generation and related transmission facilities almost universally lack linkages to historic places, people, or building patterns, and therefore seemingly do not necessarily advance the objectives of historic preservation.⁴⁶

⁴¹ Embodied energy is the total of all energy necessary to construct an existing building (including the energy expended to create the building materials), which is lost when a building is destroyed rather than preserved. See Mike Jackson, *Embodied Energy and Historic Preservation: A Needed Reassessment*, 36 ASS’N FOR PRESERVATION TECH. INT’L. 47 (2005) (arguing that the environmental benefits of existing buildings are overly discounted in considering the environmental performance of buildings and quantifying the benefits of preserving a building’s embodied energy).

⁴² See *id.*; PRESERVATION GREEN LAB, NAT’L TRUST FOR HISTORIC PRESERVATION, *THE GREENEST BUILDING: QUANTIFYING THE ENVIRONMENTAL VALUE OF BUILDING REUSE* 84 (2011).

⁴³ See Akubue Jideofor Anselm, *Building with Nature (Ecological Principles in Building Design)*, 6 J. APPLIED SCI. 958, 959, 963 (2006) (arguing that traditional building methods and styles are often environmentally superior and frequently should be revived because traditional methods account for local environmental issues, use local materials, and avoid wasting resources); see also Sarah Elizabeth Welniak, *Energy Efficiency in Historic Structures*, 2–3 (May 2009) (unpublished M.S. thesis, Clemson University) (describing traditional building practices in residential structures in coastal South Carolina as being highly efficient for energy conservation purposes).

⁴⁴ See Patrice Frey, *Making the Case: Historic Preservation as Sustainable Development* 10 (Oct. 15, 2007) (draft white paper).

⁴⁵ The National Environmental Policy Act and its implementing regulations lists historic and cultural resources among the factors federal agencies are required to consider in performing environmental impact statements and environmental assessments. See 40 C.F.R. § 1508.27(b)(3), (8) (2013); see also MILLER, *supra* note 32, at 6; Kuntz, *supra* note 6, at 328–31.

⁴⁶ See Wiseman et al., *supra* note 19, at 829. Hydropower is a renewable source with a very long history. See Oliver Paish, *Small Hydro Power: Technology and Current Status*, 6 RENEWABLE & SUSTAINABLE ENERGY REV. 537, 538–39 (2002). However, hydropower is outside the scope of this paper, despite its role as the leading source of renewable energy and despite possible conflicts with preservation statutes. See generally Dan Tarlock, *Hydro Law and the Future of Hydroelectric Power Generation in the United States*, 65 VAND. L.

Indeed, most renewable energy and transmission line projects fall squarely in the realm of projects that may adversely affect historic resources and that would likely benefit those historic resources by undergoing federal historic preservation review.

Yet the animating objectives of renewable energy development include protecting national security, promoting community justice (or environmental justice), reviving the domestic manufacturing sector (i.e., creating “green jobs”), and mitigating climate change.⁴⁷ Compare these objectives to those of historic preservation listed above: patriotism, community building, economic development, and environmentalism. There is considerable overlap; indeed, the two sets of objectives are strikingly parallel.

1. *National Security*

Renewable energy sources are widely viewed as a means for decreasing domestic dependence on foreign fuel sources, particularly imported oil.⁴⁸ Producing “homegrown” renewable energy is an ostensibly patriotic act and one that arguably makes

REV. 1723 (2012) (discussing the history of hydropower development in the United States and possible conflicts with conservation laws). Small wind also has a long history. See Erica Schroeder, *Turning Offshore Wind On*, 98 CALIF. L. REV. 1631, 1634–35 (2010). It is not considered in this paper alongside utility-scale wind projects, however, for the simple reason that large new turbines are not modern echoes of historic turbines but instead have vastly greater landscape impacts. See ROBERT W. RIGHTER, *WIND ENERGY IN AMERICA: A HISTORY* (1996) (describing the long, slow, and unsteady development of wind as a power source in the United States). But see Christopher J. Castaneda, *History Beneath the Surface: Natural Gas Pipelines and the National Historic Preservation Act*, 26 PUB. HISTORIAN 105, 107 (2004) (arguing that even though energy infrastructure is modern, it can nonetheless be historically significant).

⁴⁷ See Patricia E. Salkin & Ashira Pelman Ostrow, *Cooperative Federalism and Wind: A New Framework for Achieving Sustainability*, 37 HOFSTRA L. REV. 1049, 1056–61 (2009); Wiseman et al., *supra* note 19, at 833–42 (setting forth broad policy arguments for developing renewable energy sources); Hannah Wiseman, *Expanding Regional Renewable Governance*, 35 HARV. ENVT'L. L. REV. 477, 487–93 (2011); see also *Electric Transmission Lines: Hearing Before the S. Comm. On Energy & Natural Resources*, 111th Cong. 10 (2009) (statement of Jon Wellinghoff, Acting Chairman, FERC); Gregory J. Rigano, Note, *The Solution to the United States' Energy Troubles is Blowing in the Wind*, 39 Hofstra L. Rev. 201, 204–217 (2011) (identifying environmental rationales for developing renewable energy sources).

⁴⁸ See Joshua P. Fershee, *Changing Resources, Changing Market: The Impact of a National Renewable Portfolio Standard on the U.S. Energy Industry*, 29 ENERGY L.J. 49, 57 (2008); Benjamin K. Sovacool & Christopher Cooper, *Congress Got It Wrong: The Case for a National Renewable Portfolio Standard and Implications for Policy*, 3 ENVTL. & ENERGY L. & POL'Y J. 85, 89 (2008).

Americans safer from foreign threats by reducing their dependence on energy sources derived from politically unstable or hostile nations.⁴⁹

2. *Community Justice*

Clean energy sources are generally seen as promoting environmental justice insofar as these sources avoid the noxious local effects of conventional power plants,⁵⁰ which often disproportionately affect minorities and low-income communities.⁵¹ Solar, wind, and geothermal plants simply do not have the negative pollution effects that fossil fuel and nuclear power sources produce.⁵² Instead, renewable energy can be a solution to environmental justice concerns, especially in native communities.⁵³

3. *Economic Development*

Renewable energy advocates hope to stimulate the domestic manufacturing sector to produce components for wind and solar generation capacity.⁵⁴ This objective is aimed at addressing

⁴⁹ Clifford Krauss & Eric Lipton, *U.S. Inches Toward Goal of Energy Independence*, N.Y. TIMES, Mar. 23, 2012, <http://www.nytimes.com/2012/03/23/business/energy-environment/inching-toward-energy-independence-in-america.html>.

⁵⁰ Sovacool, *supra* note 11, at 1.

⁵¹ See NAT'L COMM'N ON ENERGY POLICY, SITING CRITICAL ENERGY INFRASTRUCTURE: AN OVERVIEW OF NEEDS AND CHALLENGES 9 (2006) (listing local concerns with energy facilities). See generally, KENNETH A. MANASTER, ENVIRONMENTAL PROTECTION AND JUSTICE: READINGS OF THE PRACTICE AND PURPOSES OF ENVIRONMENTAL LAW 201–326 (3d. ed. 2007) (addressing siting of polluting facilities in depth); Vicki Been, *What's Fairness Got To Do With It? Environmental Justice and the Siting of Locally Undesirable Land Uses*, 78 CORNELL L. REV. 1001 (1993); Richard J. Lazarus, *Pursuing "Environmental Justice": The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787 (1993) (discussing environmental justice concerns).

⁵² See Uma Outka, *Siting Renewable Energy: Land Use and Regulatory Context* 37 ECOLOGY L.Q. 1041, 1076 (2010) (describing the environmental justice benefits of solar power).

⁵³ See Ryan David Dreveskracht, *Native Nation Economic Development via the Implementation of Solar Projects: How to Make It Work*, 68 WASH. & LEE L. REV. 27, 48–81 (2011); Elizabeth Ann Kronk, *Alternative Energy Development in Indian Country: Lighting the Way for the Seventh Generation*, 46 IDAHO L. REV. 449, 455–58 (2010); Uma Outka, *Environmental Justice in the Renewable Energy Transition*, 19 J. ENVTL. & SUSTAINABILITY L. 60, *passim* (2012).

⁵⁴ See Dorceta E. Taylor, *Green Jobs and the Potential to Diversify the Environmental Workforce*, 31 UTAH ENVTL. L. REV. 47, 69–70, 75–77 (2011); see also Glennon & Reeves, *supra* note 12, at 93–94; Salkin & Ostrow, *supra* note

concerns about America's competitiveness in an increasingly global economy.⁵⁵

4. *Environmental Benefits*

Finally, the environmental benefits of renewable energy are well documented.⁵⁶ Renewable energy sources are widely viewed as a crucial solution to global climate change.⁵⁷

C. *Barriers to Renewable Energy Development*

Despite many important supporting objectives, renewable energy generation and transmission developments face numerous barriers.⁵⁸ Barriers to utility-scale generation of solar and wind include high, upfront capital costs, unproven technologies, intermittent sources or inadequate energy storage technologies, overlapping and uncertain regulatory agency jurisdiction, and NIMBYism.⁵⁹ Competition with fossil fuels, the continued

47, at 1058–60 (describing jobs and economic benefits of widespread renewable energy adoption).

⁵⁵ See AMERICAN WIND ENERGY ASS'N & SOLAR ENERGY INDUS. ASS'N, *supra* note 25, at 6; Sheryl Gay Stolberg, *Obama Calls for Bipartisan Effort to Fight for U.S. Jobs*, N.Y. TIMES, Jan. 26, 2011, <http://www.nytimes.com/2011/01/26/us/politics/26speech.html> (describing President Obama's objectives for increasing domestic clean energy development).

⁵⁶ See Wiseman et al., *supra* note 19, at 888–92 (describing the environmental benefits of renewable sources as avoiding the numerous environmental ills created by fossil fuel and nuclear sources); Rigano, *supra* note 47, at 204–16; see also Schroeder, *supra* note 46, at 1638–40. Renewable sources are not without their own environmental problems, even if such sources do avoid emissions that cause local and global air pollution. MASSACHUSETTS INSTITUTE OF TECHNOLOGY, *supra* note 14, at 8-3 to 8-17 (describing adverse environmental effects of geothermal projects such as water use, noise pollution, and some gaseous emissions); See Glennon & Reeves, *supra* note 12, at 96–105 (describing adverse environmental effects of utility-scale solar projects); Rigano, *supra* note 47, at 1640–41 (describing adverse effects of wind projects).

⁵⁷ See, e.g., Timothy P. Duane, *Greening the Grid: Implementing Climate Change Policy Through Energy Efficiency, Renewable Portfolio Standards, and Strategic Transmission System Investments*, 34 VT. L. REV. 711 (2010); Thomas D. Peterson et al., *Developing a Comprehensive Approach to Climate Change Policy in the United States that Fully Integrates Levels of Government and Economic Sectors*, 26 VA. ENVTL. L.J. 227 (2008); Daniel Van Fleet, *Legal Approaches to Promote Technological Solutions to Climate Change*, 2008 DUKE L. & TECH. REV. 8 (2008).

⁵⁸ YANG, *supra* note 13, at 10 (describing barriers to transmission development); Outka, *supra* note 30, at 1690–99 (describing barriers to renewable energy development).

⁵⁹ See DAVID J. HURLBUT ET AL., NAT'L RENEWABLE ENERGY LAB., BEYOND RENEWABLE PORTFOLIO STANDARDS: AN ASSESSMENT OF REGIONAL SUPPLY AND

externalization of the costs of fossil fuel-driven energy production, and subsidies for fossil fuels are further, significant barriers to renewable energy development.⁶⁰ Finding sites and obtaining land use permits for large, utility-scale renewable energy projects present still more obstacles.⁶¹

Transmission constraints are also a major barrier to the development of utility-scale renewable energy resources, particularly solar and wind resources.⁶² Many of the richest solar and wind resources are found in remote locations—for example, the Mojave Desert, the High Plains, and offshore—where at present transmission infrastructure is inadequate or nonexistent.⁶³ Without a transmission network stretching to load centers from remote resource areas, the development of remote resource areas for renewable energy production is generally not worthwhile.⁶⁴

DEMAND CONDITIONS AFFECTING THE FUTURE OF RENEWABLE ENERGY IN THE WEST (2013); DEP'T OF ENERGY, 20% WIND ENERGY BY 2030: INCREASING WIND ENERGY'S CONTRIBUTION TO U.S. ELECTRICITY SUPPLY 72–73 (2008) (describing materials, manufacturing, and labor challenges in developing wind resources); YANG, *supra* note 13, at 8–14; Glennon & Reeves, *supra* note 12, at 105–111 (describing economic challenges confronting utility-scale solar development); Lorde Martin, *supra* note 20 (describing NIMBY opposition to wind farms); Outka, *supra* note 30, at 1690 (describing cost barriers); Salkin & Ostrow, *supra* note 47, at 1049, 1065–70, 1076–79 (describing barriers to wind development such as storage and intermittancy); Wiseman et al., *supra* note 19, at 830–32 (describing barriers to utility-scale renewable energy such as complex and competing regulatory regimes).

⁶⁰ Outka, *supra* note 30, at 1704 (noting that many laws aimed at protecting the environment have significant “carve-outs” for fossil fuels and that renewable sources do not enjoy such benefits under the law).

⁶¹ Sara C. Bronin, *Building-Related Renewable Energy and the Case of 360 State Street*, 65 VAND. L. REV. 1875, 1883 (2012); see also Glennon & Reeves, *supra* note 12 at 104.

⁶² See DEP'T OF ENERGY, *supra* note 59, at 98–100 (describing barriers to transmission investment such as cost allocation, capacity planning, cost recovery and siting); YANG, *supra* note 13, at 10; Klass & Wilson, *supra* note 17, at 1804; Matthew L. Wald, *Wind Energy Bumps into Power Grid's Limits*, N.Y. TIMES, Aug. 27, 2008, at A1 (noting that the reason some prime sites for renewable sources have not yet been developed is inability to move power to markets from those remote sites).

⁶³ See AM. WIND ENERGY ASS'N & SOLAR ENERGY INDUS. ASS'N, *supra* note 25, at 5 (describing the remoteness of wind resources); Glennon & Reeves, *supra* note 12, at 94 (describing prime solar sites as often being far from urban areas). Moreover, unlike coal, natural gas, oil, and nuclear energy, all of which can be transported via truck, train, or barge, wind and solar fuel sources must be converted to electricity where captured. Klass & Wilson, *supra* note 17, at 1811. In this way, transmission is much more essential to renewable energy sources than it is to many conventional sources.

⁶⁴ See Wiseman et al., *supra* note 19, at 853–54 (noting that renewable

New transmission lines are costly and difficult to build in some places.⁶⁵

“Congestion” is arguably the foremost barrier for electrical transmission.⁶⁶ Transmission is the movement of high voltages of electricity across large distances,⁶⁷ and congestion is a shortage of transmission capacity resulting from of a geographic imbalance of supply and demand.⁶⁸ In areas with high demand (e.g., urban areas along the coasts), construction of new generation sources is often difficult for environmental and cost reasons, so transmission is necessary to move electricity to the high demand areas from faraway sources.⁶⁹ However, in many energy markets today,

energy projects must be able to connect generation to transmission to be of value); see also Uma Outka, *The Renewable Energy Footprint*, 30 STAN. ENV'T L. J. 241, 249–50 (2011) (“[I]t is widely perceived that a large increase in renewable energy sources will require more transmission infrastructure than historically may have been necessary for fossil fuel source[s] of electricity”) (citations omitted); Wald, *supra* note 62.

⁶⁵ See Wald, *supra* note 62 (noting that New York state has not built a new transmission line in nearly twenty years, with the exception of underwater connections to Long Island); see also Meyer & Sedano, *supra* note 30, at E-6.

⁶⁶ See YANG, *supra* note 13, at 9–10 (using the term “bottlenecks” to describe congestion); John Noor, *Herding Cats: What To Do When States Get in the Way of National Energy Policy*, 11 N.C. J.L. & TECH. 145, 146 (2009) (citations omitted). Congestion in transmission networks led to brownouts in 2003, prompting Congress to pass the Energy Policy Act of 2005, which included provisions aimed at reducing congestion problems. See Klass & Wilson, *supra* note 17, at 1817; see also Miriam Sowinski, *Practical, Legal, and Economic Barriers to Optimization in Energy Transmission and Distribution*, 26 J. LAND USE 503, 520 (2011) (describing problems of intermittency related to transmission of renewable sources such as wind and solar power).

⁶⁷ Sowinski, *supra* note 66, at 505 (defining transmission as being the near speed-of-light transfer of electricity over long-distance, highly conductive lines with voltages between 138 and 765kV, which minimize the amount of electricity lost as heat or other energy (so-called “line loss”)); see also Williams, *supra* note 26, at 566–72 (providing a thorough overview of the physical structure of the transmission network).

⁶⁸ See DAVID MEYER, OFF. OF ELEC. DELIVERY & ENERGY RELIABILITY, U.S. DEP'T. OF ENERGY, 2012 NATIONAL ELECTRIC TRANSMISSION CONGESTION STUDY: PRELIMINARY FINDINGS 5 (2012), <http://energy.gov/oe/services/electricity-policy-coordination-and-implementation/transmission-planning/2012-national>.

⁶⁹ See Meyer & Sedano, *supra* note 30, at E-17 (noting that load centers tend to be heavily urbanized with air quality problems and lack of water supplies needed for new (conventional) sources). Texas is a prominent example of the geographic dichotomy between locations suitable for generation and locations with high demand for energy. (This dichotomy creates the need for new transmission lines.) The Texas Public Utility Commission has identified several areas in the sparsely developed northern and western parts of the state where wind energy is particularly profitable. The Public Utility Commission is

transmission capacity is inadequate, and new lines are needed.⁷⁰ Inadequate transmission capacity leads to high retail energy prices at best, and blackouts at worst.⁷¹ Transmission congestion also creates pricing anomalies and grid instabilities.⁷² Relieving transmission congestion problems is complicated by overlapping jurisdictions controlling the approval of transmission line siting among the states and between individual states and the federal government,⁷³ cost allocation among the beneficiaries of additional transmission capacity,⁷⁴ and, perhaps most significantly,

proposing to build several new transmission lines to the eastern part of the state where the primary urban centers demand the electricity that the wind turbines can generate. See Pub. Util. Comm'n of Tex., *Program Overview*, CREZ TRANSMISSION PROGRAM INFO. CENTER, <http://www.texascrezprojects.com/overview.aspx> (last visited Feb. 20, 2013); see also Kathryn B. Daniel, *Winds of Change: Competitive Renewable Energy Zones and the Emerging Regulatory Structure of Texas Wind Energy*, 42 TEX. TECH L. REV. 157, 166 (2009); Kaitlyn Luck, *They Call It the Hill Country, I Call It Home: Issues in Siting Wind Energy Transmission Lines in Texas*, 14 TEX. TECH. ADMIN. L.J. 247 (2012).

⁷⁰ See Klass & Wilson, *supra* note 17, at 1811–12 (noting that new wind energy development will require new transmission investments of up to \$200 billion); see also AM. WIND ENERGY ASS'N & SOLAR ENERGY INDUS. ASS'N, *supra* note 25, at 6; YANG, *supra* note 13 (describing problems in the transmission grid such as underinvestment, balkanized ownership, fragmented regulatory regimes, NIMBYism, and reliability focused siting requirements); Steven J. Eagle, *Securing a Reliable Electricity Grid: A New Era in Transmission Siting Regulation*, 73 TENN. L. REV. 1 (2005) (describing many reasons why transmission capacity is lacking); Luck, *supra* note 69, at 247 (describing idled wind turbines deliberately prevented from generating because of a shortage of transmission capacity connecting to demand centers).

⁷¹ Wald, *supra* note 62 (“Achieving [twenty percent of energy use from wind] would require moving large amounts of power over long distances, from the windy, lightly populated plains in the middle of the country to the coasts where many people live. Builders are also contemplating immense solar-power stations in the nation’s deserts that would pose the same transmission problems.”); see also YANG, *supra* note 13, at 18; Eagle, *supra* note 70, at 17 n.77.

⁷² Peter Fox-Penner, *Easing Gridlock on the Grid: Electricity Planning and Siting Compacts*, ELECTRICITY J. 11, 12 (Nov. 2001).

⁷³ See Sowinski, *supra* note 66, at 514 (describing the relationship between federal and state regulators of transmission lines); see also Meyer & Sedano, *supra* note 30 at E-3 to E-8 (describing obstacles in the transmission line siting process). See generally EDISON ELEC. INST., STATE GENERATION & TRANSMISSION SITING DIRECTORY (2012) (summarizing transmission siting requirements for each of the fifty states and illustrating the disparate jurisdictional regulatory regimes from state to state); Moran, *supra* note 7 (describing the relationship between state and local regulators).

⁷⁴ See AM. WIND ENERGY ASS'N & SOLAR ENERGY INDUS. ASS'N, *supra* note 25, at 16; Ashley C. Brown & Damon Daniels, *Vision Without Site; Site Without Vision*, 16 ELECTRICITY J. 23, 25, 27 (2003) (describing “parochialism” concerns whereby state regulators considering transmission siting proposals are either

NIMBYism.⁷⁵

Some of the obstacles to exploiting America's rich wind and solar resources are unrelated to the built environment and therefore largely unrelated to historic preservation.⁷⁶ However, those obstacles that are related to land use conflict with historic resources can be minimized or avoided through thoughtful planning and coordination with existing federal preservation laws.

D. *Federal Historic Preservation Law*

The goals of historic preservation are reflected in the National Historic Preservation Act (NHPA).⁷⁷ NHPA seeks to preserve historic resources.⁷⁸ NHPA sets forth the primary federal historic preservation framework for studying the effects of federal undertakings such as large infrastructure projects, which include energy development and transmission projects.⁷⁹ Significantly,

barred by statute or unwilling to consider the benefits to other jurisdictions of transmission proposals).

⁷⁵ See Brown & Daniels, *supra* note 74, at 26 (mentioning barriers to transmission siting arising from landowner opposition); Eagle, *supra* note 70, at 32 ("The magnitude of the NIMBY problem has increased in recent years with the de-crease in available land, the growing necessity of infrastructure close to existing populations, and the level and organization of local opposition . . ."). Concerns regarding NIMBY challenges to transmission siting are implicit in FERC Commissioner Jon Wellinghoff's testimony to the Senate in 2009; *Electric Transmission Lines: Hearing Before the S. Comm. On Energy & Natural Resources*, 111th Cong. 10 (2009) (statement of Jon Wellinghoff, Acting Chairman, FERC). Commissioner Wellinghoff focused his testimony primarily as a request to Congress to give FERC the authority to override state and local government siting decisions and addressed cost allocation and reliability only as secondary matters. See *id.*

⁷⁶ For example, the cost allocation issue in financing transmission line construction is unrelated to historic preservation. See Sowinski, *supra* note 66, at 521–26 (describing problems stemming from allocating construction costs of new transmission lines as endemic to the regulatory structure governing transmission monopolies).

⁷⁷ National Historic Preservation Act, 16 U.S.C. § 470 (2012).

⁷⁸ See *id.* § 470(b)(2) ("[T]he historical and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people . . ."); *id.* § 470-1 ("It shall be the policy of the Federal Government, in cooperation with other nations and in partnership with the States, local governments, Indian tribes, and private organizations and individuals to . . . administer federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship for the inspiration and benefit of present and future generations . . . [and] encourage the public and private preservation and utilization of all usable elements of the Nation's historic built environment . . .").

⁷⁹ See S. Rheagan Alexander, *Tribal Consultation for Large-Scale Projects:*

however, the law does not dictate any substantive outcomes;⁸⁰ that is, NHPA does not, on its own, require any agency to deny a project on its merits for the purposes of historic preservation.⁸¹ Rather, NHPA imposes procedural requirements on any federal agency action likely to affect a historic resource.⁸² The procedures require information gathering, analysis, and consultation with parties interested in or affected by the agency's decision.⁸³

1. *The Scope of NHPA's Jurisdiction*

The threshold issue under NHPA for renewable energy and transmission projects is whether NHPA even applies.⁸⁴ In general, a federal agency is obligated to follow NHPA's procedural requirements when it engages in an "undertaking," broadly defined to mean any

project, activity, or program funded in whole or in part under

The National Historic Preservation Act and Regulatory Review, 32 PACE L. REV. 895, 896 (2012) (describing NHPA as the central piece of federal legislation regarding historic review of buildings and infrastructure and energy development).

⁸⁰ See *Nat'l Trust for Historic Pres. v. Blanck*, 938 F. Supp. 908, 919 (D.D.C. 1996) ("[NHPA] require[s] the government to conduct certain procedural and informational activities before embarking on projects that might affect, respectively, historic sites or the environment. *Neither [the National Environmental Policy Act] nor Section 106 mandates a particular outcome of governmental decisions; rather each defines the processes by which those decisions must be made.*") (emphasis added).

⁸¹ See *Wilderness Watch v. Iwamoto*, 853 F. Supp. 2d 1063, 1071 (W.D. Wash. 2012) (ruling that NHPA does not create substantive preservationist obligations with regard to any specific projects); see also *Lee v. Thornburgh*, 877 F.2d 1053, 1058 (D.C. Cir. 1989) ("The National Historic Preservation Act is a narrow statute. Its main thrust is to encourage preservation of historic sites and buildings rather than to mandate it.").

⁸² *Thornburgh*, 877 F.2d at 1055. Those procedures are set forth at 36 C.F.R. § 800 and are described in more detail in Section I.D.2, *infra*. See MacGill, *supra* note 22, at 706 (describing the limitations of NHPA's current requirements and its relative shortcomings in protecting historic assets). In addition to the lack of any substantive obligations to protect historic resources, agencies are not even obligated, as under the National Environmental Policy Act, to consider alternative courses of action that would protect such resources. Moreover, NHPA's federal gatekeeper, the Advisory Council on Historic Preservation, is also relatively toothless to impose any substantive preservationist measures. See *id.* at 706–07.

⁸³ See MILLER, *supra* note 32, at 4–5; see also SARA C. BRONIN & J. PETER BYRNE, *HISTORIC PRESERVATION LAW* 144–51 (2012); Donald Dworsky et al., *An Overview of Federal Preservation Law*, in *A HANDBOOK ON HISTORIC PRESERVATION LAW* 193, 194 (Christopher J. Duerksen ed., 1983).

⁸⁴ See MacGill, *supra* note 22, at 713–15 (discussing the threshold NHPA inquiry of what constitutes a "federal undertaking" generally).

the direct or indirect jurisdiction of a Federal agency, including—(A) those carried out by or on behalf of the agency; (B) those carried out with Federal financial assistance; (C) those requiring a Federal permit, license or approval; and (D) those subject to State or local regulation administered pursuant to a delegation or approval by a federal agency.⁸⁵

Determining when an “undertaking” occurs has itself been the subject of much dispute and litigation.⁸⁶ In the context of infrastructure project development, NHPA is often relevant because such projects often require either a federal subsidy or federal agency approval, or both.⁸⁷ The federal subsidy or approval constitutes the “undertaking” under NHPA and triggers the NHPA process. It is important to note, however, that not all renewable energy and transmission projects will trigger NHPA. NHPA does not apply when there is no federal involvement or no federal agency discretion in the commitment of federal funds.⁸⁸

2. *A Roadmap of NHPA’s Procedural Requirements*

NHPA imposes procedural requirements primarily, and the “centerpiece” of the procedures to protect historic resources is

⁸⁵ 16 U.S.C. § 470w (2012); *see also* Sugarloaf Citizens Ass’n v. Fed. Energy Regulatory Comm’n, 959 F.2d 508 (4th Cir. 1992) (construing the meaning of “undertaking” under NHPA and setting forth when NHPA review is required).

⁸⁶ *See, e.g.*, Nat’l Mining Ass’n v. Fowler, 324 F.3d 752, 759 (D.C. Cir. 2003) (holding that NHPA “applies by its terms only to *federally funded or federally licensed* undertakings”) (quoting Sheridan Kalorama Historical Ass’n v. Christopher, 49 F.3d 750, 755 (D.C. Cir. 1995)); *see also* Bus. & Residents Alliance of E. Harlem v. Jackson, 430 F.3d 584, 586 (2d Cir. 2005) (holding that a non-federal expenditure of block grant funds is not an undertaking under NHPA and therefore not subject to NHPA’s procedural requirements); *Sheridan Kalorama*, 49 F.3d at 754 (holding that the Secretary of State’s inaction with regard to the renovation of a foreign embassy under the Foreign Missions Act was not an undertaking for the purpose of NHPA); MacGill, *supra* note 22, at 714 n.109 (collecting cases construing the meaning of “undertaking”).

⁸⁷ *See, e.g.*, Alexander, *supra* note 79. Section II, *infra*, contains a detailed analysis of when transmission projects constitute an undertaking necessitating NHPA review.

⁸⁸ *See, e.g.*, Liberty Square Realty Corp. v. Boricua Vill. Hous. Dev. Fund Co., No. 12 CV 1395(HB), 2012 WL 3191963, at *2 (S.D.N.Y. Aug. 7, 2012) (ruling that no violation of NHPA can occur without, at a minimum, federal involvement); *see also* *E. Harlem*, 430 F.3d at 594 (holding that where an agency does not have discretion to consider the use of federal funds NHPA is not triggered); *Sugarloaf Citizens Ass’n*, 959 F.2d at 515 (holding that a mere “ministerial act” on the part of the federal agency is not an undertaking and does not subject a project to NHPA review).

NHPA's Section 106.⁸⁹ Section 106 is a "stop, look, and listen" provision that requires each federal agency to consider the effects of its programs on historic resources.⁹⁰ Section 106 mandates the above-described information-gathering and review process, which requires conducting studies, preparing reports on historic resources, consultation with certain stakeholders, and consideration of an agency program's impacts.⁹¹ Thus, beyond the threshold jurisdictional issue of whether NHPA applies, two of NHPA's procedural requirements will also be relevant in conflicts involving historic preservation and renewable energy development.⁹² First, under NHPA's Section 106, federal agencies must identify historic resources within the area potentially affected by the undertaking, consider the effects of their actions on those historic resources, and determine whether the effect of the undertaking will be adverse to the historic resources.⁹³ Second,

⁸⁹ 16 U.S.C. § 470f; John M. Fowler, *The Federal Preservation Program*, in *A RICHER HERITAGE: HISTORIC PRESERVATION IN THE TWENTY-FIRST CENTURY* 45 (Robert E. Stipe ed., 2003).

⁹⁰ *E. Harlem*, 430 F.3d at 591. NHPA's requirements are procedural:

Under NHPA, a federal agency must make a reasonable and good faith effort to identify historic properties, 36 C.F.R. § 800.4(b); determine whether identified properties are eligible for listing on the National Register based on criteria in 36 C.F.R. § 60.4; assess the effects of the undertaking on any eligible historic properties found, 36 C.F.R. §§ 800.4(c), 800.5, 800.9(a); determine whether the effect will be adverse, 36 C.F.R. §§ 800.5(c), 800.9(b); and avoid or mitigate any adverse effects, 36 C.F.R. §§ 800.8(e), 800.9(c) . . . [and] confer with the State Historic Preservation Officer . . . and seek the approval of the Advisory Council on Historic Preservation

Muckleshoot Indian Tribe v. U.S. Forest Serv., 177 F.3d 800, 805 (9th Cir. 1999).

⁹¹ That is, NHPA does not impose any substantive standards upon federal agencies to protect historic resources from an agency action that might have adverse effects on the resource. See MacGill, *supra* note 22, at 700. NHPA generally lacks any prohibition against either destroying or adversely impacting historic resources, provided the appropriate review and consultations have been completed first. See *National Mining Ass'n. v. Fowler*, 324 F.3d 752, 755 (D.C. Cir. 2003); see also MacGill, *supra* note 22, at 705–06 (discussing drawbacks with Section 106, including its lack of substantive protections for historic resources and the limited role of the Advisory Council on Historic Preservation). Some commentators have speculated about substantive requirements imposed by NHPA's Section 110, but so far the courts have disagreed. See Suagee, *supra* note 3, at 55–56.

⁹² For the best recent overview of federal historic preservation law (and the law of historic preservation generally), see BRONIN & BYRNE, *supra* note 83, at 57–73, 106–267.

⁹³ See 16 U.S.C. § 470f. "Section 106" refers to the provision of the session law through which NHPA was passed and is commonly used in literature and

federal agencies must solicit consultations with third parties, such as state and tribal leaders and non-governmental interest groups, when agency actions are likely to impact historic resources.⁹⁴ These two requirements are explained in greater detail below.

3. *Consideration of Effects and Designation for Listing in the National Register of Historic Places*

Section 106 requires federal agencies with indirect or direct jurisdiction over a proposed federally led, federally licensed, or federally assisted undertaking to take into account the effect of the undertaking on a district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP).⁹⁵ Places listed in or eligible for listing in the NRHP are the focus of historic preservation and receive special attention under NHPA.⁹⁶ The NRHP and its criteria for eligibility are hugely important to the historic preservation process, serving as the basis for review under Section 106.⁹⁷ If no historic sites are

case law discussing NHPA's requirements; *see, e.g.,* MacGill, *supra* note 22, at 699; Marilyn Ursu Bauriedel, *Federal Historic Preservation Law: Uneven Standards for Our Nation's Heritage*, 20 SANTA CLARA L. REV. 189, 199–200 (1980).

⁹⁴ *See* 36 C.F.R. § 800.3(c)–(f) (2011). The Advisory Council on Historic Preservation has the authority to promulgate regulations implementing Section 106, and has done so. 16 U.S.C. § 470s; 36 C.F.R. § 800. NHPA has reserved special consultation requirements for tribes. *See* Alexander, *supra* note 79, at 898–905.

⁹⁵ *See* 16 U.S.C. § 470a(a)(1)(A); *see also* *National Register of Historic Places*, NATIONAL PARK SERVICE, <http://www.nps.gov/nr/> (last visited Feb. 21, 2013).

⁹⁶ The criteria for evaluating a nomination to the NRHP are:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or (d) that have yielded, or may be likely to yield, information important in prehistory or history.

36 C.F.R. § 60.4 (2011). The most important elements of this regulatory definition are “historical significance” and “integrity.” *See* BRONIN & BYRNE, *supra* note 83, at 61.

⁹⁷ *See* BRONIN & BYRNE, *supra* note 83, at 147–50. Indeed, the idea of

identified as impacted by the undertaking, then the agency must notify the State Historic Preservation Officer(s) (SHPO) of the state(s) where the undertaking is occurring, and if the SHPO concurs with the agency, the Section 106 process is complete. However, if the agency finds that a site (or sites) eligible for listing in the NRHP will be affected by the undertaking or if the SHPO disagrees with the agency, the federal agency must consider the effect of its undertaking on the site(s).⁹⁸

4. *NHPA's Consultation Requirements*

In addition to the impact review requirements of Section 106, NHPA imposes upon federal agencies the obligation to engage in “consultations” with different classes of stakeholders, including historical and archaeological associations,⁹⁹ the Advisory Council on Historic Preservation (ACHP),¹⁰⁰ SHPOs,¹⁰¹ the public,¹⁰² and tribes.¹⁰³ NHPA requires “coordination among Indian tribes, [SHPOs], and Federal agencies in historic preservation planning and in the identification, evaluation, protection, and interpretation of historic properties.”¹⁰⁴ Indian tribes enjoy a special consultation

inventorying the nation's historic resources underpinned NHPA in the first place. See 16 U.S.C. § 461 (codifying the 1935 Historic Sites Act, which had authorized the National Park Service to conduct a survey of buildings and sites of historic significance for possible inclusion in the national park system).

⁹⁸ 16 U.S.C. § 470f; see MacGill, *supra* note 22, at 708–12 (describing in greater detail than presented here the steps involved in the Section 106 review process). The Advisory Council on Historic Preservation is a federal body with the authority to make regulations enacting NHPA and to advise other agencies on historic preservation, among other responsibilities. See 16 U.S.C. § 470j(a).

⁹⁹ 16 U.S.C. § 470a(a)(2); see *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 553 (8th Cir. 2003) (describing the consultation provisions of NHPA).

¹⁰⁰ 16 U.S.C. § 470a(a)(6). The ACHP is not obligated to consult with the lead federal agency. See 36 C.F.R. § 800.6(a)(1)(iii) (giving the ACHP discretion to participate). Compare *id.* § 800.6(b)(1) (“Resolution without the [ACHP]”) with § 800.6(b)(2) (“Resolution with [ACHP] Participation”).

¹⁰¹ 16 U.S.C. § 470a(a)(6); see also 36 C.F.R. § 800.3(c).

¹⁰² 16 U.S.C. § 470a(b)(1)(C); see also 36 C.F.R. § 800.3(e)–(f) (obligating the agency leading NHPA review to seek public input, notify the public, and identify other parties entitled to be consulted, inviting them to participate in the NHPA review process).

¹⁰³ 16 U.S.C. § 470a(d)(1)(A); see also Derek C. Haskew, *Federal Consultation with Indian Tribes: The Foundation of Enlightened Policy Decisions, or Another Badge of Shame?*, 24 AM. INDIAN L. REV. 21, 46–50 (1999) (summarizing NHPA cases involving consultations between federal agencies and Native American Tribes).

¹⁰⁴ 16 U.S.C. § 470a(d)(1)(A).

status under the NHPA regulations. Regulations implementing this broad coordination mandate require Federal agencies to “gather information from any Indian tribe . . . to assist in identifying properties, *including those located off tribal lands.*”¹⁰⁵ Furthermore, consultation with tribal communities must “commence early in the planning process, in order to identify and discuss relevant preservation issues.”¹⁰⁶ The regulations do not provide detailed requirements for the precise nature, timing, or forum for consultation other than that meetings with tribal leaders should occur on a “government-to-government” level.¹⁰⁷

In general, whether involving tribes or state or local actors, consultation regarding the effects of federal undertakings on historic resources is at the heart of the NHPA process because NHPA is fundamentally an information-gathering statute.¹⁰⁸

¹⁰⁵ 36 C.F.R. § 800.4(a)(4) (emphasis added); *see e.g.*, Peter J. Gardner, *The First Amendment’s Unfulfilled Promise in Protecting Native American Sacred Sites: Is the National Historic Preservation Act a Better Alternative?*, 47 S.D. L. REV. 68 (2002) (describing the benefits and potential of NHPA in protecting Native American historic resources); Elizabeth G. Pianca, *Protecting American Indian Sacred Sites on Federal Lands*, 45 SANTA CLARA L. REV. 461, 480 (2005) (summarizing the relationship between NHPA and protection of Native American historic resources).

¹⁰⁶ 36 C.F.R. § 800.2(c)(2)(ii)(A). Courts have required consultation begin early and comply with both the spirit and the letter of the regulations, even when federal agencies have compelling reasons to move quickly. *See* Quechan Tribe of the Fort Yuma Indian Reservation v. U.S. Dep’t of the Interior, 755 F. Supp. 2d 1104, 1119 (S.D. Cal. 2010), discussed *infra* in Section III. *See also* 16 U.S.C. § 470a(d)(6) (obligating federal agencies engaging in Section 106 review to “consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to properties” “of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization”); Alexander, *supra* note 79, at 902; Suagee, *supra* note 3, at 55 (noting that tribal opposition to projects can be costly and lead to delays if consultation does not proceed early in the development of a project). Note the jurisdictional parameters for Section 470a(d)(6): consultation with affected Tribes is required even if the project triggering NHPA is not on tribal land (i.e., the project is on federal or even private land), and even if the site is not “historic” (i.e., as long as the site is culturally or religiously significant), but only if NHPA itself applies. *See* Narragansett Indian Tribe v. Warwick Sewer Auth., 334 F.3d 161 (1st Cir. 2003) (explaining that consultation with a tribe is required if the tribe “considers a site that might be affected by the undertaking to have religious or cultural significance”). If NHPA does not apply, then no consultation is required.

¹⁰⁷ 36 C.F.R. § 800.2(c)(2)(ii)(C). The Ninth Circuit has likened the government-to-government consultation requirement to a fiduciary relationship. *See* Pit River Tribe v. U.S. Forest Serv., 469 F.3d 768, 788 (9th Cir. 2006), discussed *infra* in Section III.

¹⁰⁸ *See, e.g.*, Alexander, *supra* note 79, at 904 (noting that in practice, however, consultation has not always been efficient or mutually beneficial for

NHPA's rationale is simply that gathering information about a project's likely effects on surrounding historic resources will lead to decisions superior to those made without such information.¹⁰⁹ Thus, even if the agency ultimately discovers that its proposed action would harm historic resources, the agency is free to act as it chooses, provided it has followed NHPA's required procedures.¹¹⁰

II. TRANSMISSION PROJECTS

Thousands of miles of new transmission lines are either under construction or planned for new development.¹¹¹ Industry experts argue that an efficient, stable, and affordable energy industry requires thousands of additional miles beyond what is already planned.¹¹² However, transmission lines are widely perceived as unsightly, disturbing many linear miles of natural environment and requiring the exercise of eminent domain to assemble contiguous corridors.¹¹³ These perceptions of transmission lines often appear

the lead agency and the affected tribes but that tribes have "special expertise regarding impacts on places that have religious and cultural significance") (citations omitted).

¹⁰⁹ *Nw. Bypass Grp. v. U.S. Army Corps of Eng'rs*, 552 F. Supp. 2d 97, 129 (D.N.H. 2008) (explaining that consultation with tribes allows federal agencies to develop and "evaluat[e] alternatives to the project that could avoid, minimize, or mitigate adverse effects on historic properties") (citations omitted) (internal quotation marks omitted); see also Lee Paddock & Lea Colasuonno, *Minimizing Species Disputes in Energy Siting: Utilizing Natural Heritage Inventories*, 87 N.D. L. REV. 603, 647 (2011) (discussing the environmental benefits of performing information gathering before approving energy infrastructure).

¹¹⁰ MacGill, *supra* note 22, at 712. Upon making such a determination, an agency, of course, may elect to mitigate any adverse effects upon historic resources subject to whatever discretionary authority it otherwise possesses. See *infra* note 296. The important point here is that the agency is not obligated under NHPA to so mitigate.

¹¹¹ See EDISON ELEC. INST., *TRANSMISSION PROJECTS AT A GLANCE* viii (2013) (identifying that interstate transmission projects will account for approximately ten thousand miles of planned transmission line development over the next ten years).

¹¹² See DEP'T OF ENERGY, *supra* note 59, at 95–96 (reporting that more than twelve thousand miles of additional transmission lines would be cost effective). Texas alone is projecting to add nearly three thousand six hundred miles of transmission to move wind resources from the northern and western parts of the state to the population centers in the eastern parts. See AM. WIND ENERGY ASS'N & SOLAR ENERGY INDUS. ASS'N, *supra* note 25, at 1; PUB. UTIL. COMM'N OF TEX., *COMPETITIVE RENEWABLE ENERGY ZONE PROGRAM OVERSIGHT PROGRESS REPORT NO. 10 6* (2013).

¹¹³ Lita Furby et al., *Public Perceptions of Electric Power Transmission Lines*, 8 J. ENVTL. PSYCHOL. 19, 20–28 (1988) (analyzing a variety of common complaints regarding transmission lines); Thomas Priestley & Gary W. Evans,

to make such projects undesirable and raise possible conflicts with the preservation of historic resources near proposed transmission lines.¹¹⁴

As described above, NHPA imposes procedural requirements on those transmission projects that constitute a federal undertaking.¹¹⁵ Projects requiring federal financial support, a federal license, or federal approval must undergo NHPA's information-gathering process and allow for public comment and consultation with interested parties.¹¹⁶ Compliance with review procedures such as NHPA is often time-consuming and costly for project developers, and it routinely serves as an opportunity for project opponents to stall or block an undesired project.¹¹⁷ Whether to avoid federal review or for independent economic and timing reasons, some transmission project developers break a long project into discrete phases,¹¹⁸ potentially making meaningful review of an

Resident Perceptions of a Nearby Electric Transmission Line, 16 J. ENVTL. PSYCHOL. 65, 70-73 (1996); George G. Karady, *Environmental Impact of Transmission Lines*, in ELECTRIC POWER GENERATION, TRANSMISSION, AND DISTRIBUTION 20-1, 20-2, 20-3 (Leonard L. Grigsby, ed., 2007) (analyzing aesthetic impacts associated with power lines).

¹¹⁴ See Furby et al., *supra* note 113, at 23.

¹¹⁵ 16 U.S.C. § 470f (2012).

¹¹⁶ *Id.* § 470w; see MacGill, *supra* note 22, at 708–12; discussion *supra* Section II.D (detailing the review and consultation procedures required under NHPA).

¹¹⁷ See Meyer & Sedano, *supra* note 30, at E-8 to E-10 (describing a transmission project that underwent more than ten years of review); Hanna Conger, *A Lesson from Cape Wind: Implementation of Offshore Wind Energy in the Great Lakes Should Occur Through Multi-State Cooperation*, 42 LOY. U. CHI. L.J. 741, 753 (2011) (noting that claims against renewable energy projects are usually asserted during the permitting phase); Donald J. Kochan, *National Historic Preservation Act Initiatives Affecting the Natural Resources Industry*, 22 ENERGY & MIN. L. INST. 408, 408 (2002); Moran, *supra* note 7, at 187–89 (discussing coordination difficulties with transmission line development owing to the frequent requirement to receive entitlements to build from many different local jurisdictions, each of which may have a different process and different objectives).

¹¹⁸ See, e.g., Press Release, Dep't of Interior, Interior Advances Offshore Atlantic Transmission Line, (May 14, 2012), available at <http://www.doi.gov/news/pressreleases/Interior-Advances-Offshore-Atlantic-Transmission-Line.cfm> (describing the phased construction of a transmission network connecting proposed offshore wind projects to land-based demand); *First Nation Partnership Formed to Advance Transmission Line*, NORTH AMERICAN WINDPOWER (Sept. 26, 2011) available at http://www.nawindpower.com/e107_plugins/content/content.php?content.8634#.USp4CKU4uik (announcing a multi-phase transmission line). When the phasing is done deliberately to avoid review under the National Environmental Policy Act or NHPA, it is called “segmentation.” See *Save Barton Creek Ass'n. v. Fed. Highway Admin.*, 950

entire project very difficult if each phase is reviewed separately.¹¹⁹

Given the ambiguity over the scope of NHPA's reach and given the incentives for developers to segment projects to avoid or minimize NHPA review, two relevant questions for identifying and avoiding conflicts between historic preservation and the development of transmission lines arise. When does the development or planning of new transmission lines trigger federal historic preservation review, as discussed in Subsection A? How do federal historic preservation laws prevent segmentation of transmission projects, as discussed in Subsection B?

A. *When Is Review Under NHPA Required for New Transmission Line Development?*

A transmission line project goes through several phases throughout its life, though some individual phases may overlap or be iterative. In chronological order, transmission projects' primary phases are planning, development, construction, operation, and end-of-life decommissioning.¹²⁰ Recent federal policy has created a federally led pre-planning phase, which would occur prior to customary project planning.¹²¹ The new federal pre-planning phase

F.2d 1129, 1140 (5th Cir. 1992) (“‘Segmentation’ or ‘piecemealing’ is an attempt by an agency to divide artificially a [project] into smaller components to escape the application of NEPA to some of its segments. . . . ‘As a general rule under NEPA, segmentation of highway projects is improper for purposes of preparing environmental impact statements.’”). Although it is the project developers that are typically eager to avoid NHPA review, it is exclusively within the realm of the federal lead agency to make that decision. However, federal agencies are also often interested in avoiding the “cumbersome process” of NHPA review. *See Save Our Heritage v. FAA*, 269 F.3d 49, 62 (1st Cir. 2001) (“Understandably, agencies are loath to submit to this cumbersome process [of NHPA review] . . .”).

¹¹⁹ *One Thousand Friends of Iowa v. Mineta*, 364 F.3d 890, 894 (8th Cir. 2004) (“A segmentation is improper when the segmented project has no independent justification, no life of its own, or is simply illogical when viewed in isolation.”) (emphasis omitted) (internal quotations omitted).

¹²⁰ *See* PUB. SERV. COMM’N OF WIS., ENVIRONMENTAL IMPACTS OF TRANSMISSION LINES 3 (2011) available at <http://psc.wi.gov/thelibrary/publications/electric/electric10.pdf> (listing the phases of transmission projects as “Design,” “Construction,” and “Post-Construction”); Office of Indian Energy and Economic Development, *Energy Transmission Project Phases and Activities*, TRIBAL ENERGY & ENVTL. INFO. CLEARINGHOUSE, <http://teeic.anl.gov/er/transmission/activities/act/index.cfm> (last visited Feb. 17, 2013) [hereinafter TEEI].

¹²¹ The new federal policy was enacted through the Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594, and is codified at 16 U.S.C. § 824p(a)(1) (2006). *See Eagle, supra* note 70, at 46.

seeks to address congestion concerns market-wide, and would potentially expedite the development phase for certain projects.¹²² As with most large infrastructure projects, transmission lines usually trigger procedural requirements under federal historic preservation laws during the planning and development phases when the project developers identify preferred corridors and alternatives, consider market feasibility, and seek federal permits, licenses, or funding.¹²³ The results of recent litigation suggest that federal historic preservation review is also required during the federal pre-planning phase.¹²⁴ This Subsection examines implications of historic preservation law during both the conventional project planning and development phases and the new pre-planning phase, an evolving area of policy with important implications for reducing transmission congestion.

1. *Transmission Project Planning and Development*

NHPA requirements attach when a proposed project becomes a federal undertaking, which for the purposes of transmission typically occurs during the transmission planning and development phases.¹²⁵ To determine whether a transmission line project constitutes an undertaking triggering NHPA review, it is instructive to examine four categories of projects separated according to the project's financing and ownership structure,

¹²² See 16 U.S.C. § 824p(a)(2), (b) (2012); see also Debbie Swanstrom & Meredith M. Jolivert, *DOE Transmission Corridor Designations & FERC Backstop Siting Authority: Has the Energy Policy Act of 2005 Succeeded in Stimulating the Development of New Transmission Facilities?*, 30 Energy L. J. 415, 446 (2009). The preplanning process will be led by the Department of Energy, which will coordinate all federal agency action and prepare a single environmental review to lead an efficient and timely process, so that the entire process is complete in one year. Eagle, *supra* note 70, at 47.

¹²³ Specifically, a developer's request for a federal permit, for federal funding or for use of federal lands triggers NHPA because a federal agency's affirmative response to such a request is almost certain to constitute an undertaking. See 16 U.S.C. § 470w(7) (defining "[u]ndertaking" under NHPA); see also Letter from Edward H. Comer, Vice President, Gen. Counsel & Corp. Sec'y, Edison Elec. Inst., to Brian Mills, Senior Planning Advisor, Office of Elec. Delivery and Energy Reliability, on Coordination of Federal Authorizations for Electric Transmission Facilities, Notice of Proposed Rulemaking, RIN 1901-AB18, 76 Fed. Reg. 77432 (Dec. 13, 2011).

¹²⁴ See *Cal. Wilderness Coal. v. Dep't of Energy*, 631 F.3d 1072, 1083 (9th Cir. 2011) (discussed in more detail in Section II.B, *infra*).

¹²⁵ Project development includes identifying project corridors, securing financing, and obtaining licenses and permits necessary to begin construction. See TEEI, *supra* note 120.

which this Subsection now defines.

“Category 1” projects are those owned and financed exclusively by the federal government, such as those controlled by the Bonneville Power Administration or the Tennessee Valley Authority.¹²⁶ “Category 2” projects are privately developed but receive some level of federal financial assistance, such as a federal loan guarantee.¹²⁷ “Category 3” projects are financed with private funds exclusively but require some federal license, permit, or approval.¹²⁸ Finally, “Category 4” projects are privately financed and require no federal license, permit, or approval.¹²⁹

Category 1 projects are almost certain to be federal undertakings because they are carried out “by or on behalf of the agency.”¹³⁰ There appears to be little ambiguity that such projects require Section 106 review unless Congress were to give the agency no discretion over how, where, or whether to build the new lines.¹³¹ Category 4 projects are similarly straightforward, as Section 106 does not apply in the absence of the federal

¹²⁶ See, e.g., *Transmission Projects*, BONNEVILLE POWER ADMIN., <http://transmission.bpa.gov/business> (last visited May 17, 2011); *TVA's Transmission System*, TENN. VALLEY AUTHORITY, <http://www.tva.com/abouttva/index.htm> (last visited May 17, 2011).

¹²⁷ See e.g., Dep't of Energy, *Department of Energy Finalizes Loan Guarantee for New Transmission Project To Deliver Renewable Energy to Southwest*, ENERGY.GOV (Feb. 15, 2011, 12:00 AM), <http://www.energy.gov/articles/department-energy-finalizes-loan-guarantee-new-transmission-project-deliver-renewable> (describing a 235-mile transmission project in northern Nevada that received a \$343 million federal loan guarantee); NAW Staff, *WAPA, Utilities Planning Renewable Energy Transmission Project for Arizona*, N. AM. WINDPOWER (Sept. 16, 2011), http://www.nawindpower.com/e107_plugins/content/content.php?content.8591#.USfPEKU4uil (announcing a transmission project that received a \$91 million federal loan).

¹²⁸ See Dep't of Energy, *Federal Permitting Transmission Tracking System*, E-TRANS, [hereinafter E-TRANS] <http://trackingsystem.nisc-llc.com/etrans/utility/Search.seam> (last visited Feb. 22, 2013) (providing up-to-date permitting information for seven transmission projects selected as part of a cross-agency collaboration); see also Klass & Wilson, *supra* note 17, at 1813 (describing the Interagency Rapid Response Team for Transmission, which has a mission of coordinating permitting and approvals for interstate transmission lines).

¹²⁹ These projects are likely to be rare.

¹³⁰ BRONIN & BYRNE, *supra* note 83, at 118 (“When the federal government itself proposes to demolish a building, build a dam, or fence rangeland, it seems obvious today that it engages in an undertaking subject to [Section] 106.”)

¹³¹ This situation has previously occurred. See *Lee v. Thornburgh*, 877 F.2d 1053, 1057 (D.C. Cir. 1989) (concluding that Section 106 did not apply to a prison construction project funded with federal assistance where Congress delegated no approval functions to any federal agency).

government's participation.¹³² A privately financed project that requires no federal licensing, funding, or approval will be outside the jurisdiction of NHPA.¹³³

Category 2 projects are not automatically subject to the Section 106 review process, despite the plain language of the statute requiring a review of any "proposed . . . federally assisted undertaking . . . prior to the approval of the expenditure of any federal funds."¹³⁴ Instead of strictly construing the "any federal funds" provision to mean literally *any* federal funds, Section 106 has been interpreted to apply when there is "some form of federal approval, supervision, control, or . . . consultation, over the spending of federal funds."¹³⁵ Section 106 review is likely to be required for federal funding provided to transmission projects under the purview of discretionary, competitive grant programs where a federal entity awards funding based on an analysis of project's merits rather than according to a legislatively determined spending formula. NHPA is unlikely to apply to transmission projects that receive federal funds through block grants allocated to the states where a federal agency has no control over the expenditure of such funds on the transmission project in question¹³⁶ or when Congress allocates funds to be spent on particular transmission projects without agency discretion.¹³⁷

Category 3 projects, as with Category 2 projects, occupy a gray area as to whether they are federal undertakings. Decisions interpreting Section 106 have determined historic review does not

¹³² See *Vieux Carre Prop. Owners, Residents & Assocs., Inc. v. Brown*, 875 F.2d 453, 458 (5th Cir. 1989) ("By its terms, only a federal agency can violate [Section 106].").

¹³³ At least two circuits appear to agree on this point: the Second and Fifth Circuits. See *W. Mohegan Tribe & Nation of N.Y. v. New York*, 246 F.3d 230, 232 (2d Cir. 2001) (resting the decision on the grounds that only a federal agency can violate NHPA, and declining to reach the question of whether NHPA only applies to federally funded projects); *Vieux Carre*, 875 F.2d at 453, 460 (construing Section 470(f) of the Act to mean that an agency need not act "unless it is about to approve an expenditure of federal funds or issue a license.").

¹³⁴ 16 U.S.C. § 470f (2012).

¹³⁵ *Woodham v. Fed. Transit Admin.*, 125 F. Supp. 2d 1106, 1110 (N.D. Ga. 2000) (emphasis added) (quoting *Maxwell St. Historic Pres. Coal. v. Bd. of Tr. of Univ. of Ill.*, No. 00 C 4779, 2000 WL 1141439, at *4 (N.D. Ill. Aug. 11, 2000)).

¹³⁶ See *Bus. & Residents Alliance of E. Harlem v. Jackson*, 430 F.3d 584, 592 (2d Cir. 2005) (holding NHPA was not triggered because the federal agency administering a federal block grant program lacked any discretion in distributing the grants).

¹³⁷ See *Lee v. Thornburgh*, 877 F.2d 1053, 1057 (D.C. Cir. 1989).

apply when the agency performs “merely a ministerial act” such that the agency has “no discretion to consider environmental values.”¹³⁸ Major transmission line developments, however, generally require far more than “ministerial” agency actions. Many transmission projects require federal permits, permission from federal entities controlling land over which the proposed lines must travel, and often full-scale environmental impact statements under the National Environmental Policy Act (NEPA).¹³⁹ Projects undergoing NEPA review generally also require Section 106 review.¹⁴⁰ Thus, Category 3 projects will usually, though not always, require Section 106 review.

These four categories of transmission projects, differentiated mainly by financing strategy and ownership structure, should fairly readily illuminate whether NHPA review is required for a particular transmission project. Recent developments in transmission policy involving the creation of a federally led preplanning phase are much less settled, however.

2. *Federally Led Preplanning*

The purpose of NHPA is to require study and consultation early in the planning of projects in order to minimize adverse effects on historic resources.¹⁴¹ Federal transmission policy similarly encourages planning efforts, but federal transmission planning focuses more on ensuring adequate transmission capacity without any explicit requirement to focus on the land use effects of transmission siting. Thus, there is an apparent disconnect between

¹³⁸ *Sugarloaf Citizens Assoc. v. Fed. Energy Regulatory Comm’n*, 959 F.2d 508, 513 (4th Cir. 1992).

¹³⁹ *See, e.g.*, Classes of Actions that Normally Require EISs, 10 C.F.R. app D pt. 1021 (2005) (requiring environmental impact statements for transmission system additions and integration); Permits for Structures or Work in or Affecting Navigable Waters of the United States, 33 C.F.R. § 322.5(h)(5)(i) (2005) (requiring a federal permit for transmission lines crossing navigable waters). *See generally* E-TRANS, *supra* note 128 (listing in a table the variety and types of federal permits and actions required for seven different transmission line projects throughout the United States).

¹⁴⁰ *Sugarloaf Citizens Ass’n*, 959 F.2d at 515 (“The standard for triggering NHPA requirements is similar to that for triggering of NEPA requirements.”).

¹⁴¹ *See* 36 C.F.R. § 800.2(c)(2) (directing federal agencies to begin consultation under NHPA “early in the planning process”); *see also* *Quechan Tribe of the Fort Yuma Indian Reservation v. U.S. Dep’t of the Interior*, 755 F. Supp. 2d 1104, 1108 (S.D. Cal. 2010); *Swanstrom & Jolivert*, *supra* note 122, at 427 (describing federal agencies’ compliance with a Congressional requirement that planning for new transmission capacity across federal lands include environmental review of corridor designations at the earliest possible times).

federal efforts at transmission planning to reduce congestion in the wholesale, regional electrical grid (i.e., capacity planning) and transmission planning to avoid the adverse effects on historic resources that transmission lines create (i.e., spatial planning).¹⁴² Federal transmission planning policies ignore historic preservation analysis during capacity planning and as a result are missing the appropriate opportunity to avoid potential conflicts with historic preservation before those conflicts arise.

Ever since NHPA was adopted in the 1960s, electrical transmission infrastructure that constitutes a federal undertaking requires historic preservation review.¹⁴³ This changed in 2005, when federal transmission planning legislation sought to encourage transmission capacity planning without any prior or simultaneous historic preservation review. Further background about the urgency and challenges of transmission is necessary to understand Congress' apparent pivot away from requiring historic preservation review of all infrastructure constituting a federal undertaking and toward expedited development of additional transmission capacity. In recent decades, energy generation markets have become increasingly open to independent power producers,¹⁴⁴ costing publicly regulated utilities some of their

¹⁴² See Meyer & Sedano, *supra* note 30, at E-11. The purpose of capacity planning is to identify constraints in the transmission grid that limit the movement of electricity from source to load. See James W. Moeller, *Interstate Electric Transmission Lines and States' Rights in the Mid-Atlantic Region*, 40 B.C. ENVTL. AFF. L. REV. 77, *passim* (2013). FERC's July 2011 Order 1000 directs public utility transmission providers to engage in capacity planning. See Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, 136 F.E.R.C. 61,051, (August 11, 2011) [hereinafter Order 1000]. Order 1000 may be one of the most significant federal policies for integrating renewable energy into the transmission grid through federally led capacity planning. See Shelley Welton & Michael B. Gerrard, *FERC Order 1000 as a New Tool for Promoting Energy Efficiency and Demand Response*, 42 E.L.R. 11,025, 11,025 (2012). Compliance with Order 1000 has proceeded slowly. See Smita Walavalkar, *Preliminary Review of Compliance Filings in response to FERC Order 1000: Mostly Business as Usual, a Few Bright Spots*, CLIMATE LAW BLOG (Mar. 18, 2013), <http://blogs.law.columbia.edu/climatechange/2013/03/18/preliminary-review-of-compliance-filings-in-response-to-ferc-order-1000-mostly-business-as-usual-a-few-bright-spots>.

¹⁴³ See discussion *supra* Subsection I.D.1.

¹⁴⁴ Hoang Dang, *New Power, Few New Lines: A Need for a Federal Solution*, 17 J. LAND USE & ENVTL. L. 327, 330 (2002). Electricity markets were long vertically integrated, with utilities owning generation, transmission, and distribution networks and either preventing or charging prohibitively high rates to non-utility generators for access to utility-owned networks. Since the turn of the century, federal and state policies have favored breaking up this monopolist

monopolist positioning in wholesale energy markets.¹⁴⁵ As a result, United States electricity grids have become more regional—many now encompass multiple states—and moved away from state-centric markets.¹⁴⁶ However, new market participants and increasing regionalization have combined to make transmission-capacity planning more difficult.¹⁴⁷ Industry observers recognize that the slow pace of transmission development hinders generation development and thereby creates grid instabilities and higher retail prices.¹⁴⁸ At the same time, transmission spatial planning is often difficult. Local aesthetic and environmental concerns stall new development, and some states are concerned that the benefits of new transmission capacity within their borders accrue primarily to out-of-state consumers.¹⁴⁹ These difficulties that transmission

structure in many states and requiring utilities to allow non-utility generators (so-called “independent power producers” or merchant power producers) access to utility-owned transmission lines. Justifications for increasing access to transmission include: reducing costs to consumers, increasing reliability, and providing access to renewable sources of energy. Eagle, *supra* note 70, at 4, 13; *see also* Swanstrom & Jolivert, *supra* note 122, at 463.

¹⁴⁵ See Dang, *supra* note 144, at 332 (noting that deregulation of energy markets has increased some competition among formerly monopolist marketplaces, but that the benefits of such competition have not yet reached consumers).

¹⁴⁶ See Eagle, *supra* note 70; Meyer & Sedano, *supra* note 30 (discussing the regionalization of transmission lines); Swanstrom & Jolivert, *supra* note 122 at 418–19 (discussing the increasing regionalization of the electricity network).

¹⁴⁷ Dang, *supra* note 144, at 335 (describing barriers to transmission planning and development such as (1) the structure of the regional transmission organizations that oversee the flow of electricity to the grid from the generators and (2) the land use and siting authority over new transmission lines that the individual states hold).

¹⁴⁸ See YANG, *supra* note 13, at 10; Dang, *supra* note 144, at 332–33.

¹⁴⁹ See Brown & Daniels, *supra* note 24 (explaining that these two concerns comprise the thrust of the authors’ concerns regarding siting new transmission lines); *see also* Dang, *supra* note 144, at 336–40 (describing NIMBY and other obstacles presented by state and local control over transmission line siting, and identifying barriers in the structure of wholesale energy markets); Eagle, *supra* note 70 (collecting additional state court cases regarding states’ cost-benefit concerns about adding new transmission lines, and touching briefly on local environmental concerns regarding transmission lines). One of the major difficulties in developing new transmission is their length; lines routinely cross multiple jurisdictions. *See generally* Meyer & Sedano, *supra* note 30, at E-7. In those states where local review of transmission lines is not preempted by a state body, a transmission developer will likely require the approval of multiple municipal bodies, any one of which might “hold out” by exercising veto powers, which may have the effect of increasing the cost of the project or preventing it altogether. *See* Noor, *supra* note 66, at 157–58; discussion *supra* Section I (pointing out the difficulties of the large “footprints” of transmission projects).

infrastructure faced (and continues to face) with regard to both under-capacity and state and local resistance prompted Congress to act in a preemptive manner. Congress sought to expand transmission capacity and bypass states that withheld approval of new transmission.¹⁵⁰

Congress included provisions in the Energy Policy Act of 2005 (EPAAct of 2005) intended to expedite the development of new transmission lines in high-congestion areas.¹⁵¹ Pursuant to the EPAAct of 2005, the Department of Energy (DOE) issued regulations identifying two National Interest Energy Transmission Corridors (NIETCs).¹⁵² DOE's two NIETCs, the Southwest Congestion Area and the Mid-Atlantic Congestion Area, encompass multiple counties across multiple states.¹⁵³ The corridors were so designated because both the Southwest and the Mid-Atlantic regions experience high levels of congestion.¹⁵⁴ Moreover, both regions are situated between important generation areas and heavy-load, high-congestion economic centers (primarily in Southern California and in the Northeast along the Boston-to-Washington corridor).¹⁵⁵ The NIETCs were to be used for planning purposes, to identify high-congestion areas, and to expedite the development of transmission through those areas.¹⁵⁶

¹⁵⁰ See Swanstrom & Jolivert, *supra* note 122, at 421–23 (describing the legislative impetus for new federal intervention in what had historically been the exclusive state realm of transmission siting); see also Ashley C. Brown & Jim Rossi, *Siting Transmission Lines in a Changed Milieu*, 81 U. COLO. L. REV. 705, 741–48 (2010).

¹⁵¹ See 16 U.S.C. § 824p (2012) (codifying the Energy Policy Act of 2005, Pub. L. 109-58, 119 Stat. 594 (Aug. 8, 2005)). The EPAAct of 2005 was at least partially a response to massive blackouts that struck the Northeast in 2003. See Sowinski, *supra* note 66, at 506; Swanstrom & Jolivert, *supra* note 122, at 423.

¹⁵² National Electric Transmission Congestion Report, 72 Fed. Reg. 56,992 (Oct. 5, 2007) [hereinafter NIETC Order].

¹⁵³ Swanstrom & Jolivert, *supra* note 122, at 434–36.

¹⁵⁴ *Id.*

¹⁵⁵ See Dep't of Energy, *Mid-Atlantic Area National Corridor Map*, ENERGY.GOV, http://energy.gov/sites/prod/files/edg/news/archives/documents/MidAtlantic_Corridor_Map091707.pdf (last visited May 17, 2011); Dep't of Energy, *Southwest Area National Corridor Map*, ENERGY.GOV, http://energy.gov/sites/prod/files/edg/news/archives/documents/SouthwestArea_CorridorMap91407.pdf (last visited May 17, 2011).

¹⁵⁶ 16 U.S.C. § 824p(b). Section 824p(b) gave FERC the authority to override states that withheld approval on transmission project applications for more than a year or conditioned approval of project such that the conditions would prevent the proposed project from reducing transmission congestion or from becoming economically feasible. The same EPAAct of 2005 provision also gave transmission project developers the right to acquire rights-of-way via

DOE issued a final order designating its two NIETCs in late 2007.¹⁵⁷ A coalition of thirteen petitioners filed suit to stop the designation of the NIETCs in March 2008.¹⁵⁸ The challengers were largely environmental organizations and states, and the primary objection they raised was that the NIETC program failed to undergo the required review under federal environmental laws.¹⁵⁹ The National Trust for Historic Preservation (NTHP) was also a party to the suit, and the petition for review challenged the NIETC program on historic preservation grounds as well.¹⁶⁰

The objections to the NIETC program on historic preservation grounds dealt with DOE circumventing the Section 106 process by establishing NIETCs without first consulting the ACHP.¹⁶¹ Petitioners argued that the NIETC designation was an undertaking for the purposes of Section 106 insofar as even “nondestructive planning activities” trigger Section 106 if those activities “restrict the subsequent consideration of alternatives to avoid, minimize or mitigate the undertaking’s adverse effects on historic properties.”¹⁶² The petitioners also argued that the purpose of the NHPA is to consider historic interests early in the process of developing new projects so that a project’s effects upon historic resources can be studied and avoided.¹⁶³ By putting transmission projects on a fast track and circumventing state review of siting decisions, NIETCs severely reduced the opportunity to study and mitigate adverse effects of transmission lines on historic resources.¹⁶⁴ DOE argued NEPA and NHPA review was

eminent domain. *Id.* § 824p(e). FERC’s backstop authority (i.e., its authority to override state transmission siting decisions) was severely curtailed in a 2009 Fourth Circuit decision. *See* *PEC v. FERC*, 558 F.3d 304, 309–10 (4th Cir. 2009); *see also* Noor, *supra* note 66, at 145.

¹⁵⁷ *See* NIETC Order, *supra* note 152.

¹⁵⁸ *Cal. Wilderness Coal. v. Dep’t of Energy*, 631 F.3d 1072, 1083 (9th Cir. 2011).

¹⁵⁹ Reply Brief for Petitioners at 1–24, *Cal. Wilderness Coal. v. Dep’t of Energy*, 631 F.3d 1072 (9th Cir. 2011) (No. 08-71074) (arguing that the NIETC program failed to comply with NEPA and with the Endangered Species Act).

¹⁶⁰ *Id.* at 25.

¹⁶¹ *Id.* at 25–27.

¹⁶² Coordinated Opening Brief of Petitioners at 51, *Wilderness Society v. Dep’t of Energy*, 631 F.3d 1072 (9th Cir. 2008) (No. 08-71074).

¹⁶³ *Id.* at 48–50 (noting also that the federal defendants have ignored ACHP’s request that historic preservation review commence early in the capacity planning exercise).

¹⁶⁴ For instance, in its 2006 comments to DOE regarding the proposed designation of NIETCs, the NTHP wrote: “The study area for the proposed power line cuts right through the heart of the ‘Journey Through Hallowed

unnecessary because NIETCs contained no actual proposed projects (i.e., the program does not identify specific transmission alignments; it only identifies regions where increased transmission capacity is needed and where it will be expedited under federal review).¹⁶⁵

In February 2011, the Ninth Circuit reversed DOE's Final Order implementing the NIETC programs in the Southwest and Mid-Atlantic regions and effectively sent the NIETC program back to the beginning.¹⁶⁶ The Ninth Circuit ruled DOE had failed to adequately consult with the "affected states" as it was obligated to do under the EAct of 2005.¹⁶⁷ The Ninth Circuit ruled that DOE's failure to undertake environmental review was improper, reversing on environmental grounds as well.¹⁶⁸ Despite the petitioners' extensive briefing opposing NIETCs under the NHPA, the court largely sidestepped that issue.¹⁶⁹ The Ninth Circuit implicitly took the position that for the purposes of whether the NIETC program should be subject to impact review, NEPA and NHPA have coextensive jurisdiction.¹⁷⁰

Although DOE did not comply with Section 106 in its initial

Ground'—a 175-mile-long corridor of American heritage running from Gettysburg to Monticello—which the National Trust featured at the top of its 2005 List of America's Eleven Most Endangered Historic Places. This major heritage tourism corridor includes 16 existing historic districts, 17 potential or proposed historic districts, 80,000 acres under easement, 4 National Historic Landmarks, 44 State and National Historic Sites, and 6 Civil War Battlefields." Letter from Elizabeth Merritt, Deputy General Counsel, Nat'l Trust for Historic Pres., to Samuel W. Bodman, Sec'y of Energy, Dep't of Energy, Comments on National Electric Transmission Congestion Study and National Interest Electric Transmission Corridor (NIETC) Designation, (Oct. 10, 2006) (footnotes omitted) (on file with author).

¹⁶⁵ *Cal. Wilderness Coal. v. Dep't of Energy*, 631 F.3d 1072, 1098–99 (9th Cir. 2011).

¹⁶⁶ *Id.* at 1107.

¹⁶⁷ Note that the consultation requirements on which the Ninth Circuit ruled were not those requirements under NHPA, but were instead separate consultation requirements under Section 216 of the EAct of 2005. *See id.* at 1080.

¹⁶⁸ *Id.* This ruling, however, should not be held to imply anything about how the court might have ruled if NEPA had been followed (or statutorily excluded) and NHPA not. *California Wilderness Coalition* does not stand for the proposition that NHPA review is not required for NIETC designation.

¹⁶⁹ *Id.* at 1106 ("As we hold that the Congestion Study and the NIETCs Designation must be vacated and the matter remanded to the DOE, we need not consider petitioners' claims under . . . NHPA").

¹⁷⁰ *See also Woodham v. Fed. Transit Admin.*, 125 F. Supp. 2d 1106, 1110 (N.D. Ga. 2000) ("[T]he scope of jurisdiction under the NHPA has been held to be coextensive with jurisdiction under the NEPA.") (citations omitted).

proceeding, it will have to do so on remand. DOE will have to evaluate the impact of its program on historic resources and solicit comments from the ACHP, tribes and SHPOs within each of the affected states, and the general public.¹⁷¹ Approximately a decade after NIETCs passed as part of the EAct of 2005, its effectiveness in expanding future transmission capacity remains uncertain,¹⁷² but it is clear that federally led efforts to plan new transmission capacity must undergo Section 106 review.¹⁷³

B. *How Do Federal Historic Preservation Laws Prevent Segmentation of Transmission Projects?*

A particular challenge of siting and developing transmission lines is their length. Some lines run for hundreds of miles.¹⁷⁴ If

¹⁷¹ The ACHP filed comments with DOE in 2006. See Letter from John M. Fowler, Exec. Dir. ACHP to Samuel W. Bodman, Sec'y of Energy, Dep't of Energy, re. National Interest Electric Transmission Corridors (Oct. 10, 2006), available at http://nietc.anl.gov/involve/searchcomment/act_displayfile.cfm?filename=Advisory_Council_on_Historic_Preservation.pdf.

¹⁷² See Klass & Wilson, *supra* note 17, at 1817. Nearly eight years after receiving a legislative authorization under the EAct of 2005, NIETCs remain more theoretical than practical. The *California Wilderness Coalition* ruling effectively requires DOE to return to the beginning in designating NIETCs (which are a precursor to FERC's use of its backstop siting authority, discussed *supra* at note 156) and makes unequivocal DOE's obligation to consider the environmental effects of its designations. See Matthew J. Agen, *Transmission Tug-of-War*, PUB. UTILS. FORT., Nov. 2011 at 49, available at <http://www.fortnightly.com/fortnightly/2011/11/transmission-tug-war>.

¹⁷³ In the period since the Ninth Circuit overturned DOE's Final Order designating two NIETCs, the DOE and the Federal Energy Regulatory Commission have considered a number of options regarding the future of the NIETC program. See FERC Staff Preliminary and Conceptual Transmission Siting Proposal DRAFT 1, 1-3[hereinafter FERC Proposal]. For instance, DOE proposed rules that would coordinate portions of the transmission planning process, but those rules did not expressly mention NIETCs. DOE also proposed delegating the NIETC program to FERC, but that proposal appears to have been shelved, at least for now. Klass & Wilson, *supra* note 17, at 1818; Agen, *supra* note 172, at 49. FERC has identified its own plan for the NIETC program, but that plan has not been implemented either. See FERC Proposal at 4-8. In late 2012, DOE embarked on its third effort to study congestion in the interstate transmission system, as mandated by the EAct of 2005. See 16 U.S.C. § 824p(a)(1) (2012) (requiring DOE to prepare congestion studies every three years). As of this writing, it is not clear if from this study DOE will designate any NIETCs following the 2012 study. Following *California Wilderness Coalition*, it seems certain, however, that if DOE does designate any such corridors it will be obligated to conduct historic preservation and environmental reviews first.

¹⁷⁴ See *supra* note 17 (collecting examples of transmission lines planned to run for many hundreds of miles each).

wind resources in the High Plains from the Dakotas to North Texas are to be developed, perhaps thousands of miles of new transmission lines may be needed to transmit those resources to markets along the coasts and Great Lakes.¹⁷⁵ Long transmission projects are often developed piecemeal for financial, logistical, and other reasons, including avoiding the conflicts with local opponents or state regulators. One relevant concern for the development of transmission lines and the protection of historic resources is whether individual segments of large projects are evaluated separately for potential effects on historic resources. A project is inappropriately segmented under federal historic preservation laws if the segment subject to federal NHPA review has no “independent justification.”¹⁷⁶ This Subsection first examines NHPA’s treatment of project segmentation generally, and then reviews recent cases involving a segmented transmission project affecting historic resources.

1. *Project Segmentation Under the NHPA*

Segmentation, the division of a project into discrete components for purposes of circumventing or simplifying review, often becomes a contentious issue in NEPA and NHPA proceedings.¹⁷⁷ Project developers will sometimes seek to split a project into discrete phases such that portions of a project with the greatest potential impacts on environmental or historic resources escape federal review.¹⁷⁸ Carving up a project into small pieces impedes the purposes of historic and environmental impact review, which is intended to understand the full breadth of a project’s effects. Under NEPA and NHPA, segmentation of projects is improper for the purpose of conducting impact reviews if the individual components do not have independent justification.¹⁷⁹

¹⁷⁵ See DEP’T OF ENERGY, *supra* note 59, at 95–96. As of today more than two hundred thousand miles of transmission lines are in operation. *Id.*

¹⁷⁶ *One Thousand Friends of Iowa v. Mineta*, 364 F.3d 890, 894 (8th Cir. 2004).

¹⁷⁷ See *Knowles v. U.S. Coast Guard*, No. 96 CIV. 1018(JFK), 1997 WL 151397, at *3–5 (S.D.N.Y. Mar. 31, 1997).

¹⁷⁸ See *Save Barton Creek Ass’n v. Fed. Highway Admin.*, 950 F.2d 1129, 1139–40 (5th Cir. 1992). Generally, improper instances of segmentation involve a project that is found to require NHPA or NEPA review but is then segmented to escape the review of the part that is not imminent. *Id.* However, it is also the case that a project could be segmented before it reaches the point that any federal review is required. *Id.*

¹⁷⁹ *Piedmont Heights Civic Club v. Moreland*, 637 F.2d 430, 439–40 (5th Cir. 1981) (“A crucial inquiry necessary to determine whether transportation

Exceptions have deviated from this general rule, however. In *Winnebago Tribe of Nebraska v. Ray*, a transmission line crossing the Missouri River required a federal permit from the U.S. Army Corps of Engineers (USACE), but the USACE determined that the permit was not a “major federal action” for the purposes of NEPA and did not trigger NEPA’s review mechanisms.¹⁸⁰ The Winnebago Tribe challenged the USACE’s determination, arguing that the USACE had to consider the entire sixty-seven-mile transmission project, which on the whole constituted a “major federal action” for the purposes of NEPA and thereby required full NEPA review.¹⁸¹ On appeal the Eighth Circuit agreed with the USACE, ruling that the USACE’s limited federal involvement (issuing a permit for a minor portion of a much larger project) did not suffice to “turn this essentially private action into a federal action.”¹⁸² The court reasoned that the USACE did not have “sufficient control and responsibility” to require it to study the entire project.¹⁸³

But the Eighth Circuit’s analysis in *Winnebago*, decided in 1980, may be out of step with more recent cases involving segmentation claims. In 2004, the Eighth Circuit held that “segmentation is improper when the segmented project has no *independent justification*, no life of its own, or is simply illogical when viewed in isolation.”¹⁸⁴ The more recent decisions have not focused on the *nature* or scale of the federal involvement as much

projects have been improperly segmented is whether the projects have *independent utility*. The rule against segmentation developed in order to prevent environmental consideration of segments of [projects] in isolation of one another.” (emphasis added). Courts will apply a “segmentation analysis to ‘weed out’ projects which are pretextually segmented.” *Save Barton Creek*, 950 F.2d at 1139.

¹⁸⁰ 621 F.2d 269 (8th Cir. 1980). As a procedural *mechanism* NEPA’s “major federal action” trigger is roughly equivalent to NHPA’s “undertaking,” see *Sugarloaf Citizens Assoc. v. Fed. Energy Regulatory Comm’n*, 959 F.2d 508, 515 (4th Cir. 1992), although the triggering *standards* are slightly different (i.e., a federal action that constitutes an undertaking may not constitute a major federal action), see BRONIN & BYRNE, *supra* note 83 at 190.

¹⁸¹ *Winnebago*, 621 F.2d at 272. The USACE was concerned only with the elements of the project that crossed a major river and which required USACE approval to fill waters protected under the federal Rivers and Harbors Act of 1899. *Id.*

¹⁸² *Id.* at 273.

¹⁸³ *Id.* at 273. Crucial to the court’s analysis in *Winnebago* is the lack of any federal funding. *Id.*

¹⁸⁴ *One Thousand Friends of Iowa v. Mineta*, 364 F.3d 890, 894 (8th Cir. 2004) (emphasis added) (internal quotation marks omitted).

as the *utility* of the considered action.¹⁸⁵ Had the *Winnebago* court considered the independent justification for the pylons crossing the Missouri River, it likely would have determined that the short river crossing component of the transmission project was not independent of the entire project.¹⁸⁶ That is, the portion of the project that the USACE permitted likely had no utility independent of the longer sixty-seven-mile project. Without an independent justification for the river-crossing segment, the entire project would have to be considered a major federal action, and the USACE would have had to consider the effects of the entire project before issuing the permit.

The more recent test for improper segmentation has not yet been subject to Supreme Court review, and the Eighth Circuit's "independent justification" test is not applied universally. One alternative to the independent justification test is an "artificial avoidance" test employed recently in the Fifth Circuit.¹⁸⁷ In *National Trust for Historic Preservation v. United States Department of Veterans Affairs (NTHP)*, the court held that "[i]mproper segmentation occurs when an agency artificially divides a project from a major federal action . . . to avoid [compliance on that project.]"¹⁸⁸ This "artificial avoidance" test appears to impose an intent requirement on segmentation analysis, ignoring the "independent justification" test altogether. The intent requirement ignores historic preservation review's important objective of analyzing a project's adverse effects on historic resources.¹⁸⁹ The "independent justification" test is probably the better test to apply because it is a more objective approach to

¹⁸⁵ *Id.*; see also *Defenders of Wildlife v. U.S. Dep't of the Navy*, 895 F. Supp. 2d 1285 (S.D. Ga. 2012) (considering factors such as "whether the proposed segment (1) has logical termini, (2) has substantial independent utility, (3) does not foreclose the opportunity to consider alternatives, and (4) does not irretrievably commit federal funds for closely related projects" in performing a segmentation analysis).

¹⁸⁶ The *Winnebago* Court took the view that Section 10 of the Rivers and Harbors Act of 1899, the authority under which the USACE was granting a permit to the project in question, was limited in scope. The court determined that the USACE's limited jurisdiction over the project did not require the USACE to apply NEPA to the entire project because a Section 10 permit did not constitute a "major federal action." *Winnebago*, 621 F.2d at 273.

¹⁸⁷ *Nat'l Trust for Historic Pres. v. U.S. Dep't of Veterans Affairs*, No. 09-5460, 2010 WL 1416729 at *10 (E.D. La. Mar. 31, 2010) (quoting *Save Barton Creek Ass'n v. Fed. Highway Admin.*, 950 F.2d 1129, 1139 (5th Cir. 1992)).

¹⁸⁸ *Id.*

¹⁸⁹ See 16 U.S.C. § 470f (2012).

impact review and because it is more likely to capture those projects that are truly within federal jurisdiction.¹⁹⁰

Courts have applied the two standards cited above to NEPA. Although NEPA and NHPA have different textual standards for invoking review, courts have often treated the triggering mechanisms for the two statutes as largely the same.¹⁹¹ Given the paucity of segmentation-related decisions under the NHPA¹⁹² and the relative abundance of segmentation rulings under NEPA, following NEPA's lead on segmentation may obviate the need for courts to start from scratch in determining when improper segmentation has occurred under NHPA. To effectuate the purposes of NHPA, the more recent Eighth Circuit's "independent justification" test for project segmentation appears to be the appropriate standard for analyzing future transmission line projects.¹⁹³

2. *Transmission Line Segmentation in Harrison v. United States Department of Army*

A 2009 NHPA challenge to the construction of a transmission line offers a testing ground for applying NEPA's segmentation jurisprudence to NHPA.¹⁹⁴ The *Harrison* court declined to apply

¹⁹⁰ Those projects that are a federal undertaking are subject to Section 106 review. *See id.* § 470w; discussion *supra* Section II.D (exploring the meaning of "undertaking" in the context of Section 106).

¹⁹¹ *See Sugarloaf Citizens Assoc. v. Fed. Energy Regulatory Comm'n*, 959 F.2d 508, 515 (4th Cir. 1992); *see also Karst Env'tl. Educ. & Prot., Inc. v. EPA*, 475 F.3d 1291, 1295–96 (D.C. Cir. 2007) (noting that courts "treat 'major federal actions' under NEPA similarly to 'federal undertakings' under NHPA").

¹⁹² *See Old Town Neighborhood Ass'n Inc. v. Kauffman*, 333 F.3d 732, 735 (7th Cir. 2003) (avoiding the issue of segmentation, even though concerns about improper segmentation were raised earlier in this case).

¹⁹³ Like the intent-driven "artificial avoidance" test in NTHP, the independent justification test has been described as having an intent component. *See, e.g., Stewart Park and Reserve Coal. Inc. v. Slater*, 352 F.3d 545, 559 (2d Cir. 2003) ("Segmentation is an *attempt to circumvent* NEPA by breaking up one project into smaller projects and not studying the overall impacts of the single overall project.") (emphasis added). However, the two tests are notably different in that the independent justification test has objective, project-based criteria upon which to determine whether the reviewing agency has attempted to circumvent review. *See, e.g., Defenders of Wildlife v. U.S. Dep't of the Navy*, 895 F. Supp. 2d 1285, 1300 (S.D. Ga. 2012) (reciting four factors relevant to a specific project for determining whether that project has been improperly segmented). It is the presence of an objective component, rather than the absence of an intent element, that, in this author's opinion, makes the independent justification test superior under NHPA.

¹⁹⁴ *Harrison v. United States Dep't of Army*, No. 3:08CV-105-H, 2009 WL

the independent justification test for its NHPA segmentation analysis. It is this author's view that, in general and unlike the reasoning applied in *Harrison*, a federal agency reviewing a project under NHPA should review the entire project unless the portion under review would have independent justification for its existence.

In *Harrison v. United States Dep't of Army*, plaintiffs challenged, on historic preservation grounds, the Army's decision to allow a 10.9-mile easement across Fort Knox, Kentucky, as part of a larger 41.9-mile transmission project.¹⁹⁵ The Army deemed the federal "undertaking" to be only the 10.9-mile portion of the proposed project that crossed the military installation, rather than the entire 41.9-mile project.¹⁹⁶ Petitioners' properties, listed in the National Register of Historic Places, were not along the 10.9-mile military easement corridor but were adversely affected by visual impacts of the transmission towers elsewhere along the project's total 41.9-mile corridor.¹⁹⁷ Petitioners argued that the Army, as part of the Section 106 process, should have considered the effect of the transmission line on the petitioners' historic properties.¹⁹⁸ The petitioners argued that the "undertaking" is the entire 41.9-mile project.¹⁹⁹ The district court rejected the petitioners' arguments and ruled that the Army correctly considered just the 10.9-mile portion of the project because that was the only portion of the project over which a federal agency exercised control.²⁰⁰ The *Harrison* court adopted the approach in *Winnebago*, and declined to "federalize" the entire project because the Army's involvement was "minimal."²⁰¹

Instead of looking to either of the more recent NEPA segmentation standards described above, the *Harrison* court followed the 1980 *Winnebago* decision and instead analyzed the nature of the federal involvement, rather than the independent utility of the segment.²⁰² The nature of the Army's role in *Harrison*

3347109, at *6 (W.D. Ky. Oct. 14, 2009).

¹⁹⁵ *Id.* at *1. Notably, plaintiffs did not raise and the court did not rule on NEPA issues.

¹⁹⁶ *Id.*

¹⁹⁷ *Id.* at *2, *3.

¹⁹⁸ *Id.* at *4.

¹⁹⁹ *Id.* at *3.

²⁰⁰ *Id.* at *6, *7.

²⁰¹ *Id.* at * 6.

²⁰² *Id.* It is worth noting that this did not reach the appellate level. After the district court dismissed, plaintiffs appealed. Subsequently, plaintiffs withdrew

was very limited: the Army granted a ten-mile easement over property it controlled, and it did not review or have any jurisdiction to block the entire project.²⁰³ Under this limited role, the *Harrison* court decided that the Army need not consider the effect of the entire project.²⁰⁴ Moreover, without the easement, the project still would have been constructed (and still would have affected the petitioners' properties) because the Kentucky Public Utilities Commission had already approved an alternative route that did not cross any federally controlled land.²⁰⁵ The Army's grant of an easement merely made the project shorter and cheaper for the developers. By considering the alternatives available to the project developer, the Army acted consistently with the objectives of the NHPA,²⁰⁶ but it arguably misapplied the law with respect to the portion of the project subject to historic review.

The *Harrison* court probably erred in its holding by failing to apply the "independent justification" test because the portion of the project across the Army's land likely had no independent utility without interconnection to the portion of the project affecting the historic resources.²⁰⁷ Federal involvement that is not so clearly segmented, but which indivisibly supports an entire project—for instance, a transmission line crossing federal land exclusively or that uses a DOE loan—requires Section 106 review for the entire project dependent upon the grant of federal license,

their appeal, and the parties submitted to mediation. Order Entering Stipulation of Dismissal, *CDH Preserve, LLC v. United States Dep't of the Army*, No. 09-6355 (6th Cir. 2009) (ECF No. 66).

²⁰³ *Harrison*, 2009 WL 3347109, at *2.

²⁰⁴ *Id.* at *6.

²⁰⁵ *Id.*

²⁰⁶ *Id.* at *3. Consistent with NHPA, the Army consulted with the SHPO, which ultimately issued a finding of "no adverse effect" on historic properties located along the ten-mile easement area.

²⁰⁷ The independent justification criteria include whether the project under consideration (1) has logical termini, (2) has substantial independent utility, (3) does not foreclose the opportunity to consider alternatives, and (4) does not irretrievably commit federal funds for closely related projects. Here, the first, third, and fourth elements are readily dispensed with. The ten-mile segment across the Army facility clearly had logical termini—it was not a "project to nowhere." The project did not prevent consideration of other alternatives; in fact, it was predicated on alternatives being more costly than the preferred plan. Moreover, the project did not involve any federal funds.

The second element of the test is where the transmission line in *Harrison* fails the independent justification test. The ten-mile portion of the transmission line across the Army's facility did not have utility independent of its connection to the longer project.

funding, or approval. This application of “independent justification”—broader than that applied in *Harrison*—prevents the sort of segmentation encountered in *Harrison* that misses the effects on historic resources of a project made possible only by the federal undertaking.²⁰⁸

C. *Historic Preservation and Transmission: Synthesis and Recommendations*

The touchstone for federal historic preservation review is federal involvement.²⁰⁹ In the context of transmission project development, federal review of transmission projects appears to cover the portion of the project subject to federal control.²¹⁰ Thus, for projects receiving federal financing for the entire project, the entire project is most likely subject to Section 106, but for projects receiving a permit, easement or license for only a portion of the project, the non-federally controlled portion is outside the scope of Section 106.²¹¹ Federally led transmission planning at multicounty, cross-border, sub-state scales is unambiguously subject to federal historic review jurisdiction.²¹²

Despite this emerging clarity about the scope of federal jurisdiction over new transmission lines, conflicts remain between the competing objectives of historic preservation and new transmission capacity. Those interested in overcoming these conflicts should look to historic preservation policies applicable for other infrastructure projects. Recommended actions for integrating new technologies into historic landscapes conclude this

²⁰⁸ The presence of the alternative route should not have entered into the *Harrison* Court’s NHPA analysis. If the project developer did not want to wait for the Army to perform historic review on properties outside of its base, it could have chosen to build the longer, more expensive alignment.

²⁰⁹ See 16 U.S.C. § 470w(7) (2012) (defining the scope of NHPA jurisdiction to include those projects, activities, or programs “funded in whole or in part under the direct or indirect jurisdiction of a *Federal* agency”).

²¹⁰ See *Winnebago Tribe of Nebraska v. Ray*, 621 F.2d 269, 273 (8th Cir. 1980).

²¹¹ See *Harrison v. United States Dep’t of Army*, No. 3:08CV-105-H, 2009 WL 3347109, at *6 (W.D. Ky. Oct. 14, 2009).

²¹² See *Cal. Wilderness Coal. v. Dep’t of Energy*, 631 F.3d 1072, 1106 (9th Cir. 2011). Although the Ninth Circuit neglected to rule on NHPA grounds in *California Wilderness Coalition*, it seems safe to say that it would find NIETCs to be an undertaking within the scope of NHPA, just as it found NIETCs to be major federal actions within the scope of NEPA. See *San Carlos Apache Tribe v. United States*, 417 F.3d 1091, 1097 (9th Cir. 2005) (calling NEPA and NHPA “close statutory analog[s]”).

Section.

1. *Problems Remain*

Portions of the transmission-related historic preservation jurisprudence appear to poorly align with historic preservation process objectives.²¹³ Preservation of historic properties is not much aided by an impact-review regime that applies to a ten-mile stretch within publicly inaccessible military facilities but not to neighboring historic landmarks.²¹⁴ At the same time, the already complex and expensive development of much-needed transmission is not aided by a multi-year two-stage historic review process, as the NIETC decision would seem to require.²¹⁵ The NIETC process as proposed by DOE in 2007 and as struck down by the Ninth Circuit in 2011 is a poor mechanism for siting transmission lines, because as implemented it would have effectively circumvented the NHPA review process.²¹⁶ Historic preservation review is important because it is an effective tool for preserving historic resources, but preservationists neither need nor deserve two bites at the proverbial apple. The NIETC concept deserves a legitimate shot at success because regional transmission planning is essential to overcoming a number of barriers in the transmission industry.²¹⁷

²¹³ The objectives of historic preservation review pertain primarily to gathering information regarding the adverse effects of a project on historic resources and identifying approaches to minimizing or mitigating those adverse effects. *See* Quechan Tribe of the Fort Yuma Indian Reservation v. U.S. Dep't of the Interior, 755 F. Supp. 2d 1104, 1109 (S.D. Cal. 2010) ("Section 106 requires identifying historic properties within a project's affected area, evaluating the project's potential effects on those properties, and resolving any adverse effects.").

²¹⁴ *See Harrison*, 2009 WL 3347109, at *6; discussion *supra* notes 194–201 and accompanying text.

²¹⁵ *California Wilderness Coalition*, 631 F. 3d at 1072, discussed *supra* note 31, would seem to require NHPA review first at the pre-planning, corridor study stage, and then again if a project constructed in the NIETC meets the criteria to be a federal undertaking.

²¹⁶ *See id.* at 1101–04 (ruling that NIETCs are major federal actions subject to NEPA review). Although the Ninth Circuit focused its ruling on the DOE's failure to adhere to NEPA, the reasoning likely applies to NHPA as well. *Id.* at 1106. There is merit to both sides of the arguments about the environmental value of NIETCs and FERC's backstopping authority; additional transmission capacity makes it possible for renewable sources to reach market, but it also makes it easier for coal plants to reach market. *See Noor*, *supra* note 66, at 157–61.

²¹⁷ *See Eagle*, *supra* note 70, at 38–46; Meyer & Sedano, *supra* note 30, at E-11; Noor, *supra* note 216, at 155–56 (2009) (noting that renewable energy advocates were on both sides of the dispute over FERC's backstopping

The cases described above are illustrative of the conflicts that exist between transmission development and protection of historic resources. Reforms to the federal historic preservation review process for new transmission facilities are necessary, and existing policy mechanisms for other large infrastructure projects are informative.

2. *Historic Preservation Laws and New Development Products: Three Lessons*

To address segmentation and planning problems, historic preservation and transmission advocates should look to policy techniques applied in the context of other types of infrastructure development. Historic preservation advocates have worked out mutually beneficial compromises with new landscape-scale developments such as highways and natural gas pipelines.²¹⁸

Techniques for coordinating conflicts with historic preservation in the highway and natural gas line context are relevant to new transmission line development because highways and natural gas pipelines share many common characteristics with transmission lines. Transmission lines are often referred to as energy “superhighways” because transmission lines and highways both require extensive, linear, interconnected conveyance corridors.²¹⁹ The concept of traffic congestion is nearly analogous to the concept of energy congestion (albeit with energy congestion and transmission occurring at or near the speed of light).²²⁰

authority); Swanstrom & Jolivet, *supra* note 122, at 464–65.

²¹⁸ See BRONIN & BYRNE, *supra* note 83, at 212 (describing federal laws protecting historic resources from transportation projects); Christopher J. Castaneda, *History Beneath the Surface: Natural Gas Pipelines and the National Historic Preservation Act*, 26 PUB. HISTORIAN 105 (2004) (describing the reconciliation of tensions surrounding the preservation of natural gas pipelines).

²¹⁹ See YANG, *supra* note 13, at 22; Noor, *supra* note 66, at 149.

²²⁰ See Sowinski, *supra* note 66, at 149. Regarding the similarities between electricity transmission networks and vehicular highways, see, for example, Noor, *supra* note 216, at 149–50: “To use a familiar analogy, traffic congestion can occur when lanes on a highway narrow, causing a bottleneck and resulting in a reduced flow of traffic. Similarly, electricity congestion occurs when there is a ‘transmission constraint’ at a certain point in a system that limits the amount of electricity flowing to consumers. The problem for electricity, unlike annoyed motorists, is that electricity cannot get off at the next exit and take an alternative route. This limitation can result in increased costs for consumers and blackouts.” But the analogy is not exact in the technical sense. When transmission congestion occurs, the electricity “traffic” is not held up or delayed (because the “traffic” is only capable of moving at one speed, the speed of light); rather, the request for the “delivery” of that electricity is denied. That denial leads to

Likewise, natural gas pipelines are analogous to transmission lines because both are interconnected and highly sensitive to moment-by-moment supply and demand.²²¹ Also, like transmission lines (but unlike highways), natural gas pipelines tend to be privately funded.²²² Looking to the experiences of transportation and natural gas networks with historic preservation, three types of federal agency actions are worth considering to mitigate conflicts between new transmission and historic preservation: (1) substantive review of new projects' effect on historic resources; (2) categorical exemption from historic preservation review; and (3) interagency cooperation. This Subsection examines these three types of actions as each has been applied to historic preservation, and the next Subsection discusses how each might be relevant to transmission lines.

a. *Substantive Review of New Projects' Effects on Historic Resources*

Unlike Section 106's mere procedural requirements to effect historic preservation objectives, Section 4(f) of the Department of Transportation Act of 1966 imposes substantive requirements on federal transportation projects with respect to the effect of such projects on historic resources.²²³ Under Section 4(f), a federal transportation project or program may adversely affect historically significant sites and landscapes only if "there is no prudent and feasible alternative to using that land . . . and the program or

blackouts. See BERNARD C. LESIEUTRE & JOSEPH H. ETO, ERNEST ORLANDO LAWRENCE BERKELEY NAT'L LAB., *ELECTRICITY TRANSMISSION CONGESTION COSTS: A REVIEW OF RECENT REPORTS 1* (2003); Bernard C. Lesieutre & Joseph H. Eto, *When a Rose Is Not a Rose: A Review of Recent Estimates of Congestion Costs*, 17 *ELECTRICITY J.* 59, 59 (2004).

²²¹ See Dang, *supra* note 144, at 342 (recommending reforms to transmission siting analogous to those applicable to natural gas lines). Note that new natural gas pipelines are required to undergo historic impact review. See Castaneda, *supra* note 46, at 109 (describing FERC's gas pipeline siting requirements, including SHPO consultation). But see Meyer & Sedano, *supra* note 30, at E-20 (warning that the natural gas siting regime is plagued with problems and may not be the best model for transmission lines to emulate).

²²² Carol A. Dahl & Thomas K. Matson, *Evolution of the U.S. Natural Gas Industry in Response to Changes in Transaction Costs*, 74 *LAND ECON.* 390, 405 (1998).

²²³ See 49 U.S.C. § 303 (2012). Congress simply decided to impose upon the federal Department of Transportation a higher standard of preservation for historic resources than it imposed on other federal entities subject to NHPA. Barbara Miller, *Department of Transportation's Section 4(f): Paving the Way Toward Preservation*, 36 *AM. U. L. REV.* 633, 642 (1987).

project includes all possible planning to minimize harm . . . resulting from the use.”²²⁴ That is, unlike Section 106, Section 4(f) precludes a certain alignment if that alignment would harm a historic resource and a feasible alternative exists.²²⁵ If no feasible alternative exists, the project must mitigate harms to historic resources.²²⁶ Section 106 contains neither the preclusion rule nor the mitigation rule of Section 4(f).²²⁷

Importantly however, the meaning of “adversely affect” under Section 4(f) includes a narrower range of situations than Section 106’s “undertakings.” Section 4(f) applies to instances where the transportation program or project requires “use of” the historic site.²²⁸ This narrower application is an apparent trade-off for the more onerous effect Section 4(f) can have on transportation projects that affect historic resources.

Interpretation of “use” under Section 4(f) is the subject of much litigation,²²⁹ which is largely beyond the scope of this article. However, Section 4(f) is instructive for resolving conflicts between transmission lines and historic resources insofar as it represents a mechanism for imposing stringent substantive review

²²⁴ 49 U.S.C. § 303(c); *see also* 23 C.F.R. § 771.135(a)(1)(i) (2008) (Department of Transportation regulations requiring avoidance of lands containing historic resources).

²²⁵ Recall that Section 106 is merely an information-gathering requirement and does not dictate substantive outcomes for individual projects. *See Valley Cmty. Pres. Comm’n v. Mineta*, 373 F.3d 1078, 1085 (10th Cir. 2004); *see also* MacGill, *supra* note 22, at 721–22.

²²⁶ 49 U.S.C. § 303(c).

²²⁷ *See Save Our Heritage v. FAA*, 269 F.3d 49, 58 (1st Cir. 2001).

²²⁸ *Id.* Determining whether the Department of Transportation’s action constitutes “use of” a historic site is a two-part inquiry. First, the Department must look at the harm to the site from the proposed project. Second, the Department must consider the site’s historical value. If the project is “fairly proximate” and has a “significant impact on the historic qualities of a structure” a use has occurred. *See* MacGill, *supra* note 22, at 727. In addition, the Department generally must also consider the no-build alternative. *Id.* Under NHPA, the federal agency must consider all historic resources in the undertaking’s area of potential effects. *See* 36 C.F.R. § 800.4(a)(1). The “area of potential effects” is the geographic area “within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.” *Id.* § 800.16(d).

²²⁹ *See, e.g., Valley Cmty.*, 373 F.3d at 1092; *see also* Matthew J. Christian, *Proliferation and Expansion of America’s Airports at the Expense of its Treasured Parks and Preserves: Judicial Perversion of the Term “Use” in Section 4(f) of the Department of Transportation Act*, 3 NEV. L.J. 613, 615 (2003).

of infrastructure projects with significant and ongoing impacts on historic resources.²³⁰

b. *Categorical Exemption from Historic Preservation Review*

The ACHP-promulgated regulations afford ACHP considerable flexibility in implementing the review requirements of Section 106.²³¹ The ACHP has the authority to exempt entire categories of development from the historic preservation requirements of Section 106.²³² Two such exemptions have been promulgated with respect to this authority: one exemption applies to natural gas pipelines and the second applies to highways. The ACHP also has the authority to set forth a customized, standard treatment for any class of undertaking.²³³

In 2002, the ACHP promulgated an exemption for natural gas pipelines such that “all Federal agencies are exempt from the Section 106 requirement of taking into account the effects of their undertakings on historic natural gas pipelines.”²³⁴ This rule has limited application on the development of *new* pipelines,²³⁵ but it does signify that the ACHP is willing to act to exclude from regulation an entire class of infrastructure at one time with only

²³⁰ See *Save Our Heritage*, 269 F.3d at 58 (describing Section 4(f) as more “stringent” than NHPA).

²³¹ See 36 C.F.R. § 800.14.

²³² See *id.* § 800.14(c)(1) (“[ACHP] may propose a program or category of undertakings that may be exempted from review under the provisions of subpart B of this part, if the program or category meets the following criteria: (i) The actions within the program or category would otherwise qualify as ‘undertakings’ as defined in § 800.16; (ii) The potential effects of the undertakings within the program or category upon historic properties are foreseeable and likely to be minimal or not adverse; and (iii) Exemption of the program or category is consistent with the purposes of the act.”).

²³³ *Id.* § 800.14(d)(1) (“The [ACHP], on its own initiative or at the request of another party, may establish standard methods for the treatment of a category of historic properties, a category of undertakings, or a category of effects on historic properties to assist Federal agencies in satisfying the requirements [the Section 106 regulations]”).

²³⁴ Exemption Regarding Historic Preservation Review Process for Projects Involving Historic Natural Gas Pipelines, 67 Fed. Reg. 16,364, 16,364 (Apr. 5, 2002).

²³⁵ That is, federal agencies overseeing the development of *new* pipelines are *not* exempt from Section 106. FERC oversees pipeline siting and has provisions for engaging in historic impact review of new pipelines. See 18 C.F.R. § 380.12(c)(2)(i)(D) (requiring consultation with the relevant SHPO); *id.* § 380.14 (requiring compliance with NHPA). See generally FED. ENERGY REGULATORY COMM’N (FERC), GUIDELINES FOR REPORTING ON CULTURAL RESOURCES INVESTIGATIONS FOR PIPELINE PROJECTS (2002) (describing standards for evaluating historic resources potentially conflicting with pipeline projects).

limited exceptions.

The emergence of this exemption is significant for its origin story. ACHP promulgated the exemption administratively when it appeared that legislative support was developing to require the exemption by law.²³⁶ ACHP, perhaps worried about losing any power at the hands of Congress, decided to act first to craft an exemption that it controlled.²³⁷ Comparable dynamics could prompt ACHP to act similarly with respect to transmission lines. A significant event—for instance a large blackout in the Northeast or in Southern California—could generate popular pressure to hasten the construction of new transmission, leading Congress to dispense with or weaken historic preservation review for new transmission capacity.²³⁸

ACHP has also exempted from Section 106 review the effects of any undertakings on portions of the federal interstate highway system as designated by the Federal Highway Administration.²³⁹ The purpose of this exemption is to allow upgrades and improvements to the highway system.

Finally, ACHP has set forth a draft standard treatment for the rehabilitation of historic exterior masonry on Department of Defense properties.²⁴⁰ Under this standard treatment, predefined

²³⁶ Castaneda, *supra* note 46, at 117.

²³⁷ *Id.* (“The ACHP opposed a legislative amendment to the NHPA, so it proposed an alternative solution: a revision to the Section 106 historic preservation review regulations of the NHPA for natural gas pipelines. . . . The legislative amendment was removed when ACHP issued the administrative exemption.”).

²³⁸ This scenario is not at all far-fetched. The 2003 blackout in the Northeast—largely a result of transmission grid problems—prompted Congress to give DOE and FERC NIETC designation authority and federal backstopping authority. Swannstrom & Jolivet, *supra* note 122, at 423. More recently, Superstorm Sandy left parts of New York City and some of its surrounding area without power for days. Governor Andrew Cuomo announced that increasing the electricity infrastructure is one of the adaptation responses necessary for future storms. See Ed Merta, *Gridlock Preempted? How Climate Change Could End State Control Over Electric Transmission Siting*, VISTA (State Bar of N.M.: Natural Res., Energy and Env'tl. Law Section), Winter 2013, at 2.

²³⁹ See Exemption Regarding Historic Preservation Review Process for Effects to the Interstate Highway System, 70 Fed. Reg. 11,928, 11,931 (Mar. 10, 2005). Note, however, that each federal agency remains “responsible for considering the effects of its undertakings on other historic properties that are not components of the Interstate Highway System (e.g., adjacent historic properties or archaeological sites that may lie within undisturbed areas of the right of way).” *Id.*

²⁴⁰ Draft Standard Treatments To Address Rehabilitation of Historic Exterior Masonry, 73 Fed. Reg. 33,387 (Jun. 12, 2008); see also *Guidance on Standard*

standard construction specifications are deemed to have no adverse effect on historic properties.²⁴¹ This provision seeks to speed up the restoration of a defined category of undertakings without engaging in repeated, time-consuming, and costly historic preservation review.²⁴²

c. *Interagency Cooperation*

Less than a month after promulgating its categorical exemption for historic pipelines, the ACHP entered into a memorandum of understanding (MOU) with nearly a dozen additional federal agencies regarding timelines and processes for issuing authorizations for the construction of new natural gas pipelines.²⁴³ Under the 2002 natural gas pipeline MOU, the signatory agencies agreed to appoint a lead agency for all new natural gas pipeline applications (in this instance, the Federal Energy Regulatory Commission), set timelines for review early in the process, share information, communicate informally, and resolve all disputes through the White House Council on Environmental Quality (CEQ).²⁴⁴

In 2009, nine federal agencies entered into a similar MOU under the ACHP's "alternate procedures" regarding the coordination of federal agency review of transmission line projects on federal lands.²⁴⁵ Under this MOU, DOE either will be or will

Treatments As Program Alternatives, ADVISORY COUNCIL ON HIST. PRESERVATION, <http://www.achp.gov/standtreatment.html> (last visited Feb. 20, 2013).

²⁴¹ Draft Standard Treatments To Address Rehabilitation of Historic Exterior Masonry, 73 Fed. Reg. at 33,388.

²⁴² *Id.* at 33,389 (describing the standard treatment's benefit as a "quicker path to 'no adverse effect' or a Section 106 agreement [that] can greatly reduce the consultation workload of federal agencies that intend to rehabilitate their historic properties in accordance with the [Secretary of the Interior's Standards for Rehabilitation, 36 C.F.R. § 67]").

²⁴³ INTERAGENCY AGREEMENT ON EARLY COORDINATION OF REQUIRED ENVIRONMENTAL AND HISTORIC PRESERVATION REVIEWS CONDUCTED IN CONJUNCTION WITH THE ISSUANCE OF AUTHORIZATIONS TO CONSTRUCT AND OPERATE INTERSTATE NATURAL GAS PIPELINES CERTIFICATED BY THE FEDERAL ENERGY REGULATORY COMMISSION (May 2002), *available at* http://www.ferc.gov/industries/gas/enviro/gas_interagency_mou.pdf.

²⁴⁴ *Id.* at 4–7.

²⁴⁵ MEMORANDUM OF UNDERSTANDING REGARDING COORDINATION IN FEDERAL AGENCY REVIEW OF ELECTRIC TRANSMISSION FACILITIES ON FEDERAL LAND 1 (Oct. 23, 2009), *available at* <http://energy.gov/sites/prod/files/Transmission%20Siting%20on%20Federal%20Lands%20MOU%20October%202009.pdf>.

designate the lead agency.²⁴⁶ DOE is responsible for coordinating between the private applicants and other federal agencies, obtaining and disseminating information, setting and enforcing timelines, preparing the environmental impact statement (EIS) and administrative record, and implementing other review procedures.²⁴⁷ Proposed rules would extend this cooperation to all new transmission line projects on federal lands.²⁴⁸

3. *Recommendations*

Three existing techniques for finding compromises between historic preservation and new infrastructure development should inform new transmission projects. There is no need to weaken historic preservation laws in order to accommodate new technologies. There is also no need to allow historic preservation laws to continue to delay unnecessarily or increase the expense of transmission line development. The following recommendations seek to overcome the ongoing planning and segmentation conflicts between historic preservation and transmission line development.

a. *Engage in Historic Preservation Review on an NIETC-Wide Basis Upon the Designation of an NIETC, and Issue Alternative Procedures to New Transmission Lines Within the NIETC*

An interagency cooperation mechanism is already in place for transmission projects on federal lands, so the most promising area for further policy innovation continues to be the NHPA regulations' program alternatives.²⁴⁹

One compromise to help reach the objectives of historic preservation and transmission development interests would be to implement Section 106 review at the NIETC (i.e., regional) scale, and then exempt from Section 106 (or provide a standard treatment under Section 106) any projects within a corridor that had already been studied. During the NIETC designation process, a corridor-

²⁴⁶ *Id.* at 2.

²⁴⁷ *Id.* at 5–6.

²⁴⁸ Coordination of Federal Authorizations for Electric Transmission Facilities, 75 Fed. Reg. 77432, 77433 (proposed Dec. 13, 2011) (to be codified at 100 C.F.R. pt. 900).

²⁴⁹ See 36 C.F.R. § 800.14 (2012). Section 800.14(b) sets forth procedures for programmatic agreements among multiple agencies; Section 800.14(c) sets forth the requirements for categorical exemptions, as described above; and Section 800.14(d) sets forth requirements for setting forth “standard methods for the treatment of . . . a category of undertakings.”

wide study of historic resources would occur, and the relevant SHPOs, the tribal historic preservation officers (THPOs), ACHP, and members of the interested public would be consulted. Interested parties would comment to identify their preferred alignments corridor-wide. Once that process is complete, transmission projects in the corridor would move forward with limited or no review.²⁵⁰ Fortunately, the ACHP's program alternative mechanisms could accommodate just such a scenario. As described above, ACHP regulations allow for "alternate procedures," allowing a federal agency to tailor Section 106 review to the agency's decision-making process.²⁵¹ In sum, the proposal is for transmission line spatial planning and capacity planning to occur simultaneously.

DOE should seek to promulgate either a categorical exemption or standard treatment under the ACHP's alternate procedures regulations to plan for historic preservation at NIETC-wide scales and eliminate or greatly limit Section 106 review for individual projects within NIETCs. Transmission developers, lead federal agencies, and preservationists would all benefit from these alternative regulations. Transmission developers would probably like this procedure because DOE would lead the Section 106 process, and once the process was completed and preferred alternatives identified, developers could commit capital without fear of further regulatory delay under NHPA. Federal agencies would likely prefer a streamlined process that eliminates questions about how to treat each separate proposal. Preservationists should prefer this approach because they will have a seat at the table at the earliest possible opportunity, selecting corridors on a regional-scale, rather than selecting from among what is often the lesser of a few evils on a project-by-project basis.

b. *Allow Separate Review of a Project Segment Only if the Segment Is Independently Justifiable*

Courts should consistently apply the "independent

²⁵⁰ ACHP, in consultation with all of the relevant parties, could set forth the expected review for each project. See 36 C.F.R. § 800.14(c)(6) ("Any undertaking that falls within an approved exempted program or category shall require no further review . . . unless the agency official or the [ACHP] determines that there are circumstances under which the normally excluded undertaking should be reviewed under [Section 106 regulations].").

²⁵¹ See 36 C.F.R. § 800.14; see also *Program Alternatives—36 CFR § 800.14*, ADVISORY COUNCIL ON HIST. PRESERVATION, <http://www.achp.gov/programalt> (last visited May 17, 2011).

justification” test.²⁵² The test appears to be a widely accepted part of the NEPA review process, and there is an obvious benefit for continuing the trend of overlap between NEPA and NHPA. Courts, agencies, and private infrastructure developers all benefit from a single understanding of “segmentation” under both NEPA and NHPA. Both statutes have information gathering and alternatives analysis at their cores. Nothing can be gained and only confusion can result if, for example, a project is considered improperly segmented for the purposes of NEPA but not for NHPA.

The purposes under NEPA for the independent-justification test support its application to the NHPA review process. Under NEPA, segmentation analysis functions to capture those projects (or portions of a project) that are segmented as a pretext for escaping NEPA review.²⁵³ The indicator of this segmentation is a lack of independent justification: “When the segmentation project has no independent jurisdiction, no life of its own, or is simply illogical when viewed in isolation, the segmentation will be held invalid.”²⁵⁴ Likewise, under NHPA, if a portion of a project has no independent justification, it should not be analyzed separately from its larger context.

The independent justification test has a logical appeal for transmission lines. If a portion of a transmission line can stand alone (e.g., because it connects to and expands the capacity of an existing network) then it can be segmented from a larger project for the purposes of historic preservation review. If, however, a portion of a line is useless independent of a larger portion of a corridor, then its segmentation is inappropriate. This test has the benefit of being straightforward for courts, agencies, and developers to apply.

c. *Use Substantive Review of the Effect of Transmission Line Projects on Historic Resources as a Backup Option Only if NIETC-Scale Planning Proves Infeasible or if Segmentation Continues To Be a Problem*

A new substantive review process for transmission projects would certainly be consistent with the objectives of existing federal historic preservation law because it would theoretically

²⁵² See discussion *supra* notes 119, 176, 184 and accompanying text.

²⁵³ *Id.*

²⁵⁴ *Save Barton Creek Ass’n v. Fed. Highway Admin.*, 950 F.2d 1129, 1139 (5th Cir. 1992).

lead transmission line developers to choose those corridors with the fewest impacts on historic resources. But substantive review might be an onerous tool to remedy conflicts between transmission line development and historic preservation. Allowing a federal body to deny certain transmission corridors on historic preservation grounds would almost certainly increase the cost of developing such corridors and may present a very difficult obstacle to overcome. It does not have same appeal as a policy that categorically exempts projects from historic preservation review following a combined capacity planning and spatial planning analysis.

In addition, substantive review of transmission line siting would represent a new role for the federal government in transmission line development, a role currently filled by the states.²⁵⁵ This federalism concern is not to be lightly dismissed. Even if a Section 4(f) mandate were to apply to only those projects that directly cross or interfere with historic resources, such a substantive outcome would substantially interfere with state siting authority.²⁵⁶ Finally, imposing substantive federal review almost certainly requires federal legislative intervention, which is often the most difficult and time-consuming policy-setting step. If a realistic goal is to protect historic resources while allowing new transmission to be developed, imposing a substantive federal barrier on transmission line site selection would appear to be the long, hard way to accomplish that goal.

Fortunately, the adverse effects of transmission line development likely do not justify the level of substantive review that prompted Congress to enact Section 4(f).²⁵⁷ Transmission lines are not ripping apart historic downtown communities as highways

²⁵⁵ See ADAM VANN, CONG. RESEARCH SERV., R40657, THE FEDERAL GOVERNMENT'S ROLE IN ELECTRIC TRANSMISSION FACILITY SITING 1 (2010); Meyer & Sedano, *supra* note 30, at E-3. Indeed there is a strong argument that state and local governments are uniquely suited to performing these siting functions. Meyer & Sedano, *supra* note 30, at E-20 (noting that total preemption of state siting of transmission would be a major change and unlikely to win support and remarking that "all transmission siting is local"). However, even within states disputes arise between various government authorities over siting controls. See Moran, *supra* note 7, at 190–94.

²⁵⁶ See VANN, *supra* note 255, at 9 (discussing strong opposition to FERC's backstopping authority in NIETCs under the EAct of 2005).

²⁵⁷ See, e.g., Phelps, *supra* note 33, at 121, 126–27 (describing urban renewal's effects on neighborhoods and the subsequent response through historic preservation legislation).

did during the urban renewal era,²⁵⁸ and the need for substantive federal review likely does not exist at present. However, substantive review of transmission line projects, when such projects directly affect historic resources, should remain an option that transmission developers and historic preservation advocates keep in mind if conflicts do not abate. As with Section 4(f), substantive review of transmission lines would likely be necessary only when a proposed transmission corridor would directly cross a historic site or landscape. Substantive review would not be triggered by adverse visual impacts on historic resources or landscapes that are some distance from the transmission corridor.

4. *Relationship Between Transmission and Renewable Energy Generation*

Transmission and generation go hand in hand: the highly centralized electrical grid requires high-voltage transmission lines to move electricity from source to load, especially when the sources are utility-scale renewable sources located in remote areas far from load centers.²⁵⁹ The conflicts between transmission and historic preservation must be solved if new renewable energy development is to be worthwhile, because new transmission is so integral to the development of renewable sources.

III. RENEWABLE ENERGY PROJECTS

Utility-scale renewable energy projects are experiencing unprecedented growth,²⁶⁰ and support from all levels of

²⁵⁸ See, e.g., *Citizens to Pres. Overton Park, Inc. v. Volpe*, 401 U.S. 402, 406 (1971) (requiring substantive review of a decision by the federal Department of Transportation to construct a multi-lane highway through a community park in downtown Memphis).

²⁵⁹ Steven Ferrey, *Earth, Air, Water and Fire: The Classical Elements Confront Land and Energy*, 27 J. LAND USE & ENVT'L. L. 259, 278 (2012) (discussing the difficulty of moving renewable energy from remote areas to urban load centers).

²⁶⁰ Utility-scale solar energy installations totaled 2,600 MW in 2010. This capacity total represents a doubling over the previous years' total installed capacity. *Industry Data*, SOLAR ENERGY INDUSTRIES ASS'N, http://www.seia.org/cs/research/industry_data (last visited May 17, 2011). In 2012, the new installed capacity totaled 3,200 MW. The United States has become the world's fourth largest solar energy producer, and is expected to become the largest within the next five years. Incentives to develop solar power continue to be strong, even in northern states not conventionally considered to be solar "hotspots." See *Solar Policy Guide*, DSIRE SOLAR, <http://www.dsireusa.org/solar/solarpolicyguide/?id=10> (last visited May 17, 2011).

government is one of the most important contributing factors. DOE has set an informal target of supplying 20 percent of the nation's energy from wind by 2030,²⁶¹ the federal government has taken significant steps to open federal lands and federal waters to renewable energy development,²⁶² and members of both parties have shown support for the continuation of tax incentives for investment and project development.²⁶³ Even before the current administration began championing renewable sources and increasing regulations on fossil fuel sources, many states implemented policies to spur renewable energy development.²⁶⁴

Utility-scale wind has out-paced utility-scale solar. The United States now has 60,000 MW of wind power, with nearly one quarter of that total added in 2012 alone. Wind constituted 42 percent of all new electrical generating capacity constructed domestically in 2012. *Wind Energy Facts at a Glance*, AMERICAN WIND ENERGY ASSOC., <http://www.awea.org/Resources/Content.aspx?ItemNumber=5059> (last visited Nov. 30, 2014). Yet wind energy's potential is nowhere near being met. Conservative estimates indicate the country has in excess of 14.5 million MW potential, and a significant proportion of that potential is offshore. See Schroeder, *supra* note 46, at 1632. Today, the United States has 0 MW of installed offshore wind capacity, *id.*, although several pioneering projects are at various stages of planning and development. States along the Atlantic and Great Lakes coasts are lining up to issue RFPs and RFIs, yet the first pylon has not been erected. *Id.* at 45, at 1666–67 (describing proposed offshore wind projects off the coasts of New Jersey, Rhode Island, Delaware, New York, Georgia, Texas, Ohio, and Maine). Michigan and North Carolina are also considering projects. See Conger, *supra* note 117, at 788 n.294.

²⁶¹ See, e.g., DEP'T OF ENERGY, *supra* note 59. However, Congress has not adopted the sort of renewable energy quota existing in more than half of the states at present. See Outka, *supra* note 64, at 247–48.

²⁶² Significantly, as part of the EPAct of 2005, Congress required the administration to open federal lands to accommodate 10,000 MW of renewable energy projects by 2015. Klass & Wilson, *supra* note 17, at 1825; see also Eric S. Spengle, *A Shift in the Wind: The Siting of Wind Power Projects on Public Lands in the Obama Era*, 86 IND. L. J. 1185 (2011) (detailing changes in federal land management policies to facilitate the development of renewables); Amanda H. Miller, *A Solar First: Permission to Build on Government Lands*, CLEANENERGY AUTHORITY (Oct. 11, 2010), <http://www.cleanenergyauthority.com/solar-energy-news/solar-projects-on-public-lands-10111>; *Largest Federally-Owned Wind Farm Breaks Ground at U.S. Weapons Facility*, DEP'T OF ENERGY (Aug. 13, 2013), http://energy.gov/articles/largest-federally-owned-wind-farm-breaks-ground-us-weapons-facility?utm_medium=email&utm_source=govdelivery.

²⁶³ See American Recovery and Reinvestment Act (ARRA), Pub. L. No. 111-5, § 1603, 123 Stat. 115 (2009) (allocating tax credits for production of renewable energy and investment in renewable energy); Family and Business Tax Cut Certainty Act of 2012, Pub. L. No. 112-240, § 407, 126 Stat. 2313, 2340 (2013) (extending the "Production Tax Credit" for renewable energy sources); see also Ferrey, *supra* note 259, at 269–76 (describing federal tax incentives for renewable energy development).

²⁶⁴ A common state-led technique is the renewable portfolio standard, which

One of the most important federal incentives for renewable energy has been subsidized access to undeveloped federal lands. Wind and solar projects enjoy economies of scale, and developing large projects on federal lands avoids the higher costs associated with purchasing the rights to develop on private lands.²⁶⁵ Federal lands, including offshore areas under federal control, have become a significant locus for conflicts between historic preservation and new solar and wind projects. From a historic preservation perspective, offshore wind and large-scale solar adversely affect the viewsheds of historic resources, including sacred tribal areas and historic maritime landscapes.²⁶⁶

The jurisdictional and segmentation questions that transmission projects raise are unlikely to be contested for offshore wind projects or utility-scale solar projects on federal lands: projects on federal lands or in federal waters will generally be a federal undertaking, necessitating NHPA review.²⁶⁷ But even with NHPA review, efforts to protect historic resources from large renewable energy projects have met with mixed results, and the uneven end results would benefit from an improved planning process. To identify and avoid conflicts between historic preservation objectives and the development of utility-scale

requires utilities operating within a state to acquire a state-determined percentage of their energy from a menu of renewable sources. See Steven Ferrey, *Sustainable Energy, Environmental Policy, and States' Rights: Discerning the Energy Future Through the Eye of the Dormant Commerce Clause*, 12 N.Y.U. ENVTL. L. J. 507, 529–32 (2004). California, for instance, recently raised its renewable portfolio standard requirements to 33 percent by 2020, meaning fully one third of the state's power will come from renewable sources. Chris Meehan, *California Signs Renewable Energy Mandate Into Law*, CLEANENERGY AUTH. (Apr. 14, 2011), <http://www.cleanenergyauthority.com/solar-energy-news/california-makes-rps-into-law-041411>.

²⁶⁵ Wiseman et al., *supra* note 19, at 850 (describing the high costs associated with assembling the right to develop large-footprint utility-scale renewable energy projects on privately-owned land).

²⁶⁶ M.W. Marinakos, *A Mighty Wind: The Turbulent Times of America's First Offshore Wind Farm and the Inverse of Environmental Justice*, 2 EARTH JURISPRUDENCE & ENVTL. JUST. J. 82, 84 (2012). Other adverse effects of solar projects include detrimental impacts to wildlife, Sarah Pizzo, *When Saving the Environment Hurts the Environment: Balancing Solar Energy Development with Land and Wildlife Conservation in a Warming Climate*, 22 COLO. J. INT'L ENVTL. L. & POL'Y 123, 135 (2011), while other adverse impacts of wind projects include noise, Roger L. Freeman & Ben Kass, *Siting Wind Energy Facilities on Private Land in Colorado: Common Legal Issues*, 39 COLO. LAW. 43, 53 (2010).

²⁶⁷ See *supra* Section I.D.1 (discussing the jurisdictional requirements triggering NHPA review).

renewable energy projects, this Article considers two relevant issues. Subsection A below discusses whether federal historic preservation laws adequately protect historic resources from the adverse effects of large, utility-scale renewable energy projects on federal lands. Subsection B argues historic designation is not the appropriate mechanism for protecting those large, historic seascapes that are likely to be the location for offshore wind resource development.

A. *Do Federal Laws Adequately Protect Historic Resources from the Adverse Effects of Utility-Scale Renewable Energy Projects on Federal Lands?*

Utility-scale wind and solar projects rely on numerous subsidies to be cost competitive with conventional energy sources.²⁶⁸ One of the most important subsidies for utility-scale renewable energy projects is access to expansive, contiguous tracts of federal lands to site large projects.²⁶⁹ However, energy development is just one of many competing interests for federal lands. Federal land managers also have mandates to accommodate recreational users, preserve unique ecosystems, and respect the practices and traditions of tribal cultures.²⁷⁰ As discussed below, tribal communities have been active in opposing utility-scale renewable energy projects under federal historic preservation laws in order to protect tribal historic resources.²⁷¹ NHPA effectively identifies impacts on historic resources on federal lands if the federal agencies coordinating development rigorously adhere to NHPA's procedural requirements. Federal agencies can design mitigation measures to protect historic resources, but they are not obligated to maximize historic resource protection. Without

²⁶⁸ See Outka, *supra* note 30 (discussing cost barriers to renewable energy development).

²⁶⁹ Vast stretches of federally controlled public lands are well-suited to renewable sources, particularly solar, geothermal, and wind. Federal agencies such as the Bureau of Land Management, the United States Forest Service, and the National Park Service, among others have accommodated fossil fuel energy development and other private resource extraction programs on public lands for decades.

²⁷⁰ The Federal Land Policy and Management Act of 1976, Pub. L. No. 94-579, 90 Stat. 2743 (codified as amended at 43 U.S.C. §§ 1701–1785 (2006)) provides for consideration of multiple resource users on federal lands.

²⁷¹ See also Mik Moore, *Coalition Building Between Native American and Environmental Organizations in Opposition to Development: The Case of the New Los Padres Dam Project*, 11 ORGANIZATION & ENVT. 287, 287 (1998).

“teeth” to protect historic resources on federal lands, NHPA falls short of its goals. This Section examines three recent cases involving tribal challenges to projects under NHPA’s consultation procedures.

1. *Challenge to a Solar Project on Bureau of Land Management Land in Southern California*

Federal agencies’ failure to adequately consult with tribal leaders regarding potentially affected historic resources is at the heart of multiple recent challenges to renewable energy development on federal lands. In *Quechan Tribe v. Department of Interior (Quechan Tribe I)*, the Quechan Tribe (the Tribe) sued the federal Bureau of Land Management (BLM) to stop construction on a seven hundred megawatt solar array constructed across six thousand acres of BLM land in California and Arizona.²⁷² The Tribe complained that BLM did not “adequately or meaningfully consult with them, but instead approved the project before completing the required consultation.”²⁷³ In December 2010, the Tribe sought and received a preliminary injunction, halting the project.²⁷⁴

The BLM, the developer, and state regulators were under pressure to move the project into development quickly.²⁷⁵ The

²⁷² 755 F. Supp. 2d 1104, 1104 (S.D. Cal. 2010). The solar project’s developers proposed erecting approximately thirty thousand solar collectors, some of which would be nearly fifty feet high. *Id.* at 1107. Roads, structures, and power lines would also accompany the project. *Id.* The project site was located within an area of historic use and significance to the Tribe and contained hundreds of known resources as well as surface archaeological sites. *Id.*

²⁷³ *Id.* at 1108.

²⁷⁴ *Id.*

²⁷⁵ Several parties involved in the project’s approval had incentives to ensure the project moved quickly towards construction and completion. The project developers were interested in moving the project along quickly to take advantage of incentives available to renewable energy projects under the federal ARRA, as some incentives were set to expire by the end of 2010. Chris Meehan, *California Approves Two More Gigantic Solar Plants*, CLEANENERGYAUTHORITY.COM (Sept. 29, 2010), <http://www.cleanenergyauthority.com/solar-energy-news/genesis-and-imperial-valley-plants-092910>. If the project was not substantially underway by the end of the calendar year, the project would not be eligible for those incentives. The California Energy Commission was similarly interested in the project progressing rapidly because the Commission was under a statutory obligation to ensure that 20 percent of the state’s electrical energy needs are met via renewable sources by the end of 2011. Finally, the BLM was under political pressure from the Obama administration, Secretary Salazar, and Congress to “fast-track” solar energy development on public lands. Frank Quimby et al., *Secretary Salazar, Senator Reid Announce “Fast-Track” Initiatives for Solar*

Tribe complained BLM neglected to adequately complete the consultation requirements of the NHPA because it was not until October 2010, after the project had been approved, that BLM met with the Tribe's government in a government-to-government meeting.²⁷⁶ As a result of this egregious procedural deficiency, the project was initially halted.²⁷⁷

2. *Challenge to a Geothermal Project on United States Forest Service Land in Northern California*

Whereas the solar development in *Quechan Tribe I* operated on an accelerated, "fast-track" timeline (going from concept to approval in approximately two years), a large-scale geothermal project near Medicine Lake in the mountains of northeastern California percolated through public and private approvals for

Energy Development on Western Lands, BUREAU OF LAND MGMT. (June 29, 2009), http://www.blm.gov/wo/st/en/info/newsroom/2009/june/NR_0629_2009.html.

²⁷⁶ BLM had initiated correspondence with the Tribe as far back as January 2008 regarding development of a solar project at the site. In November 2008, the project's developer submitted an application to BLM for a right-of-way to develop the project. The developer subsequently reapplied to BLM in 2009 under BLM's above-mentioned fast-track program. The Tribe wrote to the BLM in February 2010 and again in August 2010 expressing frustration with being excluded from communication regarding approval of the project. It was not until August 2010 that BLM consulted with the Tribe regarding the Tribe's understanding of the project site's cultural significance. *Quechan Tribe I*, 755 F. Supp. 2d at 1112–13.

In granting the Tribe's motion for a preliminary injunction for BLM's failure to engage in adequate and timely consultation, the trial judge noted that BLM's "contact" (i.e., via letters and invitations to public meetings) failed to fulfill the required "consultation." The trial judge equated the Tribe's request for "private, closed meetings" with NHPA's government-to-government consultation requirements; BLM's failure to engage in the former was a violation of the latter. Moreover, the trial judge noted that BLM failed to provide to the Tribe essential information about the project's location, timing, and development. When it finally did provide the Tribe with the requisite information in July 2010, the BLM gave the Tribe insufficient time to review and comment upon the proposed project. The project's developer ultimately agreed to withdraw the project and refile. See Stipulation of Voluntary Dismissal without Prejudice pursuant to FRCP 41(a)(1)(A)(ii), *Quechan Tribe of the Fort Yuma Indian Reservation v. U.S. Dep't of the Interior*, No. 10cv2241-LAB (CAB) (S.D. Cal. Oct. 14, 2011), ECF No. 65.

²⁷⁷ In May 2012, the Quechan Tribe again sued the Department of Interior, this time to stop a utility-scale wind project, alleging, inter alia, procedural deficiencies with NHPA. See *Quechan Tribe of the Fort Yuma Indian Reservation v. U.S. Dep't of the Interior* (*Quechan Tribe II*), 927 F. Supp. 2d 921 (S.D. Cal. 2013). A February 2013 ruling by the U.S. District Court for the Southern District of California allowed the project to proceed. *Id.*

nearly thirty years.²⁷⁸ *Pit River Tribe v. United States* involved another California tribe's concerns with the effects of a renewable energy project on historic resources. As in *Quechan Tribe I*, the permitting federal agency failed to adequately consult with the tribe.²⁷⁹

The mountainous area of the proposed project was on federal and not tribal land, but the mountains held important cultural significance to the Pit River people and their history.²⁸⁰ The project in *Pit River Tribe* proposed to disturb nearly fifty acres near the Medicine Lake caldera.²⁸¹ The project required disturbing an additional three hundred acres to accommodate a transmission line from the project site to a larger transmission line twenty-four miles away.²⁸² Yet, in the thirty years from concept to approval, no federal official reached out to the Pit River Tribe in a government-to-government consultation as required under NHPA.²⁸³ The Pit River Tribe complained that the United States Forest Service (USFS) ignored NHPA (and NEPA). The Ninth Circuit agreed and enjoined the project for failure to comply with procedures set forth

²⁷⁸ *Pit River Tribe v. U.S. Forest Serv.*, 469 F.3d 768 (9th Cir. 2006). During the 1970s, America's first period of exuberance toward renewable energy sources, Congress passed the Geothermal Steam Act. See 30 U.S.C. §§ 1001–1025 (2012). The act directed the Department of the Interior and the United States Forest Service to issue leases for the development and utilization of geothermal steam. *Id.* § 1002. In 1973, the Department of the Interior issued a programmatic EIS on geothermal projects nationwide. *Pit River Tribe*, 469 F.3d at 773. More than a decade later, in 1984, the Forest Service issued an environmental assessment for the Medicine Lake area and a finding of no significant impact for leasing geothermal sites, and notified California's SHPO of its intent to commence leasing. *Id.* at 773–74. In 1988, BLM and the Forest Service entered into the leases at issue in *Pit River*. *Id.* at 775. In 1994, a geothermal project developer began exploratory work, and in 1995 the developer issued an operation plan to BLM and the Forest Service for the agencies to commence environmental and historic preservation review. *Id.* at 776. The agencies again issued a finding of no significant impact. *Id.* In 1998, BLM and the Forest Service extended the developer's lease for five more years, and finally, in 2002, the agencies extended the lease for an additional forty years. *Id.* at 777–78. Neither lease extension was accompanied by any environmental or historic preservation review. *Id.* at 777.

²⁷⁹ *Pit River Tribe*, 469 F.3d at 777.

²⁸⁰ In 1999, the Keeper of the NRHP determined Medicine Lake to be eligible for the NRHP, and stated that “no mitigation” can offset the “significant impact” of the proposed geothermal projects. *Id.*

²⁸¹ *Id.* at 776.

²⁸² *Id.*

²⁸³ The Ninth Circuit noted it was “undisputed that no consultation or consideration of historical sites occurred in connection with the lease extensions.” *Id.* at 787.

in historic preservation and environmental laws.²⁸⁴ For this failure, and for USFS's similar dereliction of its obligations under NEPA, the circuit court nullified the federal lease extensions granting the developer the right to build the project.²⁸⁵

3. *Challenge to a Wind Project off of the Coast of Massachusetts*

The final renewable energy project this Section will consider is Cape Wind. Located in Nantucket Sound off of the coast of Massachusetts, the project proposes to install more than one hundred wind turbines over a twenty-four square mile stretch of ocean.²⁸⁶ Each turbine is more than two hundred fifty feet tall and will be anchored into the seabed via foundations drilled deep below the benthic surface.²⁸⁷ Though located far from the shoreline, the turbines will nonetheless be visible on land.²⁸⁸

After nearly a decade of stops and starts, litigation, and regulatory uncertainty, the project's lead agency, the Minerals Management Service (MMS, now Bureau of Ocean Energy Management, or BOEM), initiated Section 106 consultation in 2008.²⁸⁹ Nearly two years after consultation began, the ACHP issued its comments to the Department of the Interior (DOI) regarding the proposed project.²⁹⁰ According to the ACHP, the Cape Wind project threatens to adversely affect thirty-four historic properties, including sixteen historic districts and, most relevant to the analysis in this Section, six properties of cultural significance to the Wampanoag Tribes.²⁹¹ The ACHP claimed consultation with

²⁸⁴ *Id.* at 778.

²⁸⁵ Rather than sending the project back to the beginning, this nullification essentially killed the project. For apparently unrelated reasons, the developer, Calpine, filed for bankruptcy in the intervening period between the trial court's decision and the Ninth Circuit's decision. *Id.* at 772.

²⁸⁶ Schroeder, *supra* note 46, at 1637; Ziza, *supra* note 4, at 606.

²⁸⁷ *See* Schroeder, *supra* note 46, at 1637.

²⁸⁸ *See* Dorothy W. Bisbee, *NEPA Review of Offshore Wind Farms: Ensuring Emission Reduction Benefits Outweigh Visual Impacts*, 31 B.C. ENVTL. AFF. L. REV. 349, 367–69 (2004) (arguing that “[a]esthetic objections are the single most important impediment to wind farm siting”).

²⁸⁹ ACHP COMMENTS, *supra* note 15, at 1; *see* Conger, *supra* note 117, at 753–58 (discussing the administrative and litigation challenges the Cape Wind project faced during its dozen-year permitting phase).

²⁹⁰ ACHP COMMENTS, *supra* note 15, at 1; *see also* Kimmell & Stalenoef, *supra* note 4, at 209–11; Marinakos, *supra* note 266, at 98–101 (providing a timeline of regulatory and litigation actions in the development of the Cape Wind project).

²⁹¹ ACHP COMMENTS, *supra* note 15, at 1–2. One of the six properties of tribal significance is the bed of Nantucket Sound, itself. Kimmell & Stalenoef,

the Tribes was late and did not provide an adequate opportunity for the tribes to communicate concerns about the effects of Cape Wind on tribal cultural properties.²⁹² But the ACHP also noted that MMS took steps to remedy deficiencies in the process.²⁹³ In April 2010, the ACHP recommended MMS not approve the project.²⁹⁴ Less than a month later, the Secretary of the Interior approved the project over ACHP's recommended denial.²⁹⁵

4. *Summary of Challenges to Recent Renewable Energy Projects on Federal Lands*

The *Quechan Tribe I* and *Pit River Tribe* cases illustrate the protection NHPA can afford tribal resources (and historic resources more generally) and the importance of NHPA's consultation provisions. In both cases, NHPA's procedural requirements protected sensitive tribal areas from the development of a large renewable energy project the federal government consulted the relevant tribe to understand the effects those projects were likely to impose on historic resources.

Yet as Cape Wind illustrates, Section 106's consultation provisions are procedural and do not dictate the outcome of a project in favor of preserving historic resources. In the Cape Wind project, DOI fulfilled its obligations to consult the ACHP and exercised its obligations to move forward with a project as proposed despite that project's putative adverse effects on historic resources. The consultation and review procedures for Cape Wind operated as intended under Section 106. NHPA can lead to informed decision making, but it cannot totally protect historic resources from a determined developer working with an accommodating federal agency.²⁹⁶

supra note 4, at 209–11.

²⁹² ACHP COMMENTS, *supra* note 15, at 4.

²⁹³ *Id.* at 5.

²⁹⁴ *Id.*

²⁹⁵ Subsequent litigation opposing the approval of the project does not raise NHPA claims. Shortly after the Secretary's decision, opponents to the project filed suit against BOEM, the federal agency authorizing the project to move forward. Cape Wind intervened on behalf of the defendants. The complaint alleged violations of the federal Endangered Species Act and the Migratory Bird Treaty Act. *See* Complaint, Pub. Emps. for Env'tl. Responsibility v. Bromwich, No. 1:10-cv-01067 (D.D.C. June 25, 2010).

²⁹⁶ Federal agencies can impose mitigation measures that limit the effect of the undertaking. For instance, in *Te-Moak Tribe of W. Shoshone of Nev. v. U.S. Dep't of Interior*, 608 F. 3d 592, 601 (9th Cir. 2010), BLM identified certain sensitive historic areas as off-limits to development and required detailed surveys

B. *Is Historic Designation the Appropriate Mechanism for Protecting Large Seascapes That Are Likely To Be the Location for Offshore Wind Resource Development?*

Offshore wind projects present a novel and unmistakable presence on the maritime landscape.²⁹⁷ Towers and turbines are tall, reaching hundreds of feet above the ocean surface, and numerous, usually totaling more than one hundred spread over many square miles to make a project economically viable.²⁹⁸ Combined with the lack of other relief or other permanent visual obstructions in otherwise planar maritime viewsheds, wind projects unavoidably alter seascape views.²⁹⁹ The site plan for the Cape Wind project, introduced above, exhibits many of these attributes of offshore wind projects.³⁰⁰ Atlantic offshore wind has one advantage over terrestrial analogs from the high plains and Midwest: prime Atlantic offshore wind resources are mere dozens of miles from the country's heaviest load centers from Washington to Boston, whereas those same load centers are thousands of miles from the wind-rich high plains.³⁰¹

Initially proposed in 2001, Cape Wind has withstood numerous legal challenges, regulatory and price uncertainty, and opposition from neighboring communities and tribes as well as opposition from groups supported by the oil-and-gas industry.³⁰² In late 2009, as the project was progressing towards construction, the

to ensure resources did not exist in other areas. Development could proceed only if those surveys revealed no historic resources. *Te-Moak*, 608 F. 3d at 601.

²⁹⁷ Bisbee, *supra* note 288, at 367–68.

²⁹⁸ Schroeder, *supra* note 46, at 1649.

²⁹⁹ Bisbee, *supra* note 288, at 368.

³⁰⁰ Schroeder, *supra* note 46, at 1649–50.

³⁰¹ However, offshore wind transmission lines still face high costs and numerous obstacles to completion. See Nathaniel C. Giddings, *Go Offshore Young Man! The Categorical Exclusion Solution to Offshore Wind Farm Development on the Outer Continental Shelf*, 2 J. ENERGY & ENVTL. L. 75, 76–77 (2011); Kimmell & Stalenhoef, *supra* note 4, at 199; Schroeder, *supra* note 46, at 1640.

³⁰² See Marinakos, *supra* note 266, at 88–94 (describing the coalition of opponents to the Cape Wind project). The Board of Directors for the Alliance to Protect Nantucket Sound, party in multiple challenges to the Cape Wind project, includes Bill Koch, one of the billionaire Koch brothers closely associated with numerous conservative causes. See *Our Board*, ALLIANCE TO PROTECT NANTUCKET SOUND, http://www.saveoursound.org/about_us/board_of_directors/ (last visited May 17, 2011). It is at least an open question whether some of the procedural challenges and litigation directed at Cape Wind were to protect resources or whether they were to stop the project. See also *supra* note 113.

then-lead federal agency, MMS (now BOEM) submitted a request to the National Park Service (NPS) to determine the eligibility of Nantucket Sound for inclusion on the NRHP.³⁰³ In January 2010, the NPS confirmed Nantucket Sound was eligible for inclusion on the NRHP pursuant to historic designation regulations.³⁰⁴ Nantucket Sound is the first marine water body to be deemed eligible for the NRHP.³⁰⁵ However, listing in the NRHP is arguably inappropriate for maritime and estuarine water bodies given the size and lack of clear boundaries inherent in such water features. This Section examines (1) the criteria for designating landscapes as historic places and (2) whether the criteria for designating landscapes is appropriately applied to historic maritime landscapes.

1. *NRHP Designation Criteria*

The criteria for evaluating a property's fitness for the NRHP are given by NPS regulation,³⁰⁶ which the NPS further clarifies through a number of informal guidance documents the NPS produces and refers to as "bulletins."³⁰⁷

A property may be eligible for listing if (1) it is "associated with events that have made a significant contribution to the broad patterns of our history"; (2) it is "associated with the lives of persons significant in our past"; (3) it "embod[ies] the distinctive characteristics of a type, period, or method of construction"; or (4)

³⁰³ See Timothy H. Powell, *Revisiting Federalism Concerns in the Offshore Wind Energy Industry in Light of Continued Local Opposition to the Cape Wind Project*, 92 B.U. L. REV. 2023, 2039 (2012).

³⁰⁴ Letter from U.S. Dep't of the Interior, Nat'l Park Serv., to Christopher E. Horrell, Fed. Pres. Officer, MMS, (Jan. 4, 2010), available at <http://nps.gov/nr/publications/guidance/NantucketSoundDOE.pdf> [hereinafter *Nantucket Determination*]. Eligibility for listing on the NRHP is determined by NPS's regulations. See 36 C.F.R. § 60.4.

³⁰⁵ Beth Daley, *More than Cape Wind Affected by Historic Label*, BOSTON GLOBE, Jan. 6, 2010, http://www.boston.com/news/local/massachusetts/articles/2010/01/06/historic_label_for_nantucket_sound_could_affect_more_than_cape_wind. Nantucket Sound is not the first water body of any kind to be found eligible for listing, however; bodies such as Walden Pond are listed in the NRHP. See Abby Goodnough, *For Controversial Wind Farm Off Cape Cod, Latest Hurdle Is Spiritual*, N.Y. TIMES Jan. 5, 2010, at A11.

³⁰⁶ See 36 C.F.R. § 60.4.

³⁰⁷ See, e.g., U.S. DEP'T OF THE INTERIOR, NAT'L PARKS SERV., NATIONAL REGISTER BULLETIN: GUIDELINES FOR EVALUATING AND DOCUMENTING TRADITIONAL CULTURAL PROPERTIES (1998) [hereinafter *TCP BULLETIN*], available at <http://www.nps.gov/NR/publications/bulletins/nrb38/>; see also Kuntz, *supra* note 6, at 326 (discussing National Parks Service bulletins).

it has “yielded, or may be likely to yield, information important in prehistory or history.”³⁰⁸

In addition to meeting one or more of these criteria, a property must have “integrity” to be eligible for listing.³⁰⁹ According to NPS guidance, “[i]ntegrity is the ability of a property to convey its significance.”³¹⁰ Elements of integrity are “location, design, setting, materials, workmanship, feeling, and association.”³¹¹ A property need not fulfill its integrity requirements for each element, and no single integrity criterion is determinative. However, it is crucial that a property have integrity with respect to the element(s) for which it is significant.³¹² For example, if a building is significant because of its location, but the building has been relocated to a new site, it lacks integrity of location.³¹³

2. *Appropriateness of Existing Criteria for Maritime Landscapes*

As noted above, Nantucket Sound is the first maritime body of water to be designated as eligible for the NRHP.³¹⁴ In its determination of eligibility, the NPS examined the Sound according to each of the four codified criteria and articulated reasons why each criterion applied.³¹⁵ The NPS also examined the Sound according to its bulletin governing designation of Traditional Cultural Properties (TCP Bulletin).³¹⁶ The TCP Bulletin applies the “integrity” component of an eligibility designation as “[the property’s importance of] maintaining the

³⁰⁸ 36 C.F.R. § 60.4.

³⁰⁹ *Id.*

³¹⁰ See U.S. DEP’T OF THE INTERIOR, NAT’L PARKS SERV., NATIONAL REGISTER BULLETIN: HOW TO APPLY THE NATIONAL REGISTER CRITERIA FOR EVALUATION, at 44 (1995) [hereinafter NRHP CRITERIA], available at <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf>.

³¹¹ 36 C.F.R. § 60.4.

³¹² See NRHP CRITERIA, *supra* note 310, at 44.

³¹³ See *id.* (“Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved.”).

³¹⁴ Nelson Sigelman, *Secretary Salazar Approves Cape Wind Project in Sound*, MARTHA’S VINEYARD TIMES, Feb. 25, 2010, <http://www.mvtimes.com/secretary-salazar-approves-cape-wind-project-sound-555>; see also *National Register of Historic Places Download Center*, NAT’L PARK SERV., <http://nrhp.focus.nps.gov/natreg/docs/Download.html#all> (click the FED DOE.xls hyperlink under “Finding Aids”) (providing a list of all historic buildings, districts, sites, structures and objects listed in the NRHP).

³¹⁵ Nantucket Determination, *supra* note 304, at 2.

³¹⁶ *Id.* at 4.

continuing cultural identity of the community.”³¹⁷ In the instance of Nantucket Sound, the determination of eligibility declared that the Sound maintained its identity and therefore its integrity.³¹⁸

One distinguished historic preservation law commentator has noted that no reported decision of any court has ever overturned an eligibility determination of the NPS.³¹⁹ The NPS is thus afforded great deference in making its determinations. However, one could at least argue that the NPS erred in declaring the Nantucket Sound eligible for designation because centuries’ worth of changing conditions have impaired the integrity of the Sound.³²⁰ First, the Sound has undergone enormous physical changes; before sea levels rose to their current elevations after the last ice age, now-subaqueous portions of the Sound were then subaerial.³²¹ Second, the Sound has changed in other important ways and now accommodates modern seagoing vessels (ferries, barges, and pleasure craft) that were unfathomable for much of the Tribe’s association with the body. The Sound also accommodates buoys, radio towers, and its coast is lined with relatively modern artificial lights and structures. Indeed, the Sound has experienced ecosystem changes and levels of pollution that have led to portions of the Sound being placed on Massachusetts’ Section 303(d) list of impaired waters.³²²

³¹⁷ TCP BULLETIN, *supra* note 307, at 1.

³¹⁸ Nantucket Determination, *supra* note 304, at 4.

³¹⁹ BRONIN & BYRNE, *supra* note 83, at 66.

³²⁰ Danielle E. Horgan, *Reconciling the Past with the Future: The Cape Wind Project and the National Historic Preservation Act*, 36 VT. L. REV. 409, 421 (2011) (advocating ultimately for the dismissal of litigation opposing Cape Wind on historic preservation grounds).

³²¹ L.J. POPPE ET AL., U.S. GEOLOGICAL SURVEY, SEA-FLOOR GEOLOGY AND SEDIMENTARY PROCESSES IN THE VICINITY OF CROSS RIP CHANNEL, NANTUCKET SOUND, OFFSHORE SOUTHEASTERN MASSACHUSETTS: OPEN-FILE REPORT 2011-1222 (2012), available at <http://pubs.usgs.gov/of/2011/1222/html/setting.html> (“The Holocene rise in sea level has conspicuously altered the geology and morphology of Nantucket Sound.”). See generally B.T. Gutierrez et al., *Relative Sea-Level Rise and the Development of Valley-Fill and Shallow-Water Sequences in Nantucket Sound, Massachusetts*, 193 MARINE GEOL. 295 (2003) (describing physical changes to Nantucket Sound).

³²² See MASS. DEP’T. OF ENVTL. PROT., DIV. OF WATERSHED MGMT., WATERSHED PLANNING PROGRAM, MASSACHUSETTS YEAR 2010 INTEGRATED LIST OF WATERS 177–78 (2011), available at <http://www.mass.gov/dep/water/resources/10list6.pdf>; MASS. DEP’T OF ENVTL. PROT., BUREAU OF RES. PROT., NANTUCKET HARBOR EMBAYMENT SYSTEM: TOTAL MAXIMUM DAILY LOADS FOR TOTAL NITROGEN 2 (2009), available at http://www.epa.gov/waters/tmdl/docs/36012_Nantucket%20Report.pdf.

The extent to which modern forces have diminished the historical integrity of the Sound for the Tribes' purposes is a matter the Tribes alone are best suited to address. But the extent to which the Sound receives protections under federal historic preservation law is a matter for public debate. NRHP listing is arguably not the most appropriate designation for the Nantucket Sound specifically and other historic bodies of water generally. One reason NRHP listing is generally inappropriate for marine bodies of water is marine areas are not "properties" in the same sense that terrestrial landscapes are.³²³ The NPS's determination of eligibility for Nantucket Sound acknowledged as much, stating, "the exact boundary is not precisely defined."³²⁴ Identifying adverse impacts on an undefined, featureless water body tends toward arbitrariness. NRHP listing is also inappropriate because the federal executive branch has other landscape designation tools such as National Historic Landmarks or Marine Protected Areas at its disposal to protect marine resources from inappropriate use.³²⁵ Alternatively, Congress could pass legislation either authorizing designation criteria for historic marine bodies or expressly identifying historic marine or estuarine bodies such as Nantucket Sound, Pamlico Sound, San Francisco Bay, the Hudson River, Mobile Bay, and others.

But as ACHP applied the NRHP designation to the Nantucket Sound, it is likely to apply such designation to other seascapes. NRHP designation is inappropriate for featureless and boundary-less maritime bodies of water. Another historic preservation

³²³ Properties with large areas are considered "districts" under the NRHP designation criteria. See NRHP CRITERIA, *supra* note 310, at 4. However, Nantucket Sound fails to comport to the standards of a district either. See *id.* at 6 ("A district must be a definable geographic area that can be distinguished from surrounding properties The boundaries must be based upon a shared relationship among the properties constituting the district.").

³²⁴ Nantucket Determination, *supra* note 304, at 4.

³²⁵ See generally Donald C. Baur et al., *Putting "Protection" into Marine Protected Areas*, 28 VT. L. REV. 497 (2004) (discussing Nantucket Sound in the context of federal Marine Protected Areas designation). However, even other designation tools (e.g., the Antiquities Act) are poorly equipped to deal with conservation of marine resources insofar as those tools were designed for terrestrial conservation. See generally Mark Laemmle, *Monumentally Inadequate: Conservation at Any Cost under the Antiquities Act*, 21 VILL. ENVTL. L.J. 111 (2010) (arguing against the use of the Antiquities Act to protect marine areas for many of the reasons given above). An important difference between NRHP designation and Marine Protected Areas designation is that the latter has a history of protecting maritime bodies dating back to the 1930s, whereas the first such use under the former was in 2010. *Id.* at 112.

designation system should be used, or a new system with more appropriate designation criteria should be developed.

C. *Historic Preservation and Utility-Scale Renewable Energy: Synthesis and Recommendations*

As discussed, NHPA is at its core an information-gathering statute. It does not dictate substantive, specific outcomes with respect to specific projects. Rather it requires that federal agencies with jurisdiction over a specific project meet certain consultation and analysis requirements. Consultation with tribal governments is among the most important of these procedural, information-gathering requirements when tribal historic resources are implicated. When the agency with jurisdiction over a project adheres to NHPA's requirements, the results are almost universally superior from a historic preservation perspective than when those requirements are ignored. Private sector energy developers and agency officials with a mandate to be responsive to those developers in order to achieve the administration's energy policy goals have an incentive to circumvent NHPA's requirements. The incentive exists because consultation and information gathering can increase costs or slow a project down.³²⁶

Formal designation of historic resources in the NRHP, which is related to NHPA's information-gathering mandate, can also lead to conflicts. Although designation is largely ceremonial and does not conclusively preclude future development, designation can have a chilling effect that developers would like to avoid.³²⁷ If nothing else, designation heightens public awareness about the significance of a historic resource, providing symbolic significance that opponents to a project might rally around.³²⁸

This Section further considers these potential sources of conflict, examines methods of conflict resolution from the municipal land use context, and concludes with recommendations to reconcile the objectives of historic preservation with those of renewable energy development when land use conflicts occur.

³²⁶ Kochan, *supra* note 117, at 408.

³²⁷ See Phelps, *supra* note 33, at 138–42 (describing emerging resistance and popular opposition to historic designation).

³²⁸ See Kimmell & Stalenhoef, *supra* note 4, at 210 (noting that Nantucket Sound's designation in the NRHP “emboldened” opponents of the Cape Wind project).

1. *Incomplete Resource Protection and Continued Conflicts*

Without administrative changes, renewable energy projects on federal lands and in federal waters will continue to conflict with historic resources. Moreover, project developers will likely continue to seek to minimize or circumvent the pre-construction historic impact review process.³²⁹ Ultimately, even if federal agencies scrupulously adhere to NHPA's requirements, historic resources may go unprotected because NHPA only dictates a process and does not impose substantive protections.³³⁰

The adverse environmental effects of utility-scale solar, geothermal, and wind projects on historic resources are almost certainly less severe and less irreversible than the effects of conventional power facilities.³³¹ Nevertheless, the visual adverse effects are very real, and are likely to grow as projects cover more area and become more numerous.³³²

New utility-scale renewable energy projects are also

³²⁹ See Giddings, *supra* note 301, at 78 (advocating for a categorical exclusion under NEPA for offshore wind projects and describing the benefits of "streamlining" such projects).

³³⁰ See Pianca, *supra* note 105, at 487–88.

³³¹ Gillette et al., *supra* note 3 at 50; Sovacool, *supra* note 11. For instance, renewable energy projects are less intensive uses of the land and emit less local pollution than conventional power generators such as coal-fired and nuclear power plants. *Id.*; see also Conger, *supra* note 117, at 746 (detailing the environmental benefits of wind as compared to conventional fuel sources); RANDY T. SIMMONS & RYAN M. YONK, ENERGY IN NATIONAL MONUMENTS (2013) (providing examples of the effects of nonrenewable and renewable energy sources in National Monuments).

³³² See, e.g., Erin Ailworth, *First Wind Sees Setbacks in Maine*, BOSTON GLOBE, June 21, 2014, <http://www.bostonglobe.com/business/2014/06/20/first-wind-sees-setbacks-maine-progress-utah/2JJrxFdw4bxhYB4hEuDbL/story.html> (describing the denial of permits for wind turbines on the grounds that the turbines "would adversely affect the views around nine scenic lakes considered of 'state or national significance'"); Pizzo, *supra* note 266. Renewable energy projects disturb landscapes during construction, spread permanent physical alterations over hundreds to thousands of acres, and introduce foreign objects into historic landscapes and seascapes. See Simon Clarke, *Balancing Environmental and Cultural Impact Against the Strategic Need for Wind Power*, 15 INT'L J. HERITAGE STUD. 175, 178–84 (2009) (describing the adverse environmental and aesthetic effects of wind farms and the need to balance such harms against global atmospheric changes); Maarten Wolsink, *Wind Power Implementation: The Nature of Public Attitudes: Equity and Fairness Instead of "Backyard Motives"*, 11 RENEWABLE & SUSTAINABLE ENERGY REV. 1188, 1194 (2007) (finding that popular opposition to wind projects generally centers on the visual impacts of turbines on landscapes, particularly landscapes considered scenic or otherwise culturally significant).

developing on short timelines.³³³ Whereas utility-owned projects passed capital costs onto ratepayers and therefore could afford to move as slowly as state public utility commissions allowed, with investor-led renewable utility projects, equity holders are highly incentivized to seek a return on their capital as quickly as possible. The fast-track approach to project development creates a tension with historic resource review, which almost necessarily dictates iterative consultation and analysis.

Continued conflicts between renewable energy projects and historic resources seem likely given the existing market and policy conditions. NHPA's information-gathering and consultation requirements cannot prevent a project from being developed, provided the lead federal agency adheres to the regulatory requirements. Ultimately, NHPA cannot dictate outcomes that protect historic resources from the effects of new development because it cannot impose substantive obligations on federal agencies to protect historic resources.³³⁴ At best, preservationists can ensure that an agency is informed about what it plans to disturb, and hope that the agency weighs competing interests fairly and requires mitigation for any impacts on historic resources.³³⁵

2. *The "Zoning" Approach: Spatial Designations Can Separate Incompatible Land Uses*

To address concerns regarding the adequacy of procedural historic preservation review and designation, preservation advocates should look to Euclidean zoning.³³⁶ Zoning has helped

³³³ See AM. WIND ENERGY ASS'N & SOLAR ENERGY INDUS. ASS'N, *supra* note 25, at 6.

³³⁴ See MacGill, *supra* note 22, at 706 (describing the limitations of NHPA and its lack of substantive procedures to protect historic assets).

³³⁵ As the Cape Wind case illustrates, when a federal agency follows NHPA's procedures and the project has merit, the project can proceed even in the face of adverse effects to nearby historic resources. Not even formal designation of a historic landscape in the NRHP can forestall development. Horgan, *supra* note 320, at 418 ("[N]either section 106, nor the NHPA as a whole, requires that a project be abandoned in the event that it adversely affects a registered or eligible historic landmark. Indeed 'Section 106 encourages, but does not mandate, preservation.'").

³³⁶ "Euclidean" zoning is so named after the city of Euclid, Ohio, which was one of the key parties in the Supreme Court case determining the validity of zoning for different land uses. See *Euclid v. Ambler*, 272 U.S. 365 (1926). Euclidean zoning defines zones on the basis of land use thereby separating potential land use conflicts. See Jonathan E. Cohen, *A Constitutional Safety Valve: The Variance in Zoning and Land-Use Based Environmental Controls*, 22 B.C. ENVTL. AFF. L. REV. 307, 330 (1995).

protect historic resources in the local land use context, and it offers lessons for protecting historic resources on federal lands and in federal waters. Strong parallels exist between conflicting interests over historic resources in the municipal land use context and conflicting interests over federal land use.³³⁷

Federal lands dealing with competing land uses are ripe for zoning.³³⁸ Three lessons from zoning are applicable to historic preservation and energy development on federal lands: (1) designating historic zones with substantive protections for historic resources and exceptions for new developments of “special merit” separates incompatible uses but allows some flexibility; (2) a public process for making land use decisions on federal lands can avoid disputes winding up in court after federal agencies make a decision; and (3) nascent zoning-like policies on federal lands are providing test cases for a more robust framework.

a. *Historic Zone Districts and the Special Merit Exception*

Numerous municipalities designate historic zones, in which special historic preservation-oriented rules apply to new development.³³⁹ In such historic zone districts, aesthetic controls are often more stringent about the form of new development than in non-historic districts.³⁴⁰ Such stringency in protecting historic fabric arises from the recognition that the visual effects of new development are frequently the most significant adverse impact on historic resources.³⁴¹

Occasionally, however, the benefits of a new development in a historic zone or directly affecting a historic resource will be uniquely well suited for that particular location, such that it is in the public interest to relax the historic preservation restrictions to

³³⁷ See generally Josh Eagle, *The Practical Effects of Delegation: Agencies and the Zoning of Public Lands and Seas*, 35 PEPP. L. REV. 835 (2008).

³³⁸ Municipal zoning laws do not apply on federal lands, and zoning certainly does not limit uses of federally controlled areas offshore. See, e.g., *Groton v. Laird*, 353 F. Supp. 344, 350 (D. Conn. 1972) (noting that the federal government is exempt from municipal zoning law). See generally Robin Kundis Craig, *Treating Offshore Submerged Lands as Public Lands: An Historical Perspective*, 34 PUB. LAND & RESOURCES L. REV. 51 (describing federal control over offshore areas).

³³⁹ Phelps, *supra* note 33.

³⁴⁰ See *id.* at 134–36. See generally Carol M. Rose, *Preservation and Community: New Directions in the Law of Historic Preservation*, 33 STAN. L. REV. 473, 489–91 (1980).

³⁴¹ Phelps, *supra* note 33, at 134–36; see also Byrne, *supra* note 37, at 682 (discussing the role of historic preservation in aesthetic regulation).

accommodate a single new development. Some jurisdictions balance the public interest in historic preservation with the benefits of a new project through “variances” or “special exceptions.”³⁴² Washington, DC—among the country’s richest troves of historic resources—relaxes its otherwise stringent historic preservation laws only for projects of “special merit,” which allows new projects with unique public benefits to proceed despite adverse effects on historic resources.³⁴³ Special merit is defined as “a plan or building having significant benefits to the District of Columbia or to the community by virtue of (1) exemplary architecture, (2) special features of land planning, or (3) social or other benefits having a high priority for community services.”³⁴⁴ Moreover, special merit determinations are truly unique, and are intended to be an “escape valve for a narrow category of situations in which the proposed construction or other amenities offered as some ‘special benefits’ to the overall community, could override the contributions made by any structure which the [District’s historic preservation review board] has already determined should be preserved.”³⁴⁵

One benefit of zoning is that it serves to confer an entitlement on potential developers, thereby reducing some pre-development risk. A developer can be certain that within designated areas its proposed project can go forward.³⁴⁶ Designating historic zones and using the special merit concept for unique proposed projects within those areas provides a template for protecting the most important

³⁴² Phelps, *supra* note 33, at 133; *see also* Cohen, *supra* note 336.

³⁴³ *See* J. Peter Byrne, *Regulatory Takings Challenges to Historic Preservation Laws After Penn Central*, 15 FORDHAM ENVTL. L. REV. 313, 320–21 (2004) (discussing important special merit cases in Washington, D.C.); Elizabeth Wohlken Rugaber, *The Special Merit Exemption Under D.C.’s Historic Preservation Act: An Analysis of 20 Years of Application and Suggestions for the Future* 2–3 (May 14, 2002), http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1007&context=hpps_papers.

³⁴⁴ D.C. CODE § 6-1102(11) (2013). Special merit determinations are fact intensive and made by a specially appointed administrator. *Id.*

³⁴⁵ *In re* Application for Demolition of the Webster School and for New Construction, HPA No. 00-462 (Feb. 15, 2001) *available at* https://www.law.georgetown.edu/library/collections/histpres/get-document.cfm?id_no=27&display=text.

³⁴⁶ *See* Kimmell & Stalenhoef, *supra* note 4, at 214–15 (describing also the lack of assurance renewable energy developers confront that they will actually receive the necessary permits, especially in light of the lengthy regulatory delays Cape Wind has faced); *see also* James N. Sanchirico et al., *Comprehensive Planning, Dominant-Use Zones, and User Rights: A New Era in Ocean Governance*, 86 BULL. MARINE SCI. (2010).

historic resources while allowing some flexibility for new development.

b. *Public Process in Zoning and Land Use Decisions*

A second lesson to be learned from municipal zoning practice can be drawn from the rich tradition of public process in land use decision making. Perhaps because land use decisions generally have the strongest effects on a local level, the land use political process is one that skews significantly towards local political institutions and citizen involvement.³⁴⁷ Citizens, rather than career bureaucrats, generally make local land use decisions.³⁴⁸ Other interested citizens can participate in the local decision-making process either informally or formally, and citizen involvement or public participation is a hallmark of zoning and land use policymaking.³⁴⁹

Policymaking surrounding federal lands is decidedly less participatory than land use decision making generally,³⁵⁰ but this need not be the case. Federal land management officials could draw heavily from local land use public participation processes to reduce conflicts over historic and renewable energy resources on federal lands.

c. *Nascent Public Lands Zoning*

Conflicts over competing uses for public lands are not new

³⁴⁷ See Orlando E. Delogu, *supra* note 27, at 16 (describing the strengthening of local control of land use); Bradley C. Karkkainen, *Zoning: A Reply to the Critics*, 10 J. LAND USE & ENVT'L. L. 45, 56 n.141-42 (1994); Garrick B. Pursely & Hannah J. Wiseman, *Local Energy*, 60 EMORY L.J. 877, 907-8 (2010); Carol M. Rose, *Planning and Dealing: Piecemeal Land Controls as a Problem of Local Legitimacy*, 71 CAL. L. REV. 837, 842-43 (1983)

³⁴⁸ See Jerry L. Anderson et al., *A Study of American Zoning Board Composition and Public Attitudes Toward Zoning Issues*, 40 URB. LAW. 689, 701-05 (2008) (describing the results of a large multi-state survey finding that members of municipal zoning bodies tend to be white collar professionals); see also Eagle, *supra* note 337 at 847.

³⁴⁹ See Jerrold A. Long, *Private Lands, Conflict, and Institutional Evolution in the Post-Public-Lands West*, 28 PACE ENVTL. L. REV. 670, 681-83 (2011); Janice K. Tulloss, *Citizen Participation in Boston's Development Policy: The Political Economy of Participation*, 30 URB. AFF. REV. 514, 514 (1995); Daren C. Brabham, *Crowdsourcing the Public Participation Process for Planning Projects*, 8 PLAN. THEORY, 242, 243 (2009).

³⁵⁰ Gail L. Achterman & Sally K. Fairfax, *The Public Participation Requirements of the Federal Land Policy and Management Act*, 21 ARIZ. L. REV. 501, *passim* (1979); Lloyd C. Irland & J. Ross Vincent, *Citizen Participation in Decision Making: A Challenge for Public Land Managers*, 27 J. RANGE MGMT. 182, 182 (1974).

and are not unique to renewable energy and historic preservation.³⁵¹ The Obama Administration has recognized that renewable energy resources present possible conflicts and has increased efforts to engage in zoning-like policies for federal lands. In May 2011, BLM introduced a draft plan for adopting a zone-based approach to siting utility-scale solar projects on federal lands.³⁵² During the summer of 2012, DOI finalized a programmatic environmental impact statement (PEIS) to speed the development of solar projects on federal lands in California, Nevada, Arizona, Utah, Colorado, and New Mexico.³⁵³ The PEIS studied nearly three hundred thousand acres and is expected to result in solar energy zones that accommodate twenty-four thousand megawatts of new solar capacity, or many times the total domestic solar capacity.³⁵⁴ The PEIS draws heavily on the “zone” concept. It delineates prime solar generation areas on federal lands in the aforementioned six states, and seeks to balance the impact on cultural and biological resources by excluding from potential development the most sensitive areas.³⁵⁵ Detailed planning for solar development on these federal lands is underway.³⁵⁶

In December 2009, Massachusetts became the first state to

³⁵¹ See Outka, *supra* note 3, at 252; see also Josh Eagle, *The Practical Effects of Delegation: Agencies and the Zoning of Public Lands and Seas*, 35 PEPP. L. REV. 835, 853-54 (2008) (advocating for “uniform-use” zones rather than multi-use zones); Scott Streater, *BLM Approves New Solar, Geothermal Development Plan in Calif. Desert*, E&E NEWS (Aug. 14, 2013), <http://www.eenews.net/stories/1059986013> (discussing possible conflicts between solar and geothermal developments on federal lands and competing environmental and military uses).

³⁵² See *Solar Energy Zones*, SOLAR ENERGY DEV. PROGRAMMATIC EIS INFO. CENTER, <http://solareis.anl.gov/sez/index.cfm> (last visited May 17, 2011); James Navarro, *Solar Energy Zones: The Smart Place to Start*, DEFENDERS OF WILDLIFE BLOG (May 2, 2011), <http://www.defendersblog.org/2011/05/solar-energy-zones-the-smart-place-to-start/>.

³⁵³ BUREAU OF LAND MGMT. & DEP’T OF ENERGY, FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT FOR SOLAR ENERGY DEVELOPMENT IN SIX SOUTHWESTERN STATES: EXECUTIVE SUMMARY (2012), available at http://solareis.anl.gov/documents/fpeis/Solar_FPEIS_ExecutiveSummary.pdf.

³⁵⁴ *Id.* at ES-13, ES-17; see also Outka, *supra* note 3, at 252–53.

³⁵⁵ See BUREAU OF LAND MGMT. & DEP’T OF ENERGY, *supra* note 353, at ES-10.

³⁵⁶ See Press Release, Dep’t of the Interior Secretary Jewell Underscores Importance of Landscape-Level Approach, Mitigation in Meeting President’s Renewable Energy Goals on Public Lands (Aug. 13, 2013), available at <http://www.doi.gov/news/pressreleases/secretary-jewell-underscores-importance-of-landscape-level-approach-mitigation-in-meeting-presidents-renewable-energy-goals-on-public-lands.cfm>.

adopt an Ocean Management Plan.³⁵⁷ The plan identified important ecological, economic, historic, recreational, geophysical, and energy resource areas.³⁵⁸ It sought to impose a Euclidean-like zoning scheme to state-controlled maritime waters.³⁵⁹ Almost at the same time, the CEQ released its “Interim Framework for Coastal and Marine Spatial Planning.”³⁶⁰ The Framework is the first step in establishing national-scale spatial and resource plans, and may help avoid the delays Cape Wind experienced for projects that occur in federal waters.³⁶¹

3. *Recommendations*

The problems that emerged in the Cape Wind, *Quechan Tribe I*, and *Pit River Tribe* cases could be avoided through advanced agency planning or via legislative intervention.

a. *Engage in Stakeholder-Led Spatial Planning To Designate Historic Resource and Energy Development Zones on Federal Lands and in Federal Waters*

One solution to avoid or address conflicts on federal lands is to bring stakeholders together as soon as possible to identify and

³⁵⁷ MASS. EXEC. OFFICE OF ENERGY & ENVTL. AFF., MASSACHUSETTS OCEAN MANAGEMENT PLAN (Dec. 2009), available at <http://www.env.state.ma.us/eea/mop/final-v1/v1-complete.pdf>; see also Morgan Gopnik et al., *Coming to the Table: Early Stakeholder Engagement in Marine Spatial Planning*, 36 MARINE POL’Y 1139 (2012); Kimmell & Stalenhoef, *supra* note 4, at 213–14.

³⁵⁸ MASS. EXEC. OFFICE OF ENERGY & ENVTL. AFF., *supra* note 357, at 1-3. Notably the Ocean Management Plan identifies protected “sanctuary” areas where no human activities are permitted; renewable energy areas for wind, wave and tidal power; and multi-use areas, where sediment mining, shellfishing, and a variety of other uses are permitted. See *id.* at 2-1 to 2-3.

³⁵⁹ See *id.* at 3-2 to 3-10 (depicting zones where various offshore uses are prohibited or allowed). See generally Sue Kidd & Geraint Ellis, *From the Land to Sea and Back Again? Using Terrestrial Planning to Understand the Process of Marine Spatial Planning*, 14 J. ENVTL. POL’Y & PLAN. 49 (2012) (describing parallels between land use planning and burgeoning ocean zoning paradigms).

³⁶⁰ WHITE HOUSE COUNCIL ON ENVTL. QUALITY, INTERIM FRAMEWORK FOR EFFECTIVE COASTAL AND MARINE SPATIAL PLANNING (2009), [hereinafter INTERIM FRAMEWORK] available at <http://www.whitehouse.gov/sites/default/files/microsites/091209-Interim-CMSP-Framework-Task-Force.pdf>. This framework served as the basis for a document issued a year later setting forth a national policy for ocean and coastal areas that called for extensive spatial planning in offshore areas to better manage those areas for, inter alia, renewable energy development as well as maritime heritage and archeology preservation. See WHITE HOUSE COUNCIL ON ENVTL. QUALITY, FINAL RECOMMENDATIONS OF THE INTERAGENCY OCEAN POLICY TASK FORCE 32, 42 (2010), available at http://www.whitehouse.gov/files/documents/OPTF_FinalRecs.pdf.

³⁶¹ See INTERIM FRAMEWORK, *supra* note 360, at 7.

prioritize sensitive historic resource areas and prime energy generation areas via a spatially-informed planning process that approximates zoning.³⁶² In each of the three cases involving tribal conflicts examined above, the consultation failures under NHPA might have been largely avoided via a multi-stakeholder, agency-led spatial planning exercise early in the project's conception.³⁶³ While each party engaged in the process may not achieve each of its preferred outcomes, geography-based planning will allow for prioritization and compromise. Consensus-built spatial planning is essential in identifying the sensitive "off-limits" sites for preservationists and the commercially valuable "must-build" sites for the developers.³⁶⁴

- b. *Allow Federal Land Agencies To Adopt Substantive Protections for Historic Resources, but Couple Those Protections with a "Special Merit" Exception To Allow for New Development in Historic Areas Under Certain Pre-Defined Conditions*

NHPA's procedural requirements are inadequate to protect historic resources on federal lands and in federal waters. Federal agencies applying NHPA in such areas should be empowered—via an executive order or via a reassessment of NHPA's Section 110³⁶⁵—to impose substantive protections on historic resources on

³⁶² See SUSAN F. TIERNEY & STEPHEN CARPENTER, PLANNING FOR OFFSHORE ENERGY DEVELOPMENT: HOW MARINE SPATIAL PLANNING COULD IMPROVE THE LEASING/PERMITTING PROCESSES FOR OFFSHORE WIND AND OFFSHORE OIL/NATURAL GAS DEVELOPMENT (2013).

³⁶³ See Alexander, *supra* note 79, at 914–15 (identifying ways to engage tribes in historic preservation review: either by incorporating tribal input into the agency's general operations or by engaging in consultations on a project-by-project basis). Agencies with questions about how best to engage the tribes in planning should look at the information promulgated by the tribes themselves. See SHERRY HUTT & JAIME LAVALLEE, NAT'L ASS'N OF TRIBAL HISTORIC PRES. OFFICERS, TRIBAL CONSULTATION: BEST PRACTICES IN HISTORIC PRESERVATION (2005), available at http://www.nathpo.org/PDF/Tribal_Consultation.pdf.

³⁶⁴ See Paddock & Colasuonno, *supra* note 109, at 623 (discussing the benefits of using spatial planning to identify natural resource areas and energy resource areas to avoid or minimize conflicts between the two). See generally, Sean F. Nolon, *The Lawyer as Process Advocate: Encouraging Collaborative Approaches to Controversial Development Decisions*, 27 PACE ENVTL. L. REV. 103, *passim* (2009) (discussing collaborative management processes to address land use conflicts).

³⁶⁵ Section 110 recites that "the heads of all Federal agencies shall assume responsibility for the preservation of historic properties which are owned or controlled by such agency," 16 U.S.C. § 470h-2(a)(1). Section 110 also states that properties listed on the NRHP be "managed and maintained in a way that

federal lands and in federal waters.

However, if an agency with control over federal land or water elects to adopt such substantive protections, it would be wise to give itself an escape clause similar to Washington, DC's special merit provision. It is difficult to foretell the adequacy of all areas for all types of renewable energy. For instance, suppose advancement in technology makes geothermal energy development much more feasible, or suppose a nascent technology such as tidal power becomes feasible. Rather than "rezoning" substantial tracts of federal land and water to accommodate the new technology—no small task given the public process contemplated above—the administrator of the federal land could weigh the benefits of an individual project against the benefits of continued preservation of the proposed site's historic resources.

c. *Prioritize Either Historic Preservation or Renewable Energy Development Over the Other via Legislation*

Wholly apart from more robust agency-led planning, a statutory solution could avoid future resource conflicts by exempting, or prioritizing renewable energy projects over historic resources.³⁶⁶ As the district court noted in *Quechan Tribe I*, "Congress could determine this particular project is in the public interest and sweep aside [American Recovery and Reinvestment Act of 2009] deadlines as well as requirements under NEPA, NHPA, and [Federal Lands Policy and Management Act of 1976] to get it built. But Congress didn't do that."³⁶⁷ In favor of renewable resources, Congress could pass legislation that preempts

considers the preservation of history, archaeological, architectural and cultural values . . . and gives special consideration to the preservation of such values." *Id.* § 470h-2(a)(2)(B). Some historic preservation advocates have argued that NHPA's Section 110 imposes substantive requirements on federal agencies to protect historic resources on federal property. However, the courts have generally not agreed that Section 110 imposes substantive requirements on agencies. *See Wilderness Watch v. Iwamoto*, 853 F. Supp. 2d 1063, 1070–71 (W.D. Wash. 2012) ("Section 110(a) cannot be read to create new substantive preservationist obligations separate and apart from the overwhelmingly procedural thrust of the NHPA as described by every court that has considered the Act.") (citations omitted).

³⁶⁶ *See Baker, supra* note 28, at 7 (discussing California's decision to elevate solar energy development over competing land use interests).

³⁶⁷ *Quechan Tribe of the Fort Yuma Indian Reservation v. U.S. Dep't of the Interior*, 755 F. Supp. 2d 1104, 1122 (S.D. Cal. 2010).

NHPA for certain classes of projects, or could impose stripped down historic preservation review requirements for projects receiving certain federal assistance, meeting certain federal objectives, or occupying certain federal lands.³⁶⁸ Alternatively, in favor of historic resources, Congress could impose more stringent, substantive historic preservation requirements for projects on federal lands or in federal waters. However, such an outcome seems unlikely given the political climate in Congress as of this writing.³⁶⁹

CONCLUSION

Historic preservation laws protect historic structures, landscapes, districts, and landmarks and influence the development of the built environment at scales both great and small.³⁷⁰ However, historic preservation is just one of many forces shaping the built environment. Preservation often competes with other influences, including demand for new and greater amounts of housing and commercial space, investment in real estate for pecuniary gain, the exploitation of natural resources, and the development of new infrastructure, among many others. Each of these influences has laudable objectives as well as occasional adverse effects on preservation, and conflicts inevitably arise over which factor or factors should most influence the use and form of

³⁶⁸ For instance, Connecticut has passed a law stating that “No application for a certificate of appropriateness for an exterior architectural feature, such as a solar energy system, designed for the utilization of renewable resources shall be denied unless the commission finds that the feature cannot be installed without substantially impairing the historic character and appearance of the district.” CONN. GEN. STAT. § 7-147f (2013).

³⁶⁹ See Giddings, *supra* note 301, at 85 (citations omitted). For instance, in 2011 California Senator Dianne Feinstein introduced legislation to designate new Mojave Desert National Monuments (which would be off-limits to solar energy development) and to direct BLM to open up other lands for renewable energy development. See California Desert Protection Act of 2011, S. 138, 112th Cong. § 1307 (2011). The bill did not pass out of committee.

³⁷⁰ Historic preservation laws have become increasingly important since American communities have begun to recognize the cultural and economic value of historic resources. See David B. Fein, *Historic District: Preserving City Neighborhoods for the Privileged*, 60 N.Y.U. L. REV. 64, 64 (1985). See generally DONOVAN D. RYPKEMA, *THE ECONOMICS OF HISTORIC PRESERVATION: A COMMUNITY LEADER’S GUIDE* (2005) (discussing the economic development benefits of historic preservation); Kent A. Robertson, *Downtown Redevelopment Strategies in the United States: An End-of-the-Century Assessment*, 61 J. AM. PLAN. ASS’N. 429, 432 (1995) (identifying historic preservation as an important aspect of the economic revitalization of traditional downtown areas).

urban areas, rural communities, and pristine landscapes. This Article aims to contribute to the recent discussion regarding conflicts between renewable energy and other environmental and social concerns.³⁷¹

The development of utility-scale renewable energy resources will continue to impose adverse effects on historic resources, despite the recommended policy amendments identified above. Some competing land uses and land use interests are simply incompatible. Nevertheless, historic preservation review makes imperfect utility-scale energy projects better by imposing procedural requirements such as information gathering and consultation.

Utility-scale renewable energy development is still in its infancy in the United States, and demand for increased transmission capacity is almost certain to continue to grow. Learning from the challenges and missteps of early projects will result in better results for later projects.

³⁷¹ See, e.g., Alexander, *supra* note 79; J.B. Ruhl, *Harmonizing Commercial Wind Power and the Endangered Species Act Through Administrative Reform*, 65 VAND. L. REV. 1769 (2012); Amy J. Wildermuth, *Is Environmental Law a Barrier to Emerging Alternative Energy Sources?*, 46 IDAHO L. REV. 509 (2010).