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DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Reform of Affected System Coordination in the Generator Interconnection Process	Docket No. AD18-8-000
EDF Renewable Energy, Inc.	Docket No. EL18-26-000
v.	
Midcontinent Independent System Operator, Inc., Southwest Power Pool, Inc., and PJM Interconnection, L.L.C.	

NOTICE INVITING POST-TECHNICAL CONFERENCE COMMENTS

On April 3 and April 4, 2018, Federal Energy Regulatory Commission (Commission) staff conducted a technical conference to discuss issues related to affected systems that have been raised in the complaint filed by EDF Renewable Energy, Inc. against Midcontinent Independent System Operator, Inc., Southwest Power Pool, Inc., and PJM Interconnection, L.L.C. in Docket No. EL18-26-000 and in the Commission's Notice of Proposed Rulemaking (Generator Interconnection NOPR) on the interconnection process in Docket No. RM17-8-000.

All interested persons are invited to file initial and reply post-technical conference comments on the questions listed in the Supplemental Notice of Technical Conference issued in this proceeding on March 26, 2018 and the questions listed in the attachment to this notice. Commenters need not respond to all topics or questions asked. Commenters may reference material previously filed in this docket but are encouraged to submit new or additional information rather than reiterate information that is already in the record. In particular, commenters are encouraged, when possible, to provide examples in support of their answers. Initial and reply comments are due within 30 days and 45 days, respectively, from the date of this notice.

For more information about this notice, please contact:

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Dated: April 19, 2018.

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Post-Technical Conference Questions for Comment

For any of the following questions, please also describe any issues presented when an affected system is a non-public utility transmission provider.

General Affected Systems Coordination Processes

1. Please describe any affected system coordination processes and guidance available for your market or balancing authority area, including, but not limited to, tariff provisions, joint operating agreements (JOA), and business practice manuals (BPM).

2. Please explain the role of the host transmission provider in managing the coordination and communication between an interconnection customer and an affected system during the course of an interconnection request process. If the interconnection customer has primary responsibility to coordinate and communicate with the affected system, please explain how the host transmission provider ensures that affected system matters are addressed before proceeding with an interconnection for which affected system impacts have been raised.

3. With respect to Midcontinent Independent System Operator, Inc. (MISO), Southwest Power Pool, Inc. (SPP), and PJM Interconnection, L.L.C. (PJM) specifically, once the need for an affected system study is determined, please describe how each RTO then coordinates with the other RTO to consider the affected system impacts due to an interconnection request on the host system. Please include the steps in the process and any timelines and other procedural matters, and reference any tariff, JOA, BPM, and/or other provisions that describe the process for such coordination.

4. Should there be a *pro forma* affected system study agreement that provides for firm timelines for the affected system to provide the relevant studies? If so, what terms and conditions should it contain, and what entities should be parties to the affected system study agreement (e.g., host transmission provider, host transmission owner, affected system, interconnection customer)? What modifications would need to be made to such a study agreement to accommodate a non-public utility affected system?

5. Regardless of whether the Commission proceeds with development of a *pro forma* affected systems study agreement, should MISO, SPP, and PJM develop a common affected systems study agreement? If so, what terms and conditions should this agreement contain, and what entities should be parties to the agreement (e.g., host transmission provider, host transmission owner, affected system,

interconnection customer)? If possible, please provide a sample of a commonly used affected systems study agreement.

6. As part of the affected systems study agreement, if affected systems were allowed to charge interconnection customers an administrative fee for conducting affected system studies, in addition to receiving reimbursement for the actual costs of conducting affected system studies, would such a fee motivate affected systems that lack resources, such as full-time employees, to conduct affected system studies in a more timely manner? If so, how should the fee be determined and what milestones of the affected system should be tied to the fee? Should such an administrative fee be tied to the affected system providing its study results by a certain date?

7. Describe any planned or in-process affected system coordination improvement efforts taking place in your market or balancing authority area (through a stakeholder process, etc.). Please provide links or directions to any publicly available materials related to these improvement efforts.

Modeling and Study Procedures Used for Affected Systems Information

1. Please explain how Network Resource Interconnection Service (NRIS) and Energy Resource Interconnection Service (ERIS) are modeled both when conducting studies on your system and when conducting studies as an affected system, and provide a reference to where that information is located in your tariff. Are the standards (e.g. shift factors, contingency lists) for modeling NRIS and ERIS available to customers, and if so, where is this information located?

2. Explain the reasons an affected system would study an interconnection request made in a host system using NRIS criteria when the interconnection customer is only requesting NRIS in the host system. What are the benefits and drawbacks to studying and also requiring an interconnection customer seeking NRIS in the host system to be responsible for network upgrade costs in an affected system in the same manner as an interconnection customer who requests NRIS in the affected system?

3. Explain the reasons an affected system could or should study an interconnection request using ERIS criteria when the interconnection customer is requesting NRIS in the host system. If you believe affected system transmission providers should study NRIS requests as ERIS, please include an explanation of how ERIS criteria address reliability concerns associated with an NRIS interconnection request in both the host and affected systems.

4. Should there be a standard approach to determine if an interconnection customer requesting NRIS in the host system is studied as NRIS or ERIS on an affected system? If so, what should the standard be and why?

5. If there is no generic reform that dictates how affected systems study interconnection customers who request NRIS on the host system, should MISO, SPP, and PJM develop a standard approach to determining whether such an interconnection customer should be studied as NRIS or ERIS on the affected system(s) during the modeling process? If so, what should the standard be and why?

6. Please explain the process used to calculate generation shift factors, including how and where the reference bus is selected, when conducting an affected system study for interconnection requests made in a host system.

7. What are the dispatch assumptions used in affected systems studies? Are the dispatch assumptions the same for already interconnected resources on the host system that affect flows on the affected system and resources already interconnected in the affected system? Are these dispatch assumptions consistent with the assumptions an affected system uses when it performs an interconnection request within its footprint? Are the dispatch assumptions an affected system uses in affected system studies provided to interconnection customers? To the extent already interconnected resources on the host system are assumed to be dispatched at full output, what is the rationale for that assumption?

8. What criteria do transmission providers use to determine whether an interconnection request on the host system requires an affected system study on an affected system? Please provide references to tariff, JOA, BPM, and any other provisions that include this criteria. If the determination is based on "engineering judgment," is this judgment adequately explained to the interconnection customer? If so, in what form does the interconnection customer receive that information? If there is a disagreement regarding this determination, is there a process for the customer to challenge it? If so, please provide a detailed description of that process.

9. Should MISO, SPP, and PJM be required to use the same criteria to determine whether an interconnection request on the host system requires an affected system study on an affected system?

10. Please comment on the possibility of implementing jointly developed interconnection-wide transmission models between transmission providers in affected system studies to detect topology changes to a transmission provider's

region that might not be visible by the affected systems until the next interconnection-wide model update.

11. When an affected system studies an interconnection request, should it model its entire footprint or a sub-region(s) of its system? If a sub-region(s) would be sufficient, please explain what criteria would be used to determine the sub-region(s) in an affected system that are impacted by an interconnection request in a host system.

12. What are the benefits and drawbacks for the interconnection customer, the host transmission provider and the affected system to an affected system studying all interconnection requests in a host system study cluster or queue to determine affected system impacts? Is there a way the host system could employ some type of pre-screening process to limit affected systems analysis to only those requests that may impact an affected system? What criteria should be used in such a pre-screening process?

13. At what point in the interconnection process should interconnection customers be required to provide relevant modeling data to best avoid delays in both the host interconnection and affected system study processes?

Timing of Affected System Coordination

1. Does the host system's interconnection process include an opportunity for the host system and interconnection customer to review an affected system study and discuss the results with the host system or affected system, as necessary, before the interconnection process either requires a financial milestone payment or execution of an interconnection agreement? If so, please provide references to the relevant tariff or manual descriptions of this opportunity. Is this opportunity to review included in the host system's interconnection queue timeline? If so, how much time is allowed?

2. Should all host system transmission providers be required to align their interconnection study process schedules with any relevant affected systems in order to allow for both host system and affected system studies to occur on the same timeline? Would such alignment improve the timing at which an interconnection customer receives affected system study results? What actions could the host system, affected system, and interconnection customer take to better align the completion of affected system study results? Should the Commission require that an interconnection customer receive affected system study results at the same time it receives a host system's system impact study results? If so, would there be any concerns with that approach?

3. Should MISO, SPP, and PJM be required to adopt a common timeline for conducting affected systems studies and providing results to interconnection customers and/or the host transmission provider? If not, why not? If so, please explain how this common timeline could be implemented. For example, would each RTO begin affected system studies at certain set dates throughout the year and commit to providing results by certain set dates, or are there other ways of implementing a common timeline? Please also provide an example of how this common timeline could be developed – that is, by providing sample tariff, JOA, BPM, or other language.

4. Should affected systems be required to adhere to a time limit or point in the host system's interconnection process (such as when a generator interconnection agreement (GIA) is tendered or system impact study data is provided by the host system to the interconnection customer) by which the affected system should notify the interconnection customer and/or host transmission provider of network upgrade costs?

5. Should affected system study results be aligned with the host system's system impact study results to allow interconnection customers to have an estimate of all of their potential network upgrade costs prior to proceeding in the queue with an at-risk financial payment? Alternatively, if an interconnection customer is required to proceed with an at-risk financial payment or move forward with an interconnection agreement without having the affected system study results, should the affected system or host system be required to provide the interconnection customer with an option for a refund of its payment if it withdraws due to late-received affected system study results?

6. Please comment on the potential for an alternative affected system study process in which the host system obtains the model from the affected system and performs the impact analysis on the affected system for interconnection customers itself, with the host system following up with the affected system to verify results. Would such an approach be beneficial or practicable? Would the additional analysis and verification add time to the interconnection process? Should the host system be compensated for performing the impact analysis?

7. Should the Commission require that time be allowed to potentially identify and consider either alternatives to the dispatch assumptions or adjustments to the interconnection request that could mitigate the cost of a network upgrade on an affected system? If so, what duration of time would be sufficient?

8. With respect to MISO, SPP, and PJM specifically, should the Commission require that time be allowed to potentially identify and consider either alternatives to the dispatch assumptions or adjustments to the interconnection request that could mitigate the cost of a network upgrade on an affected system? If so, what duration of time would be sufficient? Even if a common timeline is not required by the Commission, should MISO, SPP, and PJM nevertheless be required to build time into their own interconnection processes to allow for further consideration of affected system study results and potential mitigation measures as an alternative to the network upgrades included in an affected system study? For example, should interconnection customers in MISO be allowed more than 15 days after receipt of affected system study results to decide to proceed to the next phase of the definitive planning phase (DPP)?

9. Should MISO perform fewer affected systems studies than the three studies currently required as part of the three-phase DPP process? If so, which phase(s) in the DPP is most important to the analysis of potential impacts on affected systems? Should an interconnection customer in MISO be permitted to proceed to the next DPP phase even if an affected system study is not ready and therefore not included in the system impact study of the prior phase?

Allocation of Affected System Costs

1. Are there improvements that could be made to transmission planning processes to better identify transmission projects that benefit host systems and/or affected systems but that are currently identified only in interconnection studies and affected system studies? If so, please explain how such improvements should be made? What are the benefits and drawbacks of such an approach?

2. If study results from affected systems are significantly delayed, and the interconnection customer is required to proceed in the process without affected system study results, should the customer still be responsible for the full cost of an affected system upgrade? Should there be a time after which the affected system has "lost its chance" to have the interconnection customer be responsible for the network upgrade? If so, how would the affected system then address the need for the network upgrade?

3. How should costs be allocated among affected system and host system interconnection customers in instances where a major network upgrade on a transmission provider's system is only identified through an affected system study and not identified in the host system studies? Should host system interconnection customers be responsible for any portion of those network upgrade costs? Should an interconnection customer needing such an affected system upgrade have the

ability to challenge the assignment of network upgrade costs? Please also discuss this issue specifically in the context of the Cooper South constraint in SPP.

4. Should the host system and affected system be required to conduct a "least-cost alternative" analysis for identified affected system upgrades? If so, please explain how that will improve the issues with affected systems.

5. If the same network upgrade is required by interconnection requests on both a host system and an affected system, is there cost sharing among the interconnection customers? Does this cost sharing extend to lower-queued customers, whether they are host system customers or affected system customers?

6. How are interconnection requests made on an affected system aligned with host system interconnection requests for the purpose of determining queue order and cost responsibility? For instance, where the affected system uses a cluster study approach, are interconnection requests external to the affected system integrated into the affected system's current cluster study with queue priority and cost responsibility equivalent to the other interconnection requests in the cluster?

7. Should MISO, SPP, and PJM be required to develop a network upgrade construct that avoids a "higher-queued" penalty, whereby network upgrade costs are assigned to higher-queued projects (earlier in time) rather than to lower-queued projects (later in time)? How do MISO, SPP, and PJM determine whether affected system interconnection customers or host system interconnection customers are responsible for the cost of a specific network upgrade? Please list the tariff, JOA, or BPM provisions that may govern this process.

8. With respect to MISO, SPP, and PJM specifically, should they be required to develop a unified approach to determine queue priority in affected systems analysis to determine cost responsibility for network upgrade costs?

9. Please describe whether interconnection customers that fund network upgrades on an affected system and pursuant to an affected system study receive transmission credits, transmission rights, or any other consideration for funding those network upgrades on the affected system. Please provide any tariff or other provisions that govern this issue.

10. Please describe whether interconnection customers that fund network upgrades on an affected system and pursuant to an affected system study in MISO, SPP, or PJM receive transmission credits, transmission rights, or any other consideration for funding those network upgrades on the affected system. Please provide any tariff, JOA, BPM or other provisions that govern this issue. Does any disparity in

approaches between MISO, SPP, and PJM impact the interconnection customers and/or affected system study process? If so, how?

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