

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Transmission Planning and Cost Allocation        )  
by Transmission Owning and Operating        )  
Public Utilities                                        )                       Docket No. RM10-23-000

COMMENTS OF  
CLEAN LINE ENERGY PARTNERS LLC

Pursuant to Rule 212 of the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) rules and regulations, 18 C.F.R § 212 (2009), Clean Line Energy Partners LLC (“Clean Line”) respectfully submits these comments in response to the Commission’s June 17, 2010 Notice of Proposed Rulemaking (“NOPR”) in the above-captioned proceeding. Clean Line commends FERC for taking these proactive steps toward addressing some of the deficiencies in planning and cost allocation of new transmission facilities. FERC’s proposed changes will help make transmission planning more transparent, comprehensive and less discriminatory and will address regional cost allocation concerns. In Clean Line’s view, however, FERC must more directly address cross-regional transmission planning for high voltage direct current (“HVDC”) technology and the necessity of these lines for more robust renewable integration into the power system. Specifically, FERC should ensure that HVDC transmission lines are part of the future transmission system that will deliver renewable energy to distant markets in the most efficient manner and with less environmental impact. More importantly, FERC should ensure that incumbent public utilities are not in the position to determine success or failure of merchant transmission lines.

Historically, HVDC has been used to move energy from large hydro systems and mine mouth coal plants to distant loads, as well as to connect independent grids or power markets.

Now, HVDC is simply the most cost-effective and least intrusive transmission technology to integrate large amounts of wind into our nation's electrical supply mix. HVDC technology is most cost effective when constructed over long distances and, therefore, solves the problem of getting remote resource-to-load. HVDC also provides a number of reliability benefits, including controllable power flows, minimal use of reactive power, black start capabilities and potentially the integration of new storage technologies. Compared to an equivalent AC solution, HVDC can link distant parts of the electric grid more reliably. Unlike AC lines, HVDC lines do not become overloaded, due to loop flow issues, since the amount of power delivered over the line is strictly limited by the DC converter stations. HVDC lines can act as a "firewall" that can reduce the likelihood that line outages will propagate from one region to another.

Clean Line currently has four projects underway, explained in greater detail below, each of which utilizes HVDC technology to transport renewable energy from one region to another in the most cost-effective way possible. Clean Line Energy's proposed projects, which are all interregional in nature, complement FERC's regulatory effort to review and consider transmission on a broader, interregional basis.

## I. Background

Clean Line is an independent developer of high voltage, long-haul transmission lines, focusing exclusively on connecting the best renewable energy resources in North America with robust electricity demand centers. The Company is developing four projects, all of which will be  $\pm 500$  or 600 kilovolt direct current transmission lines: the Plains and Eastern Clean Line, with an expected in-service date of late 2015, will consist of two parallel lines that will deliver up to 7,000 MW of wind and solar generated electricity produced in southwestern Kansas, northwestern Oklahoma and the Texas panhandle to the Tennessee Valley Authority and other

areas of the southeastern U.S.; the Rock Island Clean Line will deliver up to 3,500 MW of wind-generated electricity from Iowa and South Dakota or Nebraska with load centers near Chicago and the surrounding region; the Grain Belt Express Clean Line will deliver up to 3,500 MW of renewable energy from new wind generation projects in western Kansas to the Midwest Independent Transmission System Operator and to the eastern U.S.; and, finally, the Centennial West Clean Line will gather up to 3,500 MW of renewable energy in eastern New Mexico and surrounding areas, and transmit it to load centers such as southern Nevada, Southern California, Arizona, and other areas in the Southwest.

All four of Clean Line's projects will facilitate the reliable delivery of power generated by renewable resources, and the development of these projects will support national efforts to significantly increase renewable electric generation capacity. These projects will meet the needs of generators and utilities for new transmission capacity and enable the construction of thousands of megawatts of new, cost-effective renewable electric generation capacity. The addition of this generation capacity will create new jobs, stimulate domestic manufacturing, and reduce pollution and water consumption.

## II. Comments

Clean Line submits the following comments in this proceeding.

### 1. All Public Utility Transmission Providers Should Be Required to Participate in a Regional Planning Process.

FERC has proposed to require each public utility transmission provider to participate in a regional transmission planning process that produces a regional transmission plan to meet specific planning principles. Clean Line supports the Commission's proposed requirement. Every public utility should be required to participate in a regional planning process that works toward a cohesive regional plan. Such a requirement would broaden the realm of participation

and expand the scope of consideration; planning on a regional level will enable transmission providers to identify and provide efficient and cost effective solutions for regional and cross-regional needs. The current lack of interregional transmission plans has resulted in the construction of too few new interregional transmission facilities and solutions. If allowed to persist, this deficiency will continue to cause inefficiencies and prevent the development of the transmission and generation facilities best suited to meet the needs of a particular region.

The planning processes that exist today are, for the most part, governed by incumbent utilities and prevailing state interests, resulting in inherent structural flaws. Today, Incumbents are charged with focusing on serving their native load and protecting generation revenues in constrained areas and, as a result, the transmission planning process involves a patchwork of different transmission plans. Geographically, the planning processes in place do not bridge the gap between regions that are endowed with good renewable energy resources and regions that need new resources. Most planning processes do not address the need for long distance transmission lines that link distant parts of a region or multiple regions. Because of this deficiency, absent transmission improvements, load serving entities will procure renewable energy from more expensive sources that do not require transmission, and utilities will not be able to procure renewable energy at the scale required by state Renewable Portfolio Standards (“RPS”). A lack of long distance transmission planning will require consumers to bear the undue expense of procuring renewable energy from less economical sources. Moreover, it will deprive consumers of the long-term price stability from procuring large quantities of renewable electricity not exposed to fuel prices.

Regional transmission plans should consider different voltages and both AC and DC technology. Currently, most plans don’t consider HVDC as a potential solution to deliver

renewable energy from supply to demand. Existing planning also typically favors the existing voltage levels on a system. The right technical solution for long distance lines hundreds of miles in length is likely to be different from the solutions used for transmission over short distances. Higher voltages tend to be appropriate over longer distances due to their lower losses and ability to transmit more power. HVDC technology also becomes more cost effective than AC lines at distances of over 300 miles. Though HVDC lines carry the additional expense of converter stations, they can transmit more power with lower losses than comparable AC lines. HVDC lines are a complement to existing AC networks, so incorporating HVDC transmission into the grid will still allow AC grid operators to serve local load, share resources for reliability purposes, and plan for state and federal public policy needs in the future. By broadening the scope of regional planning to permit participation in the planning process by all market participants and the solutions they propose, such as HVDC, FERC will enable the identification of the most efficient and cost effective solutions for regional and cross-regional needs. Utilities cannot charge just and reasonable rates to their customers without a comprehensive planning process that identifies the best technology for long distance transmission lines.

Finally, Clean Line is concerned that the lack of clarity around what constitutes a planning region in the NOPR could, outside of an organized market, permit a single utility or utility family to establish its own planning region. Clean Line encourages the Commission to establish guidelines for what constitutes a planning region. Clean Line suggests that the Commission prohibit single utility regions and look to the physical realities of utility operations and power flows rather than the boundaries of a particular transmission provider.

2. Merchant Transmission Companies Should Not Be Required to Participate in a Regional Transmission Process.

FERC proposes to exclude independent transmission companies from planning requirements. Clean Line supports FERC's conclusion. If ratepayers are not bearing any development risk and the project is not seeking cost recovery across a region, the company developing that project should not be required to participate.

While planning is necessary, it is not the ultimate goal. FERC must ensure that there is a cross-regional planning process in place that is quick and efficient. Investors will not participate in grid expansions if they cannot understand the time horizon upon which upgrades will be considered. The lengthy process and multi-year queue backlogs that have plagued the generation interconnection review process – both within and outside RTOs – should not be permitted to likewise halt the development of interregional transmission solutions.

Permitting independent transmission developers that are not seeking cost allocation to proceed outside of the planning process is vital for this segment of the market to have continued access to capital. The expense of participating in the planning process may be excessive and burdensome particularly for early stage projects. Investors may not participate in grid expansion if there is no assurance that their projects will be considered in a fair and open process that considers all technologies. Therefore, FERC must ensure that grid expansion plans are definitive and complete within a reasonable timeframe and that decisions are made independently, transparently and with the country's long term energy goals in mind.

3. Requiring Interregional Transmission Planning Agreements Between Public Utility Transmission Providers in Neighboring Regions Is Important In Moving Renewable Energy to Where It Is Needed.

The types of generation resources currently under development throughout the US are shifting in response to state and federal public policy goals. Utilities are being required to

procure as much as 20% to 33% of their energy from renewable resources, and in the present environment, wind is the least-cost option to meet these goals. In addition, while over 30 states have an RPS or goal, not every state has abundant, in-state renewable resources. Thus, the growing number of renewable energy goals is stimulating the need for additional transmission facilities to move renewables from resource-rich areas to those in need of the renewable supply. In short, cost effectively reaching the levels of wind penetration necessary to meet RPS requirement is not possible without a broad transmission build-out to connect the best resources to load centers.<sup>1</sup>

The need for interregional transmission lines also necessitates the development of interregional planning processes. Requiring Interregional Transmission Planning Agreements between public utility Transmission Providers in neighboring regions, as proposed by the Commission in this NOPR, is a necessary step in getting more renewables on the grid. This will enable Load Serving Entities to meet state and federal RPSs and other renewable energy goals, and Clean Line is in full support of this requirement. As the agency that regulates the interstate transmission of electricity, FERC is the only logical authority to govern the interregional transmission planning process and, therefore, must ensure that a process is developed that is not unduly discriminatory or preferential.

The most significant operational challenge facing the integration of wind generation is its variable nature.<sup>2</sup> While numerous studies have shown that wind can be reliably integrated at high levels — for example, 20% — to be integrated at the lowest cost, wind resources must be balanced over a large control area. Requiring Interregional Planning Authorities to consider the

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<sup>1</sup> US Department of Energy, National Renewable Energy Laboratory, Eastern Wind Integration and Transmission Study, January 2010. [http://www.nrel.gov/wind/systemsintegration/pdfs/2010/ewits\\_final\\_report.pdf](http://www.nrel.gov/wind/systemsintegration/pdfs/2010/ewits_final_report.pdf).

<sup>2</sup> *Notice of Inquiry, Integration of Variable Energy Resources*, Docket No. RM10-11-000 (Jan. 21, 2010).

benefits of larger Balancing Authorities will help meet the operational challenges posed by variable resources, as well as providing the option of more efficient resource sharing among utilities. If a large number of wind farms are built in the balancing area of a small utility in order to provide power to a load center in a different utility's balancing area, it is unduly burdensome on the small utility to manage the variability of the wind farms. Variable resources are best balanced if delivered directly to the load they serve. HVDC transmission lines are capable of transporting variability from one control area to another area with higher load that is more likely to have resources available to assist in the integration.

HVDC lines often require interregional planning since they almost always cross multiple Regional Transmission Organizations ("RTOs") and regions. Multilateral, interregional transmission planning agreements will also facilitate the cost allocation methods that are simultaneously proposed in this NOPR. Clean Line supports FERC's effort to ensure a transmission planning process with provisions that enable the evaluation of transmission interconnection on an expeditious, coordinated basis. The interregional planning process, like the regional planning process, should evaluate the best technology option for long distance lines based on voltage level and alternating or direct current. In the case of HVDC lines, the AC/DC converters can provide certain ancillary services such as reactive power, frequency control, and the sharing of reserves across distant areas of the grid. The benefits of these ancillary services should be considered in the evaluation of HVDC lines. HVDC lines may also require ancillary services such as voltage support and short circuit capability. Consistent with the principles of the Open Access Transmission Tariff, the relevant transmission owner or RTO should be required to provide these services in a non-discriminatory and reasonable fashion, even if the AC/DC converter primarily serves to export energy through another region. Clean Line recommends that

FERC lay clear groundwork for HVDC lines to compete on their own merits, namely, cost-effectively and reliably integrating different transmission systems and large quantities of renewable energy.

4. State and Federal Public Policy Goals Should Be Considered in Regional and Interregional Transmission Planning Processes.

FERC proposes to require consideration of public policy requirements in transmission planning processes. Clean Line supports the inclusion of provisions in each utility's Open Access Transmission Tariff (OATT) that require consideration of state and federal public policies in the planning process. As noted above, over 30 states have state-mandated RPS or goals that FERC has a responsibility to support. By requiring this inclusion within OATTs, FERC will implement the goals of the administration and, combined with other provisions of the NOPR, will eliminate discrimination by allowing all independent transmission developers to help satisfy public goals.

Public policy goals can change over time, and, if implemented incorrectly, this requirement could reduce the planning horizon due to political pressure. In order to adequately account for public policy requirements, these interregional plans should not be limited to mere seam agreements, but should also include open and transparent scenario planning, consider numerous carbon and emission scenarios, and ensure that reliability is always considered as a public policy goal and in interregional plans.

In addition to renewable energy and emission policies, transmission plans should be authorized to consider environmental and land use impacts from transmission lines. Given the enormous need for high voltage transmission lines, it is important to plan transmission in a way that minimizes impact on protected areas, endangered species, and other siting considerations. Achieving the same transmission goals with a lower number of lines also has value because it

minimizes land use and impact to wildlife. In this regard, HVDC lines can be a valuable technology because they use less right of way and can deliver more power through a single line than comparable AC lines.

The failure to account for public policy in the transmission planning process could also result in rates that are unjust or unreasonable. The failure to integrate transmission facilities necessary to meet state resource requirements with the existing planning processes can result in greater costs to consumers and deprive them of the benefits of renewable energy. Requiring public utility transmission providers to evaluate projects based on their potential to facilitate the achievement of public policy requirements will provide a solution to this problem.

5. Elimination of provisions from OATTs and jurisdictional agreements that establish a right of first refusal for incumbent transmission providers will promote competition in the development of transmission solution.

FERC proposes to require transmission providers to remove from their OATTs and jurisdictional agreements any provisions establishing a right of first refusal for an incumbent transmission provider. Clean Line supports the removal of this right of first refusal. Allowing incumbent utilities to exercise the right of first refusal violates the “open” planning process that FERC is trying to achieve, and it undermines FERC’s effort at making the transmission planning process “just and reasonable and not unduly discriminatory or preferential.”

The right of first refusal is a potential impediment to project development. Non-incumbent utilities may be hesitant to develop and propose their projects if there is a chance that their development investment may be lost to an incumbent utility. Encouraging the participation of non-incumbent transmission developers in the regional transmission planning process will increase competition and expand development, which can ultimately lead to lower costs for ratepayers.

Since most incumbent utilities focus on their own service territories, independent developers have a particularly important role to play in long distance lines. It is imperative that merchant transmission providers be allowed to use private capital to expand the grid and in turn, have a reasonable expectation that they will get a return on invested capital. If the right of first refusal stays in place, numerous beneficial lines may not be built, as incumbent transmission providers have historically protected their generation returns through the lack of competition and new transmission lines.

6. Merchant Transmission Developers Should Have An Opportunity Comparable to That of An Incumbent Transmission Owner To Recover Costs Associated With Developing and Constructing Transmission Facilities.

FERC proposes to require that a project's sponsor have the right to construct and own its proposed facility, and merchant transmission developers have an opportunity comparable to that of an incumbent transmission owner to recover the costs associated with developing and constructing a facility. Clean Line generally supports the Commission proposal. Projects proposed by Merchant Transmission Developers should be given the same consideration for inclusion in regional transmission plans as those proposed by incumbent Transmission Owners. If a project is ultimately included in a regional plan, the party designated to build the project should be the entity that proposes the project.

Transparent planning and expedited queue processes that are understood for both AC and HVDC upgrades should give investors the certainty needed to invest risk capital. The Commission should be cautious when it comes to broad cost recovery for both incumbent utility and merchant-proposed projects. Allowing the recovery of development costs through a regional cost allocation scheme will eliminate all of the risk of project development and could result in unnecessary lines being proposed and recovered at a potentially huge cost to ratepayers.

Cost recovery is more appropriate once a project has clearly demonstrated its feasibility and cost effectiveness. It is reasonable to expect utilities to invest some development capital to perform studies and planning without guaranteed cost recovery. The prospect of earning a return on a large construction investment should be a sufficient incentive for the capital investment in initial development work.

7. Requiring the development of intraregional and interregional cost allocation methods for the costs associated with new transmission facilities included in the transmission plan produced by a utility's transmission planning process will facilitate the development of new transmission infrastructure.

The implementation of a cost allocation methodology is critical to the development of new infrastructure, whether it be contained within one region or built across several regions. Without a plan that outlines who is responsible for construction costs, it is difficult to foster widespread support for these proposed projects. In addition, if there is no identified avenue for cost recovery, companies may not risk capital on initial routing, permitting, and engineering, which will halt progress. For these reasons, Clean Line supports the Commission's proposal to require the development of intraregional and interregional cost allocation methods for the costs associated with new transmission facilities included in the transmission plan produced by a utility's transmission planning process.

Clean Line also supports allocating the costs for high voltage lines across the largest region possible, including both AC and DC high voltages lines. Allocating costs to all beneficiaries rather than a subset will allow for the greatest number of needed transmission projects to proceed.

### **III. CONCLUSION**

Clean Line commends FERC's Proposed Rulemaking as a positive step towards addressing the serious need for long distance transmission lines. The construction of transmission to

integrate tens of thousands of megawatts of renewable power is in the interest of ratepayers, electric consumers, the environment and national security. Requiring utilities to plan regionally and interregionally is necessary to assure that all potentially beneficial transmission solutions are examined. Requiring the consideration of various technologies will assure that the most cost effective solution is deployed. Finally, removing barriers to participation by independent developers will increase competition and the vitality of the transmission sector.

Respectfully submitted,

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