CLEAN LINE
ENERGY PARTNERS

Clean Line Energy Comments to the Proposed Regional Cost Allocation Principles for Order No. 1000

The following comments by Clean Line Energy Partners LLC ("Clean Line") on behalf of Rock Island Clean Line LLC ("Rock Island") and Grain Belt Express Clean Line LLC ("Grain Belt") are based on the PJM Transmission Owners cost allocation proposal as discussed at the public meeting on July 18, 2012. Rock Island and Grain Belt are long-haul, HVDC transmission projects currently with one or more active merchant transmission interconnection queue requests under study within PJM.

In general, the current business models for Rock Island and Grain Belt assume that each will be merchant projects, dependent on participant funding via capacity contracts. Accordingly, neither Rock Island nor Grain Belt currently anticipates recovery of any costs through PJM's cost allocation mechanisms. That said, however, based upon the substantial benefits that would accrue to PJM customers through transmittal by Rock Island and Grain Belt of high-quality renewable resources from the Midwest ISO and SPP regions, under the appropriate circumstances, either or both of the projects may qualify for, and seek allocation to some degree. Therefore, these projects have substantial interest in the proposed cost allocation mechanisms.

Unfortunately, the PJM TO proposal does not adequately address cost allocation for multiple drivers, State RPS/Public Policy Projects, or HVDC projects like those being developed by Clean Line. To properly allocate costs commensurate with benefits engendered by HVDC projects like Rock Island and Grain Belt, Clean Line advocates that the PJM TOs adopt an approach to cost allocation akin to the Multi-Value Project approach implemented in the Midwest ISO. This approach properly recognizes the substantial regional benefits created by considering the transmission build out necessary to accommodate the vast renewable resource potential that exists within the Midwestern region of the country. These same Midwestern resources are readily and economically available for import into the PJM region via HVDC projects like those being developed by Clean Line.

In order to better reflect the benefits of transmission infrastructure to enhance reliability, support more efficient markets, and deliver low-cost, emission free power from those parts of the country with robust regimes of renewable fuel sources, PJM and its Transmission Owner members should consider the following:

First, the ability to help LSEs meet their RPS requirements should be considered a valid reason, alone or coupled with additional benefits such as market efficiency and reliability, for projects to be included within the PJM RTEP. Second, the treatment of projects not required for reliability, operational performance, or market efficiency should not, by default, be treated as "supplemental" projects. Finally, projects that benefit regional public policy goals should have the ability to be allocated to regional load.

1001 MCKINNEY, SUITE 700 HOUSTON, TX 77002 TEL 832-319-6310 FAX 832-319-6311

CLEANLINEENERGY.COM

Allocation of Direct Current Lines

As noted by the PJM TOs during the July 18 meeting, work continues in order to develop appropriate cost allocation rules for DC lines; "recognizing that DC lines have different characteristics than AC lines, and are used in various applications." During the July 18 meeting, PJM TO reps indicated that the reason DC lines were not included in the proposal was that "the applicability of distribution factor (DFAX) analysis to DC lines is complex" and the group wanted to release a proposal in a more timely manner than they would have otherwise been able to if they first developed an approach to include DC lines.

Since the distribution factor calculation is based on a power flow analysis, one can report the DFAX on any transmission element as a result of transfers of energy from any node or aggregate of nodes to any other node or aggregate of nodes. Performing this calculation for a DC line, however, would require an intermediate step to adjust the DC line's scheduled power flow to match the expected amount of power that would travel down the line for a given power transfer. This is the case because a DC line is completely controllable both operationally and therefore also in power flow simulations. So a power injection is not "allowed" to flow on a DC line until and unless action is taken to adjust the DC line schedule to accept that power. This additional step makes the calculation of a distribution factor on a DC line more cumbersome than the process currently used to calculate DFAX on an AC line. An approach to implement the ability to calculate DFAX for DC lines while maintaining the current process by which DFAX are calculated for AC lines would be to devise a process by which a proxy AC transmission line model (i.e. an "AC surrogate"), with properties that can approximate a given DC line, would be implemented into the power flow model so that the DFAX approach can still be used as a preferred method of impact calculation.

Clean Line supports the development of a methodology such as the aforementioned "AC surrogate" approach, in order to ensure that DC transmission lines, with their broad benefits in controllability and renewable resource integration, can be qualified for cost allocation similar to AC lines.