United States
Department of Energy

Summary of Findings
In re Application of Clean Line Energy Partners LLC
Pursuant to Section 1222 of
the Energy Policy Act of 2005

March 25, 2016

TABLE OF CONTENTS

FREQUENTLY USED ACRONYMS

AC	Alternating Current
DC	Direct Current
DOE	United States Department of Energy
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPAct 2005	Energy Policy Act of 2005, as amended, 42 U.S.C. § 15801 *et seq.*
ESA	Endangered Species Act of 1973, as amended, 16 U.S.C. § 1531 *et seq.*
FERC	Federal Energy Regulatory Commission
GW	Gigawatt (one billion watts)
HVDC	High-Voltage Direct Current
MISO	Midcontinent Independent System Operator
MW	Megawatt (one million watts)
NEPA	National Environmental Policy Act of 1969, as amended, 42 U.S.C. § 4321 *et seq*.
NERC	North American Electric Reliability Corporation
OATT	Open-Access Transmission Tariff
RFI	Request for Information
RFP	Request for Proposals
ROW	Right-of-Way or Rights-of-Way
RRO	Regional Reliability Organization
RTO	Regional Transmission Organization
SPP	Southwest Power Pool
SWPA	Southwestern Power Administration
TSA	Transmission Services Agreement
TVA	Tennessee Valley Authority
USFWS	United States Fish & Wildlife Service
WAPA	Western Area Power Administration

UNITED STATES DEPARTMENT OF ENERGY
SUMMARY OF FINDINGS
IN RE APPLICATION OF CLEAN LINE ENERGY PARTNERS LLC
PURSUANT TO SECTION 1222 OF THE ENERGY POLICY ACT OF 2005

I. Executive Summary

This Summary of Findings presents the U.S. Department of Energy's (DOE or the Department) conclusions regarding the application by Clean Line Energy Partners LLC (Clean Line) submitted pursuant to section 1222 of the Energy Policy Act of 2005 (EPAct 2005). Clean Line seeks the Department's participation in the development, siting, construction, operation, maintenance, and ownership of high-voltage direct current (HVDC) transmission facilities running approximately 705 miles from western Oklahoma to the Arkansas-Tennessee border (the Project). Clean Line, acting on its own and without the Department's participation, would build additional facilities that would connect to the Project in Texas and Tennessee.

The Project would deliver up to 4,000 megawatts (MW) of primarily wind generation from the Oklahoma and Texas Panhandle region to the mid-South and Southeastern United States, which could meet the annual energy needs of more than 1.5 million average American homes. Wind resources in the Panhandle region are among the most consistent and lowest-cost in the Nation. But their development has been constrained by a lack of cost-effective transmission capacity to major load centers. The Project would, therefore, unlock the potential for significant new development of wind energy and deliver that energy to a region of the United States that has seen relatively scarce wind development. Of course, energy delivered from the Project will have to compete on price and quality with other resources available to consumers in the mid-South and Southeastern United States. Such competition is healthy, however. By increasing the availability of renewable energy from the Panhandle region across a wide geographic area, the Project will facilitate market competition that will ultimately benefit consumers and the renewable energy industry as a whole.

The Department's participation in the Project does not include any financial contribution. Along with the review that led to this Summary of Findings, Department staff have negotiated a Participation Agreement with Clean Line. The Participation Agreement would ensure that all of the Department's costs would be paid by Clean Line in advance, that Clean Line would indemnify and hold the Federal Government harmless against any liabilities created by the Project, and that Clean Line's obligations would be backed by adequate insurance and credit support. The Participation Agreement also carefully conditions the Department's involvement in the Project, including land acquisition by the Department, on Clean Line satisfying commercial and technical milestones that demonstrate the Project's continued viability. The Participation Agreement would further obligate Clean Line to contribute two percent of revenues from the Project to offset the Federal Government's costs of federal hydropower infrastructure improvements, an activity with significant long-term needs, and to make certain payments to local governments for real property and facilities owned by the Federal Government that would otherwise be taxable.

As directed by section 1222, the Southwestern Power Administration (Southwestern or SWPA) would act on behalf of the Secretary in carrying out important functions related to the Project. But Southwestern's involvement would not, and indeed must not, interfere with its power marketing function or adversely affect its rates for federal hydropower. Like all Departmental expenses, Southwestern's costs would be carefully tracked and funded in advance by Clean Line. And, as explained in greater detail below, the Department concludes that there is no lawful means by which costs or liabilities associated with the Project could be recovered in Southwestern's rates for federal hydropower marketed under the Flood Control Act of 1944.

Section II of this Summary of Findings provides an introduction to section 1222 and the process the Department has undertaken to review Clean Line's application, which included a review of environmental impacts in accordance with the National Environmental Policy Act (NEPA) and the consideration of public comments on both environmental and non-environmental issues. Section III describes the key terms of the Participation Agreement and Southwestern's role in the Project. Section IV describes the Department's legal authority to participate in this Project. Section V considers the eligibility criteria imposed by section 1222 and concludes that the Project satisfies them all. Section VI discusses the considerations that the Department uses to evaluate applications received under section 1222: whether the project is in the public interest, whether it facilitates the delivery of renewable energy, the benefits and impacts of the Project to each state it traverses, and the technical and financial viability of the project. Section VII concludes.

II. Introduction

a. Section 1222 of EPAct 2005

Section 1222 of EPAct 2005, Pub. L. No. 109-58, was enacted as part of a suite of congressional reforms to promote transmission development. Section 1222 authorizes the Secretary of Energy to accept and use funds contributed by another entity to carry out a project, with the contributed funds treated as appropriated funds without fiscal year limitation.[1] The Secretary may use contributed funds for two types of projects: (1) upgrades to existing transmission facilities owned by Southwestern or the Western Area Power Administration (Western or WAPA),[2] or (2) new electric power transmission facilities located within any state in which Southwestern or Western operates.[3] Prior to EPAct 2005, Western and Southwestern's authority to build transmission facilities was generally limited to those facilities necessary to deliver federal hydropower.[4] Section 1222 expands the type of transmission projects in which Southwestern or Western may participate, provided that the projects satisfy certain criteria as determined by the Secretary, in consultation with the applicable Administrator of either Southwestern or Western. The criteria include demonstrations of the need for the proposed project and assurances that it will be operated in conformance with industry standards. The Secretary must make the relevant determinations using the best available data.[5]

Section 1222 falls within title XII, subtitle B of EPAct 2005, entitled "Transmission Infrastructure Modernization." In addition to section 1222, Congress created several other transmission modernization programs in EPAct 2005. Notably, section 1221 amends the Federal Power Act to authorize the designation of national interest electric transmission corridors, areas in which certain transmission projects could receive federal permits to overcome state authorization barriers. Section 1221 also requires improved coordination among federal agencies that permit transmission facilities to speed the permitting process.[6] Sections 1223 and 1224 encourage the deployment of advanced transmission technologies and advanced power system technologies, respectively.[7]

---

[1] 42 U.S.C. § 16421(c).

[2] *Id.* § 16421(a).

[3] *Id.* § 16421(b).

[4] *E.g.*, Flood Control Act of 1944 § 5, 16 U.S.C. § 825s; Reclamation Project Act of 1939 § 15, 43 U.S.C. § 485i.

[5] 42 U.S.C. § 16421(f).

[6] 16 U.S.C. § 824p.

[7] 42 U.S.C. §§ 16422, 16423.

The comments received on Clean Line's application included a letter from former Senators Pete Domenici and Byron Dorgan, who served as Chairman and member, respectively, of the Senate Energy and Natural Resources Committee when EPAct 2005 was enacted. The Senators noted that "Section 1222 was intended to foster public-private cooperation to upgrade or build new transmission projects for the secure and reliable delivery of affordable energy."[8] It was meant, in their words, as "a tool for tackling the underlying challenges that EPAct 2005 was designed to address—modernizing transmission infrastructure, increasing the use of domestic energy sources, and ensuring jobs for our future through an abundant, affordable energy supply."[9] The Senators characterized section 1222 as encouraging the construction of "much-needed energy infrastructure, with the risk borne by the private sector, rather than by ratepayers or taxpayers."[10]

The arrangement contemplated in section 1222, in which the Department participates in the development of transmission facilities with a private entity, follows a successful example that was well advanced by the time EPAct 2005 was enacted: the Path 15 Upgrade.[11] Beginning in 1984, Congress authorized the Secretary to participate in the construction of power lines to improve the intertie between the Pacific Northwest and California. The Secretary eventually used that authorization to participate in building an 84-mile, 500 kV line in California's San Joaquin Valley, called the Path 15 Upgrade. The Secretary, acting through Western, worked with Trans-Elect NTD Path 15, LLC and Pacific Gas and Electric Company to finance and construct the system additions. The Department began condemnation proceedings in 2003 to acquire all necessary property rights. The Path 15 Upgrade became operational in 2004[12] and remains an important transmission link between West Coast regions.

b. The Department's 2010 Request for Proposals

In June 2010, the Department published a "Request for Proposals for New or Upgraded Transmission Line Projects Under Section 1222 of the Energy Policy Act of 2005" (2010 RFP).[13] The notice directed applicants to submit information demonstrating compliance with section 1222's requirements, referred to in the notice as "eligibility criteria." The Department also asked applicants to include a financing statement identifying the amount of funds to be contributed to the Department.

Project sponsors were informed of additional criteria to be evaluated by the Department and urged to provide information, as it became known, concerning:

1. Whether the project is in the public interest;
2. Whether the project will facilitate the reliable delivery of renewable energy;
3. The benefits and impacts of the transmission line on each state it traverses, including environmental and economic impacts; and
4. The technical and financial viability of the project.

[8] Comment of Sen. Pete V. Domenici & Sen. Byron Dorgan (Jul. 8, 2015).

[9] *Id.*

[10] *Id.*

[11] *See United States v. 14.02 Acres of Land More or Less in Fresno County*, 547 F.3d 943, 948-52 (9th Cir. 2008) (explaining statutory authority and history of Path 15 project).

[12] Cal. Indep. Sys. Operator Corp., Notice of Commercial Operation of Path 15 Upgrade, FERC Docket No. ER03-1217-000 (Dec. 22, 2004).

[13] Request for Proposals for New or Upgraded Transmission Line Projects Under Section 1222 of the Energy Policy Act of 2005, 75 Fed. Reg. 32,940 (June 10, 2010).

To aid in the examination of these factors, the Department requested specific information on the energy resource under consideration; any transmission interconnection requests; a description of transmission rights; the role of the Department and other entities in the project; and the experience of the applicant relating to the financing and construction of transmission lines.

The notice contemplated the negotiation of a funding agreement allowing the Department to undertake a comprehensive evaluation of the application, including any analysis required by NEPA.[14]

c. Clean Line's Application

Clean Line submitted its section 1222 proposal to the Department in July 2010. The initial proposal (2010 Application) contemplated two HVDC[15] electric transmission lines capable of delivering 7,000 MW from wind energy projects in Oklahoma, Kansas, and Texas to the Southeastern United States. Under the 2010 Application, all costs, including engineering, procurement, acquisition of rights-of-way, construction, and operation would be borne by Clean Line—at no cost to the Federal Government. Clean Line estimated a contribution of funds to the Department, as authorized by section 1222, totaling $14.1 million for two Department activities: (1) necessary acquisition of property rights using federal eminent domain authority and (2) environmental review costs and other administrative expenses.

Clean Line requested the role of the Federal Government to be "outreach, siting and permitting."[16] That is, Clean Line sought the Department's participation in ensuring fair treatment of stakeholders, exercising federal eminent domain when necessary, leading environmental review, and aiding in obtaining required federal permits.

The 2010 Application addressed and claimed to satisfy the section 1222 eligibility requirements, as well as the evaluation factors identified by the Department in its RFP. The 2010 Application included studies concerning different aspects of the proposed project. Consultant reports asserted economic and environmental benefits including favorable impacts on Arkansas and Oklahoma.

A little over a year later, Clean Line updated its 2010 Application to address what it called "substantial development progress."[17] The update[18] reported on Clean Line's outreach to stakeholders, including local communities, companies, and interested organizations. Additional information was submitted regarding jobs and economic development. Clean Line informed the Department that feasibility

[14] 42 U.S.C. § 4321 *et seq*.

[15] The November 2015 Final Environmental Impact Statement on the Project (Final EIS) describes Direct Current (DC) as "the constant, zero-frequency movement of electrons from an area of negative (-) charge to an area of positive (+) charge." Final EIS, Glossary, at 7-10. DC transmission differs from alternating current (AC) transmission in that "the voltage and current on a direct current transmission line are not time varying, meaning they do not change direction as energy is transmitted." *Id.* Physical HVDC transmission line equipment includes "[t]ubular and lattice steel structures used to support the transmission line," an "[e]lectrical conductor and metallic return," and "[c]ommunications/control and protection facilities (optical ground wire and fiber optic regeneration sites)." *Id*.

[16] Plains & Eastern Clean Line, *Project Proposal for New or Upgraded Transmission Line Projects Under Section 1222 of the Energy Policy Act of 2005*, at 40 (July 2010) (2010 Application), http://www.energy.gov/sites/prod/files/Plains%20%26%20Eastern%20Clean%20Line%20Transmission%20Project%20Application.pdf.

[17] Clean Line transmittal letter of August 17, 2011.

[18] Plains & Eastern Clean Line, *Update to Plains & Eastern Clean Line Proposal For New or Upgraded Transmission Line Projects Under Section 1222 of the Energy Policy Act Of 2005* (Aug. 2011) (2011 Proposal Update), http://www.cleanlineenergy.com/sites/cleanline/media/resources/1222Update_PLains_Eastern_August2011.pdf.

studies were being undertaken by the Tennessee Valley Authority (TVA) and Entergy Services, and that Clean Line had executed a Transmission System Study Agreement with the Southwest Power Pool (SPP). Clean Line expanded its arguments concerning the need for the line and the Project's consistency with regional transmission planning including SPP's twenty-year Integrated Transmission Plan.

In December 2014, the Department requested additional information and Clean Line responded by submitting an updated "Part 2 Application" to the Department in January 2015.[19] By this time, Clean Line's proposal had evolved into a single 720-mile, 600 kV, overhead HVDC electric transmission line and associated facilities capable of delivering 4,000 MW of primarily renewable energy from Oklahoma and Texas to the mid-South and Southeastern United States via an interconnection with TVA. The Part 2 Application included a proposed converter station in Arkansas allowing the delivery of 500 MW by way of an interconnection with the Midcontinent Independent System Operator (MISO). Again, Clean Line presented information and arguments designed to satisfy statutory eligibility requirements and the Department's evaluation factors. In addition to addressing the RFP criteria, Clean Line responded to specific DOE requests concerning its progress, means of mitigating certain risks, financial viability, technical specifications, regulatory requirements, electric reliability, interconnections, land acquisition, and system planning. Appendices to the Part 2 Application included letters of support; additional analysis on economic and environmental benefits of the Project; a proposed participation agreement term sheet; an estimate of total costs; financial statements of one of Clean Line's major investors; a summary of the transmission experience of the Clean Line management team; design criteria and structural drawings; interconnection and feasibility reports; and a proposed construction schedule.

d. Clean Line's Regulatory Filings

Clean Line is not a traditional public utility with a franchised service territory, an obligation to serve captive customers, and cost-of-service rates including an approved return on equity. Moreover, it is developing this Project on a "merchant" basis. Merchant developers, which are a relatively recent entrant in the U.S. transmission market,[20] charge negotiated rates rather than cost-based rates and assume all financial risks associated with their projects. Merchant transmission projects are part of a broader trend toward market competition in the electric industry that Congress and the Federal Energy Regulatory Commission (FERC or the Commission) have promoted over the past two decades.[21] Transmission developers independent of existing franchised utilities often lack legal status as public utilities in the state where a proposed development is located. That status is determined by state regulators and is a prerequisite to most transmission development. Consequently, at the same time Clean Line was pursuing its 2010 Application with the Department, it sought public utility status in Oklahoma and Arkansas—two states with traditional electric utilities providing service in accord with state law.[22] In June 2010, Clean Line applied to the Oklahoma Corporation Commission for authority to operate as an electric transmission-only public utility providing wholesale bulk electricity transmission service within the State of Oklahoma. The

[19] Clean Line Energy Partners, *Plains & Eastern Clean Line 1222 Program – Part 2 Application: Information Requested for Proposed Plains & Eastern Clean Line Project*, http://energy.gov/sites/prod/files/2015/04/f22/Clean%20Line%20Part%202%20Application%20-%20Final%203-6%20version.pdf.

[20] The Federal Energy Regulatory Commission first granted negotiated rate authority to a merchant transmission project developer on June 1, 2000. *TransEnergie U.S., Ltd.*, 91 FERC ¶ 61,230, at p. 61,838 (2000).

[21] *See generally New York v. FERC*, 535 U.S. 1 (2002).

[22] Clean Line also received public utility status in Tennessee, but that is outside the scope of this analysis. *In re: Petition of Plains and Eastern Clean Line LLC for a Certificate of Convenience and Necessity Approving a Plan to Construct a Transmission Line and to Operate as an Electric Transmission Public Utility*, Docket No. 14-00036, Order at 7-8 (May 5, 2015).

Oklahoma Corporation Commission granted the request, finding Clean Line to be an electric transmission-only public utility subject to the Commission's transmission-only rules.[23]

In May 2010, Clean Line applied for a Certificate of Convenience and Necessity from the Arkansas Public Service Commission (Arkansas Commission) to operate as a public utility in Arkansas. The request was denied. Clean Line could not meet Arkansas' statutory definition of a public utility requiring transmission of power "to or for the public for compensation" as Clean Line had no contracts for public utility service within Arkansas.[24] In explaining its decision the Arkansas Commission made specific reference to Clean Line's status as a merchant developer:

> The difficulty the [Arkansas] Commission now faces is that the law governing public utilities was not drafted to comprehend changes in the utility industry such as this one—where a non-utility, private enterprise endeavors to fill a void in the transmission of renewable power that is much needed but for which the Commission is unable to afford any regulatory oversight.[25]

Although the Arkansas Commission's 2011 order left open the possibility of Clean Line submitting a new application, in March 2015 the Arkansas legislature enacted legislation effectively prohibiting the Arkansas Commission from issuing a certificate to independent, merchant transmission developers such as Clean Line.[26] The Arkansas legislature barred certificating any entity that "(1) is not currently a public utility, (2) primarily transmits electricity, and (3) has not been directed or designated to construct an electric transmission facility from a regional transmission organization."[27]

With regard to transmission rates for interstate electric transmission service to be charged by Clean Line, FERC granted Clean Line's request for authority to negotiate transmission service rates allowing Clean Line to subscribe 100% of the line's capacity through direct negotiation. The Commission noted that it distinguishes between traditional public utilities and merchant transmission projects—such as Clean Line—because the developer of the merchant project assumes all of the market risk of a project without resort to payment by captive customers.[28]

---

[23] *In the Matter of the Application of Plains and Eastern Clean Line LLC, to Conduct Business as an Electric Utility in the State of Oklahoma*, Order No. 590530, Cause No. PUD 201000075 (Oct. 28, 2011).

[24] *In the Matter of the Application of Plains and Eastern Clean Line LLC For a Certificate of Public Convenience and Necessity to Construct, Own and Operate as an Electric Transmission Public Utility in the State of Arkansas*, Docket No. 10-041-U, Order at 11 (Jan. 11, 2011).

[25] *Id.* at 10.

[26] Act No. 842 of the 2015 Regular Session (Mar. 2, 2015), http://www.arkleg.state.ar.us/assembly/2015/2015R/Acts/Act842.pdf.

[27] *Id.*

[28] *Plains & E. Clean Line LLC*, 148 FERC ¶ 61,122 at P 1 n.1 (2014) ("Under the Commission's precedent, merchant transmission projects differ from those of traditional public utilities in that the developers of merchant projects assume all of the market risk of a project and have no captive customers from which to recover the cost of the project.").

e. DOE Review of Clean Line's Application

i. Environmental and Historic Property Review

In September 2012, the Department and Clean Line entered into an Advance Funding and Development Agreement.[29] This agreement established the terms and conditions for advance funding by Clean Line to the Department to analyze the Project. The advance funding covered DOE's expense relating to the review required by NEPA, the review related to the section 1222 statutory criteria and criteria specified in the Department's June 10, 2010 Federal Register Notice RFP, and other reviews such as those under section 106 of the National Historic Preservation Act.[30]

NEPA review of the Project began in December 2012 with a public scoping process from December 21, 2012, through March 21, 2013. The Department reviewed all scoping comments and published a Scoping Summary Report in June 2013. A Draft Environmental Impact Statement was made available in December 2014, with a public comment period that exceeded the required minimum 45 days and instead ran from December 19, 2014, through April 20, 2015. During that time, DOE held 15 public hearings in Oklahoma, Texas, Arkansas, and Tennessee.[31] The Final EIS was made available on November 13, 2015. All NEPA-related documentation is available on DOE's NEPA Website (http://www.energy.gov/nepa) and on the Project's EIS website (http://www.plainsandeasterneis.com).[32]

The Department's environmental review also included compliance with the Endangered Species Act of 1973 (ESA).[33] In March 2015, the Department and TVA requested initiation of formal consultation with the U.S. Fish and Wildlife Service (USFWS) under section 7 of the ESA and submitted a Biological Assessment regarding the Project and its potential effects on listed species and designated critical habitats.[34] In November 2015, the USFWS issued its Biological Opinion, pursuant to section 7 of the ESA, which evaluates the anticipated impacts of the Project on species that are federally-listed under the ESA. The Biological Opinion concludes that the Project is not likely to jeopardize the continued existence of the affected species and sets forth reasonable and prudent measures, with implementing terms and conditions, designed to minimize the impacts of incidental take that might otherwise result from the Project.

In compliance with the regulations implementing section 106 of the National Historic Preservation Act regulations,[35] the Department initiated government-to-government consultation in January 2013 with nearly thirty federally-recognized Indian Tribes and Nations that may attach traditional religious and cultural significance to historic properties that may be affected by the proposed Project. After multiple

[29] Contract No. 1 for Advance Funding and Development Agreement, Plains & Eastern Clean Line Transmission Project, http://energy.gov/sites/prod/files/Advance%20Funding%20and%20Development%20Agreement.pdf.

[30] 16 U.S.C. § 470f. Like other Federal Government agencies, the Department evaluates protection of historic properties under section 106 of the National Historic Preservation Act and its implementing regulations at 36 C.F.R. part 800. State historic preservation offices and Indian tribes have consultative authority in identifying historic properties that must be avoided or preserved. *See* 36 C.F.R. § 800.2(c).

[31] Final EIS at 1-15.

[32] *See* Department of Energy, *Record of Decision in re Application of Clean Line Energy Partners LLC* (Mar. 25, 2016).

[33] 16 U.S.C. § 1531 *et seq.*

[34] The Department and TVA each had potential federal actions related to the Project and agreed to have the Department serve as lead agency for purposes of the consultation.

[35] 36 C.F.R. part 800.

consultation meetings, a Programmatic Agreement[36] was signed on December 2, 2015, by parties including the Department, the Advisory Council on Historic Preservation, the Cherokee Nation, four state historic preservation offices, and Clean Line.

ii. Section 1222 Review

The Department has consistently encouraged public feedback on projects like this one. All Application materials have been posted on the Department's website for public viewing, and the Department publicized an opportunity for public comments on Clean Line's final amended Application or Part 2 Application in 2015. Initially this comment period ran from April 28, 2015, through June 12, 2015,[37] but in response to public and congressional requests, DOE extended the comment period through July 13, 2015.[38] In addition to the Federal Register Notice, the Department requested public comment on its website and sent an email to interested parties. Specifically, the Department requested comment on whether the Project meets the section 1222 statutory criteria and the factors identified in the 2010 RFP.

The Department received over 700 comments, which fell into five categories: 1) requests for an extension on the timeline for submitting comments, 2) requests for a public hearing, 3) form letters in support of the Project, 4) form letters in opposition to the Project, and 5) other substantive comments.

The Department responded to the requests for an extension of time by extending the comment period another month. In light of the 15 public hearings held as part of the NEPA process, where public input on non-NEPA factors was also taken, DOE chose not to hold additional public hearings.

The form letters in support of the Project identified the following reasons to grant Clean Line's application: job creation; increasing the reliability and security of transmission infrastructure; reducing carbon pollution; stimulating economic development; strengthening domestic manufacturing capabilities; generating local revenues; increasing access to renewable power; increasing competition in the energy sector; promoting energy independence; and facilitating the President's Clean Power Plan.[39]

The form letters in opposition identified the following reasons to deny Clean Line's application: no regional transmission organization (RTO) or regional reliability organization (RRO) has determined a need for the Project; the Project would only positively impact Tennessee and not the other states involved; and the adverse effects on health and safety have not been studied.

Among those submitting unique comments, many voiced support for bringing additional wind energy onto the electric grid. Many others were opposed to the Project, on varying grounds. Some claimed that the Project is not needed as either new transmission or to upgrade existing transmission facilities owned by Southwestern; that the Project would have no impact on congestion; that there is no actual or projected

[36] The Programmatic Agreement describes roles and responsibilities for DOE and the consulting parties; the tribal consultation protocol; the area of potential effects; the phased process to address historic properties, including continued consultation; procedures to address the unanticipated discovery of cultural resources or inadvertent discovery of human remains, graves or associated funerary objects; communication plan; historic properties management plan for operations and maintenance activities, annual reporting and close out report requirements; and dispute resolution requirements.

[37] Application for Proposed Project for Clean Line Plains & Eastern Transmission Line, 80 Fed. Reg. 23,520 (Apr. 28, 2015).

[38] Extension of Public Comment Period for Application for Proposed Project for Clean Line Plains & Eastern Transmission Line, 80 Fed. Reg. 34,626 (June 17, 2015).

[39] On February 9, 2016, the United States Supreme Court stayed the rule implementing the Clean Power Plan until the current litigation against it concludes. *Chamber of Commerce, et al. v. EPA, et al.*, Order in Pending Case, 577 U.S. ___ (2016), http://www.supremecourt.gov/orders/courtorders/020916zr3_hf5m.pdf. As of that date, a challenge to the rule was pending before the United States Court of Appeals for the District of Columbia Circuit.

increase in demand for electric transmission capacity; that the Project is not consistent with transmission needs identified by any transmission organization or RRO; or that the Project duplicates existing transmissions facilities. Some commenters asserted that the Project would result in a misuse of federal eminent domain authority. Others pointed to TVA's current lack of a contractual commitment to purchase power delivered by the Project. Some commenters raised procedural issues, complaining of a lack of public notification and involvement in the development of the Project since it began in 2009.

Other commenters claimed the Project is not in line with public interest due to negative effects on individual landowner's use and enjoyment of private property; negative impacts on natural gas exploration and production; decline in property value; negative impacts on the environment; adverse health impacts; potential hazards due to proximity to other structures such as gas plants; and complications due to existing practices such as aerial spraying.

The Department has not conducted its consideration of Clean Line's application as a formal adjudication with motions practice.[40] Nevertheless, one commenter submitted motions such as a Petition for Extension of Comment Period Deadline, a Petition for Public Hearings, a Petition for Intervention and Notice of Intervention Deadline, a Petition for Contested Case, and a Petition for Delay of Application Pending Rulemaking.[41] In light of the lengthy public comment process, which was extended in response to public request, the Department has declined to extend the comment period further, to conduct public hearings, or to delay a decision on Clean Line's application pending a rulemaking. The Department has also declined to refer Clean Line's application to an administrative law judge, which was the intent of the Petition for Contested Case. A hearing before an administrative law judge is not required by section 1222 and would be unnecessary as the Department did not restrict the scope or type of information that the public could submit in writing for review. The Department is not aware of factual disputes, relevant to the decisions at hand, that oral testimony would be particularly helpful to resolve. Because there is no formal proceeding, motions to intervene are inapposite. The Department's response to the petition for rulemaking[42] will be announced separately.

Sections V and VI below will address substantive issues raised by commenters relevant to the section 1222 and RFP criteria. Substantive environmental comments submitted during the section 1222 public comment period, which followed the NEPA public comment period, are predominantly addressed in section VI.a below, which discusses the public interest.

[40] Section 1222 does not require that the Secretary's decision be made on the record after opportunity for an agency hearing. Therefore, this is not a formal adjudication under the Administrative Procedure Act. 5 U.S.C. § 554(a); *Friends of the Earth v. Reilly*, 966 F.2d 690, 693 (D.C. Cir. 1992) (explaining the need for explicit congressional intent to require full agency adherence to all Administrative Procedure Act section 554 procedural components).

[41] Comment of Carol A. Overland, representing BLOCK Plains & Eastern Clean Line: Arkansas and Oklahoma (June 8, 2015). The commenter incorrectly applied FERC's Rules of Practice and Procedure, 18 C.F.R. part 385, which the Department has not adopted as part of its section 1222 implementation.

[42] BLOCK Plains & Eastern Clean Line Petition for Rules of General Applicability Section 1222 Rulemaking (June 16, 2015). The same commenter also filed a petition for rulemaking before FERC, and the Commission denied that petition. *BLOCK Plains & Eastern Clean Line: Arkansas and Oklahoma*, Notice Rejecting Petition for Rulemaking, FERC Docket No. RM15-22-000 (June 25, 2015).

III. Participation Agreement with Clean Line and Role of Southwestern

a. Key Features of the Participation Agreement

Alongside the review process that culminated in this Summary of Findings, the Department has negotiated a Participation Agreement with several Clean Line affiliates[43] that explains in detail the terms under which the Department would participate in the development and continuing operation of the Project.[44] The Participation Agreement was drafted to at all times protect the Department from costs and liabilities associated with the Project while giving the Department sufficient oversight and control to ensure that the Project achieves its stated benefits.

The Participation Agreement requires that the Project be undertaken "at the sole cost and expense" of the Clean Line parties.[45] That includes the obligation to pay all costs arising from the Project, such as taxes, assessments, insurance premiums, and the cost of acquiring real estate rights. Clean Line must pay costs incurred by the Department in advance.[46] The Participation Agreement requires that the Clean Line entities indemnify and hold harmless the United States government (including the Department and its elements, including Southwestern) as well as employees and consultants thereof,[47] from liabilities linked to the Project.[48] This indemnification is backed by several forms of financial support, such as the Department's access to letters of credit or guarantees issued in favor of the Department,[49] insurance coverage that is accessible to the Department and subject to its approval,[50] and a pre-funded reserve account to cover the costs of dismantling and removing all Project facilities at the end of the Project's life.[51]

The Department's obligations under the Participation Agreement have been carefully conditioned on Clean Line meeting commercial and technical milestones to demonstrate project viability.[52] An early example is that prior to the Participation Agreement becoming effective, the Department required updated

[43] These consist of Plains and Eastern Clean Line Holdings LLC, the Clean Line Energy Partners LLC subsidiary serving as borrower for the Plains & Eastern Project, and several operating companies: Arkansas Clean Line LLC, Plains and Eastern Clean Line Oklahoma LLC, Oklahoma Land Acquisition Company LLC, and Plains and Eastern Clean Line LLC.

[44] The Participation Agreement defines the Project as "the design, development, construction, operation, maintenance and ownership, as applicable, of approximately 705 miles of +/-600 kilovolt overhead, high voltage direct current electric transmission facilities and related facilities with the capacity to deliver approximately 4,000 megawatts (net) from renewable energy generation facilities located in the Oklahoma Panhandle and Texas Panhandle regions to the eastern state-line of Arkansas near the Mississippi River." Participation Agreement, Recitals, at 1.

[45] *Id.* § 2.1.

[46] *Id.* §§ 11.1, 11.3. The Advanced Funding Account must have on deposit (1) the sum of all covered costs estimated by DOE to be due and payable in the next 3 months *plus* (2) the sum of any future amounts payable by DOE pursuant to any Project-related contractual obligation *plus* (3) a contingency equal to 10% of all covered costs estimated to be due and payable in the next 3 months.

[47] *Id.* §§ 1.1, 11.4.

[48] *Id.* §§ 11.4, 11.8.

[49] *Id.* §§ 7.3(b), 7.4(a)(vi) (referencing Performance Support).

[50] *Id.* §§ 5.1(e)(ii), 6.2(a)(x).

[51] *Id.* § 7.6.

[52] *Id.* §§ 6.1 – 6.4.

Project budget and Clean Line financial statements and certified copies of executed term sheets for transmission services agreement (TSA) precedent agreements totaling at least 3,500 MW.[53]

The conditions precedent for Departmental assistance with right-of-way (ROW) acquisition are significantly more extensive. Understanding that the Clean Line entities have the primary responsibility for acquiring all Project real estate rights,[54] the Department has agreed to assist with the acquisition of real estate rights—anticipated to be easements—under specific circumstances. The Department will assist with voluntary right-of-way acquisition[55] only if conditions precedent including the following are first met: Clean Line has executed at least 1,500 MW of TSAs, documented its purchase options for converter station real estate rights, achieved certain milestones in obtaining interconnection rights for the Project, and executed an insurance agreement with the Department.[56]

Because the Department has consistently maintained that it would not use its eminent domain authority except as a last resort, the Department has, by agreement, conditioned the exercise of its condemnation power on Clean Line first satisfying a set of conditions that demonstrate clearly the commercial viability of the Project. Among those conditions, the Project must have obtained financing commitments sufficient to fund all project costs,[57] Clean Line must have executed firm TSAs for at least 2,000 MW of electrical capacity, all converter station real estate rights must be in effect, and all interconnection agreements must be in effect, including completion of all material interconnection studies.[58] Finally, authority to begin construction is conditioned on the Department issuing a notice to proceed, which it would be obligated to do only if another set of conditions precedent are satisfied in addition to the previously-discussed conditions precedent. That other set of conditions includes the execution of an agreement with the Department concerning mandatory reliability standards compliance, the execution of material operations and maintenance agreements, and compliance with Davis-Bacon Act requirements.[59]

Under the Participation Agreement, the Department would own all Project facilities in Arkansas,[60] but the costs—like all Project costs—of acquiring, building, and maintaining those facilities would be borne by Clean Line entities. The Department may acquire real estate rights in either Oklahoma or Arkansas, and will maintain title to such rights,[61] but Clean Line entities would have contract rights (not real estate interests) to enter into and use Department-acquired real property for purposes of carrying out the Project.[62]

---

[53] *Id.* § 6.1(e).

[54] *Id.* § 3.2(a). The Department also negotiated procedures and a code of conduct for how Clean Line entities are to acquire real estate rights to protect landowners. *See id.* at Schedules 1, 12.

[55] "Voluntary" right-of-way acquisition, as used here, means purchase of real property rights by negotiated agreement and without resort to condemnation.

[56] *Id.* § 6.2.

[57] *See id.* § 1.1, at 20-21, for definition of "Financing Condition."

[58] *Id.* § 6.3.

[59] *Id.* § 6.4.

[60] *Id.* § 2.2.

[61] *Id.* § 3.3(e) ("The United States of America, acting through the Secretary of the Department, shall hold title to any and all DOE Acquired Real Property and the [Arkansas] Facilities."). The Participation Agreement defines DOE Acquired Real Property as "any [real property rights, including temporary property rights and access rights,] acquired by DOE pursuant to the terms of this Agreement." *Id.* § 1.1, at 17.

[62] *Id.* § 2.1(b), (c).

Conversely, the Clean Line entities would grant the Department the necessary property interests or rights of use for any Clean Line-acquired real property rights in Arkansas.[63]

The Clean Line entities would be responsible for managing the Project,[64] subject to Department oversight as specified in the Participation Agreement. The Department comprises half of the Coordination Committee, which is responsible for a variety of management decisions.[65] In general, the Department would have significant access rights to ensure compliance, including the right to visit and inspect any portion of the Project, access records of the Clean Line parties, and monitor and review the Project's financing and operations.[66] In the event the Clean Line entities default on their obligations under the Participation Agreement, the Department has reserved multiple remedies, including in certain circumstances the termination of the Participation Agreement and the removal of all Project equipment, facilities, and structures.[67]

The Department is committed to seeing that the Project provides its intended benefits, and the Participation Agreement includes provisions designed to ensure that outcome. Such provisions include a description of contribution payments to local governments covering the entire footprint of the Project, including Arkansas.[68] The Participation Agreement supports the policy goal of promoting renewable energy development by mandating all commercially reasonable efforts to use at least 75% of the Project for transmission of renewable energy resources.[69] In addition, to provide continuing benefits in return for the Department's participation, the Participation Agreement also establishes a Participation Account to which 2% of Project revenues would be paid to offset the costs of federal hydropower infrastructure improvements or other authorized purposes.[70]

In sum, the key features of the Participation Agreement include protections for the Department and taxpayers while permitting sufficient federal oversight and assurance that the Project will achieve its stated benefits.

b. Role of Southwestern

Southwestern would play an important role in performing certain functions associated with the Project on behalf of and under the direction of the Secretary. Under the Participation Agreement, Clean Line would be responsible for all Project operations and maintenance activities and regulatory compliance obligations, both for facilities owned by the Department and those owned by Clean Line. Southwestern's role would include the following Project functions: (1) land acquisition and management activities; (2) oversight of Clean Line's conformance with environmental and cultural resource obligations applicable to the Project; (3) oversight of Clean Line's compliance with regulatory obligations of the Commission and the North American Electric Reliability Corporation (NERC); (4) oversight of Clean Line's adherence to

[63] *Id.* § 3.2(b).

[64] *Id.* § 4.1.

[65] *Id.* § 5.1.

[66] *Id.* § 8.2.

[67] *Id.* §§ 7.4, 7.5.

[68] *Id.* § 8.6, Schedule 4.

[69] *Id.* § 8.27. Based on the current business environment, the Department expects the project to carry substantially in excess of 75% renewable energy. For example, all of the requests received in response to Clean Line's 2014 capacity solicitation (discussed further in section V.a) were from wind generators.

[70] *Id.* § 11.2. Clean Line's payment obligation to the Participation Account is conditioned on Clean Line first meeting operating costs, debt service, and payment to an account to pre-fund major repairs.

certain technical provisions of the Participation Agreement and Clean Line's operation of the Project in accordance with prudent utility practice; and (5) reporting information on Project development and management to the Secretary and other elements within the Department.

Apart from customary oversight by Southwestern senior management, all work on the Project would be performed by a separate, new organizational structure within Southwestern to simplify segregation of cost responsibility and to ensure that existing Southwestern activities are not impacted by the Project.

c. Independence of the Project from Southwestern's Power Marketing Function

Prior to enactment of section 1222, Southwestern's authority was largely limited to its power marketing function. Section 5 of the Flood Control Act of 1944, as amended, authorizes the Department to "transmit and dispose of" electricity that is "generated at reservoir projects [but deemed] not required in the operation of such projects."[71] Section 5 authorizes the Department to recover through rates the costs of generating and transmitting hydropower: "Rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of the projects) of the cost of producing and transmitting such electric energy. . . ."[72] Further, the Department may only build or acquire "transmission lines and related facilities" needed to sell the power at wholesale "to facilities owned by the Federal Government, public bodies, cooperatives, and privately owned companies."[73]

Section 1222 gave the Secretary, acting through Western or Southwestern, a new authority: to participate with private developers in the development, construction, and ownership of new transmission facilities, including facilities that are not constructed for the purpose of delivering federal hydropower. Yet, while section 1222 charged Southwestern with acting on behalf of the Secretary in implementing its terms, nothing in section 1222 affected Southwestern's power marketing responsibilities under the Flood Control Act or the types of costs that may be collected in Southwestern's rates. Section 5 of the Flood Control Act is clear that generally the only costs that may be recovered in Southwestern's rates are those associated with generating, marketing, and delivering federal hydropower.[74] Because the Project would not deliver federal hydropower, costs associated with the Project could not under any circumstances be recovered in the rates Southwestern charges for federal hydropower. Some have observed that, under section 1222, if an outside project sponsor's contributions do not cover all costs, the amount not paid for through contributed funds "shall be collected through rates charged to customers using the new transmission capability provided by the Project and allocated equitably among these project beneficiaries using the new transmission

[71] 16 U.S.C. § 825s. Section 302(a) of the Department of Energy Organization Act of 1977 transfers authority under section 5 of the Flood Control Act from the Department of the Interior to the Department of Energy. *See* 42 U.S.C. § 7152(a)(1) ("There are transferred to, and vested in, the Secretary [of Energy] all functions of the Secretary of the Interior under section 825s of Title 16, and all other functions of the Secretary of the Interior, and officers and components of the Department of the Interior, with respect to" the power marketing administrations, "the power marketing functions of the Bureau of Reclamation," and "the transmission and disposition of the electric power and energy generated at Falcon Dam and Amistad Dam. . .").

[72] 16 U.S.C. § 825s.

[73] *Id.*

[74] In this Summary of Findings the Department is not intending to opine as a general matter on what types of costs may be recovered under section 5 of the Flood Control Act. The Department's intention is only to address whether this Project's costs are recoverable in Southwestern's rates. For the reasons above, the Department concludes that section 5 of the Flood Control Act would prevent recovery of such costs.

capability."[75] This provision has no applicability to Southwestern because Southwestern will not take capacity on the Project and, therefore, will not be "using the new transmission capability provided by the Project."

During the comment period, existing Southwestern customers and others sought assurance that Southwestern will bear no Project costs or liability. One commenter stated that "customers are ultimately the only funding stream for Southwestern [so] the customers must be carefully insulated from any project utilizing section 1222."[76] The same commenter urged that "Clean Line and DOE must ensure that the customers of Southwestern and/or the taxpayers do not finance" acquisitions by condemnation,[77] and that "Southwestern and its customers cannot be required to complete the Project and/or provide service under the contracts" if the Project stalls after construction begins.[78] Another commenter asked for a "guarantee that none of the costs of the proposed project are allocated to [Southwestern] or included in the rates charged to its existing customers."[79] The Department agrees with the intention of these comments and reiterates that no costs associated with this Project could lawfully be recovered in Southwestern's rates. And, as noted earlier, Southwestern will take measures to ensure careful segregation of costs by organizing its activities under section 1222 into a discrete organization to ensure that no Project costs—direct or indirect—are inadvertently recovered in rates.

Some commenters, in the course of urging that no Project costs be recovered in Southwestern's rates, appeared to assert that Southwestern lacks the legal authority to participate in the Project at all. One commenter stated that the "Project is outside the scope and ordinary course of business of Southwestern under section 5 of the Flood Control Act of 1944 – marketing federal hydropower – and Southwestern's customers will not pay for these costs should they come to fruition."[80] A related comment argued that the Flood Control Act limits Southwestern to marketing and transmission of hydropower: "It appears that SWPA can't get its electricity from wind sources, [and if so,] then this Project does not meet the 2010 RFP."[81]

To the extent these comments are arguing that Project costs may not be recovered in Southwestern's rates, the Department agrees for the reasons above. But insofar as these comments are arguing that Southwestern lacks legal authority to participate in the Project, they are based on an inaccurate understanding of Southwestern's function in implementing the Project. Under section 1222, Southwestern (or Western) plays a role in carrying out the Secretary's authority that is akin to a program office within the Department. Southwestern will oversee certain aspects of the Project on behalf of the Secretary but will not have a financial role in the Project, nor could there be any adverse impact to Southwestern's rates associated with the Project. In any event, to the extent these commenters contend that Southwestern lacks legal authority to act on the Secretary's behalf in carrying out the Project they are mistaken. Section 1222 explicitly authorizes Southwestern's involvement and nothing in section 1222 limits the eligibility of transmission projects to those that are also eligible for construction and cost recovery under the Flood Control Act.

---

[75] 42 U.S.C. § 16421(c)(3).

[76] Comment of Scott Williams (President, Southwestern Power Resources Association), at 1-2 (July 13, 2015).

[77] *Id.* at 4.

[78] *Id.* at 5.

[79] Comment of Leslie James (Exec. Director, Colorado River Energy Distributors Association) (July 9, 2015).

[80] Comment of Scott Williams, at 3.

[81] Comment of Leif Anderson (July 13, 2015).

IV. Legal Authority

a. Section 1222 Authorizes the Department to Undertake Such an Action

Congress enacted section 1222 as part of a broad effort in EPAct 2005 to support and accelerate the modernization of transmission infrastructure in the United States. Section 1222 authorizes the Department to advance broad transmission policy goals by participating with private entities in the development of electric power transmission lines. Subsection 1222(c) authorizes the Department to "accept and use" contributed funds to build new transmission lines. That subsection also states that contributed funds "shall be available for expenditure for the purpose of carrying out the Project . . . without fiscal year limitation; and . . . as if the funds had been appropriated specifically for that Project."[82]

The following discussion addresses specific aspects of the section 1222 authority and relevant public comments on the scope of the authority.

b. The Department May Condemn Property for a Section 1222 Project

As described above, one of the Department's chief activities in participating in the Project would be to acquire rights-of-way, including by exercising eminent domain authority only as a last resort. Several commenters questioned the Department's authority to secure the needed property rights for the Project through eminent domain,[83] particularly because a private developer is involved. For the reasons that follow, the Department finds that it does have the authority to acquire real property as appropriate for a section 1222 Project and that, if necessary, it may exercise eminent domain authority to do so.

The Condemnation Act authorizes an agency that has the authority to acquire real estate for public use to use eminent domain for the acquisition.[84] For purposes of the Project, the applicability of the Condemnation Act depends on the answers to two questions: (1) whether section 1222 or any other provision of law authorizes the real estate acquisitions the Department would undertake, and (2) whether the Project would constitute "public use."[85]

Although section 1222(b) does not explicitly refer to the acquisition of real estate, the Department interprets the provision to authorize such activity. Section 1222(b) authorizes the Secretary to "develop, construct, operate, maintain, or own" new transmission facilities, as well as to "participate" in "developing,

---

[82] 42 U.S.C. § 16421(c)(2).

[83] *E.g.*, Comment of Oklahoma Attorney General's Office, at 6 (July 13, 2015) ("If Clean Line wishes to exercise eminent domain in Oklahoma, it should be forced to seek that ability according to the Oklahoma Constitution and Oklahoma law, just like every other utility in Oklahoma."); Comment of Sen. Lamar Alexander (June 11, 2015) (stating that "[t]he use of Federal eminent domain authority would strip Arkansas of their traditional property rights"); Comment of Chuck Banks (June 3, 2015) (warning that the Project could "circumvent public eminent domain power and law of the State of Arkansas").

[84] 40 U.S.C. § 3113 ("An officer of the Federal Government authorized to acquire real estate for the erection of a public building or for other public uses may acquire the real estate for the Government by condemnation, under judicial process, when the officer believes that it is necessary or advantageous to the Government to do so."). *See United States v. Carmack*, 329 U.S. 230, 235 (1946) ("The Condemnation Act supplemented the federal right to procure real estate for the erection of a public building or for other public uses by adding to it a general federal power of condemnation under judicial process to be exercised by an officer of the Government whenever, in his opinion, it is necessary or advantageous to the Government to do so."); *Albert Hanson Lumber Co. v. United States*, 261 U.S. 581, 587 (1923) ("The authority to condemn conferred by the [Condemnation Act] extends to every case in which an officer of the government is authorized to procure real estate for public uses.").

[85] The scope of what constitutes "public use" for purposes of the Condemnation Act is coextensive with the constitutional limit on eminent domain authority. *Carmack*, 329 U.S. at 239.

constructing, operating, maintaining, or owning" new transmission facilities. A transmission "facility" is an improvement on land, and the "facility" encompasses not only the physical items constituting the equipment (such as the electrical wires) but also the legal interests that permit the facility to be where it is.[86] Therefore, to best fulfill section 1222(b)'s goal of enabling the construction of new transmission capacity, "owning" a transmission facility is properly read to include holding the relevant real-estate interests—such as fee ownership of or a leasehold on the land on which the facility sits, or an easement for the transmission facility. Similarly, "developing, constructing, operating, or maintaining" a transmission facility would encompass the relevant real-estate interests as well as the physical equipment. The ordinary means for "developing" and "maintaining" the real property aspects of a transmission facility would be to acquire real estate and to maintain it (such as by filing appropriate real-estate records). For these reasons, DOE concludes that the wide range of tasks authorized by section 1222(b) include the acquisition of real estate.

The one federal appellate court that has considered a similar question reached a similar conclusion. In *United States v. 14.02 Acres of Land More or Less in Fresno County*, the Ninth Circuit heard a challenge to Western's effort to exercise eminent domain for the Path 15 Upgrade project, which was to install an 84-mile transmission line in California's San Joaquin Valley.[87] Congress specifically authorized the project, but without reciting, in such words, the authority to acquire real estate. The Ninth Circuit held that "[w]hen Congress mandates the construction of a new high voltage transmission line and appropriates funds to carry it out, it implies, *by necessity if not common sense*, the authority on the part of the executing agency to acquire land on which the transmission line may be constructed."[88] Similarly here, it is common sense that the section 1222 authority to develop and own a transmission facility includes the authority to acquire the relevant real estate.

The Project also constitutes a "public use." The decision whether a given function serves a public purpose rests with Congress in the first instance, subject to "narrow" judicial review.[89] Section 1222 reflects a legislative judgment that the projects that section 1222 will enable are for public use. Each of the criteria by which a project qualifies under section 1222(b) reflects a concern for the public benefit and welfare. For instance, section 1222 requires a finding that a project "will reduce congestion of electric transmission in interstate commerce [or] is necessary to accommodate an actual or projected increase in demand for electric transmission capacity." This finding demonstrates Congress's purpose to allow the Department to pursue projects under section 1222 where doing so can help meet needs for transmission capacity. Second, and relatedly, section 1222 projects must be consistent with identified transmission needs and with efficient and reliable operation of the transmission grid. Improvements to transmission grid capacity and capability aim at improving the public's access to adequate power supplies. Third, projects must be operated "in conformance with prudent utility practice," to safeguard the interests of the public in well-functioning utilities. Fourth, the projects must be operated by, or according to the rules of, an appropriate Transmission Organization or RRO. Both types of organizations are designed to make electricity markets work better for the public they serve. Finally, a project cannot "duplicate the functions of existing transmission facilities or proposed facilities which are the subject of ongoing or approved siting and related permitting proceedings," to avoid the costs of redundant facilities being passed on to consumers. Taken together, these

[86] A transmission developer frequently is responsible for all activities leading up to commercial operation of the transmission line, including acquisition of real property. *See, e.g., N.Y. Indep. Sys. Operator, Inc.*, 148 FERC ¶ 61,044 at P 76 (2014) (describing the "total cost of developing" a transmission project as including "rights-of-way and land acquisition costs").

[87] 547 F.3d at 951.

[88] *Id.*

[89] *Haw. Hous. Auth. v. Midkiff*, 467 U.S. 229, 239-40 (1984).

eligibility criteria function to ensure that projects authorized under section 1222 assist in the provision of electric service to the public through the provision of needed electric transmission facilities. For these reasons, the Department concludes that a project eligible for DOE's involvement under section 1222 is, by virtue of that eligibility, a public use.

Moreover, this Project is of a sort—a public utility—that has regularly been regarded as a public use in the past.[90] Clean Line will be a "public utility" under the Federal Power Act.[91] Pursuant to federal law, it will be required to provide open access to its facility on non-discriminatory terms, charge only rates that the Commission determines are just and reasonable, and comply with conditions of service imposed by the Commission.[92] Clean Line intends to secure preconstruction commitments for up to 100% of the Project's capacity, with any remaining capacity being sold through an "open season" available to all prospective purchasers, and subject those sales to an Open Access Transmission Tariff (OATT).[93] In addition, Clean Line must submit to audits by the Commission to ensure it has complied with its obligations to make service publicly available. More specifically, as in similar Commission decisions, Clean Line will be required to file its "books and records audited by an independent auditor" once Project operation begins.[94] The purpose of that requirement is to "assist the Commission in carrying out its oversight role,"[95] which serves to protect the public. For these reasons, the Department considers the Project similar to public-utility projects that have been treated as "public use" in the past; the purpose of the Project is to make transmission capacity available to the public.

c. Section 1222 Allows the Department's Participation Notwithstanding Clean Line's Activities in Tennessee

Section 1222(b) authorizes the Secretary to "participate with other entities in designing, developing, constructing, operating, maintaining, or owning, a new electric power transmission facility and

[90] *See Mt. Vernon-Woodberry Cotton Duck. Co. v. Ala. Interstate Power Co.*, 240 U.S. 30, 32 (1916); *see also* 2A Nichols on Eminent Domain § 7.05[4] (3d ed. 2014) (collecting cases). In *Kelo v. City of New London*, the majority opinion and both dissenting opinions held out condemnation for common carriers like public utilities as a well-established public use. 545 U.S. 469, 477 (2005) (majority opinion) ("[I]t is equally clear that a State may transfer property from one private party to another if future 'use by the public' is the purpose of the taking; the condemnation of land for a railroad with common-carrier duties is a familiar example."); *id.* at 498 (O'Connor, J., dissenting) ("[T]he sovereign may transfer private property to private parties, often common carriers, who make the property available for the public's use—such as with a railroad, a public utility, or a stadium."); *id.* at 512-13 (Thomas, J., dissenting).

[91] *See* 16 U.S.C. § 824(b), (e) (interstate electricity transmission subject to the Federal Power Act, and persons owning or operating such facilities considered "public utilit[ies]").

[92] *Id.* § 824d.

[93] *Plains & E. Clean Line LLC*, 140 FERC ¶ 61,187 at P 26 (2012) ("[U]pon the Project's completion, [Clean Line] must also make the Project subject to the OATT of either SPP or another qualified entity, such as an RTO or ISO, by filing an OATT administered by that entity or a rate schedule in that entities' [sic] OATT.").

[94] *Id.*

[95] *Id.*

related facilities[96] . . . located within any State in which WAPA or SWPA operates."[97] With respect to the Project, Clean Line intends to connect the transmission facilities being developed in Oklahoma and Arkansas to facilities in Tennessee—a State in which neither Western nor Southwestern operates. Nonetheless, the Department's participation in the Project will be consistent with section 1222 because the facilities with respect to which the Department is exercising its section 1222 authority are exclusively in Oklahoma and Arkansas, both states in which Southwestern operates.

The Department recognizes that Clean Line will connect the Project with transmission, generation, and distribution facilities outside the States in which Western and Southwestern operate. But the Department does not read section 1222(b) to cabin the Department's authority on the basis of activities that private parties undertake in connection with a project that is otherwise eligible under section 1222.

Neither the text nor the context of section 1222(b) suggests such a restriction. And, inferring such a limitation would undermine the purposes of the EPAct 2005. Section 1222(b) is designed to accelerate the development of new, needed electric transmission facilities. The Department sees no reason, consistent with that purpose, why Congress would have intended to disqualify a project from eligibility under section 1222(b) simply because a private developer intends to develop interconnecting transmission facilities in a state where Western or Southwestern does not operate. The electrical transmission grid is nationwide, and in general EPAct 2005 was intended to increase the degree to which electrical facilities are interconnected across the Nation.[98] Nationwide interconnectedness fosters greater reliability and efficiency while reducing congestion, the three principal goals of EPAct 2005 with respect to electricity. In an interconnected grid, a facility that DOE might develop pursuant to section 1222(b) can be expected to be, indeed ought to be, connected to other facilities elsewhere in the country. Thus, the Department concludes the geographic limitation in section 1222(b)—the States in which Western and Southwestern operate—reflects simply a determination that Western and Southwestern should not, as a consequence of section 1222(b), themselves undertake nationwide operations. It is not meant to limit the extent to which a section 1222(b) facility itself might connect with or depend on facilities outside those States.

d. Section 1222 Does Not Limit the Use of Contributed Funds After Fiscal Year 2015

At least one commenter raised the issue of how long funds contributed to a section 1222 project will remain available, claiming that the provision has a "spending sunset," and that "Section 1222 spending expires at the end of 2015."[99] For the reasons that follow, the Department concludes that the authority to accept and use contributed funds provided by section 1222 continues past the end of Fiscal Year (FY) 2015.

---

[96] Transmission lines are comprised of transmission towers and conductors or power lines. Related facilities include converter stations, substations, collection systems, and other facilities necessary for operating and servicing a transmission line. Chapter 2 of the Final EIS provides a detailed description of all facilities related to the Project. For example, each of the Project's converter stations would include the equipment typical to a substation plus equipment to convert between AC and DC as well as ancillary facilities such as communications equipment and cooling equipment.

[97] 42 U.S.C. § 16421(b).

[98] *See, e.g.*, EPAct 2005 §§ 368(d) (42 U.S.C. § 15926(d)) ("In carrying out this section, the Secretar[y] shall take into account the need for upgraded and new electricity transmission and distribution facilities to improve reliability, relieve congestion, and enhance the capability of the national grid to deliver electricity."), 1242 (42 U.S.C. § 16441) (discussing Commission approval of funding for new interconnection and transmission upgrades), and 1254 (amending PURPA by establishing interconnection standards for electric utilities).

[99] Comment of Scott Thorsen (May 11, 2015).

Section 1222(c)(1) authorizes the Secretary to "accept and use funds contributed by another entity for the purpose of carrying out" a project under section 1222(b).[100] The funds are to be "available for expenditure for the purpose of carrying out [a] Project . . . without fiscal year limitation and as if the funds had been appropriated specifically for that Project."[101] Section 1222(g) prevents the Secretary from "accept[ing] and us[ing] more than $100,000,000 under subsection (c)(1) for the period encompassing fiscal years 2006 through 2015." Taken together, these provisions indicate that, after FY2015 ended on September 30, 2015, the Secretary continued to be authorized to accept and use contributed funds "without fiscal year limitation." The statute does not terminate or otherwise restrict the Secretary's authority to accept and use contributed funds after that date.

Textually, the Department's interpretation of paragraph (g) is more consistent with ordinary English usage, while the alternative is somewhat strained. The phrase introducing the limitation on the Department's ability to accept funds is "more than." For the Department to be unable to use funds beyond the FY2006-2015 period, "more than" must encompass the "for the period" phrase that defines the time period. But "more than" usually suggests a comparison based on number or some other quantity (such as size or volume), and does not ordinarily apply to a time period.[102] Therefore, rather than taking paragraph (g) to limit the use of funds "more than . . . for the period" FY2006-2015, the Department takes the "for the period" phrase to be an adverbial phrase modifying the "more than" condition. Thus, paragraph (g) restricts the Department from accepting more than $100 million; and applies that limit for fiscal years 2006-2015.

The Department's reading of this provision finds support in sections of EPAct 2005 that do include provisions limiting the temporal scope of the authorities being granted. Those provisions use language that much more clearly expresses the temporal limitation.[103] Had Congress intended to limit the Secretary's acceptance and use of contributed funds for section 1222 projects after FY2015, it would have included similar language in section 1222.

Moreover, the Department's interpretation of paragraph (g) better supports the purposes of section 1222. Were the Department permitted to use contributed funds only until the end of FY2015, it could participate in developing transmission capacity only in a limited, short-term manner. But projects of this type usually become operational after at least 10 years of development, and once operational remain in service for many decades more. The Department notes that the statute authorizes the Secretary to accept and use contributed funds for the operation and maintenance of the subject transmission facilities, thus explicitly contemplating long-term project involvement. Reading section 1222(g) to "terminate" the Secretary's authority to accept and use funds after an arbitrary 10-year window ending in FY2015 would significantly interfere with the Department's ability to exercise the authorities granted by section 1222, even for a project initiated immediately after EPAct 2005 was enacted.

In sum, had Congress intended to add a termination provision to section 1222, as in other provisions of EPAct 2005, it would have done so unequivocally. The Department interprets section 1222(g) simply

---

[100] 42 U.S.C. § 16421(c)(1).

[101] *Id.* § 16421(c)(2).

[102] It is natural to say "more than $100,000,000," in the sense that $101,000,000 would be more than $100,000,000. By contrast, one would not say "I worked more than 5 p.m. yesterday," one says "after," "past," or "later than."

[103] *See, e.g.*, EPAct 2005 §§ 242 (42 U.S.C. §15881) ("There are authorized to be appropriated to the Secretary to carry out the purposes of this section $10,000,000 for each of the fiscal years 2006 through 2015."), 1007 (42 U.S.C. § 7256(g)) ("Notwithstanding any other provision of law, the authority to enter into transactions under paragraph (1) shall terminate on September 30, 2010."), and 1510 (42 U.S.C. § 16501) ("The authority of the Secretary to issue a loan guarantee under subsection (b) terminates on the date that is 10 years after the date of enactment of this Act.").

to cap contributed funding for the first 10 years of the program.[104] Starting in FY2016—absent further congressional action—section 1222 does not limit the Secretary's authority to accept and use contributed funds.

e. Section 1222's Interaction With State Siting Laws

A number of commenters argued that the Department must obtain permits from state regulatory bodies before proceeding with a section 1222 project because section 1222 does not supplant state siting laws.[105] Several commenters claimed that Arkansas must approve the siting, and highlighted the state's denial of public utility status to Clean Line.[106] The Oklahoma State Attorney General's Office also asserted that state's siting authority, insisting that section 1222 "preserves state law relating to the siting of energy facilities."[107] For the reasons that follow, the Department concludes that the savings clause of section 1222 does not require the Federal Government to subject itself to state regulatory authority.

The savings clause of subsection 1222(d) states that "[n]othing in this section affects any requirement of . . . . any Federal or State law relating to the siting of energy facilities . . . ."[108] The expression "State law relating to the siting of energy facilities" likely contemplates, at a minimum, state laws requiring state regulatory approval of large energy infrastructure projects before construction can begin. The laws usually call for a detailed description of the proposed facilities, including location information, technical information, and associated environmental reviews. These proceedings generally conclude when the public utility commission either denies the application or approves it by granting a "certificate" or other permit. In certificate proceedings, state public utility commissions often modify the proposal, including the proposed location, or subject the certificate to conditions. A certificate is usually required before construction and is sometimes a predicate for rate recovery and eminent domain authority.[109]

By its terms, the savings clause does nothing more than preserve the existing effect of federal and state siting law. Under such laws, private entities must generally obtain state regulatory approval to site and construct electric transmission lines but the federal power marketing administrations need not. A

[104] Although no legislative history exists on this point, the Department suspects that section 1222(g) was added to facilitate budgetary scoring of section 1222 by the Congressional Budget Office (CBO) over the 10-year period for which CBO scored EPAct 2005. Indeed, each of the CBO cost estimates scored section 1222 as an expenditure of $100 million and concluded—as does section 1222(g)'s dollar limitation—in FY2015. *See, e.g.*, http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/65xx/doc6581/hr6prelim.pdf (dated July 27, 2005).

[105] *E.g.*, a letter submitted and signed by multiple commenters stating that "in reading Section 1222, it is not at all clear that Congress intended it to provide siting authority to override state law," citing the savings clause in section 1222(d)(2); Comment of John C. Ale at 15 (Apr. 20, 2015) (arguing directly that "Section 1222 . . . does not preempt state siting requirements").

[106] *E.g.*, Comment of Linda Lou & Robert Brown (July 5, 2015) (stating that permission to build the line "despite the rejection of the line by the state of Arkansas . . . is a blatant disregard for the rights of states to regulate utilities."); Comment of Leif Anderson (July 12, 2015) ("The Arkansas utility commission has not granted public utility status and the right of eminent domain to [Clean Line]."); Comment of John C. Ale, at 14 (July 13, 2015) (requesting analysis of "[w]hether Arkansas state authorizations for the siting of the transmission line . . . are needed for the Project").

[107] Comment of the Oklahoma Attorney General's Office, at 5 (July 13, 2015).

[108] 42 U.S.C. § 16421(d)(2).

[109] For example, Arkansas law prohibits any person from constructing a high voltage transmission line without first having obtained a Certificate of Environmental Compatibility and Public Need from the Public Service Commission. *See* Ark. Code Ann. § 23-18-510. Having obtained such a certificate, the recipient may exercise eminent domain in state court. *Id.* § 23-18-528(a)(2).

federal agency may only be subject to state regulatory requirements if there is a "clear and unambiguous" congressional statement to that effect.[110] For that reason, federal courts have consistently rejected arguments that the Department's power marketing administrations must obtain state siting approval to build transmission lines.[111] Moreover, nothing in the savings clause in subsection (d)(2) states that the Department must itself comply with state siting law, much less in the "clear and unambiguous" language that would be required. The savings clause states only that "[n]othing in this section affects" state siting law. Again, these words appear intended only to preserve the existing effect of state siting law, not to expand it to federal activities otherwise free from state regulation. Therefore, the Department, acting through Western or Southwestern, need not obtain a certificate from a public utility commission for a transmission project under section 1222 before taking an action, such as construction, that if done by a private party would require a certificate under state law.

V. Findings with Regard to Secretarial Determinations Required by Section 1222

a. The Project Is Necessary to Accommodate a Projected Increase in Demand for Electric Transmission Capacity

Section 1222 authorizes the Department to participate in a new transmission project if, among other criteria, the Secretary determines the project to be "necessary to accommodate an actual or projected increase in demand for electric transmission capacity."[112] Because the statutory text specifies a particular type of demand—one for transmission capacity—the Department's analysis focuses on that statutory directive rather than indicators of demand for electricity generally, such as load growth projections.

Clean Line points to several factors to satisfy this criterion. First, Clean Line conducted an open solicitation for transmission capacity on the Project from May to July 2014. Fifteen different transmission customers submitted a total of 29 separate requests amounting to 17,091 MW of capacity, roughly four times the Project's transfer capacity.[113] Broken down, the transmission service requests from Oklahoma to Tennessee, as well as the requests from Oklahoma to Arkansas, both totaled approximately four times the Project's delivery capacity to each of those states.[114] Each request was for a term of "at least 20 years."[115] Clean Line argues that the interest in its Project shows that "increased demand for interregional capacity to connect wind-rich zones with load-centers exists today," not only in projections.[116]

---

[110] *Hancock v. Train*, 426 U.S. 167, 179 (1976).

[111] *See Citizens & Landowners Against the Miles City/Underwood Powerline v. Dep't of Energy*, 683 F.2d 1171, 1178-82 (8th Cir. 1982) (rejecting arguments that either section 103 of the Department of Energy Organization Act, 42 U.S.C. § 7113, or section 505 of the Federal Land Policy and Management Act, 43 U.S.C. § 1765, evince the necessary congressional intent to require Western to comply with South Dakota's siting law); *Montana v. Johnson*, 738 F.2d 1074 (9th Cir. 1984); *Columbia Basin Land Prot. Ass'n v. Schlesinger*, 643 F.2d 585, 605 (9th Cir. 1981) (holding that the Bonneville Power Administration was not required to secure a state certificate to build transmission lines and noting that "to require the [Administration] to require the BPA to receive a state certificate would imply that the state could deny the application, which would give them a veto power over the federal project [and] clearly cannot be the meaning that Congress intended.").

[112] 42 U.S.C. § 16421(b)(1)(B).

[113] Part 2 Application at 2-2.

[114] *Id.* at 2-3.

[115] *Id.*

[116] *Id.* at 2-2.

Second, Clean Line explained that wind energy development in Oklahoma is increasing demand for transmission capacity, as shown by letters from ten wind generators seeking new transmission service[117] and the results of a 2013 Request for Information (RFI) gauging the transmission needs of wind generators active in the Oklahoma Panhandle region. The responding wind generators reported over 11,450 MW of projects under development within 40 miles of the proposed Oklahoma converter site.[118]

Third, Clean Line stated that load serving entities in the Mid-South and Southeast are seeking more renewable power and transmission capacity to import low-cost wind power. As support, Clean Line referenced a November 3, 2014 letter of interest from TVA's President and CEO explaining why, in light of more stringent environmental requirements and other factors, "wind energy delivered by HVDC transmission to the TVA system could provide benefit to TVA and the areas that we serve."[119] TVA's 2011 Integrated Resource Plan (IRP) similarly noted that government mandates and customer demand for renewable energy support increasing renewable generation to 2,500 MW by 2020, with wind contracts playing a key role in future portfolios.[120] Clean Line asserted that the Project could meet the needs of other utilities in the Mid-South and Southeast as states enact greater renewable energy goals and as environmental regulation drives demand for renewable energy. Citing as examples the Environmental Protection Agency's (EPA) Clean Power Plan,[121] Mercury Air Toxics Standards, and Cross-State Air Pollution Rule, Clean Line explained that EPA's rules are leading to numerous coal plant retirements in the region.[122] Clean Line contended that Oklahoma wind energy is low cost and can meet the needs of regional utilities in the Southeast, particularly in light of the finite capacity and volatility of natural gas generation and the high cost of local renewable resources.[123]

Fourth, Clean Line explained that demand for the Project's transmission capacity cannot be met by existing planning processes. Clean Line explained that none of the relevant systems (SPP, Entergy, and Associated Electric Cooperative, Inc.) have been upgraded to facilitate new west-east transfers, and that is driving higher congestion costs.[124] Calculating the amount of interconnection capacity available in the area of its planned Oklahoma converter station, Clean Line noted that less than 600 MW is available for wind generators who have not yet completed their system impact studies.[125] According to Clean Line, SPP has

[117] *Id.* at app. 2-B.

[118] *Id.* at 2-3 to 2-4.

[119] *Id.* at app. 2-C.

[120] *Id.* at 2-5 (citing 2011 TVA Integrated Resource Plan, at 151, 153-54, & app. D at D198, https://jobs.tva.com/environment/reports/irp/archive/pdf/Final_IRP_complete.pdf). Clean Line also noted that the largest load centers in TVA support additional renewable energy purchases. *Id.* at 2-5 to 2-6.

[121] *See supra* n.39.

[122] Part 2 Application at 2-9 (noting that TVA has retired or plans to retire over 50% of its coal units, and over 14,000 MW of coal power generators in the SERC footprint are scheduled to be retired by 2017).

[123] *Id.* at 2-8 to 2-10.

[124] *Id.* at 2-11 to 2-12.

[125] *Id.* at 2-11.

repeatedly identified an increased demand for transmission export capacity,[126] but "SPP's focus in transmission planning is moving power with[in] the SPP footprint."[127]

Several commenters disagreed that the Project is necessary to accommodate actual or projected demand. These commenters' discussion of "demand" often conflated aggregate demand for electricity with demand for electric transmission capacity. Some commenters claimed that demand for electricity in the next two decades will grow slowly, and that the need for additional wind energy will not arise for some time. For example, citing a draft DOE study finding that, notably, did not include Oklahoma,[128] Save the Ozarks contended that "DOE found little or no actual or projected increase in demand for additional generation or electric transmission capacity in the [S]outheastern United States."[129] Senator Lamar Alexander of Tennessee wrote that TVA stated in its 2015 Draft Integrated Resource Plan (IRP) that it "would not have a need for this wind power until the 2030s, at the earliest."[130] Other comments pointed out that integrated resource planning forecasts demand growth of 0.3% to 1.3% over 20 years, much less than TVA's projection as recently as 2011,[131] and alleged that TVA "has no plans to buy [Clean Line] intermittent power."[132]

Comments also stated that too few agreements cover the anticipated transmission capacity, and that too little evidence supports a demand increase that could lead to new agreements. They stressed that because Clean Line has not secured firm commitments from producers or users, projected demand increases are specious and the Project would not be necessary to meet any increase in demand.[133]

---

[126] Clean Line previously noted that the SPP "specifically identified a future demand for additional export capacity to the broader Eastern Interconnection as renewable energy increases its penetration level." 2010 Application at 8 (citing Southwest Power Pool, *Final Report on the SPP EHV Overlay Project*, at 7 (June 27, 2007)). In a subsequent version of that study, the study model was updated to reflect increased load growth and significantly increased interest in developing wind generation in western Oklahoma, a re-evaluation that underscores the growing trend for transmission export capacity. *Final Report on the Southwest Power Pool (SPP) Updated EHV Overlay Study*, at 4-7, 17-18 (March 8, 2008), http://sppoasis.spp.org/documents/swpp/transmission/2008%20EHV%20Study%20Final%20Report.pdf. Clean Line's 2011 Proposal Update noted a similar trend. 2011 Proposal Update at 10 ("Transmission Service Requests (TSRs) in SPP also evidence a significant demand to transmit power generated in western SPP to regions east of SPP"), 11 (as of August 2011, "more than 9300 MW of [Transmission Service Requests] from western SPP regions to balancing authorities east of the SPP footprint" were outstanding).

[127] Part 2 Application at 2-11.

[128] U.S. Department of Energy, *Transmission Constraints and Congestion in the Western and Eastern Interconnections, 2009-2012* (2014). The comment quoted the study as finding "a high level of generation capacity relative to peak demand" and "few reports of specific transmission constraints in the Southeast." *See also* Comment of Mark Fears (May 1, 2015) (noting that TVA's April 2015 report states that the agency "has no need or demand for this additional power being added to the grid of the southeast United States.").

[129] Comment of Pat Costner, at 5 (July 13, 2015).

[130] Comment of Sen. Lamar Alexander, at 1 (June 11, 2015). *See also* Comment of Cynthia Callahan, at 3 (June 2, 2015) (arguing that because TVA has not prioritized Clean Line and does not plan to consider it for another 15 years, the project is "not necessary").

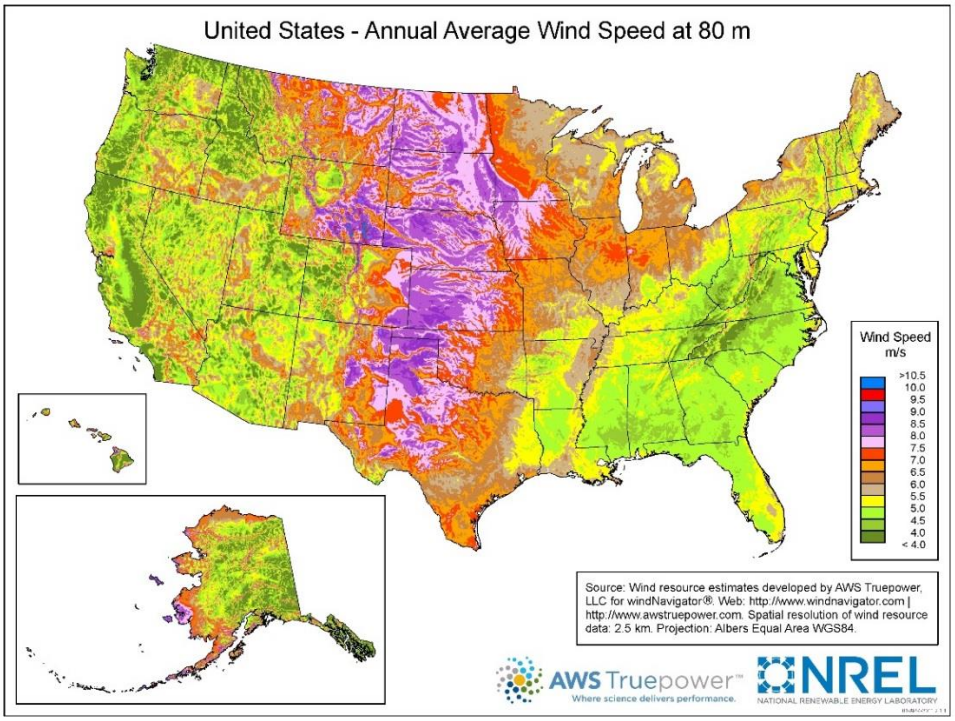
[131] *E.g.*, Comment of Rob Kopack (July 13, 2015); Comment of Richard Mays, at 2 (July 13, 2015); Comment of Daron Harrison (July 12, 2015) ("TVA even states there is no need required for any additional energy until 2030.").

[132] Comment of Luis Contreras, at 1 (July 5, 2015).

[133] *E.g.*, Comment of Greg Kremers (July 8, 2015) (noting that Clean Line has not secured customers and claiming that "no suppliers [are] waiting to generate power on this line"); Comment of Leif Anderson, at 1 (July 13, 2015) (noting that Clean Line "does not have enough signed agreements to provide electricity to cover transmission

The Department concludes that the Project is necessary to accommodate an actual or projected increase in demand for electric transmission capacity. This conclusion is supported both by analysis of the demand for west-to-east transmission capacity delivering wind power into the mid-South and Southeast, and by indicators of demand that are specific to the Project itself.

Figure 1. U.S. 80m Wind Resource Map



SOURCE: National Renewable Energy Laboratory, Dynamic maps, GIS Data, & Analysis Tools, *available at* http://www.nrel.gov/gis/images/80m_wind/USwind300dpe4-11.jpg.

Multiple sources establish the demand for additional transmission capacity to move wind power out of the Panhandle region of Oklahoma and Texas. As shown above, the Panhandle region has some of the highest average wind speeds in the Nation. Consequently, wind power produced in the Panhandle region is among the lowest cost in the Nation.[134] In 2015, the Department conducted a study of transmission congestion in the United States (2015 Congestion Study). The Department's 2015 Congestion Study found that in the Midwest region, which includes Oklahoma, "Congestion results from high and growing levels

capacity, especially within WAPA/SWPA."); Comment of Connie Hill, at 2 (July 13, 2015) ("The lack of Power Purchase Agreements speaks volumes."); Comment of the Oklahoma Attorney General's Office, at 1 (July 13, 2015) (noting that "Clean Line does not have firm contracts with 'load-service entities.'"); Comment of Daron Harrison (July 12, 2015) (stating that no TVA customers have sought additional energy sources and that no Oklahoma wind producers have contracts with Clean Line); Comment of Flo Stumbaugh (April 29, 2015) (alleging that Clean Line has "no guarantees the power generated will be sold to anyone."); Comment of Luis Contreras, at 5 (June 8, 2015) (noting that Clean Line "does not have Power Purchase Agreements with utilities").

[134] U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, *2014 Wind Technologies Market Report*, at viii (Aug. 2015) (noting that "the national average levelized price of wind PPAs that were signed in 2014 . . . fell to around $23.5/MWh nationwide—a new low, but admittedly focused on a sample of projects that largely hail from the lowest-priced Interior region of the country."), https://emp.lbl.gov/sites/all/files/lbnl-188167_0.pdf.

of wind generation that cannot be delivered from the western side to more distant, eastern loads, and the lack of additional transmission to enable further development in renewable-rich areas."[135] In addition to the evidence of congestion, the 2015 Congestion Study pointed to generator interconnection queues, describing them as "indicators of potential transmission demand."[136] The 2015 Congestion Study observed that "Interconnection queues for the Midwest, as of 2012, were dominated by siting requests for wind generation, generally in locations distant from population centers."[137] The 2015 Congestion Study did not analyze constraints between Oklahoma and the Southeast region, but it did find that future generation in the Southeast region will consist in part of "wind generation in the western part of the interconnection,"[138] lending support to Clean Line's findings that wind developers in Oklahoma are seeking additional transmission export capacity. The findings in the 2015 Congestion Study regarding transmission-constrained wind resources are reinforced by the results of Clean Line's 2013 RFI. In that RFI, Clean Line sought information on whether there was increasing demand for transmission service from the Panhandle region. Clean Line received affirmative responses from twelve wind generators. Respondents to the RFI also reported wind power projects under development totaling 11,450 MW of planned capacity within 40 miles of the proposed Oklahoma converter station, which contrasts with the less than 600 MW of interconnection capacity available on SPP's system in the same general area.[139] Finally, the Department notes that in December 2015, Congress extended the Production Tax Credit for five additional years.[140] The Department expects that, by improving the economics of wind power in general, the Production Tax Credit extension will add to the demand for transmission capacity to deliver wind power from the Panhandle region.[141]

Complementing the increased demand for transmission capacity to export wind power out of the Panhandle region is evidence of demand for import transmission capacity to load centers in the mid-South and Southeast.[142] As noted above, a November 2014 letter of interest from TVA's President and CEO

---

[135] U.S. Department of Energy, *National Electric Transmission Congestion Study*, at 87 (2015) (2015 Congestion Study). Studying congestion in the Southeast region (including Arkansas and Tennessee) was hampered by the fact that "there are no reports on the economic cost of congestion because no organized wholesale electricity markets operate in the Southeast which produce locational marginal prices that reflect differences in production costs due to congestion." *Id.* at 89.

[136] *Id.* at xi. "[W]hen the aggregate capacity in the queue is larger than available or projected transmission capacity connecting it to load regions, it is an indication that transmission may be or will become constrained depending on how many of these projects materialize and how capacity interconnection and energy delivery is pursued." *Id.* at xii.

[137] *Id.* at 87; *see also* Southwest Power Pool, *2016 Wind Integration Study*, at 6 (Jan. 5, 2016) ("SPP wind generation resources are primarily located in the southwestern and north central portions of the SPP footprint . . . . Wind development is expected to expand to higher levels based on the generation interconnection requests in the queue."), http://www.spp.org/documents/34200/2016%20wind%20integration%20study%20(wis)%201.pdf.

[138] 2015 Congestion Study at 89.

[139] Part 2 Application at 2-4, 2-11.

[140] The Production Tax Credit is a subsidy of $0.023/kWh for wind, with a phase down starting with wind facilities commending construction in 2017 or later. Consolidated Appropriations Act, 2016, Pub. L. No. 114-113, 129 Stat. 2242 (Dec. 18, 2015); Renewable Electricity Production Tax Credit, http://energy.gov/savings/renewable-electricity-production-tax-credit-ptc.

[141] *See, e.g.*, Daniel Cusick, *Renewables Boom Expected Thanks to Tax Credit*, Scientific American, Dec. 21, 2015, http://www.scientificamerican.com/article/renewables-boom-expected-thanks-to-tax-credit (last visited Mar. 24, 2016) (citing statements of several industry experts predicting growth in renewable development resulting from the tax credit extension).

[142] The sources cited in this paragraph do not rely on overall load growth to drive import demand because the utilities are also responding to market pressures to find replacement power sources as older units are retired.

stated that "wind energy delivered by HVDC transmission to the TVA system could provide benefit to TVA and the areas that we serve."[143] TVA's 2015 IRP modeled adding renewables under every strategy considered.[144] In a comment on Clean Line's application, TVA's CEO and President, William Johnson, noted that the agency "supports the advancement of [the Project] and encourages the Department of Energy to complete the remaining review and evaluation needed to move the project forward."[145] Mr. Johnson stressed that TVA "appreciates every available option as we select from them the best portfolio of resources to meet our forecast load, both for the long- and short-term," and that the Project's "promise . . . to make additional, competitively priced wind energy available holds value for this reason."[146] Further, in January 2016, Georgia Power issued an IRP that included a substantial commitment to renewable resources and noted its continued interest in wind delivered over HVDC from the Panhandle region. The IRP stated that the "use of HVDC lines could facilitate delivery from either the Oklahoma Panhandle into the Tennessee Valley Authority . . . The use of HVDC lines can potentially eliminate delivery risk across the Southwest Power Pool ('SPP') and Midcontinent Independent System Operator ('MISO') transmission systems."[147]

The already-strong demand for imports of low-cost wind energy into the mid-South and Southeast would likely increase if and when states in the region are subject to regulations limiting greenhouse gas emissions from power plants. EPA's Clean Power Plan,[148] published in October 2015 and scheduled to mandate compliance beginning in 2022, aims to "continue progress already underway in the U.S. to reduce CO_2 emissions from the utility power sector"[149] and is part of a suite of air quality improvements sought by other national environmental regulations.[150] These improvements could be accomplished through retrofitting of older generation plants, plant retirements, and an increasing reliance on local or imported low-carbon generation including renewables.[151] The Department's Energy Information Administration (EIA) estimates that the Clean Power Plan would result in strong growth in renewable generation, particularly in regions currently lacking robust renewable portfolio standards such as the Southeast.[152] Implementation of the Clean Power Plan would also shift the regional fuel mix away from baseload capacity with on-site fuel supplies (such as coal, nuclear, hydroelectricity, and oil) towards capacity that tends to

[143] Part 2 Application at app. 2-C.

[144] 2015 TVA Integrated Resource Plan, at 90, https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/IRP/Documents/2015_irp.pdf (recognizing the role of renewables but declining to analyze the Clean Power Plan impact until the rule is finalized). *See supra* n.39.

[145] Comment of William D. Johnson, President & CEO, Tenn. Valley Auth., at 2 (June 9, 2015).

[146] *Id.* at 1.

[147] Georgia Power Company's 2016 Integrated Resource Plan and Application for Decertification of Plant Mitchell Units 3, 4A and 4B, Plant Kraft Unit 1 CT, and Intercession City CT, Ga. Public Serv. Comm. Docket No. 40161, at 10-114.

[148] On February 9, 2016, the United States Supreme Court stayed the rule implementing the Clean Power Plan until the current litigation against it concludes. *Chamber of Commerce, et al. v. EPA, et al.*, Order in Pending Case, 577 U.S. ___ (2016), http://www.supremecourt.gov/orders/courtorders/020916zr3_hf5m.pdf. As of that date, a challenge to the rule was pending before the United States Court of Appeals for the District of Columbia Circuit.

[149] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662 (Oct. 23, 2015). *See supra* n.39.

[150] 2015 Congestion Study at 30-34.

[151] *Id.* at 30.

[152] U.S. Energy Information Administration, *Analysis of the Impacts of the Clean Power Plan*, at 53 (2015) (EIA Clean Power Plan Analysis).

utilize real-time fuel delivery (wind, solar, and natural gas).[153] Overall, wind generation is projected to play a major role and become increasingly economically competitive.[154] Although the EIA's analysis did not look at the degree to which such a fuel mix would be imported to the Southeast or conduct a detailed model of the transmission system, it did find that "[c]ompliance with the proposed rule could necessitate significant investment in electric transmission system infrastructure to integrate renewables from remote areas."[155]

Supporting these findings about demand for projects of this type are the indicators of demand for this Project itself. To begin, the Project was oversubscribed in its 2014 capacity solicitation.[156] Responding to Clean Line's open capacity solicitation, potential customers requested 17,091 MW, or roughly four times the Project's transmission capacity.[157] The company noted that "[a]ll of the requests were from companies whose primary business is wind power generation, not retail electric service."[158] Given the robust response, the company has also signed term sheets for precedent agreements with several potential transmission service customers. To date, customers have entered into 8,252 MW of term sheets for precedent agreements.[159] In a precedent agreement to a TSA, the parties set forth important terms and conditions—such as price, schedule, point of delivery, etc.—that they expect to be included in a TSA. As such they demonstrate bona fide commercial interest in the Project at the price and terms specified. Finally, the Department notes again that the Project is a merchant project, meaning that it will not succeed commercially unless there is market demand for the service at the price and terms Clean Line can offer. Accordingly, the substantial equity commitment investors have already made on the Project to date[160] is a powerful indicator of their expectations regarding market demand.

The observation made by some commenters that Clean Line has yet to enter binding TSAs does not disturb this conclusion. To begin, the Department notes that the statute requires that the Project be "necessary to accommodate an actual or projected increase in demand for electric transmission capacity." The inclusion of the word "projected" indicates that the transmission capacity for the project need not already be under contract for the criterion to be satisfied. Further, because the Department's participation in this Project is critical to its development, the Department thinks it would have been unlikely for potential subscribers to the Project to have entered binding TSAs before knowing whether, and on what terms, the Department would choose to participate under section 1222.

Nor does the Department agree with commenters regarding their interpretation of the TVA's IRP or the weight they place on demand from TVA itself. It is true that TVA's IRP focused on the need for wind resources by 2033. But TVA cautioned that its anticipated resource mix is "dependent on pricing,

[153] *Id.* at 60. This trend is currently evident in coal-fired generation plant closures throughout the Southeast region. Part 2 Application at 2-9.

[154] EIA Clean Power Plan Analysis at 36 & n.27.

[155] *Id.* at 60.

[156] *See* Part 2 Application at 2-2.

[157] *Id.* at 2-3.

[158] *Id.* at 6-5.

[159] Documents provided to the Department in 2015 during the Department's due diligence review of the Application.

[160] Clean Line's major investors, National Grid USA and ZAM Ventures, L.P., "have made, and continue to make, substantial investments to support the Project's development." Part 2 Application at 3-15. *See also id.* at app. 6-E (financial statements of National Grid and its subsidiaries as well as Clean Line Energy Partners LLC and Plains and Eastern Clean Line Holdings LLC).

performance and integration costs."[161] "Given the variability of wind selections in the scenarios, [the recommendation is to] evaluate accelerating wind deliveries into the first 10 years of the plan if operational characteristics and pricing result in lower-cost options."[162] In other words, if the Project comes online quickly and wind generators offer low prices, TVA's projected import of wind energy could rise substantially in the near future.[163] In any event, demand in TVA is not determinative. The Project is designed to deliver energy to MISO South through the Arkansas converter station and, by connecting to facilities built by Clean Line in Tennessee, into TVA's system through a Tennessee converter station. In both instances, the energy can be delivered over the connected AC system and marketed to other utilities across the Southeast and up to Virginia.[164]

Another comment pointed to a draft of the Department's 2015 Congestion Study to support a claim that the Southeast will have little or no projected increase in demand. The Department disagrees with this comment because (1) it mischaracterizes the statement made in the 2014 draft Congestion Study,[165] and (2) the language identified in the 2014 draft Congestion Study was not included in its entirety in the final 2015 Congestion Study. The 2015 Congestion Study did not examine the impact of the Project itself because it would not come online during the timeframe of the study, but the Department found that "its existence could materially change load flows, long-term congestion patterns, and transmission infrastructure plans within the Midwest and Southeast."[166]

The Department finds that the Clean Line Project is necessary to accommodate a projected increase in demand for electric transmission capacity. The evidence discussed above represents the best available evidence on the issue, and the Department's analysis of that evidence leads to the Department's finding. Moreover, the Department has taken the additional precaution of including terms in the Participation Agreement that would condition the Department's participation in this respect. Before the Department would begin activities authorized under section 1222, the Participation Agreement would require Clean Line to have under contract at least 3,500 MW from the project, including precedent agreements,[167] capacity transferred as a part of a project investment, and firm TSAs.[168] Of that 3,500 MW, at least 1,500 MW must be in the form of firm TSAs. Thus, the Department's participation would be conditioned on evidence of actual—not projected—demand for the Project's transmission capacity.

---

[161] Tennessee Valley Authority, *Integrated Resource Plan: 2015 Final Report*, at 117, https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/IRP/Documents/2015_irp.pdf.

[162] *Id.*

[163] *Id.* at 109 ("Lowering costs and providing a higher guaranteed net dependable capacity for HVDC wind results in selection as early as 2020.").

[164] Part 2 Application at 2-7.

[165] The comment pointing to a finding of "few reports of specific transmission constraints in the Southeast" omits the fact that Oklahoma is not included in the finding. Additionally, the lack of organized markets in much of the region complicates the study of constraints.

[166] 2015 Congestion Study at 60-61.

[167] *Cf.* Federal Energy Regulatory Commission, *Certification of New Interstate Natural Gas Pipeline Facilities: Statement of Policy*, 88 FERC ¶ 61,227 at p. 61,748 (1999) (crediting precedent agreements as an indicator of need for new interstate natural gas pipelines).

[168] Participation Agreement § 6.2.

b. The Project Is Consistent Both with Transmission Needs Identified by the Appropriate Transmission Organization and with Efficient and Reliable Operation of the Transmission Grid

i. Consistency with Transmission Needs Identified in the Regional Expansion Plan of the Appropriate Transmission Organization

To exercise the authority provided in section 1222, the Secretary must determine that the proposed Project "is consistent with . . . transmission needs identified, in a transmission expansion plan or otherwise, by the appropriate Transmission Organization (as defined in the Federal Power Act[169]) if any, or approved regional reliability organization." For ease of exposition, this requirement is referred to here as the Planning Consistency Criterion.

Transmission organizations assess transmission needs and conduct transmission planning on their own and in cooperation with other neighboring transmission organizations. Transmission organizations identify transmission needs by analyzing the economic and reliability-related problems that have arisen or may arise due to lack of adequate transmission facilities, as well as those needs driven by public policy requirements, such as mandates on utilities to use renewable energy or reduce emissions. Transmission organizations typically conduct needs assessments for their own geographic footprints on a rolling basis considering short-, medium-, and long-term time horizons separately. Transmission organizations often formalize this analysis in transmission expansion plans. Transmission expansion plans typically assess needs and then also propose certain transmission projects to be constructed and paid for by the transmission organization itself or allocated among members of the transmission organization.

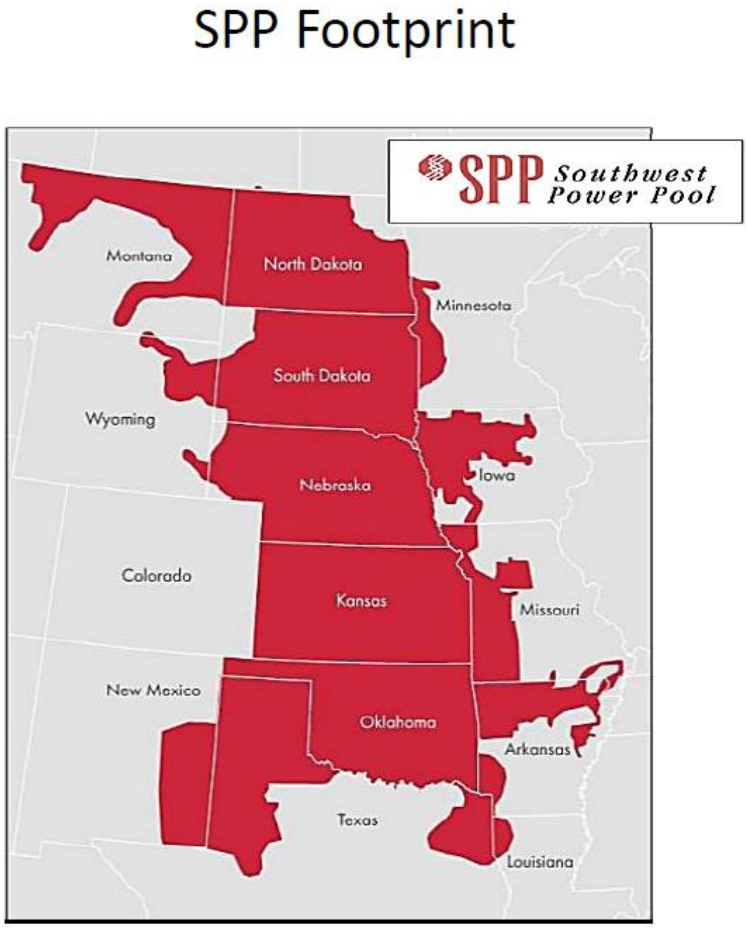
Transmission expansion plans are not the only means by which transmission organizations assess transmission needs. Transmission organizations also conduct transmission planning, including needs assessments, in cooperation with other neighboring transmission organizations in order to explore efficiencies that might be gained by looking at how the transmission system functions across a greater geographic area. The need for transmission depends on a number of factors and transmission organizations prudently evaluate the need for transmission under a number of assumptions and scenarios. The inclusion of the words "or otherwise" in the phrase "in a transmission expansion plan or otherwise" demonstrates that, in considering whether the Planning Consistency Criterion is satisfied, the inquiry need not be limited to transmission expansion plans within an RTO footprint but may include other processes, such as inter-regional planning, in which transmission organizations identify joint transmission needs.

SPP is an "appropriate transmission organization" for purposes of the Planning Consistency Criterion because the overwhelming majority of the Project traverses SPP's footprint, including the entire Oklahoma portion and a substantial portion in western Arkansas. SPP is an RTO[170] that runs through some or all of fourteen states and conducts regional transmission planning on behalf of its members.

[169] The Federal Power Act defines "transmission organization" broadly as "a Regional Transmission Organization, Independent System Operator, independent transmission provider, or other transmission organization finally approved by the Commission for the operation of transmission facilities." 16 U.S.C. § 796(29).

[170] An RTO is an organization that controls the electric grid in a given region, coordinating both power generation and transmission and giving power producers and marketers fair access. The Federal Power Act defines an RTO as "an entity of sufficient regional scope approved by the Commission (A) to exercise operational or functional control of facilities used for the transmission of electric energy in interstate commerce; and (B) to ensure nondiscriminatory access to the facilities." 16 U.S.C. § 796(27).

Figure 2. SPP Footprint



SOURCE: http://www.ferc.gov/market-oversight/mkt-electric/spp/elec-spp-footprint.pdf (last visited Mar. 24, 2016)

SPP prepares transmission planning reports on a recurring basis, including assessments looking at potential transmission needs across twenty-year, ten-year and near-term time horizons. As SPP has explained:

> The 20-Year Assessment identifies transmission projects, generally above 300 kV, needed to provide a grid flexible enough to provide benefits to the region across multiple scenarios. The 10-Year Assessment focuses on facilities 100 kV and above to meet system needs over a ten-year horizon. The Near Term Assessment is performed annually and assesses system upgrades, at all applicable voltage levels, required in the near term planning horizon to address reliability needs.[171]

[171] Southwest Power Pool, *2015 Integrated Transmission Plan Near-Term Assessment*, at 6 (Jan. 27, 2015), http://www.spp.org/documents/30445/final_2015_itpnt_assessment_bod_approved.pdf.

The costs of transmission projects selected for construction in SPP's transmission planning process are allocated to SPP's members based on the purpose of the project, the location within SPP, and the distance traveled.[172]

In general terms, SPP has identified the need for west-to-east transmission capacity to access low-cost wind resources in the western part of its footprint, including the Panhandle region. In its most recent 20-Year Assessment,[173] SPP stated:

> As wind capacity has increased, some generation is concentrated in areas of high wind potential towards the western part of the system. It has become necessary to connect this generation with a network that is capable of moving power to the eastern portion of the SPP system or the eastern United States where the major load centers are located.[174]

SPP has conducted or participated in a number of interregional planning studies addressing the need for west-to-east transmission of wind power. In 2008, SPP participated in an inter-regional planning process with several transmission organizations in the eastern interconnection called the Joint Coordinated System Plan (JCSP). Anticipating a substantial increase in the need for renewable energy, the JCSP "was designed to look at the costs and benefits of transmission overlays that [could] serve a range of policy goals."[175] The study used a several-step process, beginning with capacity expansion analysis for each region, then incorporating that analysis into transmission and production cost models, followed by "conceptual transmission overlays to economically deliver energy to the Eastern Interconnection."[176] Looking at a scenario assuming 20% wind generation nationally, the JCSP identified the need for up to seven inter-regional west-to-east HVDC transmission lines,[177] including two originating in Oklahoma.[178]

Beginning in 2010, SPP participated in the Eastern Interconnection Planning Collaborative (EIPC), which was a transmission planning effort funded by DOE and conducted by the major transmission planning and operating entities in the eastern electricity interconnection. The first of the three "stakeholder selected scenarios" in the study was a "national carbon constraint and demand reduction scenario, driven by a nationally implemented CO_2 price, as well as significant penetration of energy efficiency and demand response."[179] Examining how to develop transmission to relieve system constraints and enhance reliability, the study concluded that HVDC lines would be required "[t]o move the large amounts of power from the

---

[172] *See Sw. Power Pool, Inc.*, 144 FERC ¶ 61,059 (2013), *order on reh'g & compliance*, 149 FERC ¶ 61,048 (2014).

[173] Southwest Power Pool, *ITP20: 2013 Integrated Transmission Plan 20-Year Assessment Report* (ITP20), http://www.spp.org/documents/20438/20130730_2013_itp20_report_clean.pdf.

[174] *Id.* at 23.

[175] Joint Coordinated System Plan '08, at 2, http://sppoasis.spp.org/documents/swpp/transmission/JCSP_Report_Volume_1.pdf.

[176] *Id.* at 3.

[177] *Id.* at 213.

[178] *See id.*, Figure 1-3, at 9.

[179] Eastern Interconnection Planning Collaborative, *Phase 2 Report: Interregional Transmission Development and Analysis for Three Stakeholder Selected Scenarios and Gas-Electric System Interface Study*, at 1-6 (July 2, 2015), http://nebula.wsimg.com/50aaeb04f92808e3881c5497a6f22040?AccessKeyId=E28DFA42F06A3AC21303&disposition=0&alloworigin=1.

Midwest over long distances to the east."[180] More specifically, the model called for six HVDC transmission lines running from Minnesota, Iowa, Missouri, and Oklahoma to points east.[181]

SPP has, in its transmission expansion planning process, identified the need for high-voltage transmission capacity from western Oklahoma eastward out of SPP in order to accommodate increased levels of wind exports out of SPP such as those proposed by Clean Line. The Department considers SPP's 20-Year Assessment the best planning document to consult because the Project would last many decades and, therefore, it is appropriate to consult the planning document that takes the longest view of SPP's future needs.[182] In SPP's 2013 20-year assessment, called the ITP20, SPP considered five future scenarios or "futures." As the ITP20 explained:

> The 2013 ITP20 study was conducted on a set of five futures. These futures consider evolving changes in technology and public policy that may influence the transmission system and energy industry as a whole. By accounting for multiple future scenarios, SPP staff can assess what transmission needs arise for various uncertainties.[183]

The "Business as Usual" future, upon which SPP placed the greatest weight for purposes of selecting transmission projects that will be paid for by its members, "assumes no major changes to policies that are currently in place"[184] and makes conservative assumptions about future development of wind resources in the SPP footprint. Specifically, the Business as Usual future assumed 9.2 gigawatts (GW) of

[180] *Id.* at 2-17.

[181] *See id.*, Figure 2-3, at 2-17.

[182] SPP's most recent ten-year assessment, called the ITP10, did not examine transmission needs in a high-wind future. Southwest Power Pool, *ITP10: 2015 Integrated Transmission Plan, 10-Year Assessment Report* (Jan. 20, 2015), http://www.spp.org/documents/26141/final_2015_itp10_report_bod_approved_012715.pdf. But the ITP10 did conduct a sensitivity analysis to look at how the Plains and Eastern project, if built, would affect the business case for the portfolio of projects already selected for construction by SPP. *Id.* at 97 ("These sensitivities were not used to develop transmission projects or filter out projects; they measure the performance of the Consolidated Portfolio projects (economic and reliability) under different input assumptions."). The ITP10 modeled a stylized version of the Plains and Eastern project in which 2,000 MW of generation was withdrawn from the terminus in Oklahoma without any corresponding change to the total amount of generation in SPP. *Id*. at 97, 103. The ITP10 concluded that the Plains and Eastern project would increase the benefits of the existing portfolio. The report also stated that the Plains and Eastern project, along with another project, would aggravate the "general north to south system flows of the SPP footprint" but that the consolidated portfolio of transmission expansion projects "is able to mitigate a portion of this increased congestion." *Id.* at 104. The Department expects that the referenced north-to-south system flows appear in the modeling result because of the assumption that power is withdrawn from the Oklahoma terminus, which is in the southern portion of the SPP footprint, without any new generation developed to access the new HVDC line. The Department expects that the construction of the Project would lead to new generation resources being constructed in the area of the Oklahoma terminus because, for the reasons above, there is inadequate transmission in that area to meet wind generation needs and because nearly all of the responses to Clean Line's capacity solicitation were for new generation facilities. In any event, the Department reiterates that the sensitivity case in the ITP10 was not an attempt to evaluate the need for the Plains and Eastern project and does not affect the Department's analysis of the needs identified by SPP in the ITP20.

[183] ITP20 at 17.

[184] *Id.*

wind generation capacity in SPP in the year 2033, and that wind exports would remain at the 2012 level of 0.8 GW throughout the 20-year period.[185]

In another future, labeled "additional wind plus exports," SPP modeled total wind generation capacity of 25.6 GW with 10 GW being exported. Under that scenario, SPP found that, at these levels of wind generation, wind generators would have to be curtailed at exceedingly high frequencies to maintain system reliability,[186] and thus that there was a need for new transmission facilities "to provide additional paths to, and, or around the curtailed wind farms to relieve congestion on the transmission system near the wind farms."[187] SPP considered economic and reliability factors and generated a set of transmission projects that could best accommodate the volume of wind exports assumed in the scenario.[188] The ITP20 generated two groupings of projects for this future, each of which was a "viable option" for meeting the objectives of the wind export scenario – one grouping that included only AC projects and a second that included a mix of AC and DC projects. The grouping that included DC projects had a superior benefit to cost ratio, lower total costs, and less total mileage required.[189] Included within the DC grouping was a project bearing similarities to the Project. That hypothetical project, labeled "New Mathewson-Shelby 600 kV DC bi-pole," is also a DC project, of the same voltage as the Project, and with a similar route from Central Oklahoma, through northern Arkansas, and ultimately into TVA.[190] While the hypothetical Project under consideration in SPP's model extends further west than the New Mathewson-Shelby project, the DC grouping also included high-voltage AC lines heading westward from New Mathewson into the Panhandle region.

In addition to examining five futures, SPP's ITP20 also included groups of potential projects, called "Potential Project Plans" that are not included in the set of projects to be paid for by SPP's members, but that nonetheless "would be valuable to SPP should the 'business as usual' change to include higher wind levels."[191] Potential Plan 1 considered wind generation levels between 9 GW and 15 GW, and Potential Plans 2 and 3 considered wind generation levels between 15 GW and 25 GW. Potential Plans 2 and 3 differed in that Potential Plan 2 included only AC projects while Potential Plan 3 included both AC and DC. The New Mathewson-Shelby facility, which, again, bears similarity to the Project, also appears in Potential Plan 3. This inclusion is significant because it demonstrates SPP's assessment of the value of HVDC capacity running east from Oklahoma even under a scenario that assumes less new wind generation (15 GW to 25 GW for Project Plan 3 versus 25.6 GW for the high wind export future) and as a component of a less capital-intensive portfolio of projects.[192]

---

[185] *Id.* at 31.

[186] *Id.* at 70 (Nine wind farms were identified in curtailment range of 51%-75%, seven wind farms were identified in curtailment range of 26%-50%, and eight were identified in curtailment range of 3%-25%).

[187] *Id.* at 70.

[188] *See id.* at § 6 (describing SPP's methodology).

[189] *Id.* at 93 – 95.

[190] The project would run 515 miles and cost $1.73 billion. *See id.* at 99.

[191] *Id.* at 116.

[192] Potential Plan 3 carried an incremental cost of $5.1 billion on top of the $560 million required for the projects in SPP's Consolidated Portfolio, for a total cost of $5.66 billion, compared to $7.5 billion for the DC grouping within the high wind export scenario.

In considering whether the Project satisfies the Planning Consistency Criterion, it is reasonable to look to the transmission needs identified by SPP in high wind export scenarios. SPP's ITP20 is premised on the sensible idea that SPP's transmission planners cannot predict the future. Therefore, the ITP20 considers multiple scenarios and potential project plans that identify needs across a range of assumptions. While SPP placed the greatest weight on its Business as Usual future in determining the projects that would presently be scheduled to be paid for by its members, the ITP20 also clearly acknowledged that other needs would arise should the wind generation assumptions in the Business as Usual future prove too low. Consequently, the ITP20 devoted much of its analysis to exploring what those needs would be and how best to address them. And, indeed, less than three years after publication of the ITP20, it is now clear the wind generation projections in the Business as Usual future were too low. The Business as Usual future projected that installed capacity of wind generation would grow from 6.3 GW to 9.2 GW. Less than three years into the twenty-year period, however, SPP has reached 12.4 GW of installed wind capacity and expects to reach 17 GW by the end of 2016 and 19 GW by the end of 2017.[193] In other words, the growth pattern of wind development in SPP just in recent years has begun to make the high wind development scenarios modeled in the ITP20 a reasonable basis for identifying transmission needs. Moreover, public policy has changed in ways that favor continued wind development. The Business as Usual future was developed based on an assumption of policies in place at the time. But since 2013, there have been two important policy changes. In December 2015, Congress enacted a five-year extension of the Production Tax Credit, which provides a per-megawatt hour subsidy to wind generation[194] and will likely lead to continued rapid deployment of wind resources.[195] In addition, EPA promulgated the Clean Power Plan in October 2015,[196] a rule that would require every state to achieve significant reductions in carbon dioxide emissions from power plants and thereby increase demand for renewable energy.[197]

Several commenters argue that this criterion has not been met. For example, one commenter stated that the Project "has not been determined [to be] needed by any appropriate transmission organization."[198] The same comment, along with several others, insists that "Section 1222 projects must be included in an appropriate regional transmission expansion plan if they are proposed within a regional transmission authority's territory."[199] The Oklahoma Attorney General's office also commented that the Project "is not

[193] Southwest Power Pool, *SPP Wind Integration Study Overview*, at 7 (Jan. 2016) (on file with Department of Energy).

[194] Consolidated Appropriations Act, 2016, Pub. L. No. 114-113, 129 Stat. 2242 (Dec. 18, 2015).

[195] *See, e.g.*, Daniel Cusick, *Renewables Boom Expected Thanks to Tax Credit*, Scientific American, Dec. 21, 2015, http://www.scientificamerican.com/article/renewables-boom-expected-thanks-to-tax-credit (last visited Mar. 24, 2016) (citing statements of several industry experts predicting growth in renewable development resulting from the tax credit extension).

[196] On February 9, 2016, the United States Supreme Court stayed the rule implementing the Clean Power Plan until the current litigation against it concludes. *Chamber of Commerce, et al. v. EPA, et al.*, Order in Pending Case, 577 U.S. ___ (2016), http://www.supremecourt.gov/orders/courtorders/020916zr3_hf5m.pdf. As of that date, a challenge to the rule was pending before the United States Court of Appeals for the District of Columbia Circuit.

[197] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,661 (Oct. 23, 2015). *See supra* n.39.

[198] Comment of Macy Rodenbaugh (June 7, 2015).

[199] *Id.*; Comment of Diane Ragsdale (June 7, 2015); Comment of Cynthia Callahan (Apr. 30, 2015). *See also* Comment of Cynthia Callahan (June 2, 2015) (stating that SPP's 2015 ITP10 Scope did "not [incorporate Clean

consistent with transmission needs identified in the 2015 SPP Transmission Expansion Plan Report and therefore does not meet the [statutory] requirements."[200] Speaking more generally, another comment states that, because no transmission organization has said it needs the Project, "Clean Line cannot be allowed to self-determine need based solely on their desire to operate for profit in the transfer of electricity."[201]

The Department understands these commenters to contend that the Project does not satisfy the Planning Consistency Criterion because SPP did not select the Project as part of the portfolio of projects that would be constructed and paid for by its members. This argument misreads the Planning Consistency Criterion. The Planning Consistency Criterion requires only that the Project be consistent with transmission *needs* identified by the appropriate transmission organization, not that the project itself has been selected for construction and cost allocation by the appropriate transmission organization. As explained above, the Project under consideration certainly is consistent with transmission needs identified by SPP even though SPP has not itself decided to construct the Project and allocate the cost among its members. Moreover, the Department notes that the Planning Consistency Criterion may be satisfied if the need is identified "in a transmission expansion plan *or otherwise*." Because transmission expansion plans are how transmission organizations identify projects to be constructed and paid for by their members, the inclusion of the words "or otherwise" cannot be squared with a reading that would allow the Planning Consistency Criterion to be satisfied only by projects that have been selected to be constructed and paid for by the transmission organizations' members.

In conclusion, SPP has identified the need for west-to-east transmission capacity to access low-cost wind resources in the western part of its footprint and, further, has identified a need for high-voltage capacity out of Oklahoma as a way to accommodate the higher level of wind generation anticipated in response to environmental and tax policy. The Department therefore concludes that the Project is "consistent with . . . transmission needs identified, in a transmission expansion plan or otherwise, by the appropriate Transmission Organization." This conclusion is based on the best available evidence on this topic, including the transmission planning conducted by an appropriate transmission organization.

ii. Consistency with Efficient and Reliable Operation of the Transmission Grid

The transmission grid's operation is regulated at the federal level by the Commission and by NERC. Because Clean Line's ownership and operation of the Project would be subject to this regulatory oversight, the Department finds that this criterion is satisfied as discussed below.

Section 215 of the Federal Power Act authorizes the Commission to establish and enforce reliability standards for the bulk-power system through oversight of a certified Electric Reliability Organization,[202] which is NERC.[203] The bulk-power system includes facilities necessary for operating any portion of an interconnected electric energy transmission network, and the Project falls within that definition as high voltage transmission that would be interconnected to more than one regional system within the Eastern Interconnection. Owners, operators, or users of the bulk-power system become subject to mandatory

---

Line's Project] into their plan" and that SPP included two DC interconnections, one of which was Clean Line's Project, "in [its] models for sensitivity analysis only.").

[200] Comment of the Oklahoma Attorney General's Office, at 8 (July 13, 2015).

[201] Comment of Marshall Hughes (July 10, 2015).

[202] 16 U.S.C. § 824o.

[203] *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062 (2006).

reliability standards upon registration with NERC.[204] Clean Line has agreed to register with NERC and accept NERC reliability responsibilities and oversight, including for Project transmission assets that would be owned by the Department.[205] As further assurance, the Participation Agreement would obligate Clean Line to enter into an additional agreement with the Department that describes in detail Clean Line's NERC registration plan, prior to the Department authorizing construction on the Project to proceed.[206] Further, once the Project becomes operational, NERC has the authority to add Clean Line to the Compliance Registry at any time to ensure complete enforcement.[207] Clean Line has a strong financial incentive to comply with these standards in light of the Commission's authority to impose significant monetary penalties—up to $1 million a day—for failure to comply with its rules or orders.[208]

As noted in the Part 2 Application,[209] Clean Line intends to turn over operational control of the Project to a third party—for instance, an RTO like SPP or MISO. Any such third party's operation of the Project would also be subject to federal reliability standards.

Some comments raised reliability concerns associated with the location of the Project and the wind power it is intended to transmit. The Project would be built in a section of the country with high tornado risk, which led some individuals to question its reliability.[210] Regional weather-related risks, however, are a known hazard to all infrastructure in that area, and no comments claimed that the Project would be uniquely threatened. Federal reliability standards are designed to manage risks to the grid and ensure continued grid operation under various contingencies.[211] Because Clean Line and the Project operator would be subject to these reliability standards, both planning and operations would be adjusted to account for outage risks to the Project—from tornadoes or other events. Other comments raised whether wind power, which is the intended source of energy to be transmitted by the Project, is a sufficiently reliable resource due to its variable nature.[212] Wind power has been recognized at the federal level as an acceptable source of generation since the enactment of the Public Utility Regulatory Policies Act of 1978.[213] The continued rise of wind generating capacity in the United States demonstrates the viability of this resource.[214] The Department continues to study ways to remove barriers to the integration of this generation resource, as shown by the research output of the National Renewable Energy Laboratory and others.[215] FERC has also paid careful attention to integration of variable resources, both in its function as regulator of the

[204] NERC Rules of Procedure app. 5B (rev. 5.1), Statement of Compliance Registry Criteria. This includes compliance with regional variations in reliability standards, all of which are approved by the Commission.

[205] 2010 Application at 13; Part 2 Application at 2-22, 2-27.

[206] Participation Agreement § 4.9.

[207] NERC Rules of Procedure app. 5B.

[208] 16 U.S.C. § 825o.

[209] Part 2 Application at 2-27.

[210] Comment of Sen. Lamar Alexander, at 2 (June 11, 2015); Comment of J.D. Dyer, at 1 (June 4, 2015); Comment of Luis Contreras, at 12-13 (June 24, 2015); Comment of Cynthia Callahan, at 30-32 (June 9, 2015).

[211] *E.g.*, Reliability Standards TOP-004-02 "Transmission Operations" and TPL-001-4 "Transmission System Planning Performance Requirements."

[212] Comment of Sen. Lamar Alexander, at 1 (June 11, 2015); Comment of Luis Contreras, at 7 (July 13, 2015); Comment of Crystal Ursin, at 1-2 (June 1, 2015).

[213] 16 U.S.C. § 824a-3.

[214] U.S. Department of Energy, *Wind Integration, Transmission, and Resource Assessment and Characterization Projects, Fiscal Years 2006-2014*, at 2 (2015).

[215] *E.g.*, National Renewable Energy Laboratory, *Eastern Wind Integration and Transmission Study* (2011).

interstate transmission system,[216] and (via NERC) through the federal reliability standards, which regulate grid reliability for *all* sources of electric energy. Moreover, SPP has recently prepared a Wind Integration Study examining higher penetrations of wind power on its system with an eye to developing measures that would "enhance reliability and provide additional grid flexibility."[217]

Beyond reliability, regulatory oversight aimed at efficient operation of the grid also includes the Commission's open access transmission rules and policies.[218] These rules were "designed to remove impediments to competition in the wholesale bulk power marketplace and to bring more efficient, lower cost power to the Nation's electricity consumers" by, in part, mandating that public utilities file an OATT (set of rate schedules) of general applicability for transmission services.[219] In later revisions to the sample or *pro forma* OATT, the Commission underscored its intent to achieve efficient operation of the grid: "Order No. 890 reformed the *pro forma* OATT to limit opportunities for undue discrimination and promote efficient use of the grid."[220] Clean Line has agreed to operate the Project pursuant to the Commission-approved non-discriminatory rate schedule filed under either an RTO's OATT or pursuant to another approved OATT,[221] thus making its operations consistent with efficient use of the grid.

Due to Clean Line's required compliance with mandatory reliability standards and non-discriminatory rate schedules, the Department finds that the Project is consistent with efficient and reliable operation of the transmission grid. This finding is based on the best available evidence on the topic, such as evidence regarding the manner in which the transmission line is likely to be operated.

c. <u>The Project Will be Operated in Conformance with Prudent Utility Practice</u>

"Prudent utility practice" is not defined in EPAct 2005 but is understood by the Department to be synonymous with the standard energy industry term "good utility practice." The Commission has defined "Good Utility Practice" in its *pro forma* OATT (section 1.15) as:

> Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition.

---

[216] *See, e.g., Integration of Variable Energy Resources*, 139 FERC ¶ 61,246 (June 22, 2012) (requiring transmission providers to offer intra-hour scheduling and requiring variable energy resources providers to provide meteorological and forced outage data to the public utility transmission provider for the purpose of power production forecasting).

[217] Southwest Power Pool, *2016 Wind Integration Study*, at 7.

[218] 18 C.F.R. § 35.28.

[219] *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, FERC Stats. & Regs. ¶ 31,036 at P 1 (1996), *order on reh'g*, Order No. 888-A, FERC Stats. & Regs. ¶ 31,048, *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh'g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff'd in relevant part sub nom. Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff'd sub nom. New York v. FERC*, 535 U.S. 1 (2002).

[220] *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 7, *order on reh'g*, Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 (2007), *order on reh'g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh'g*, Order No. 890-C, 126 FERC ¶ 61,228, *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009).

[221] *Plains & E. Clean Line LLC*, Order Conditionally Authorizing Proposal and Granting Waivers, 148 FERC ¶ 61,122 at P 5 (2014).

> Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, including those practices required by Federal Power Act section 215(a)(4).[222]

Clean Line has agreed to comply with this definition through a commitment to using a Commission-approved OATT.[223] The OATT defines the term because it mandates a variety of operational behaviors that are in conformance with good utility practice, such as in the areas of interchange, electric frequency, reserves (section 1.7); curtailment of service (sections 13.6, 14.7 and 33.5); expansion of facilities (section 15.4); providing data to transmission customers and other utilities (sections 16.2, 21.1, 30.6); maintaining power factor (section 24.3); and general planning, construction operation and maintenance (section 28.2).

In addition to the good utility practice required by its OATT, whatever operating agreement entered into between Clean Line and a third-party operator would also mandate conformance with good utility practice. This is a standard element of membership agreements with RTOs such as MISO and SPP.[224] For example, the SPP Membership Agreement provides that "SPP shall function in accordance with Good Utility Practice and shall conform to applicable reliability criteria, policies, standards, rules, regulations, guidelines and other requirements of SPP and NERC . . . and all applicable requirements of Federal and state regulatory authorities."[225] As another check on operational conformance with good utility practice, Clean Line would be contractually bound to provide its operating agreement(s) to the Department during development.[226]

Good utility practice is also a standard component of interconnection agreements with the entities to which the Project would be interconnected: SPP and MISO. The SPP Generator Interconnection Agreement states that "Each Party shall perform all of its obligations under this [agreement] in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice. . . ."[227] MISO's version is nearly identical.[228]

A few commenters questioned whether Clean Line could meet the prudent utility practice criterion because it "never will be a utility company"[229] and "cannot provide any electricity to any customers in the state of Oklahoma."[230] These comments assume prudent utility practice is limited to traditional, retail-level public utility entities regulated at the state level. In contrast, the Department, like the Commission, takes a broader view of prudent utility practice that recognizes wholesale market participants. The possession of state public utility status, in which an entity may have defined service territories and an obligation to provide

---

[222] Order 890-B, 123 FERC ¶ 61,299, app. B § 1.15.

[223] *Plains & E. Clean Line LLC*, 148 FERC ¶ 61,122 at P 5. If Clean Line elects to use either SPP or MISO's Commission-approved OATT, the definition of "Good Utility Practice" is either identical or very similar to the *pro forma* OATT.

[224] Agreement of the Transmission Facilities Owners to Organize the MISO, a Delaware Non-Stock Corporation, art. 3, § I.A ("Functional Control"); SPP Membership Agreement § 2.1.1.

[225] SPP Membership Agreement § 2.1.1.

[226] Participation Agreement § 4.6.

[227] SPP OATT, Attachment V, app. 6, Generator Interconnection Agreement (Feb. 1, 2015), § 4.3, http://sppoasis.spp.org/documents/swpp/transmission/studies/Appendix_6_GIA.pdf.

[228] MISO OATT, Attachment X, app. 6, Generator Interconnection Agreement (June 24, 2015), § 4.3, https://www.misoenergy.org/Library/Repository/Tariff%20Documents/Attachment%20X.pdf.

[229] Comment of J.D. Dyer, at 1 (June 4, 2015).

[230] Comment of the Oklahoma Attorney General's Office, at 8 (July 13, 2015).

electricity to certain customers, is not required for section 1222 eligibility. Section 1222's criteria are silent as to what kind of entity operates the Project and where Project off-takers should be located. Thus, the Department concludes that state public utility status and the location of Project off-takers is not relevant to whether an entity can operate the Project consistent with prudent utility practice.

The Department finds that Clean Line's contractual commitments to operate the Project in conformance with good utility practice, both through its OATT and interconnection agreements, satisfy the criterion that the Project will be operated in conformance with prudent utility practice. This finding is based on the best available evidence on this topic.

d. The Project Will be Operated in Conformance with the Rules of the Appropriate Transmission Organization

To participate in the Project, the Secretary must determine that the proposed project "will be operated by, or in conformance with the rules of, the appropriate. . . Transmission Organization. . . ."[231] In the Application, Clean Line noted that it agreed to turn over operational control of the Project to "an RTO or similar entity" as a necessary condition of providing service under a Commission-approved OATT.[232] Moreover, the Commission has required that Clean Line file "a rate schedule for service under the Tariff for the transmission provider *to which they hand over operational control*," meaning Clean Line's authority to charge negotiated rates requires ceding operational control to a Commission-approved transmission organization.[233] The Commission's negotiated rate approval also relies on Clean Line's continued participation in regional planning processes, thus reinforcing the importance of compliance with SPP, MISO, and TVA requirements.[234]

Transmission organization rules may include operational conditions, and Good Utility Practice (addressed in section V.c above), and other agreements required by regional transmission entities such as SPP, MISO, and TVA. Clean Line acknowledged its obligation to coordinate service with the SPP, MISO, and TVA systems through both interconnection and seams agreements, which should cover the scope of applicable transmission organization rules.[235] This acknowledgement, however, is secondary to the more

---

[231] 42 U.S.C. § 16421 (b)(4)(A). As explained in section V.b.i. above, a "Transmission Organization" is defined as an organization, such as an RTO, approved by the Commission for the operation of transmission facilities. 16 U.S.C. §§ 796(29), 824o(a)(6).

[232] Part 2 Application at 2-27.

[233] *Plains & E. Clean Line LLC*, 148 FERC ¶ 61,122 at P 32 (emphasis added) (acknowledging in body of order a reliance on Clean Line's commitment to turn over operational control of the Project to an RTO or other existing third-party transmission provider and to comply with all applicable reliability requirements).

[234] *Id.*

[235] Part 2 Application at 2-27. Seams are inefficiencies that prevent the economic transfer of capacity and energy between neighboring wholesale electricity markets or between control areas:

> According to the New England Independent System Operator (ISO-New England), "Seams are barriers and inefficiencies that inhibit the economic transaction of capacity and energy between neighboring wholesale electricity markets, or control areas, as a result of differences in market rules and designs, operating and scheduling protocols and other control area practices. Seams exist between most control areas because wholesale electricity markets have evolved using different sets of rules and procedures. For example, seams can result from different pricing models, inconsistent transaction submittal times, and variations in transmission tariff services."

National Regulatory Research Institute, *Electric Transmission Seams: A Primer White Paper*, at 1-2 (Feb. 2015), http://nrri.org/download/nrri-15-03-nrri-seams-primer/# (citation omitted). Seams agreements reached between two market operators attempt to resolve seams issues and reduce economic inefficiencies.

fundamental point that the Project cannot operate in its intended geographic area absent successful interconnection with SPP and MISO. That means whatever entity operates the Project must do so in conformance with the SPP and MISO requirements if the Project is to exist at all. The Project will go into operation only after the required interconnection agreements are executed, necessary network upgrades for the injection of power into the system are complete, and required operating procedures, if any, are in place.

Finally, to provide additional assurance, the Participation Agreement would condition the Department's participation on Clean Line's compliance with the appropriate transmission organizations' processes. Under the Participation Agreement, Clean Line must, not later than Project completion, "enter into one or more agreements . . . regarding the coordinated operation of the Project with SPP, MISO and TVA, which shall include identification of the entity responsible for exercising operational control of the Project . . .(each, an 'Operating Agreement')."[236] Further, Clean Line "shall consult with and report to DOE on the development of such Operating Agreements."[237] These conditions underscore Clean Line's obligation to ensure that the Project operates in conformance with the rules of the appropriate transmission organization.

In sum, because the Commission has required Clean Line to transfer operational control of its facilities to an RTO or similar entity as a condition of its negotiated rate approval, and because the Participation Agreement would require Clean Line to do so, the Department finds that the Project will be operated by or in conformance with the rules of the appropriate transmission organization. This finding is based on the best available evidence on this topic.

e. The Project Will Not Duplicate the Functions of Existing or Proposed Facilities

Clean Line asserts that the proposed line does not duplicate existing facilities or those in the interconnection queue or permitting process.[238] At the time Clean Line filed its initial application in July 2010, SPP had approved transmission projects totaling $1.14 billion, but none of the approved projects increased SPP's wind export capabilities.[239] According to Clean Line, the proposed line "would be the first HVDC transmission facility providing interregional transmission capacity for the purpose of delivering wind energy from SPP into both MISO South and TVA."[240]

The Project spans two transmission planning regions (SPP and MISO), and the facilities constructed by Clean Line without the Department's participation in Tennessee would also extend to the Southeastern Regional Transmission Planning process, of which TVA is a principal participant.[241] Clean Line claims, and the Department agrees, that none of the regional transmission planning entities have planned projects designed to export wind energy from SPP's territory into the Southern and Southeastern United States.

The Department has reviewed regional planning documents to confirm that the Project does not duplicate any existing transmission facility in the Southwestern service territory. The Project does not duplicate any of the six transmission projects approved by SPP's Board and included in SPP's Priority Project Portfolio approved in April 2010.[242] One of these lines, Hitchland-Woodward, is in the vicinity of

[236] Participation Agreement § 4.6.

[237] *Id.*

[238] 2010 Application at 13.

[239] *Id.*

[240] Part 2 Application at 2-27 to 2-28.

[241] *Id.* at 2-28.

[242] *Id.*

Clean Line's Project but only provides for the delivery of wind power within SPP's territory.[243] The MISO projects that were approved in 2011 are designed to improve access to wind energy in areas other than MISO South. None of the 17 MISO transmission projects will be located in the areas served by Clean Line's Project.[244]

No commenter has identified a specific project that would be duplicated by the Project,[245] and the Department's review of other known transmission projects has not revealed a conflict. For example, the Southern Cross project being developed by Pattern Power Marketing LLC and Southern Cross Transmission LLC is a partial HVDC line, but it is intended to move wind power from Texas to Mississippi.[246] This does not duplicate the Project's support for Oklahoma wind development and the ability to deliver to Arkansas and move the energy further east.

VI. Evaluation Factors

Satisfying the statutory requirements discussed above is a necessary, but not sufficient, condition for the Department to participate in a Project under section 1222. If the Department finds that a project is eligible, it will evaluate the project using the criteria laid out in its 2010 RFP, then decide whether to participate.

a. The Project is in the Public Interest

The 2010 RFP lists criteria the Department will use to evaluate projects that are eligible under section 1222. The first is whether the Project is in the public interest.[247] In considering the public interest, the Department looks at a broad range of energy policy, environmental, and other goals. In this section the Department discusses what it regards, based on its own analysis and comments received, to be the five most significant public interest factors raised by the Project: renewable energy development, economic development, landowner impacts, environmental impacts, and public investment facilitated by the Project.

i. The Project Facilitates Development of Renewable Energy

Renewable energy development has always been one of the Department's important policy goals.[248] Renewable energy allows our nation to meet its needs for electric power with substantially fewer negative

[243] *Id.*

[244] *Id.*

[245] Instead, commenters addressing this criterion claimed the Project was duplicative of overall efforts of large entities such as SPP or the SERC Reliability Corporation without naming specific proposed facilities that would be duplicated. For instance, the Office of the Oklahoma Attorney General stated that the Project "is duplicative of the proposals in the 2015 SPP Transmission Expansion Plan Report" without explanation. Comment of the Oklahoma Attorney General's Office, at 8 (July 13, 2015).

[246] *See S. Cross Transmission LLC*, 147 FERC ¶ 61,113 (2014) (describing project as presented in applications to the Commission).

[247] 2010 RFP, 75 Fed. Reg. at 32,941. To minimize duplicative analysis, the Department has combined its evaluation of public interest with the criterion of whether the Project will facilitate the reliable delivery of power generated by renewable resources.

[248] *See, e.g.*, Department of Energy Organization Act of 1977, § 102(6), 42 U.S.C. § 7112 ("It is the purpose of this chapter . . . [t]o place major emphasis on the development and commercial use of solar, geothermal, recycling and other technologies utilizing renewable energy resources"); EPAct 1992, § 1201, 42 U.S.C. § 13311 (stating that the "purposes of [Title XII of the Act] are to promote (1) increases in the production and utilization of energy from renewable energy resources; (2) further advances of renewable energy technologies; and (3) exports of United States renewable energy technologies and services."); EPAct 2005, § 201(a), 42 U.S.C. 15851(a) (requiring the

impacts to the natural environment and human health.[249] The Project would facilitate the development of a substantial quantity of renewable energy in the Panhandle region where high average wind speeds make the resource one of the lowest-cost and most consistent in the Nation.[250] The Project would, in turn, facilitate delivery of that low-cost wind power into the mid-South and Southeast, regions with substantially less access to high-quality native wind resources. As detailed in sections V.a and V.b, additional transmission capacity is necessary to facilitate development of wind power from the Panhandle region. Indeed, SPP's study concluded that HVDC projects such as the Project would be an efficient means of facilitating high levels of wind generation within the SPP footprint.

To be sure, wind power delivered by the Project will compete with other sources of renewable energy in markets in the mid-South and Southeast. But such competition is healthy, and ultimately benefits consumers and the renewable energy sector as a whole. Indeed, new transmission links such as the Project create value through their ability to foster healthy competition among generators. As the Commission has observed: "New interconnections and transmission service generally meet the public interest by increasing power supply options and improving competition."[251] The Commission has also explained that "as a general matter, the availability of transmission service enhances competition in power markets by increasing power supply options of buyers and sales options of sellers, [resulting in] lower costs to consumers."[252] Moreover, as a merchant project, the only customers that will take service from the Project

---

Department to "review the available assessments of renewable energy resources within the United States" every year).

[249] *See, e.g.*, U.S. Department of Energy, *Wind Vision: A New Era for Wind Power in the United States*, at 181-201 (Apr. 2015), http://www.energy.gov/sites/prod/files/WindVision_Report_final.pdf (describing the benefits of wind energy in reducing emissions of greenhouse gases and other air pollutants, as well as reduction in water usage); Presidential Statement on Signing the Energy and Water Development Appropriations Act, 1997, 32 Weekly Comp. Pres. Doc. 1934, 1935 (Sept. 30, 1996) ("Investments in the development of advanced renewable energy technologies, which have a large potential export market, will create new jobs and reduce pollution, thereby addressing climate change and protecting human health and the environment."), https://www.gpo.gov/fdsys/pkg/WCPD-1996-10-07/pdf/WCPD-1996-10-07-Pg1934-2.pdf; Council of Economic Advisers, *The All-of-the-Above Energy Strategy as a Path to Sustainable Economic Growth*, at 36 (May 2014) ("Wind and solar generation are zero-emission sources of energy and thus do not create a negative climate externality."), https://www.whitehouse.gov/sites/default/files/docs/aota_energy_strategy_as_a_path_to_sustainable_economic_growth.pdf; Environmental Protection Agency, *Clean Energy, Air, Health, and Related Economic Impacts: Assessing the Many Benefits of State and Local Clean Energy Initiatives*, at 1 (June 14, 2011) ("[I]ncreasing renewable energy generation from state and local clean energy initiatives . . . can generate many benefits, including . . . [i]mproved environmental quality, human health, and quality of life."), http://www3.epa.gov/statelocalclimate/documents/pdf/background_paper_06-14-2011.pdf.

[250] *See 2014 Wind Technologies Market Report*, at 55-56 (stating that the Interior region—"as a result of its low average project costs and high average capacity factors shown earlier in this report—also tends to be the lowest-priced region over time."), 58 ("[B]ased on our sample, wind PPA prices have—in recent years—been most competitive with wholesale power prices in the Interior region.").

[251] *S. Cross Transmission LLC*, 137 FERC ¶ 61,206 at P 31 (2011); s*ee also S. Cross Transmission LLC*, 137 FERC ¶ 61,207 at P 28 (2011) (finding that a 400-mile interstate HVDC transmission line was "in the public interest because it will create a new transmission path and new markets for Texas wind generators.").

[252] 137 FERC ¶ 61,206 at P 31 (citing *Fla. Mun. Power Agency*, 65 FERC ¶ 61,125, at p. 61,615, *reh'g dismissed*, 65 FERC ¶ 61,372 (1993), *final order*, 67 FERC ¶ 61,167 (1994), *order on reh'g*, 74 FERC ¶ 61,006 (1996); *aff'd*, 315 F.3d 362 (D.C. Cir. 2003)); *see also NAACP v. Fed. Power Comm'n*, 425 U.S. 662, 670 (1976) ("The use of the words 'public interest' in the [FPA] . . . is a charge to promote the orderly production of plentiful supplies of electric energy . . . at just and reasonable rates.").

will be those entities that have made a business judgement that service on the Project will be of value to them and their ratepayers.

ii. The Project Creates Jobs and Enhances Economic Development

Construction of the Project is anticipated to generate jobs in Oklahoma and Arkansas and bring economic benefits to both states. As discussed further in section VI.b below, the Project creates both short-term construction jobs and long-term operation and maintenance jobs. Construction is reasonably estimated to result in between 5,166 and 5,716 combined direct, indirect, and induced jobs in Oklahoma,[253] and approximately 900 such jobs in Arkansas.[254] Ongoing work on the transmission line will require permanent jobs to tend to the facilities as long as they are in service. The Project is therefore in the public interest because it creates both temporary and permanent employment opportunities, along with the public benefits of increased employment in both Oklahoma and Arkansas.

The Project should also promote economic development in Oklahoma and Arkansas. To begin, Clean Line has partnered with local businesses in both states, reaching agreements that could be worth hundreds of millions of dollars in supply orders. More generally, economic benefits will flow from the construction, operation, and maintenance of the Project, as businesses serve those building, operating, or maintaining the Project through both states. Strengthening state and local economies in Oklahoma and Arkansas, with minimal disruption, is in the public interest.

Finally, the Project is expected to generate substantial tax revenue for Oklahoma and Arkansas.[255] Clean Line will make voluntary payments to "Arkansas counties and other taxing jurisdictions" for project facilities owned by the United States government that would otherwise be taxable. These payments are in the public interest.

At least one commenter voiced concern that the Project will hurt tourism, particularly in Arkansas.[256] However, the Department and Clean Line have agreed on a route development process for the Project based on General Guidelines[257] that require the route to "[m]inimize visibility of transmission lines from residential areas and visually sensitive public locations (*e.g.*, public parks, scenic routes or trails, and designated Wild and Scenic Rivers)" and to "[m]inimize interference with the use and operation of . . . existing facilities used for cultural, historical, and recreational purposes," as well as to "[m]inimize adverse effects on protected species habitat and on other identified sensitive natural resources (*e.g.*, forested areas, native prairies, and other areas as identified by Natural Heritage Commissions)."[258] Finally, one of the issues identified in scoping for the EIS was to "analyze how the visual impacts of the Project may have negative effects on tourism and recreational activities."[259] The Final EIS did just that, evaluating impacts

[253] *See* Final EIS, Table 3.13-53, at 3.13-79.

[254] *See* Part 2 Application at 3-9.

[255] See Final EIS at 3.13-20 to 3.13-22, 3.13-60 to 3.13-62, 3.13-84

[256] Comment of Cynthia Callahan (June 2, 2015).

[257] *See* Final EIS, app. G, exhibit 1: DOE Alternatives Development Report. The General Guidelines were established "to focus the evaluation of the various route alternatives" and "were intended to minimize conflicts with existing resources, developed areas, and existing incompatible infrastructure; to maximize opportunities for paralleling existing compatible infrastructure; and to take into consideration land use and other factors affecting route selection." Final EIS at 2-104.

[258] *Id.* at 2-105.

[259] *Id.*, Table 1.5-1, at 1-14.

to visual resources including visual contrast,[260] impacts to scenery,[261] and impacts to sensitive viewers.[262] In general, the Final EIS acknowledges that temporary impacts during construction may occur within the area of construction activities, but that operation of the Project is not expected to affect statewide tourism in Arkansas or the other states crossed by the Project.[263]

iii. The Project Demonstrates Appropriate Steps to Minimize Negative Landowner Impacts

Among comments opposing the Project, the concern raised most frequently was impacts to landowners, including the potential use of eminent domain. Some commenters expressed concern that their own property could be subject to condemnation, while others expressed concern about the effect on property values for those not entitled to compensation.[264] Other comments alleged that condemnation of real estate would disproportionately harm low-income individuals, and that the Department has ignored that consideration.[265]

In response to these concerns, the Department begins by noting that landowner impacts are a regrettable but unavoidable consequence of infrastructure projects. This is especially true for linear infrastructure projects that traverse long distances, such as transmission lines, pipelines, railroads, and highways. Given this unavoidable reality, the Department's view is that the most important question to consider in reviewing a proposed project is not whether landowners will be affected at all, but whether the proposed project demonstrates that the proponent has done everything feasible to avoid and mitigate negative landowner impacts through design, routing, procedures for interacting with and compensating landowners, and other available options.

With that question in mind, the Department concludes that the Project demonstrates that all steps have been taken that reasonably could minimize negative landowner impacts. With respect to design, the Department notes that, as an HVDC line, the Project can transmit more electric power using less land than a comparable AC line.[266] As an example of the land use efficiency of HVDC lines, SPP's ITP20, discussed in section V.b above, analyzed two groupings of transmission projects that could meet the wind export demands of SPP's high wind development/ high wind export future. One grouping consisted of only AC facilities and the second used DC as well as AC. The AC portfolio required a total mileage of 6,766 miles.[267] The portfolio that included HVDC facilities required 3,904 miles—a reduction of more than 40 percent.[268] This study shows that, as a transmission solution for delivering wind power from the Panhandle region, the

[260] *Id.* at 3.18-54 to 3.18-56.

[261] *Id*. at 3.18-56.

[262] *Id.* at 3.18-56 to 3.18-57.

[263] *See id.* at 3.12-14 ("Once the Project is in operation, no impacts to recreation, including hunting and fishing, are expected from the Project.").

[264] *E.g.*, Comment of Kirk Stites (Apr. 28, 2015) (stating that property value would decline but that he would receive no compensation).

[265] Comment of Ron Hairston (July 9, 2015).

[266] In addition to reducing overall transmission line mileage required, DC lines have a narrower footprint because they require two conductors for a single circuit, compared to three conductors for AC. *See*, e.g., *N.Y. Reg'l Interconnect, Inc.*, 124 FERC ¶ 61,259 at P 48 (2008) (discussing an HVDC transmission line, including converter stations and AC interconnections at each end, and observing that "[t]he HVDC transmission line . . . will also have a smaller footprint than an AC line, which can help with the installation and siting of a new line.").

[267] ITP20 at 94.

[268] *Id.* at 95.

Project's HVDC design makes it likely to cause fewer negative landowner impacts than would be caused by conventional AC solutions.

The Project has also undergone a careful routing process. Clean Line has conducted dozens of public meetings over several years, and has invested significant time and attention to route planning, such that the rights-of-way needed for the Project will avoid all residences identified during the route selection process.[269] Clean Line "will continue to work with affected landowners to minimize the impact of siting the ROW on their property, including micrositing to avoid residences and other structures."[270] The Project also has been routed to run parallel with other infrastructure where possible.[271] Clean Line convened a "routing team" of professionals to identify a route for the Project, and that team "applied general and technical guidelines intended to . . . maximize opportunities for paralleling existing compatible infrastructure."[272] Ultimately, the proposed route runs alongside existing infrastructure wherever possible—specifically, along roughly nine miles of existing transmission lines and 54 miles of existing roads.[273]

---

[269] Final EIS at 2-20 ("Incompatible land uses within the right-of-way include construction and maintenance of inhabited dwellings."), 2-104 to 2-105 (General Guidelines include "Avoid existing residences" as a focal point). The Final EIS initially identified a representative right-of-way that would have intersected four homes. *Id.* at 2-86. But, subsequent siting work by Clean Line has identified a representative right-of-way that will avoid these four homes. Website maps available at both the Department's EIS website (http://www.plainsandeasterneis.com) and at Clean Line's website (http://www.plainsandeasterncleanline.com) both show that the current Representative ROW avoids the four homes.

[270] *Id.* at 2-86.

[271] The Department takes this commitment seriously. After careful consideration, the Department plans to implement the Applicant Proposed Route presented in the Final EIS, except for Region 4, Applicant Proposed Route Link 3, Variation 2. *See* Department of Energy, *Record of Decision in re Application of Clean Line Energy Partners LLC* (Mar. 25, 2016). The Department plans this modification because "1) the route variation crosses 32 percent fewer land parcels (17 versus 25); 2) the route variation parallels more than twice the length of existing infrastructure, including transmission lines and roads (4.42 miles versus 1.85 miles); 3) the representative ROW of the route variation would be located within 500 feet of 8 fewer residences (1 versus 9); and 4) the route variation would avoid a private airstrip whose operations could be impacted by the Applicant Proposed Route." Final EIS at 2-106. The Final EIS describes the route variation as follows: "The location is in Sequoyah County, [Oklahoma,] starting approximately 1 mile northeast of Vian, Oklahoma, and ending approximately 3.3 miles northwest of Sallisaw. . . The variation would shift the route north approximately 0.8 to 1.4 miles[, and it] is essentially the same length as the corresponding link of the Applicant Proposed Route." *Id.* at 2-31.

[272] Final EIS at 2-25.

[273] *See id.* at 3.10-50 to 3.10-65. *See also id.* at 2-27 ("The Applicant Proposed Route in Region 1 would parallel the existing Xcel/OG&E Woodward-to-Hitchland 345kV transmission line for the majority of its length."), 2-28 ("The Applicant Proposed Route parallels Western Farmers Electric Cooperative's existing 115kV transmission line, U.S. Route 60, section lines and parcel boundaries, and county roads to the extent practicable."), 2-29 ("The Applicant Proposed Route parallels OG&E's Cottonwood Creek-to-Enid 138kV transmission line, section lines, county roads, parcel boundaries, gas pipeline, the KAMO Electric Cooperative, Inc. Stillwater-to-Ramsey 115kV transmission line, KAMO Electric Cooperative, Inc. Stillwater-to-Cushing 69kV transmission line, OG&E's Muskogee to Pittsburgh 345kV transmission line, Public Service Company (PSCo)-OK's Bristow to Silver City 161kV transmission line, and OG&E's Cushing to Bristow 138kV transmission line, and the OG&E's Beggs-to-28 Pecan Creek 138kV transmission line for the majority of its length."), 2-30 ("The Applicant Proposed Route parallels several existing transmission lines across the Arkansas River."), 2-32 ("The Applicant Proposed Route in Region 5 parallels parcel boundaries and section lines, Entergy Arkansas Inc.'s Independence-to-Genpower Keo 500kV transmission line, the Cleburne County 69kV transmission line, and a natural gas transmission pipeline to the extent practicable[, and the] Applicant Proposed Route parallels Entergy Arkansas Inc.'s Marked Tree to Marion 161kV electrical transmission line, county roads, section lines, and parcel boundaries to the extent practicable."), 2-33

The Final EIS acknowledged that "[w]here a negotiated agreement is not possible, [the Department], acting through Southwestern, may in appropriate circumstances exercise the federal government's eminent domain authority to acquire the interests."[274] Nonetheless, with respect to landowner communication and compensation, the Project will take steps intending to minimize the need for eminent domain. Land acquisition for the Project will proceed in two phases. First, Clean Line will obtain as many parcels as possible on its own through voluntary negotiation. Next, the Department will obtain any parcel that Clean Line is unable to obtain. For its part of the land acquisition process, Clean Line has agreed to a robust set of procedures and compensation requirements set forth in Schedule 1 of the Participation Agreement. For instance, Clean Line must "use all commercially reasonable efforts to locate each applicable Landowner through any available search methods."[275] Once it has located and identified a given landowner, Clean Line will "attempt to contact any applicable Landowner by at least three (3) different forms of contact including by phone, in person, first class mail, certified mail or leaving messages with a neighbor or family member of the applicable Landowner."[276] When seeking to buy needed real estate from an affected landowner, Clean Line will offer to meet with the landowner in person, and will provide a proposed form of easement, documentation of compensation offers, and other materials.[277] Landowners must receive "a reasonable opportunity (including a period of reasonable length) to consider any offer to acquire" their property.[278] Clean Line has committed to paying landowners the greater of "(i) the [product of the number of acres to be acquired and the] Average Fair Market Per Acre Value, or (ii) if an appraisal is [statutorily] required . . ., the appraised value of the easement determined by such appraisal."[279] In addition, Clean Line will pay landowners for structures within the easement area, in either one-time payments or annual payments, the latter of which will increase by 2 percent annually.[280] Any damages "resulting from the construction, maintenance or operation of the Project" will also be covered so that landowners will "be made whole for any damages or losses that occur as a result of the Project at any time."[281] Further, the Participation Agreement would require Clean Line to submit to binding arbitration on the compensation amount if it cannot reach an agreement with the landowner on what that amount should be.[282] Overall, the requirements of Schedule 1 go well beyond what is typical in the utility sector, and underscore the Department's intent to limit eminent domain or avoid it altogether.

If Clean Line is unable to obtain rights-of-way after having gone through the process set forth in Schedule 1, the Department will obtain these rights-of-way in a process that complies with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended,[283] and its

("The Applicant Proposed Route parallels the Entergy Arkansas Inc.'s Fisher-to-Cherry Valley 161kV transmission line, the St. Francis Levee, parcel boundaries, and county roads to the extent practicable.").

[274] *Id.* at 2-15.

[275] Participation Agreement, Schedule 1, at P 2.

[276] *Id.*

[277] *Id.* at P 3(a).

[278] *Id.* at P 3(d).

[279] *Id.*, app. A, at 1. Clean Line has committed to following the statutory and regulatory requirements that would be applicable to a federal land acquisition.

[280] *Id.*

[281] *Id.* at 1-2.

[282] *Id.* at 2; Participation Agreement, Schedule 1, at P 6(a)(v).

[283] 42 U.S.C. § 4601 *et seq.*

implementing regulations.[284] The Department will begin with renewed landowner notifications and contacts, an appraisal, and good faith efforts to obtain the right-of-way on a negotiated basis. Only after the exhaustion of efforts to obtain a right-of-way voluntarily both by Clean Line and the Department and the satisfaction of conditions precedent demonstrating the commercial viability of the Project[285] would the Department pursue condemnation. As the Department has consistently stated, it views the exercise of eminent domain authority as a last resort,[286] and has made every effort to ensure that the authority would only be used for this Project where and when it is unavoidably necessary.

With respect to nearby properties not entitled to condemnation, the Final EIS acknowledged that "proximity to electric transmission lines can have negative effects on residential property values, with average impacts ranging from less than 1 percent to about 10 percent,"[287] but noted that the impact "decreases with distance and tends to decline over time"[288] and that "[m]ost studies have concluded that other factors, such as the general location, the size of property, improvements, conditions, amenities, and supply and demand factors in a specific market area are more important criteria than the presence or absence of transmission lines in determining the value of residential real estate."[289] Similarly, the Final EIS cited studies of agricultural land value, and the most recent studies found little to no value reduction from transmission line installation.[290] Some negative impact on private property is foreseeable, but the impact on non-compensable property is not expected to be significant, and the impact on compensable property is legally required to be justly compensated.

The Final EIS also found that "[n]o unavoidable adverse impacts would be disproportionately borne by minority and/or low-income populations as a result of the Project,"[291] and identified "[n]o unavoidable

---

[284] *See* 49 C.F.R. part 24.

[285] These conditions precedent are discussed above in section III.a. The conditions include financing commitments sufficient to fund all project costs, execution of firm TSAs for at least 2,000 MW of electrical capacity, effectiveness of converter station real estate rights, and effectiveness of all interconnection agreements, including completion of all material interconnection studies. *See* Participation Agreement § 6.3.

[286] Written Statement of Patricia Hoffman, Assistant Secretary for the Office of Electricity Delivery and Energy Reliability, U.S. Department of Energy, Before the Subcommittee on Water, Power, and Oceans, Committee on Natural Resources, U.S. House of Representatives: Hearing on H.R. 3062, the APPROVAL Act, at 4 (Oct. 28, 2015), http://docs.house.gov/meetings/II/II13/20151028/104170/HHRG-114-II13-20151028-SD007.pdf ("The Department cannot speculate on the degree to which eminent domain would be necessary if a decision is made to participate in the Applicant Proposed Project other than to emphasize that the Department's intent has always been to minimize the use of eminent domain."); Letter from Daniel Poneman, Deputy Secretary of Energy, to Michael Skelly, Clean Line CEO (Apr. 5, 2012), http://energy.gov/sites/prod/files/Poneman_Letter_April_5%2C_2012.pdf (agreeing to launch NEPA review of the project proposal with Clean Line's acceptance, among other things, "that eminent domain authority would be used only as a last resort after negotiations in good faith have concluded with all affected landowners"); Contract No. 1 for Advance Funding and Development Agreement, Plains & Eastern Clean Line Transmission Project, at 7 (Sept. 20, 2012), http://energy.gov/sites/prod/files/Advance%20Funding%20and%20Development%20Agreement.pdf ("Clean Line will make good faith efforts to obtain through negotiated purchase necessary rights-of-way and other property rights for the Project, and the Parties agree that eminent domain authority would be used only as a last resort after negotiations in good faith have concluded with affected landowners.").

[287] Final EIS at 3.13-54.

[288] *Id.*

[289] *Id.* at 3.13-54 to 3.13-55.

[290] *Id.* at 3.13-55.

[291] *Id.* at 3.5-23.

adverse impacts to socioeconomic resources."[292] Evidently, Project facilities would permanently impact the land they occupied, but the Final EIS noted that Clean Line "will continue to work with affected landowners to minimize the impact of siting the [right-of-way] on their property, including micrositing to avoid residences and other structures."[293]

iv. The Project is Designed to Avoid or Minimize Environmental Impacts

Most opposing comments submitted during the Department's section 1222 review process raised a range of environmental concerns about the Project as designed.[294] The following discussion examines these comments in light of details provided in the Final EIS. The section 1222 review comment period ended on July 13, 2015, and the Final EIS was issued the following November.

The Department's Final EIS "evaluated the potential direct, indirect, and cumulative impacts on 19 environmental resource areas that include features of the natural environment and matters of social, cultural, and economic concern."[295] The Final EIS "did not identify widespread significant impacts as a result of construction or operations and maintenance of the Project."[296] Indeed, "[i]mplementation of the [environmental protection measures (EPMs)] that the Applicant has included as an integral part of the Project would avoid or minimize the potential for significant environmental effects to the affected resources."[297] These EPMs "would be made binding through the [Record of Decision] and terms of Participation Agreements between [the Department] and [Clean Line]."[298] Additionally, the Department has identified best management practices (BMPs) for some resources to further avoid or minimize potential adverse impacts,[299] and these are also binding on Clean Line through the ROD.[300]

A number of comments maintained that the impact of corona noise from the transmission lines was inadequately examined. One comment argued that more information was needed on how the noise "will devalue property, cause hearing problems, disturb the peace and disturb the wildlife habitat."[301] Another comment stated that "the noise pollution a line of this size would put off . . . would echo for miles and be

[292] *Id.* at 3.13-76.

[293] *Id.* at 3.10-88.

[294] The Comment Response Document, Appendix Q of the Final EIS, includes all of the comments the Department received on the Draft EIS and provides the Department's responses to those comments. The comments addressed in this document were those received in response to Clean Line's application as described in section II.e.ii above.

[295] Final EIS at S-86.

[296] *Id.* at S-87.

[297] *Id.*

[298] *Id.* at 2-22. Clean Line has identified both general and resource-specific EPMs. The EPMs are described in the Department's Mitigation Action Plan.

[299] As discussed in section 4.2 of the Participation Agreement, following a decision on whether to participate in the Project, the Department, under 10 C.F.R. § 1021.331, will prepare a Mitigation Action Plan. The Mitigation Action Plan will address, in part, "any environmental protection measures, species-specific protection measures and best management practices identified in the Final Environmental Impact Statement." Participation Agreement § 4.2(a)(ii).

[300] *Id.* at S-59. *See* Department of Energy, *Record of Decision in re Application of Clean Line Energy Partners LLC* (Mar. 25, 2016).

[301] Petition Opposing Plains & Eastern Clean Line Updated Application As Published in the Federal Register (June 15, 2015).

unbearable to those around it."[302] In the same vein, commenters were concerned about effects to those beyond the right-of-way, who could see their property values dip without the right to compensation: "the effect of corona noise and visual pollution from lines and structures with their measurable negative financial consequences for property owners are unjustly ignored for those under the right-of-way and those near or adjacent to it."[303] Other comments mentioned the risks of power lines, noting that "the "huge structures will be a blight on the landscape and the electricity running through the lines will be noisy and potentially a health hazard"[304] and that "[o]ther countries have banned such lines in inhabited areas due to the dangers."[305]

The Final EIS discussed corona noise extensively, and its analysis included several key observations. First, "[a]udible noise on HVDC lines is typically highest in fair weather or during the transition from fair to foul weather,"[306] and the fair-weather noise conditions are likely because "people may be outside more often and no rainfall is present to mask the noise."[307] Second, "[t]he positive pole of a bipolar HVDC line produces more audible noise than the negative pole; in fact, audible noise generation from the negative pole is negligible."[308] Third, "[a]s opposed to HVAC, HVDC corona noise does not contain pure tones emerging from the broadband noise."[309] The pure tones are the "hum" sound, and on an HVDC line, "[t]he low frequency components of the noise (up to the 125Hz octave band) can rarely be distinguished from ambient noise, while high frequency corona noise ranges from 500Hz to 16kHz."[310] Citing a 1982 study, the Final EIS remarked that "above 50 [decibels], DC audible noise was shown to produce more annoyance than AC audible noise."[311] Fourth, EPA's recommended noise guideline is 55 decibels "[f]or outdoor residential areas and other locations in which quiet is a basis for use,"[312] noting that higher noise levels can cause "[o]utdoor activity interference and annoyance."[313]

Noise levels should vary according to Project segment and whether the transmission is AC or DC. DC transmission accounts for the vast majority of the Project's length, and a short stretch of the Project's HVDC line could see noise levels very slightly above the guideline (up to roughly 58 decibels). This condition would only occur in the noisier of two possible transmission line configurations, and only within the right-of-way.[314] Calculated maximum audible noise for the 345 kV AC line configurations for the AC collection system was 53.9 dBA,[315] below the EPA's 55 dBA threshold. The Final EIS also found that "the

[302] Comment of Nic Stockton (July 10, 2015).

[303] Comment of Ron Hairston, at 3 (Feb. 23, 2015).

[304] Comment of Kathie and John Cross (July 13, 2015).

[305] Comment of Laurie Smith (May 13, 2015).

[306] Final EIS at 3.4-9.

[307] *Id.* at 3.4-10.

[308] *Id.* at 3.4-9 to 3.4-10.

[309] *Id.* at 3.4-9.

[310] *Id.*

[311] *Id.* at 3.4-10.

[312] *Id.* at 3.11-1.

[313] *Id.*, Table 3.11-1, at 3.11-1.

[314] *See id.*, Figure 3.4-38, at 3.4-84.

[315] *Id.*, Table 3.4-30, at 3.4-71.

likelihood of increased audible noise . . . rising to a level of annoyance is small."[316] Calculated maximum audible noise for the 345 kV AC line interconnections to the Oklahoma converter station was 57.8 dBA on the right-of-way itself, decreasing to between 51.0 and 55.2 dBA 75 feet from the right-of-way's centerline.[317] Finally, calculated audible noise for the 500 kV AC line interconnections to the Arkansas converter station was 60.2 dBA on the right-of-way, decreasing to between 54.8 and 56.7 dBA 100 feet from the centerline.[318] The EIS noted that all noise impacts from AC transmission line operation "were assessed assuming conditions that would generate the highest noise emissions."[319] The "threshold distances" from the lines, beyond which audible noise will not exceed the EPA guideline, were found to be 146 feet for the lower-voltage AC lines and 659 feet for the higher-voltage AC lines."[320] Significantly, the only two routes "with noise-sensitive areas located within the threshold distance of 146 feet" each included just one noise-sensitive area.[321] This configuration represents the worst case, however. The EIS notes that "[a]udible corona noise from [AC] transmission lines occurs primarily in foul weather" when transmission-line conductors are wet.[322] The noise calculations were performed assuming "rainy conditions of 1 millimeter per hour . . . to 5 millimeters per hour, at which point the sound of rain hitting the ground, foliage, and/or structures masks the audible noise from the line."[323] Across the overwhelming majority of the Project, noise levels should rarely, if ever, exceed the EPA's noise threshold.

The Final EIS acknowledged that "two noise sensitive areas [are] expected to exceed federal guidelines near the [Project's] proposed route in Region 3."[324] This region, called the "Oklahoma Cross Timbers Region,"[325] includes parts of eight counties in north-central Oklahoma.[326] In Region 3, "[t]he majority land use is rangeland and cultivated crops,"[327] and farmland covers between 56% and 98% of each of the eight counties.[328] The affected area within the region includes 114 residential structures and 61 agricultural structures within the 1,000-foot-wide corridor of the Project's proposed route.[329] Audible noise calculations for two different DC line configurations found a maximum noise level of 58.1 decibels in the noisier "standard" configuration.[330] Noise levels dropped below 50 decibels, however, within 75 feet of the

[316] *Id.* at 3.4-76.

[317] *Id.*, Table 3.4-17, at 3.4-33.

[318] *Id.*, Table 3.4-44, at 3.4-99.

[319] *Id.* at 3.11-13.

[320] *Id.*

[321] *Id.*

[322] *Id.* at 3.11-12.

[323] *Id.*

[324] *Id.*, Table 2.6-3, at 2-75 to 2-76.

[325] *Id.* at 3.2-3.

[326] Specifically, the region "begins southeast of Enid, Oklahoma, and continues southeast through Garfield, Kingfisher, Logan, Payne, Lincoln, Creek, Okmulgee, and Muskogee counties in Oklahoma for approximately 162 miles and ends north of Webbers Falls, Oklahoma, at the Arkansas River." *Id.* at 2-29.

[327] *Id.* at 3.2-3.

[328] *Id.*, Table 3.2-4, at 3.2-4.

[329] *Id.*, Table 3.4-34, at 3.4-76.

[330] *Id.*, Table 3.4-37, at 3.4-83.

right-of-way's center line in the quieter configuration, and within 300 feet in the noisier configuration.[331] In any event, the sound "would be attenuated indoors . . . [and with] windows closed, under fair weather HVDC line conditions, operations and maintenance sound levels would be 10-20 [decibels] lower than those predicted outside."[332]

Numerous comments protested that the Project might endanger the health of wildlife and the safety of land and landowners. Comments listed threats to various Oklahoma and Arkansas wildlife, focusing largely on birds and endangered species of bats.[333]

The Final EIS discussed bats in some detail, concluding that "[v]egetation maintenance is not likely to be a source of mortality to special status wildlife species (*e.g.*, bats) as large suitable roost trees for bats would not be present in the [right-of-way] during operations."[334] The EIS noted that impacts to bats from operations and maintenance in the regions where they appear, namely Regions 3 through 7, should not be severe,[335] and that construction will specifically avoid caves where the bats hibernate and roost. While "[r]emoval of roost trees could cause habitat loss and possibly mortality of bats" in the worst case, Clean Line will "coordinate with [USFWS] to minimize potential loss of bat habitat within the region of influence [(ROI)]."[336] Further, even though "vegetation clearing and work site preparation would pose the greatest risk of mortality and injury[, most] of the special status wildlife species are relatively mobile (*i.e.*, birds and bats) and could avoid construction activities by moving to other areas."[337]

Beyond its examination of impacts to bat habitat, the Final EIS evaluated impacts to wildlife including "important recreational species, migratory birds, reptiles, amphibians, and mammal species that are known to occur or have the potential to occur within the applicable ROI,"[338] as well as "species known to occur or to have the potential to occur within the ROI and [that] are federally protected or proposed for federal protection under the [ESA,] and state protected species."[339] To avoid or minimize potential impacts on wildlife, Clean Line has developed contractually-binding EPMs, to be "implemented during

---

[331] *See id.*, Figure 3.4-38, at 3.4-84.

[332] *Id.* at 3.11-21.

[333] *E.g.*, Comment of Mark A. Fuksa, at 2 (June 11, 2015) (noting threats to "quail, wild turkeys, coyotes, raccoons, rabbits, hawks, pheasants, and numerous other species of turtles, birds, and small mammals"); Comment of Ron Hairston (July 8, 2015); Comment of Ron Hairston (Mar. 16, 2015) (stating that "[o]f 16 bat species resident to Arkansas, all four endangered species (Ozark Big Eared, Indiana, Grey, and Northern Long Eared) are believed to be resident in Johnson County, AR where Link 9 crosses"); Comment of Cynthia Callahan, Attachment 2 (June 2, 2015) (expressing concern about harm to avian flight patterns).

[334] Final EIS at 3.14-34.

[335] *See id.* at 3.14-48 ("No impacts are expected to the [bats] during operations and maintenance [in Region 3] as additional land disturbances are not expected."), 3.14-51 (same for Region 4, but "any bat roost trees removed during construction in the right-of-way . . . would be habitat lost for the length of Project operations."), 3.14-52 (same for Region 5), 3.14-53 ("Operations and maintenance of the Project is not expected to impact any of the three special status bat species that could occur in Region 6."), 3.14-55 ("[I]mpacts to [bats in Region 7] during this phase are not expected," but "roost trees in the right-of-way underneath the transmission lines removed during construction . . . would remain as lost habitat during the life of the Project.").

[336] *Id.* at 3.14-52.

[337] *Id.* at 3.14-33.

[338] *Id.* at 3.20-11.

[339] *Id.* at 3.14-30.

design/engineering, construction, and operations and maintenance."[340] Although habitat disruption is inevitable, the Project's designers have carefully crafted measures that will mitigate the disruption. For example, construction work, including clearing of vegetation for the right-of-way and use of hazardous materials, could kill some wildlife "even with the implementation of seasonal and spatial restriction," but Clean Line would implement at least five EPMs to prevent those events.[341] Habitat disturbance—that is, response to the "presence of human activity, noise, vibration, or other external stimulus that is sensed by wildlife species"—could be reduced by "adjusting construction schedules and the location of construction staging areas to avoid sensitive areas that are known or identified as breeding, nesting or roosting sites."[342] Once the line is operational, vegetation maintenance should not disturb habitat as much as construction,[343] although "habitat loss could occur indirectly through habitat displacement," as "[s]ome wildlife species avoid areas near human activities or structures even though the habitat has not been physically disturbed or altered."[344] Birds risk flying into the power lines, most often during inclement weather,[345] but "the spacing for the conductors as currently proposed would minimize the risk of [birds] coming into contact with two energized conductors and/or becoming electrocuted."[346] The combination of design features, construction restrictions, and EPMs will not reduce impacts on wildlife to zero, but they should reduce these impacts significantly.

Still other comments argued that the Project will encroach on farms[347] and impair other land rights,[348] including those bearing on natural gas production in Arkansas's Fayetteville Shale region.[349] As emphasized earlier, some disruption is unavoidable, but the Project as designed will avoid and minimize impacts. For instance, Clean Line has pledged in EPMs to "identify and veri[f]y the location of facilities," including oil and gas wells, "and to minimize adverse impacts," as well as "avoid crossing existing operations [and ensuring] that access is maintained as needed to existing operations."[350] As mentioned earlier, the EPMs are binding on Clean Line. Further, "the representative right-of-way that would be occupied by the Project constitutes a small share of the area and is not expected to result in overall reductions to future shale play development."[351] Clean Line already has demonstrated its commitment to these EPMs by responding to a commenter and making an adjustment to the Project route in the Final EIS

[340] *Id.* at 3.20-12.

[341] *Id.* at 3.14-34.

[342] *Id.*

[343] *See id.* at 3.14-34 to 3.14-35.

[344] *Id.* at 3.14-36.

[345] *Id.* at 3.14-35.

[346] *Id.*

[347] Comment of Ark. State Rep. Rick Beck (July 14, 2015) ("The proposed route for the transmission line will severely reduce the size of many farms limiting their operation while forcing other farms to completely shut down.").

[348] Comment of Leif Anderson (July 13, 2015) ("The devaluation of land not in the corridor is understated, especially for land managed for wildlife and spiritual values.").

[349] Comment of John C. Ale, at 7 (July 13, 2015).

[350] Final EIS at 3.13-43.

[351] *Id.*

to ensure that the Project's proposed "Representative Right-of-Way . . . does not intersect any well or well pad owned or operated by Southwestern."[352]

At least one commenter speculated that the HVDC line, particularly if using Alternative Route 5-B, could cause problems for "the flight operations at the Little Rock Air Force Base."[353] The commenter noted that "[i]f the [HVDC line's] towers are 200 feet tall and the flights are down as low as 300 feet, with one slight error, this could cause a potential disaster to the residents in these areas and to the Little Rock Air Force pilots."[354]

The Final EIS acknowledged that "[t]ransmission line structures and lines could become a hazard if they are located too close to airport operations or military airspace operating areas,"[355] but nonetheless found that "[i]ncorporation of design features and implementation of EPMs are expected to reduce the extent of the safety issues to permissible levels."[356] The EIS carefully considered airports and airstrips whose operations the Project might affect, concluding that "[t]ransportation resources would be returned to previous operating conditions following construction."[357] Thus, according to the Final EIS, the Project's aviation safety impacts, including challenges for pilots using Little Rock Air Force Base, would be insignificant. Further, Alternative Route 5-B does not lie on the Department's preferred route,[358] so the line will not be built along the route of the commenter's concern.

Other comments expressed concern about health hazards from the electromagnetic fields (EMFs) the Project will emit.[359] The comments claimed that EMFs "have not been fully studied"[360] and that a number of potential effects had not been analyzed, including cell phone and radio reception, digital transmission, health sensitivities for small children and older adults, and navigational disruption for birds, bats, and bees.[361] Relatedly, a commenter pointed to a lack of information on the effect that "the aerial

[352] Letter to John C. Ale, Senior Vice President, General Counsel & Secretary, SWN Production (Arkansas), LLC, at 1 (Oct. 20, 2015).

[353] Comment of Mary Styron (Apr. 16, 2015).

[354] *Id.*

[355] Final EIS, Table 2.6-3, at 2-79.

[356] *Id.* at 3.16-25.

[357] *Id.* at 2-79.

[358] *See id.* at 2-106 ("[Clean Line's] Proposed Route (as presented in the Final EIS) is DOE's preferred route for the majority of the route from the Oklahoma converter station to the Arkansas/Tennessee border[, and] because DOE's preferred route is the route alternative with the lowest potential for environmental impacts when compared against the other HVDC route alternatives, it is also designated as the environmentally preferable route alternative.").

[359] The Final EIS uses the acronym EMF to refer to "Electric and Magnetic Fields." Final EIS, Acronyms & Abbreviations, at lvii.

[360] Petition Opposing Plains & Eastern Clean Line Updated Application As Published in the Federal Register (June 15, 2015).

[361] *See* Petition Opposing Project (June 8, 2015); Comment of Jim Liebhart (July 13, 2015); Comment of Rick Hudson (Apr. 28, 2015) ("[S]everal studies on similar lines in California clearly show the harmful effects of these high voltage lines to the elderly and young children."); Comment of Cynthia Callahan (June 2, 2015) (noting that "potential interference with electrical equipment could have serious effects.").

spraying of herbicides and toxins will have on people, animals and the environment."[362] Another comment urges the Department not to "use the people of the United States as guinea pigs."[363]

Following extensive studies on the health effects of EMFs, "[t]he general consensus among researchers and the medical and scientific communities is that there is insufficient evidence at this time to conclude whether magnetic fields are a cause of adverse health issues."[364] The Final EIS highlighted that "virtually all of the laboratory evidence and the mechanistic evidence fail to support a relationship between low-level power-frequency magnetic fields and changes in biological function or disease status."[365] Put differently, "[f]or DC electric and magnetic fields, studies have shown no consistent evidence of adverse human health effects for exposure to levels comparable to those encountered underneath DC transmission lines."[366] The Final EIS found the same to be true of AC facilities.[367] A 2002 report to the United States Congress found that "scientific evidence suggesting that extremely low frequency EMF exposures pose any health risk is weak."[368] Nonetheless, "on balance, the evidence is not strong enough to be considered causal, but [is] sufficiently strong to remain a concern."[369] The Final EIS concludes that, "[b]ased on an evaluation of research and guidelines recommended by various agencies, it is unlikely that the proposed HVDC transmission line would pose a known threat to human health along the [Project's] Proposed Route."[370]

In the same vein, the Final EIS found little risk of threats to human health from the AC collection system,[371] nor to plant and animal health from the DC transmission system.[372] According to a "comprehensive review of the scientific literature, the association between DC magnetic fields and adverse effects to plant life and animal health is weak,"[373] as is the association between AC magnetic fields and adverse effects.[374] In fact, in several studies examining "the potential effect of electric and magnetic fields from transmission lines on plants, such as agricultural crops, trees, and forest and woodland vegetation[,

[362] Comment of Sandra Gangluff (June 16, 2015).

[363] Comment of Gail A. Cullens (July 7, 2015); *see also* Comment of Cleo Styron, at 1 (Mar. 30, 2015) ("While on-going scientific debate continues as to whether the EMF emissions of such power lines create serious health issues for humans, [we] certainly do not wish to become unwilling research subjects ('lab rats') to prove or disprove the current science strongly suggesting that EMFs are hazardous to human health.").

[364] Final EIS at 3.8-18.

[365] *Id.*

[366] *Id.* at 3.4-87.

[367] *Id.* at 3.4-76 ("Based on an evaluation of research and guidelines recommended by various agencies, it is unlikely that the AC collection system would pose a known threat to human health.").

[368] *Id.* at 3.8-19.

[369] *Id.* at 3.8-18.

[370] *Id.* at 3.4-93.

[371] *Id.* at 3.4-74 ("Based on an evaluation of research and guidelines recommended by various agencies, it is unlikely that the AC collection system would pose a known threat to human health.").

[372] *Id.* at 3.4-91 ("Overall, studies of DC transmission line environments and DC electric and magnetic fields indicate that the field levels associated with the Project would be unlikely to pose a threat to animals and plants.").

[373] *Id.*

[374] *Id.* at 3.4-59.

no] adverse biological effects were consistently observed, and none have been confirmed at exposure at levels similar to those of the Project."[375]

The Final EIS examined concerns about herbicides in some detail, noting that EPMs should alleviate any harmful effects of herbicides. Two EPMs targeted the use of herbicide for clearing vegetation. EPM GE-5 states that "Any herbicides used during construction and operations and maintenance will be applied according to label instructions and any federal, state, and local regulations."[376] EPM W-4 states that "If used, Clean Line will selectively apply herbicides within streamside management zones."[377] Finally, EPM AG-5 addresses protection of agricultural herbicide usage: "Clean Line will work with landowners and/or tenants to consider potential impacts to current aerial spraying or application (*i.e.*, aerial crop spraying) of herbicides, fungicides, pesticides, and fertilizers within or near the transmission ROW," and "Clean Line will avoid or minimize impacts to aerial spraying practices when routing and siting the transmission line and related infrastructure."[378] Taken together, these measures provide assurance that Clean Line will exercise an abundance of caution should it need to use herbicides.

Concerns about device disruption, including "cellular telephones, wireless internet, computer systems, radio, satellite television systems, and other types of telecommunications equipment," are unfounded because "these devices all utilize radio frequency signals that are not affected by power lines."[379] Circumstantial evidence also blunts concerns, as "[t]he fact that the cell phone industry currently mounts its GPS and cell phone antennas on transmission line towers clearly indicates that power line interference is not a concern for the industry."[380]

Discussing unavoidable adverse impacts to the electrical environment,[381] the Final EIS concluded that most harms are either avoidable, temporary, or offset by countervailing factors.[382] Damage to the electrical environment "associated with the operation of overhead HVDC and/or AC transmission lines," could take place "within, and to a more limited extent outside, the transmission line right-of-way."[383] Nonetheless, "[o]utside the right-of-way, calculated electrical effects for the Project are generally limited to levels that comply with associated standards and guidelines."[384]

EMFs should not create navigational problems for wildlife. According to studies cited in the Final EIS, "there continues to be no credible evidence that native bee species are harmed by EMF in terms of foraging, nesting, or behavior."[385] Also according to the Final EIS, "[i]t is now widely accepted that birds have numerous navigational-type problem solving mechanisms available and are capable of using a

---

[375] *Id.*

[376] *Id.* at 3.6-78.

[377] *Id.* at 3.14-89.

[378] *Id.* at 3.2-12.

[379] *Id.* at 3.4-62.

[380] *Id.* at 3.4-63.

[381] Analysis of the electrical environment includes examining DC and AC electric and magnetic fields, audible noise, radio and television noise interference, and ozone and air ions. *See id.* at 3.4-1.

[382] *See generally id.* at 2-83 to 2-88.

[383] *Id.* at 2-84.

[384] *Id.*

[385] *Id.* at 3.4-59.

multiplicity of environmental information for orientation purposes."[386] In short, an impact from EMF "on migratory patterns of birds is not anticipated," and "[e]ven if the transmission line DC magnetic field were to cause some localized disorientation directly near the line, birds have numerous other environmental factors to use for orientation."[387] In fact, "[o]ther research on the health, behavior, or productivity of animals, including livestock (*e.g.*, dairy cows, sheep, and pigs) and a variety of other species (*e.g.*, small mammals, deer, elk, birds, and bees) has not identified any reliable effects at the field levels associated with the Project."[388]

An additional comment, citing a study by Southwestern Energy Company, stated that "stray current from the [Clean Line] project has the potential to adversely affect pipelines and casings by accelerating corrosion even under normal operating conditions."[389] The Final EIS acknowledges that "HVDC transmission lines may cause pipeline and well casing corrosion due to stray electric current (by utilizing the earth for transmission/return currents)," but states that "the Project's dedicated metallic-return design eliminates the risk of stray voltage during operations."[390] To explain, because "the current in the transmission line conductors will create a static magnetic field comparable to the earth's natural magnetic field, [the] DC magnetic fields will not create grounding, induced current, or stray voltage issues."[391] Addressing Southwestern Energy Company's concerns directly, Clean Line reached an agreement on October 20, 2015, to resolve concerns about stray current: "The [dedicated metallic return] will be used for carrying imbalance currents during bipolar operation of the Project and will be capable of full-load continuous current ('return current') during monopolar operation."[392]

The Project raises a range of environmental concerns, but effective protection measures are in place to ensure that the concerns are minimized or eliminated. Human health is not expected to suffer. Plant and animal habitat will be preserved and protected to the extent possible. Given the size of the Project, its ability to mitigate impact is significant and based on the best possible design strategies.

v. The Project Will Generate Revenues for Public Purposes

The Nation's water resource infrastructure is aging and decaying, and the urgency of capital investments is increasing. As the Government Accountability Office has observed, several federal agencies have pointed out the need for improvements:

> According to a 2012 National Research Council report on [the Army Corps of Engineers'] infrastructure, large portions of the Corps' water resources infrastructure were built over 50 years ago and are experiencing various stages of decay and disrepair, making project maintenance and rehabilitation a high priority. The report also found that federal funding over the past 20 years has consistently been inadequate to maintain the Corps' infrastructure at acceptable levels of performance and efficiency. Similarly, most of Reclamation's water infrastructure facilities are more than 50 years old and, according to a 2011 Congressional Research Service report, with limited budgetary resources and aging

[386] *Id.* at 3.4-91.

[387] *Id.*

[388] *Id.* at 3.4-59.

[389] Comment of Cynthia Callahan (June 2, 2015).

[390] Final EIS at 3.4-92.

[391] *Id.*

[392] Letter to John C. Ale, Senior Vice President, General Counsel & Secretary, SWN Production (Arkansas), LLC (Oct. 20, 2015).

infrastructure, Reclamation's maintenance needs are likely to increase, as is competition for limited funding.[393]

Section 11.2 of the Participation Agreement between DOE and Clean Line requires Clean Line to pay DOE 2% of the Project's revenues "resulting from the sale of transmission service in connection with the Project" each fiscal quarter, and that amount "shall be made available to DOE to offset costs associated with federal hydropower infrastructure or for any other authorized purpose."[394] This contractual obligation would ensure that the Project would contribute directly to hydropower infrastructure improvements to the benefit of federal taxpayers and the users of federal hydropower.

vi. Conclusion—The Project is in the Public Interest

In sum, the Department finds that the Project as proposed will serve the public interest by facilitating renewable energy development, stimulating economic development, generating revenues for needed public investment, and doing so while minimizing impacts to landowners and the natural environment.

b. Benefits and Impacts to the States it Traverses

The RFP also states that DOE will evaluate "[t]he benefits and impacts of the Project in each state it traverses, including economic and environmental factors."[395] The Project traverses Oklahoma and Arkansas. Based on the application materials and public comments, the benefits of the Project as planned likely outweigh any negative impact.

i. Oklahoma

At least three factors indicate the Project's net benefit to Oklahoma. First, many of the Project's wind resources will be developed within Oklahoma. Nearly 430 miles of the HVDC line – thus, most of its total length – will run through Oklahoma.[396] The Project's AC collection system and western converter station will be located there as well.[397] Additionally, the Project would enable more than 4,000 MW of wind turbine construction.[398]

---

[393] United States Government Accountability Office, *Climate Change: Federal Efforts Under Way to Assess Water Infrastructure Vulnerabilities and Address Adaptation Challenges*, GAO-14-23, at 11 (Nov. 14, 2013) (citations omitted), http://www.gao.gov/assets/660/659024.pdf. The three documents GAO cites in this paragraph are (1) L.D. Brekke, J.E. Kiang, J.R. Olsen, R.S. Pulwarty, D.A. Raff, D.P. Turnipseed, R.S. Webb, and K.D. White, *Climate Change and Water Resources Management—A Federal Perspective: USGS Circular 1331* (2009); (2) Committee on U.S. Army Corps of Engineers Water Resources Science, Engineering, and Planning; Water Science and Technology Board; Division on Earth and Life Studies; National Research Council, *Corps of Engineers Water Resources Infrastructure: Deterioration, Investment, or Divestment?* (The National Academies Press, Washington, D.C.: 2012); (3) Congressional Research Service, *The Bureau of Reclamation's Aging Infrastructure* (Mar. 30, 2011).

[394] Participation Agreement § 11.2.

[395] 2010 RFP, 75 Fed. Reg. at 32,941.

[396] Part 2 Application at 3-6.

[397] *Id.*

[398] *Id.*

Oklahoma state government officials have expressed support for harnessing the state's wind resources.[399] In its October 2011 Order approving Clean Line's request to do business as a public utility, the Oklahoma Corporation Commission determined that the state's legislature intended to promote wind resource development for "both the people of the state and the Nation as a whole."[400] Almost two years later, in a letter to Energy Secretary Moniz, Oklahoma Governor Mary Fallin pointed out that Oklahoma enjoys "vast wind resources but few wind turbines because of the lack of transmission."[401] Including both generation and transmission components, the Project will help the state to develop its wind resources on a large scale.

Second, the Project's supply chain, construction, and operation and maintenance needs will generate both temporary and permanent jobs. A third-party report submitted with the Application found that "[o]nce in operation, the [Project] will generate ongoing economic benefits through operation and maintenance of the [facilities] and cost savings due to improved fuel diversity," and that the benefits should be "ongoing and last for the useful life of the transmission infrastructure."[402] As of August 2011, Clean Line had identified "over 100 businesses involved in the wind energy and transmission supply chain located in Oklahoma, Arkansas, and Tennessee alone," and said it intended to seek materials and labor from them.[403] Clean Line claims that "manufacturing and installing [the] new wind turbines will create thousands of jobs for Oklahomans and increase local and state tax revenues."[404] More specifically, citing a December 2013 report prepared for the Department, Clean Line states that "[t]he construction of the transmission line in Oklahoma would result in an estimated 1,060 jobs, consisting of 572 direct jobs and 488 indirect and induced jobs," and that "[t]he construction of the converter station in Oklahoma would result in 256 jobs, consisting of 138 direct jobs and 118 indirect and induced jobs."[405] The Project's Final EIS supports Clean Line's job creation claims, estimating that construction of wind farms, separate from the Project itself, will generate over 5,000 combined direct, indirect, and induced jobs in Oklahoma.[406]

As an example of its intent to hire local labor and equipment, Clean Line announced in June 2011 an agreement to use Pelco Structural LLC as a "preferred supplier for the Project's tubular steel transmission structures,"[407] to be supplied from Pelco's Claremore, Oklahoma facility.[408] The agreement contemplates both engineering and manufacturing cooperation,[409] and the "supply order could be worth $300 million or

---

[399] In this proceeding, the Office of Oklahoma Attorney General Pruitt did not oppose wind resources, but it demonstrated skepticism that wind developers suffered from lack of adequate transmission capacity. Comment of the Oklahoma Attorney General's Office, at 1-2 (July 13, 2015).

[400] *In the Matter of the Application of Plains and Eastern Clean Line LLC, to Conduct Business as an Electric Utility in the State of Oklahoma*, Order No. 590530, Cause No. PUD 201000075 (Oct. 28, 2011).

[401] Letter from Governor Fallin to Secretary Moniz (June 13, 2013), attached as Appendix 3-A to Part 2 Application.

[402] The Potential Impact of the Proposed Plain & Eastern Clean Line Transmission Project on Business Activity in the US and Affected States, at 30 (June 2010) ("Perryman Group Study").

[403] 2011 Proposal Update at 5.

[404] Part 2 Application at 3-6.

[405] *Id.* at 3-7.

[406] *See* Final EIS, Table 3.13-53, at 3.13-79.

[407] Part 2 Application at 3-7.

[408] *See* Press Release, Clean Line Energy Partners, Clean Line Energy Signs Agreement to Source Materials from Oklahoma Company (June 14, 2011), http://www.cleanlineenergy.com/sites/cleanline/media/news/June142011.pdf.

[409] Part 2 Application at 3-7.

more depending on commodity prices and the number of structures purchased."[410] Pelco supports the Project.[411]

Third, the Project will benefit Oklahoma through payments to landowners and tax payments to state and local governments. Clean Line must "pay or arrange for the payment of . . . all present and future Taxes (including stamp taxes), duties, fees, expenses, or other charges payable on or in connection with the Project."[412] Landowners would receive royalty payments from the wind turbines, and "[a]s these payments are spent, they [will] lead to an economic stimulus in a wide variety of industries."[413] Clean Line has also covenanted to make "Local Government Contribution Payments" in Oklahoma and Arkansas,[414] defined as "all infrastructure payments, voluntary payments and other payments (which are not Taxes) to be made by [Clean Line] to local and state governments in connection with the Project."[415] Schedule 4, attached to the Participation Agreement between the Department and Clean Line, specifies the payments to be made.[416] Further, because the Project will use a merchant business model it should "not increase transmission rates or retail electric rates in Oklahoma, while still providing the economic benefits of new wind farm construction and a major infrastructure project."[417]

Both the state government and local governments could expect "notable gains" in "tax receipts associated with the incremental activity."[418] According to estimates in the Final EIS, under a "simplified cost approach and an assumed value of $250 million," the estimated 32-month construction of the western converter station[419] would generate $10.1 million in state sales and use tax revenues, as well as $2.3 million in Texas County (Oklahoma) sales and use tax revenues.[420] The converter station would also generate between $3.2 million and $4.6 million in ad valorem or property tax revenues in its first year of operation.[421] Additional sales and use taxes,[422] as well as ad valorem taxes,[423] would be charged according to the route of the AC Collection System construction. Using the proposed route of the HVDC transmission line, total estimated state sales and use tax revenues from construction would approach $35 million.[424] Based on Clean Line's estimated value of $2 million per mile, ad valorem taxes on the HVDC line collected during

[410] 2011 Proposal Update at 5.

[411] Comment of Pelco Structural, LLC (June 5, 2015).

[412] Participation Agreement § 8.6. The defined term "Tax" includes "all taxes, levies, imposts, duties, deductions, charges or withholdings imposed by any Governmental Authority, including any interest, penalties or additions thereto imposed in respect thereof." *Id.* § 1.1, at 41.

[413] Perryman Group Study at 34.

[414] Participation Agreement § 8.6 (stating that Clean Line "shall pay or arrange for the payment of (before they become overdue) all present and future . . . Local Government Contribution Payments.").

[415] Participation Agreement § 1.1, at 27.

[416] *See* Participation Agreement, Schedule 4: Local Government Contribution Payments.

[417] Part 2 Application at 3-7.

[418] Perryman Group Study at 38.

[419] Final EIS at 3.13-59.

[420] *Id.*, Table 3.13-37, at 3.13-60.

[421] *Id.* at 3.13-60.

[422] *Id.* at 3.13-61.

[423] *Id.* at 3.13-61 to 3.13-62.

[424] *Id.* at 3.13-63.

the first year would range from $13.2 million to $18.3 million.[425] Finally, construction of the generating facilities would produce estimated sales and use tax revenues between $158 million and $161 million.[426] Ad valorem tax revenues would range from $1.9 million for a 50 MW facility in Beaver County, Oklahoma, to $36 million for a 1 GW facility in Texas County, Oklahoma.[427]

Overall, the Final EIS found that "local expenditures, employment, and construction-related earnings from the Project would have a positive impact on the local economy and employment for the duration of construction,"[428] although "[e]conomic impacts associated with operation and maintenance would be small, especially when compared to the construction-related and ad valorem tax impacts."[429]

ii. Arkansas

At least three factors also indicate the Project's net benefit to Arkansas. First, the converter station to be built and installed in the state allows access to 500 MW of low-cost renewable energy, developed at Clean Line's financial risk.[430] Clean Line also claims strong interest in wind power from Arkansas customers: "[a]s part of its open solicitation for transmission capacity, Clean Line received transmission service requests to Arkansas for nearly four times" the converter station's capacity.[431] Wind and solar generation have also been scarce in Arkansas: according to Clean Line, the state "had no local utility-scale electricity wind or solar generation installed" as of November 2014.[432] The new converter station will bring substantial renewable electricity to the state.

The Project's environmental benefits could also result in economic benefit to Arkansas. A third-party study submitted as part of Clean Line's application found that Arkansas stands to save $65 million in production costs in 2019,[433] "because the Project's low-cost wind generation reduces the cost of the fuel purchases by utilities necessary to serve their load."[434] Concurrently, the state could expect to reduce its NO_x emissions by 533 tons, its SO_x emissions by 825 tons, its CO_2 emissions by more than 1.1 million tons, its mercury emissions by 20 pounds, and its power generation water usage by 268 million gallons.[435]

Second, the Project will create both temporary and permanent jobs from its supply chain, construction, operation, and maintenance needs. Clean Line touted benefits to Arkansas in its 2010 Application, finding that the state was "in an ideal position to become the manufacturing hub for the wind industry."[436] Further, Clean Line stated that if the Project stimulates new wind generation, the effect could be "expansion of the manufacturing facilities or the opening of new facilities in Arkansas" and perhaps also

[425] *See id.*, Table 3.13-43, at 3.13-65 to 3.13-66.

[426] *Id.* at 3.13-84.

[427] *Id.*

[428] *Id.* at 4-47.

[429] *Id.*

[430] Part 2 Application at 3-8.

[431] *Id.*

[432] *Id.*

[433] Part 2 Application, app. 2-G, Plains & Eastern Clean Line Benefit Analysis, at 1 (Jan. 7, 2015) (Leidos Study).

[434] Part 2 Application at 2-20. The Leidos Study finds that "[t]he Project will reduce utilities' cost to procure coal, natural gas and other fuels, and their other variable production costs, by $540 million annually." *Id.* at 3-2 (citing the Leidos Study).

[435] Leidos Study at 2.

[436] 2010 Application at 21.

in Oklahoma.[437] In the immediate term, Clean Line expects Project activities in Arkansas to create several hundred jobs. Building the converter station would generate "an estimated 244 jobs, consisting of 138 direct jobs and 106 indirect and induced jobs."[438] In addition to the converter station, more than 270 miles of HVDC line will travel through Arkansas.[439] Clean Line says that construction of this line "would result in an estimated 656 jobs, consisting of 371 direct jobs and 285 indirect and induced jobs."[440]

As in Oklahoma, Clean Line has identified and plans to use as much local labor and material in Arkansas as possible. In March 2011, Clean Line signed a preferred supplier agreement to purchase overhead transmission conductor from General Cable,[441] whose factory is in Malvern, Arkansas.[442] The Project should require about "25 million conductor feet of conductor, based on a length of approximately 720 miles," meaning a potential purchase order of more than $100 million.[443] The steel for the purchase order is to come from Bekaert Steel Van Buren, which runs a factory in Van Buren, Arkansas.[444] In June 2015, Clean Line announced an agreement to use Sediver as the preferred supplier for the transmission line's glass insulators, to be manufactured in West Memphis, Arkansas starting in 2016.[445]

Third, the Project will benefit Arkansas through payments to landowners, state taxes on infrastructure, and payments in lieu of taxes. Clean Line has stated that it "seeks to negotiate all easement agreements on a voluntary basis and . . . will pay Arkansas landowners over $30 million for easements and other compensation."[446] Using the proposed route of the HVDC transmission line, total estimated state sales and use tax revenues from construction would exceed $32 million in Arkansas.[447] Ad valorem tax revenues would total $5.1 million in the first year of operation.[448] Construction of the converter station, at an estimated cost of $135 million, would generate an estimated $7.9 million in state tax revenues and $1.2 million in county tax revenues.[449] Clean Line has also committed to paying more than $5 million in voluntary tax payments in the first year, and more than $147 million over the first 40 years, to counties in both Oklahoma and Arkansas.[450] Clean Line will pay each Oklahoma and Arkansas county $7,500 per mile of transmission line running through that county, for a total of just over $3.2 million to Oklahoma counties

[437] *Id.*

[438] Part 2 Application at 3-9. *See also* Final EIS at 3.13-67.

[439] Part 2 Application at 3-7.

[440] *Id.* at 3-9.

[441] 2011 Proposal Update at 5.

[442] Part 2 Application at 3-9.

[443] *Id.*

[444] *Id.*

[445] Press Release, Clean Line Energy Partners, European Manufacturer Opens New High-Tech Facility in Arkansas to Serve Plains & Eastern Clean Line (June 8, 2015), http://www.cleanlineenergy.com/sites/cleanline/media/news/Sediver_Press_Release_FINAL.pdf.

[446] http://www.plainsandeasterncleanline.com/support-arkansas/facts (last visited Mar. 24, 2016).

[447] Final EIS at 3.13-63.

[448] *Id.*, Table 3.13-44, at 3.13-66.

[449] *Id.*, Table 3.13-47, at 3.13-69.

[450] *See* Participation Agreement, Schedule 4: Local Government Contribution Payments.

and just over $2.0 million to Arkansas counties.[451] Twelve of the 26 affected counties in Oklahoma and Arkansas will receive total payments of nearly $147.7 million over 40 years.[452]

iii. Comments

A number of public comments addressed potential benefits and costs to Oklahoma and Arkansas. One commenter stated that the promised benefits are difficult to determine precisely, that many resulting jobs would be temporary, and that "the impacts and burden to landowners . . . would be devastating and permanent."[453] The same commenter added that "Clean Line would bypass transmission lines owned by utilities that generating companies would otherwise have to pay to move electricity across the country."[454] Another commenter pointed out that Clean Line's application does not promise an annual $5 million tax payment to Arkansas, as Clean Line spokesman Christopher Hardy announced.[455] The commenter also doubted that hundreds of workers could be trained for the Project, or that local, permanent jobs would result.[456] Finally, the commenter referred to the construction process as a "months-long nuisance for traversed communities," and claimed that power lines can send property values plummeting.[457]

Net benefits are more likely than not if the Project succeeds, even if the actual benefits differ from the anticipated benefits. Many resulting jobs would be temporary, but a significant number would be permanent—as discussed, operation and maintenance jobs will continue for the useful life of the Project's facilities. These permanent jobs are expected to generate a series of ongoing economic benefits.

Clean Line has committed to measures that would mitigate the burdens and inconveniences to affected communities. A combination of required and voluntary compensation should help alleviate the Project's burdens fairly and adequately. As discussed earlier, construction should generate long-term benefit even if it is a short-term nuisance. Finally, the Participation Agreement's Schedule 4 establishes the payments Clean Line would make to state and local government agencies.

c. Technical and Financial Viability

The final criteria the Department uses to evaluate eligible projects are "[t]he technical viability of the Project, considering engineering, electrical, and geographic factors" and "[t]he financial viability of the Project."[458] In assessing viability, the Department examines details including, but not limited to, the applicant's "prior experience related to constructing, financing, facilitating, or studying construction of upgraded and/or new electric power transmission lines and related facilities for the primary purpose of delivering or facilitating the delivery of power generated by resources constructed or reasonably expected

[451] *Id.*

[452] *See id.* at Exhibit A. The Schedule notes that if Clean Line "becomes subject to property tax in Arkansas, it will pay the assessed taxes in accordance with local and state laws in lieu of the [payments to Arkansas counties] outlined in Exhibit A."

[453] Comment of Carol Munson Ross (June 11, 2015).

[454] *Id. See* sections V.a and V.b.i of this Summary of Findings for a discussion of the insufficient west-to-east transmission capacity on utilities' current systems to support wind export.

[455] Comment of Luis Contreras, at 2 (July 8, 2015).

[456] *Id.*

[457] Comment of Luis Contreras, at 3-4 (June 8, 2015).

[458] 2010 RFP, 75 Fed. Reg. at 32,941.

to be constructed," and "[v]erifiable information demonstrating that the [applicant] is in sound financial condition and has the ability to secure the necessary financing to meet the Project's requirements."[459]

Restated, the Department must generally be satisfied that a proposed section 1222 project is technically sound—that is, able to accomplish its core purpose of transmitting renewable energy efficiently, reliably, and cost-effectively. Similarly, long-distance HVDC lines are costly. The Department will only agree to participate with business entities who have demonstrated the ability to acquire funds to see the project to fruition.

In its 2010 Application, Clean Line described itself as "an independent developer of high voltage, long-haul transmission lines."[460] To illustrate its technical experience, it emphasized that its management team includes "highly regarded professionals in the electric energy industry, including individuals who have designed, studied, developed and secured the financing for multiple new transmission lines,"[461] along with "executives who have managed, built and financed ambitious projects in the renewable and traditional energy sectors around the world, as well as senior policy professionals who have shaped energy policy and advanced the renewable energy agenda at the local, state and national levels."[462] The company added that it was working with various entities to help its Project meet technical challenges. At the time of the original Application, it had engaged consultants for a variety of project components, including identifying possible right-of-way corridors, determining construction routes that will "minimize land use and environmental impacts," and ascertaining "conductor sizing, design criteria, right-of-way requirements and the family of structures to be used in constructing the line."[463] It also claimed to be "working with leading HVDC equipment manufacturers" well qualified to handle "the technical, planning and operational aspects of HVDC."[464]

Clean Line also stressed the Project's financial viability in its 2010 Application. The company estimated a cost breakdown of 1-2% for development (siting authority, interconnection studies, routing, permitting, and public outreach), 10% for pre-construction activities, and the remaining 88-89% for construction.[465] While admitting that pre-construction investment is harder to secure, Clean Line stated that it had "secured the funding it needs to advance the development of [the Project] to a stage where [TSAs] can be signed and more traditional sources of financing can be secured."[466] Clean Line then highlighted its management team's financing experience, including several billion dollars of project finance, and provided several examples of how "debt markets have a substantial history of supporting transmission, including merchant and HVDC lines."[467]

Clean Line's Part 2 Application bolstered the evidence of its Project's technical and financial viability. The Part 2 Application maintained that the Project was technically viable for three reasons. First, "[t]he Project relies on existing technology, as well as proven engineering and construction methods."[468]

---

[459] *Id.* at 32,942.

[460] 2010 Application at 41.

[461] *Id.* at 42.

[462] *Id.*

[463] *Id.* at 45.

[464] *Id.* at 46.

[465] *Id.*, Table 10, at 47.

[466] *Id.* at 47.

[467] *Id.*

[468] Part 2 Application at 3-11.

The Project's HVDC line commutated conversion ("LCC") technology "is both tested and proven," as "[s]imilar HVDC converters using LCC have operated safely and reliably for over 40 years."[469] The Project's DC transmission line is to be built using well-established materials and design, and Clean Line pointed out that the Project is "simpler . . . than an AC overhead line, because [it] requires only two separate sets of conductors as opposed to the three separate sets of conductors required for an AC transmission line."[470] Clean Line also noted the qualifications of its vendors and engineering partners, emphasizing their breadth and depth of experience on similar projects.[471]

Second, Clean Line stated that SPP, MISO, and TVA "studied the Project's interconnection extensively," and that their findings confirmed "that the Project's interconnection complies with all applicable federal, regional and local reliability standards."[472] Clean Line added that its "Project can connect to the existing grid at the desired power levels without adverse impact to reliability for the Project or the interconnecting system."[473] Each of the three entities reviewed the Project as designed for reliability issues, and each found that the Project would not hamper reliability following interconnections. SPP's Transmission Working Group concluded in November 2012 that the Project would be "consistent with SPP planning processes and [meet] coordinated planning requirements under SPP Criteria."[474] TVA reported on its study to Clean Line in March 2014, and that report "identified certain upgrades that would be made to TVA's system to reliably interconnect the Project."[475] Responding to Clean Line's October 2013 interconnection request, MISO issued a report in February 2014 finding "no transmission constraints or required upgrades based on the request."[476] Although the interconnection process is contingent on further reliability upgrades, the Project's success in passing reliability analyses to date is an indication of a technically sound project.

Finally, Clean Line noted that its Project is geographically viable. Clean Line followed technical siting guidelines including the maximum practicable use of existing linear corridors and open lands, minimal crossings of water resources like lakes, rivers, and wetlands, and minimal transmission installation on land sloped over 20 percent.[477] Having gathered extensive data on the Project's proposed routes, Clean Line said that it has "not identified any geotechnical condition that conflicts with the feasibility of the construction or operation of the Project."[478] It also intends to continue geotechnical work to ensure that its foundation designs and structures are sound throughout the proposed route.[479]

Clean Line took additional steps in its Part 2 Application to highlight its sound financial condition. Clean Line said that financial statements attached in a confidential appendix to its Part 2 Application showed that its relevant corporate entities had "no material liabilities," and that all were "capitalized entirely

---

[469] *Id.*

[470] *Id.*

[471] *See id.* at 3-11 to 3-12.

[472] *Id.* at 3-12 to 3-13.

[473] *Id.* at 3-13.

[474] *Id.*

[475] *Id.*

[476] *See id.* at 2-21 (citing MISO Feasibility Study (Feb. 10, 2014) at app. 10-B, http://energy.gov/sites/prod/files/2015/04/f22/CleanLinePt2-Appendix-10-B.pdf).

[477] *Id.* at 3-14.

[478] *Id.* at 3-15.

[479] *See id.*

with equity and [had] no debt."[480] The company explained that it uses equity from its shareholders to "contribute[] equity to its subsidiaries, which is used to fund the development of the Project."[481]

Clean Line also underlined the financial backing of its investors. Its two major investors, ZAM Ventures and National Grid USA, have extensive experience investing in energy sector projects.[482] Moreover, Clean Line emphasized that these two investors "are capable of supporting the Project as additional development milestones are reached,"[483] and that the funding "will enable Clean Line . . . to bring the Project . . . to a point of development where major permits and authorizations are obtained," facilitating long-term [TSAs] and more "project-specific financing arrangements."[484]

Lastly, Clean Line stressed that "the Project's construction will be fully financed *before* construction of the Project begins."[485] The company underscored that "[m]any successful transmission projects have followed [its] model in which initial equity investors fund development and the Project is later refinanced at the project level to fund construction."[486] Clean Line then cited several examples to show "that debt and equity financing is in plentiful supply for projects like the [Clean Line] Project."[487] Moreover, Clean Line said, funding is ripe for wind projects—for one example, "Horizon Wind Energy (now EDP Renewables), which is one of the leading developers of wind generation facilities in the U.S., successfully used [the project finance] approach to develop, finance, construct, and place into operation a number of significant wind generation projects throughout the U.S."[488] Clean Line concluded by pointing out that in its "financial model for the Project, projected revenues greatly exceed the anticipated expenses and will be sufficient to pay all operating costs without raising additional capital."[489] Accounting for all factors, Clean Line contends that its Project is well-positioned to raise all the capital it needs for construction, and that the Project will be financially self-sustaining once operational.

Several comments questioned the Project's technical viability, both on overall design and on vulnerability to damage. The design comments stated that "significant questions [had been raised] about corrosion of well casings and pipelines, as well as interference with electrical equipment,"[490] and criticized the Project's proposed route selection with claims that "no survey [had] ever been conducted on the ground."[491] A larger set of comments warned of damage to the Project from natural disasters or sabotage. These comments suggested that the Project is not technically viable because it has not accounted for repairs that could be necessary. For instance, a comment cautioned that the "Project involves DC electricity so it can't be easily diverted to the grid in the event of an accident."[492] Several comments noted that tornadoes

[480] *Id.* at 3-15.

[481] *Id.*

[482] *See id.* at 3-16.

[483] *Id.* at 3-16 to 3-17.

[484] *Id.* at 3-17.

[485] *Id.* (emphasis in original).

[486] *Id.*

[487] *Id.* at 3-17 to 3-18.

[488] *Id.* at 3-18.

[489] *Id.*

[490] Comment of Stephanie Stites (July 9, 2015).

[491] Comment of Cynthia Callahan (June 2, 2015) (emphasis removed).

[492] Comment of Leif Anderson (July 13, 2015).

often strike within the region the Project crosses.[493] Another comment raised the possibility of terrorist attacks on Project facilities, citing examples of attacks on other electrical facilities and claiming that "[t]he entire [Project] plan is fundamentally flawed in terms of security from attack."[494]

Numerous commenters also argued that Clean Line did not provide enough information to determine the Project's financial viability. Commenters were concerned about unaccounted-for costs, including the "cost of the likely line repair from 1-5 tornados per year"[495] and the "cost of TVA line upgrades [that] are interconnected with this Project."[496] Other comments accused the Project of having "no track record building transmission lines, no assets, no set timeline for a 10 year project (with the TVA Interconnection requirements) and no revenues before the in-service date" and suggested that Clean Line failed to show the Project's financial viability.[497]

The second set of comments on financial viability argued that the Project does not pass financial muster. For instance, one comment rhetorically challenged the Department to address "[w]hether and how the funding and expenditure structure envisioned by section 1222(c) and proposed by Clean Line in Appendix 4-A of its application proposal complies with the Appropriations Clause of section 9 of Article I of the U.S. Constitution; the Anti-Deficiency Act, 31 U.S.C. § 1341; and the Miscellaneous Receipts Statute, 33 U.S.C. § 3302."[498] Another comment suggested that the Project's major investors cannot adequately back the Project.[499] Further comments stated that the "project schedule is incomplete" and that a lack of service revenues for many years would scare investors away,[500] not to mention the Project's lack of current customers."[501]

The Department finds that Clean Line has sufficiently demonstrated the Project's technical viability. Clean Line plans to build and operate its HVDC transmission line with well-established technology. It is working with reputable firms to design and build the line. Critically, its management and collaborators have significant experience developing transmission line projects. Clean Line's management and partners plainly have the experience needed to carry out a project of this type. Moreover, the entities overseeing transmission systems to which the Project would interconnect also continue to study the Project as part of the interconnection process, and neither SPP nor MISO has identified a lack of technical viability to date. In any event, Clean Line is well-positioned to address any technical issues raised by SPP or MISO, and will bear the cost of any technical issues that may arise, which would not be unusual in the design and construction of a long-distance electric transmission line. Based on the proposal Clean Line has put forward, the Department believes Clean Line's Project is technically sound.

---

[493] *Id.* (stating that Arkansas and Oklahoma "average 101 tornadoes per year, of which 4.63% are F3 and higher [on the Fujita Tornado Damage Scale]" and questioning whether Clean Line has "plans to stockpile repair materials for tornado events"); Comment of Sen. Lamar Alexander (June 11, 2015) (noting that"[a] single tornado could take down part of [a] transmission line, cutting off the wind farms from TVA.").

[494] Comment of J.D. Dyer, at 1 (June 7, 2015).

[495] Comment of Leif Anderson (July 13, 2015).

[496] *Id.*

[497] Comment of Luis Contreras (June 30, 2015).

[498] Comment of John C. Ale (Senior Vice President, General Counsel & Secretary, Southwestern Energy), at 14 (July 13, 2015).

[499] Comment of Luis Contreras (July 1, 2015).

[500] *See* Comment of Luis Contreras, at 11 (June 24, 2015).

[501] Comment of Cynthia Callahan (June 2, 2015).

Many of the technical issues raised by commenters have been addressed and/or mitigated. For example, the Final EIS concluded that "[a]lthough HVDC transmission lines may cause pipeline and well casing corrosion due to stray electric current (by utilizing the earth for transmission/return currents), the Project's dedicated metallic-return design eliminates the risk of stray voltage during operations."[502] The Final EIS also cited Clean Line's assertion "that there is minimal risk of interference with electronic equipment (since this type of equipment operates at greater frequencies than 60Hz and there are no well pads within the ROW that would utilize this equipment."[503] Contrary to the accusation of no ground-level surveys being conducted, the proposed route has in fact undergone extensive surveying, including for the highly-detailed Final EIS.

The Department expects that, as in nearly all high-voltage transmission projects, technical issues will surface as the Project progresses, and acknowledges that the risk of accidental or deliberate damage is impossible to eliminate entirely. Nonetheless, Clean Line is well-positioned to handle both technical issues and damage repair effectively. The damage other commenters referenced, and the repairs that would be necessary, would only come from extraordinary events. All transmission in the region faces the same threats from natural and artificial disasters. The Project does not bear unique risks, and its developers will confront the risks just as any other transmission project developer in the region would. In short, the Department believes that Clean Line has both the technical and financial wherewithal to repair extraordinary damage, and to arrange substitute service, quickly and effectively.

The Department also finds that the Clean Line Project is financially viable. According to the 2010 RFP, financial viability calls for an applicant to show that its financial condition is sound and that it "has the ability to secure the necessary financing to meet the [proposed] Project's requirements."[504] The second of these requirements is critical because it does not state that applicants must show that they have already secured project financing. Rather, an applicant must show only the *ability* to secure the financing. Here, Clean Line has not only emphasized its existing financial support, but has also provided a model that has succeeded in similar contexts and that would help ensure adequate financing.

Legal concerns in the comments are easily resolved. Section 1222(c)(2) states that "contributed funds shall be available for expenditure for the purpose of carrying out the Project (A) without fiscal year limitation; and (B) as if the funds had been appropriated specifically for that Project." This provision is dispositive, as Congress has therefore given contributed funds the status of appropriations under section 1222.[505] The Constitution's Article I Appropriations Clause states that "[n]o Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law."[506] The Anti-Deficiency Act prevents federal officers or employees from spending or allocating funds that Congress has not appropriated.[507] The

---

[502] Final EIS at 3.4-92.

[503] *Id.*

[504] 2010 RFP, 75 Fed. Reg. at 32,942.

[505] Congress has taken the same approach in other statutes. *See, e.g.*, 43 U.S.C. § 397a ("Any moneys which may have been heretofore or may be hereafter advanced for operation and maintenance of any project or any division of a project shall be covered into the reclamation fund and shall be available for expenditure for the purposes for which advanced in like manner as if said funds had been specifically appropriated for said purposes.") (emphasis added); 16 U.S.C. § 590z-6 ("Charges collected during the development period of a project . . . shall be available for expenditure for operation and maintenance of said project in like manner as if said funds had been specifically appropriated for said purposes.").

[506] U.S. Const. art. I, § 9, cl. 7.

[507] 31 U.S.C. § 1341(a) ("An officer or employee of the United States Government or of the District of Columbia government may not (A) make or authorize an expenditure or obligation exceeding an amount available in an appropriation or fund for the expenditure or obligation; (B) involve either government in a contract or obligation for

Miscellaneous Receipts Act generally requires that "an official or agent of the Government receiving money for the Government from any source shall deposit the money in the Treasury as soon as practicable without deduction for any charge or claim." The Department already complies with the Miscellaneous Receipts Act when it receives contributed funds, and—again—Congress specifically gave contributed funds appropriation status in section 1222.

In both its 2010 and 2015 applications, Clean Line has asserted it can secure the funding to make its Project succeed. As Clean Line underscored, other projects have used the same financing model it plans to use. The company has already found significant investor backing for the Project's initial stages. Because Clean Line assumes full financial liability for Project costs, the investors—sophisticated and experienced in energy development projects—would not take part without confidence in the Project's financial foundation. Once the initial stages are complete, Clean Line explains, more funding sources will become available.[508] Of course, the additional funding would only materialize if the Project were on sound financial footing, as "[n]o lender or investor is willing to take the risk that insufficient funding commitments lead to an incomplete Project."[509] If the Project were not financially viable, it would neither have attracted substantial investment thus far, nor have the potential to attract the additional investment it needs literally to get off the ground. The Department is therefore convinced that Clean Line has developed a financially viable Project.

Finally, the Participation Agreement would require Clean Line to obtain financing for the Project before the Department initiates any condemnation action. The Participation Agreement does so through its "Financing Condition," which essentially requires available and committed funds at all times to equal or exceed the Project's remaining costs.[510] One of several conditions precedent for DOE to condemn property is that "the Financing Condition shall be satisfied."[511] This safeguard would allow the Project to proceed with condemnation only if Clean Line has a funds readily available to ensure Project viability.

For the reasons stated, it is reasonable to conclude that Clean Line's Project meets the RFP standards of technically and financially viability.

VII. Conclusion

After careful consideration using the best available data, as well as close consultation with Southwestern, this Summary of Findings concludes that the Project meets the requirements of section 1222. First, the Project is necessary to accommodate an actual or projected increase in demand for electric transmission capacity. Several relevant regional transmission planning documents, as well as express interest from numerous renewable generators and potential transmission customers, demonstrate that the Project will address projected transmission demand increases. As further assurance, the Participation Agreement would require Clean Line to have under contract a substantial volume of transmission capacity before the Department would exercise its authority to acquire rights-of-way for the Project. Second, the Project is consistent with applicable, identified transmission needs, as well as efficient and reliable

---

the payment of money before an appropriation is made unless authorized by law; (C) make or authorize an expenditure or obligation of funds required to be sequestered under section 252 of the Balanced Budget and Emergency Deficit Control Act of 1985; or (D) involve either government in a contract or obligation for the payment of money required to be sequestered under section 252 of the Balanced Budget and Emergency Deficit Control Act of 1985.").

[508] Part 2 Application at 3-17 (noting that once the Project enters TSAs, "project-specific financing arrangements can be entered into with lenders and with equity investors and/or other partners.").

[509] *Id*.

[510] *See* Participation Agreement § 1.1, at 20-21.

[511] *Id.* § 6.3(a)(iii), (b)(v).

operation of the transmission grid. SPP, an appropriate transmission organization with respect to this Project, has identified a need for transmission capacity to deliver wind from the western areas of its territory. The Project is ideally suited to meet this need. Third, the Project will be operated in conformance with prudent utility practice, as Clean Line agreed to do when it committed to using a Commission-approved OATT. Clean Line will also be required to maintain good utility practice in any operating agreement with a third-party, as well as any interconnection agreement. Fourth, the Project will conform to the rules of the appropriate transmission organization. Clean Line has agreed to turn Project operation over to an RTO or to an entity that will follow SPP's and MISO's rules upon interconnection. Finally, the Project will not duplicate the functions of existing transmission facilities or proposed facilities. The Department has reviewed projects SPP and MISO have already approved and, based on the best available data, has found that the Clean Line Project does not duplicate any of them.

Along with the statutory requirements, this Summary of Findings considered the evaluation criteria in the Department's 2010 RFP: whether the Project is in the public interest; whether the Project will facilitate the reliable delivery of renewable energy; the benefits and impacts to the states the Project would traverse; and whether the Project is both financially and technically viable. After consideration of these evaluation factors, and for the reasons provided above, this Summary of Findings concludes that the Project merits the Department's participation as set forth in the Participation Agreement.