

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

American Wind Energy Association )

Docket No. RM15-21-000 )

**COMMENTS OF THE ISO/RTO COUNCIL ON  
PETITION TO REVISE GENERATOR INTERCONNECTION  
RULES AND PROCEDURES**

The ISO/RTO Council (“IRC”)<sup>1</sup> respectfully submits these comments in response to the June 19, 2015, petition (“Petition”)<sup>2</sup> by the American Wind Energy Association (“AWEA”) requesting that the Commission commence a rulemaking proceeding to revise provisions of its *pro forma* Large Generator Interconnection Procedures (“Pro Forma GIP”) and *pro forma* Large Generator Interconnection Agreement (“Pro Forma GIA”).

The IRC supports AWEA’s overall goal of ensuring that interconnection procedures are efficient, cost-effective, and transparent. While the Commission’s Order No. 2003 recognized the need to establish an overarching national framework, it acknowledged the need for regional flexibility because of the vastly different network electrical characteristics and make-up of the interconnection queues across the nation.<sup>3</sup> Consistent with that direction, ISOs and RTOs have

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<sup>1</sup> The IRC is comprised of the Alberta Electric System Operator (“AESO”), the California Independent System Operator Corporation (“CAISO”), the Electric Reliability Council of Texas, Inc. (“ERCOT”) the Independent Electricity System Operator (“IESO”), ISO New England Inc. (“ISO-NE”), the Midcontinent Independent System Operator, Inc. (“MISO”), the New York Independent System Operator, Inc. (“NYISO”), PJM Interconnection, L.L.C. (“PJM”) and the Southwest Power Pool, Inc. (“SPP”). ERCOT, AESO and IESO are not FERC-jurisdictional and are not joining these comments.

<sup>2</sup> *American Wind Energy Association*, Petition for Rulemaking of the American Wind Energy Association to Revise Generator Interconnection Rules and Procedures, Docket No. RM15-21-000 (June 19, 2015) (“Petition”).

<sup>3</sup> *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, FERC Stats. & Regs. ¶ 31,146 (2003), *order on reh’g*, Order No. 2003-A, FERC Stats. & Regs. ¶ 31,160, *order on reh’g*, Order No. 2003-B, FERC Stats. & Regs. ¶ 31,171 (2004), *order on reh’g*, Order No. 2003-C, FERC Stats. & Regs. ¶ 31,190 (2005), *aff’d sub nom. Nat’l Ass’n of Regulatory Util. Comm’rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007) (“Order No. 2003”) at P 827 (acknowledging the differing characteristics of each region and providing ISO/RTOs

implemented distinct procedures across different regions to advance the directives of Order Nos. 2003 and 2006<sup>4</sup> and improve interconnection processes. Such procedures have facilitated interconnection for all project developers, including wind developers.

In light of the unique regional processes of each ISO/RTO, the IRC believes it is critical and most practical to maintain regional flexibility. The IRC therefore requests that the Commission allow ISOs/RTOs to continue to address specific issues in their respective regions, with their stakeholders, as necessary (considering, among other things, best practices from neighboring regions), rather than initiate a rulemaking to implement *pro forma* reforms to interconnection procedures that have already undergone different variations in each region. To the extent the Commission determines a need to initiate a rulemaking to consider selected broader reforms, the IRC urges the Commission to first consider input from all affected parties; and not simply the one-sided proposals suggested by AWEA. As discussed herein, AWEA's proposals – many of which are completely counter to the Commission's determinations in Order No. 2003 – would create conflicting obligations among the parties to the interconnection process and will necessarily result in less flexibility to developers themselves.

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with the flexibility to seek independent entity variations from the final rule “to customize its interconnection procedures and agreements to fit regional needs”). Unless otherwise stated, capitalized terms used in these comments have the meanings specified in Order No. 2003.

<sup>4</sup> *Standardization of Small Generator Interconnection Agreements and Procedures*, Order No. 2006, FERC Statutes and Regulations, Regulations Preambles 2001-2005 ¶31,180 at P 59, *order on reh'g*, Order No. 2006-A, FERC Statutes and Regulations, Regulations Preambles 2001-2005 ¶31,196 (2005), *order granting clarification*, Order No. 2006-B, FERC Statutes and Regulations, Regulations Preambles 2006-2007 ¶31,221 (2006).

## I. COMMENTS

### A. **The Commission Should Continue to Allow For Regional Flexibility in Interconnection Procedures and Not Move to a “One-Size-Fits-All” *Pro Forma* Approach to Every Interconnection Issue, as Requested by AWEA**

The Commission has consistently recognized that regional flexibility in interconnection procedures is necessary and preferable to proscribing a uniform approach across the country.<sup>5</sup> Significant differences exist across regions regarding the volume and frequency of various types of interconnection requests and the nature of their transmission systems. Certain regions have experienced recent surges of solar and wind generator interconnection requests as the result of aggressive state renewable portfolio requirements; others have not. Certain regions receive a large number of interconnection requests from wind generators proposing to build their facilities in remote locations, requiring long generator lead lines to interconnect to the bulk transmission system; other regions have few, if any, such proposed interconnections.

As the Commission has previously recognized, “[a]lthough there are some common issues affecting all the regions, there are also significant differences in the nature and scope of the problem from region to region; there may, therefore, be no right answer for how to improve queue management.”<sup>6</sup> In its order regarding Interconnection Queuing Practices in Docket No. AD08-2-000, the Commission identified concerns that interconnection requests for large

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<sup>5</sup> See, e.g., *Interconnection Queuing Practices*, Order on Technical Conference, 122 FERC ¶ 61,252 at P 3 (2008) (“Queuing Practices Order”); *Long-Term Firm Transmission Rights in Organized Electricity Markets*, Order No. 681, FERC Stats. & Regs. ¶ 31,226 (2006) (stating a flexible approach is appropriate because “there is no ‘one size fits all’ long-term firm transmission right design that could be implemented in each of the various transmission organization markets.”), *order on reh’g*, Order No. 681-A, 117 FERC ¶ 61,201 (2006), *order on reh’g and clarification*, Order No. 681-B, 126 FERC ¶ 61,254 (2009); *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000 at P 61, FERC Stats. & Regs. ¶ 31,323 (2011) (stating each transmission planning region has unique characteristics, and, therefore, Order No. 1000 accords transmission planning regions significant flexibility to tailor regional transmission planning and cost allocation processes to accommodate regional differences), *order on reh’g*, Order No. 1000-A, 139 FERC ¶ 61,132, *order on reh’g*, Order No. 1000-B, 141 FERC ¶ 61,044 (2012).

<sup>6</sup> Queuing Practices Order at P 8.

generating facilities were not processed efficiently due to surges in the volume of new generation, including an unprecedented demand in some regions for renewable generation.<sup>7</sup>

Rather than requiring a single approach, the Commission allowed each RTO and ISO to address issues specific to each region. The Commission stated:

While the Commission could take action to impose solutions, and may need to do so if the RTOs and ISOs do not act themselves, we agree that we should allow each region the opportunity to propose its own solution. Although there are some common issues affecting all the regions, there are also significant differences in the nature and scope of the problem from region to region; there may, therefore, be no one right answer for how to improve queue management. Further, any solution involves a balancing of interests. Therefore, we urge the RTOs and ISOs to work with their stakeholders to develop consensus proposals.<sup>8</sup>

The Commission informed the ISOs/RTOs that it was open to a range of possible variations to address the identified issue.<sup>9</sup> The IRC strongly believes that the Commission should continue to take that approach and allow such variations to be addressed by each region.

Consistent with the Commission's rulings in its Queuing Practices Order, the IRC emphasizes the need for individually tailored modifications, as necessary, on a region-by-region basis. Toward that end, the IRC requests that the Commission urge interested parties to continue to collaborate with the pertinent RTO/ISOs in refining and enhancing interconnection procedures through the relevant stakeholder processes in their specific regions.

As AWEA acknowledges in its Petition, not all regions are implicated by each of its concerns. On many issues, AWEA cites certain ISOs or RTOs as model examples. Likewise, in certain regions, a number of AWEA's concerns are inapplicable due to unique regional variations or ISO/RTOs' own past efforts with stakeholders, to enhance their interconnection procedures.

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<sup>7</sup> Queuing Practices Order at P 3.

<sup>8</sup> *Id.* at P 8.

<sup>9</sup> *Id.* at P 15.

Specific ISO and RTO variations will be discussed in greater detail in individual comments filed by IRC members; however, to illustrate the regional variability that makes AWEA's proposals unworkable in a one-size-fits-all manner, the IRC provides the following examples, which focus on why the need for a "restudy" process necessarily differs among various regions.

As AWEA recognizes, certain of its proposals are inapplicable to CAISO in light of the enhancements CAISO made to its interconnection procedures (with significant stakeholder input), that avoid cascading restudies and provide reliable cost estimates early in the interconnection process.<sup>10</sup>

Certain of AWEA's proposals are also inapplicable in the NYISO due to its unique "non-serial" interconnection queue approach. Because the NYISO evaluates Interconnection Requests in parallel, not sequentially, it does not include proposed projects in the base case of its interconnection studies simply because a project has a higher Queue Position than the studied project. Rather, a project is only included in the base case when it has satisfied certain requirements, including its developer's acceptance of the cost of, and provision of security for, any network upgrades identified in the Class Year Interconnection Facilities Study. For this reason, the NYISO does not require a restudy process to continuously restudy the facilities and related costs required to reliably interconnect a project with a lower Queue Position if projects higher in the queue withdraw from the interconnection queue or are not progressing. AWEA's proposed modifications to restudy processes therefore have no relevance under the NYISO's process which was designed to avoid the need for restudies.

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<sup>10</sup> Petition at 24-25, 30, 48.

On the other hand, PJM’s “priority-based” interconnection process can create a financial coupling of projects when they enter the interconnection queue based on PJM’s cost allocation rules. For example, if a project is first to cause the need for an upgrade that is less than or equal to \$5 million, the project can become financially-coupled to projects within the same queue that contribute to the identified system issues. If a project is the first to cause the need for an upgrade that is over \$5 million, the project, through cost allocation rules, becomes linked to subsequent projects within their queue and future queues that contribute to the same identified system issues. Finally, projects that do not cause the initial need for an upgrade may still be coupled to the higher order project and have some cost allocation responsibility for that upgrade. Because of this paradigm, projects, once financially coupled, become dependent on the decisions of higher ordered projects. As such, the need for studies, and restudies, is due to this financial coupling and the requirement to hold cost-responsibility to the project that is first to cause an identified system condition. Each time a project withdraws from the queue or makes substantive changes to its project, PJM must re-evaluate impacts to the transmission system and whether such withdrawal will impact cost responsibility for lower queued projects. Given this financial coupling, adopting a once per year restudy process is unfeasible for PJM.

MISO’s queue process has transitioned from Order No. 2003 into a priority and group-based queue. Developers enter the MISO “Definitive Planning Phase” (“DPP”) by paying significant entry milestones and study deposits introduced as a means of proving project readiness. Upgrades are identified for each project in the group and can be shared among projects through MISO’s “Common Use Upgrade” concept. The projects and required upgrades from each DPP cycle are built into the assumptions for each subsequent DPP cycle. Should a project withdraw after entering the DPP, a restudy may result to identify if the upgrades or

Common Use Upgrades for that project are still needed and assign any new cost responsibility to remaining same queued or lower queued projects. Only performing this restudy analysis once per year would subject developers to additional uncertainty and further lag in knowing their true cost responsibility for required upgrades.

ISO-NE's interconnection process presents yet another variation further illustrating a mandate for a single, annual restudy as simply unworkable. While ISO-NE evaluates Interconnection Requests in sequential order, its interconnection process is merged with the Forward Capacity Market. Interconnection Requests for the New England-specific Network Resource Interconnection Service for energy-only interconnections are studied under a first-come, first-served serial queue order construct, and subject to restudy only to the extent the conditions specified in the interconnection procedures are triggered. Interconnection Requests for Capacity Network Interconnection Service for capacity and energy interconnections, however, are studied under an annual Capacity Network Resource Group Study of generators that are seeking to participate in the same upcoming Forward Capacity Auction, and are always subject to a one-time post-FCA restudy based on the outcome of the auction. AWEA's proposed modifications for restudy processes would be extremely disruptive and potentially result in misalignment of these complex processes.

Similarly, while SPP recognizes that restudies do continually slow down the process for completion of its studies, restudies are necessary to give developers the most accurate study results possible. In SPP's experience, most developers readily await restudies as the restudies generally mean that the costs of their upgrades undergo a reduction when the previously or equally queued Interconnection Requests withdraw from the queue. It would seem unworkable for a developer to have to wait almost a year in order to find out what its latest costs are. This

would also cause SPP a dilemma in commencing new studies. Should the new studies use the assumptions of higher queued requests that the previous studies use or do they go forward using the latest information for higher queued projects? This would result in inconsistency of results among studies that could possibly show the same upgrades being assigned to different developers.

In addition to certain issues that are not applicable to some ISOs and RTOs, certain additional concerns raised by AWEA appear to be directed at procedures employed by specific ISOs/RTOs and are therefore particularly inappropriate to address with a “one size fits all” solution. For example, AWEA points to specific concerns regarding study delays in MISO, ISO-NE and PJM;<sup>11</sup> the size of deposits required for evaluation of proposed projects in SPP;<sup>12</sup> the refund provisions related to study deposits in SPP and MISO;<sup>13</sup> and the accuracy of study costs provided by MISO and PJM.<sup>14</sup> Through AWEA’s own petition it is clear that these issues are not issues in every region, reaffirming the IRC’s position that these issues are more appropriately raised in the respective ISO/RTO stakeholder processes; not through a national rule-making.

## **B. Ongoing Efforts By IRC Members to Improve Interconnection Procedures**

The IRC members continuously review their interconnection processes for opportunities to improve transparency and efficiency where issues are identified or suggested through their individual stakeholder processes.<sup>15</sup> As individual IRC members may discuss in more detail in

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<sup>11</sup> Petition at 14-15.

<sup>12</sup> *Id.* at 18-19.

<sup>13</sup> *Id.* at 19.

<sup>14</sup> *Id.*

<sup>15</sup> See, e.g., *PJM Interconnection, L.L.C.*, Letter Order, Docket No. EL08-36-000 (issued Aug. 19, 2008); *PJM Interconnection, L.L.C.*, Letter Order, Docket No. ER09-26-000 (issued Nov. 6, 2008); *PJM Interconnection, L.L.C.*, Letter Order, Docket No. ER09-755-000 (issued Mar. 25, 2009); *PJM Interconnection, L.L.C.*, Letter Order, Docket No. ER09-978-001 (issued Aug. 17, 2009); *PJM Interconnection, L.L.C.*, Letter Order, Docket No. ER11-



their individual comments, each has made and continues to pursue opportunities to improve their processes or to revise procedures in light of new technologies, new interconnection challenges, or specific stakeholder concerns unique to their regions.

For example, the NYISO has an ongoing interconnection queue improvement process in the Transmission Planning Advisory Subcommittee (“TPAS”) of its stakeholder Operating Committee. When identifying and prioritizing potential tariff changes and process improvements, the NYISO actively solicits input from TPAS participants. In addition, developers and other parties to interconnection studies are encouraged to participate in TPAS meetings, particularly if they raise concerns to NYISO staff regarding the interconnection procedures or if they have suggested improvements to the process. Through its engagement with stakeholders, the NYISO has been able to identify the key areas of concern expressed by many developers and to develop targeted solutions that function effectively in the NYISO’s process. This has resulted in a series of queue improvement tariff revisions accepted by the Commission between 2010 and 2014.<sup>16</sup>

Likewise, the CAISO conducts a regular Interconnection Process Enhancement stakeholder initiative. This initiative exists solely for CAISO stakeholders and adjacent

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3085-000 (issued May 5, 2011); *PJM Interconnection, L.L.C.*, 139 FERC ¶ 61,079, *Letter Order accepting compliance filing*, Docket No. ER12-117-001 (issued Aug. 28, 2012) ; *New York Independent System Operator, Inc.*, 135 FERC ¶ 61,014 (2011); *New York Independent System Operator, Inc.*, 142 FERC ¶ 61,113 (2013); *Midwest Independent Transmission System Operator, Inc.*, 124 FERC ¶ 61,183 (2008), *order on rehearing*, 127 FERC ¶ 61,294 (2009), *order on compliance and requiring further compliance*, 127 FERC ¶ 61,295 (2009).

<sup>16</sup> See *New York Independent System Operator, Inc.*, Letter Order, ER14-627-000 (issued Jan. 23, 2014); *New York Independent System Operator, Inc.*, 142 FERC ¶ 61,113 (2013); *see also*, *New York Independent System Operator, Inc.*, Letter Order on Compliance Filing, ER13-588-001 and ER13-588-002 (issued April 1, 2013); *New York Independent System Operator, Inc.*, Order on Tariff Revisions, 135 FERC ¶ 51,014 (2011); *New York Independent System Operator, Inc.*, Letter Order on Compliance Filing, Docket No. ER11-2842-001 (issued July 6, 2011); *New York Independent System Operator, Inc.*, Order on Tariff Revisions, 135 FERC ¶ 61,014 (2011); *New York Independent System Operator, Inc.*, Letter Order on Tariff Revisions, Docket No. ER10-290-000 (issued Jan. 6, 2010); *New York Independent System Operator, Inc.*, Letter Order on Compliance Filing, Docket No. ER10-290-000 (issued Feb. 22, 2010).

balancing authorities to propose enhancements and modifications to CAISO generator interconnection procedures. It has resulted in numerous enhancements in recent years,<sup>17</sup> and encompasses 11 proposed enhancements this year.<sup>18</sup>

Efforts to improve existing procedures have been ongoing in ISO-NE as well. In 2009, for example, the Commission approved the merging of processing New England's interconnection queue with the participation of generators in ISO New England's Forward Capacity Market.<sup>19</sup> The integration of these processes provides for an annual Capacity Network Resource Group Study of generators seeking to participate in the upcoming Forward Capacity Auction ("FCA"). Generators that qualify to participate and clear in the FCA obtain capacity interconnection service on a first-cleared-first-served basis. The integrated processing, while complicated, has been successful for multiple capacity periods. ISO-NE also revised the interconnection procedures to increase milestones and deposit requirements to enhance the certainty that projects in the queue – thereby consuming study efforts – are serious and committed. These measures improved the overall imposition of queue discipline.<sup>20</sup> To date, with very specific exceptions, interconnection queue processing in New England is up-to-date. Further improvements, however, are being explored to reduce study time for wind and other inverter-based technology studies which are seeking interconnection in technically challenging areas of the system. To that end, ISO-NE recently announced the beginning of its latest

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<sup>17</sup> See, e.g., *California Independent System Operator Corp.*, 149 FERC ¶ 61,231 (2014); 148 FERC ¶ 61,077 (2014); 145 FERC ¶ 61,172 (2013).

<sup>18</sup> See <http://www.caiso.com/informed/Pages/StakeholderProcesses/InterconnectionProcessEnhancements2015.aspx>.

<sup>19</sup> See *ISO New England Inc. and New England Power Pool*, 126 FERC ¶ 61,080 (2009).

<sup>20</sup> *Id.*

stakeholder consultative process to discuss potential changes to the interconnection process, with a focus on improving issues related to wind and other inverter-based interconnections.

Facing its own unique challenges due its large geographic footprint, the MISO is supplementing the series of queue reform efforts it has made over the years with continuing efforts to reform its interconnection procedures through its Interconnection Process Task Force.<sup>21</sup> MISO is leveraging industry best practices, as well as specific developer feedback, to develop its fourth round of queue reform.<sup>22</sup>

Similarly, in recent years, PJM has leveraged its stakeholder process to improve the timeliness and quality of its various interconnection studies. Given these developments, in PJM's most recent queue study release, PJM completed approximately 90% of both Feasibility and System Impact studies within several weeks of the targeted due date.

Moreover, in offering areas for improving transparency in the interconnection process, AWEA has urged the Commission to require Transmission Providers to provide better justification for the assumptions used in interconnection studies.<sup>23</sup> In particular, AWEA points to the use of light-load scenarios, by PJM and others, to consider the impact of wind and nuclear energy production during times of low demand; noting that if interconnection studies are modeled in such a way as to assume high output of these generators during low demand times, the results could equate to the construction of more network upgrades to address. However, operationally, the utilization of a light load reliability analysis is important to address real,

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<sup>21</sup> See *Midwest Independent Transmission System Operator, Inc.*, 124 FERC ¶ 61,183 (2008), *order on rehearing*, 127 FERC ¶ 61,294 (2009), 127 FERC ¶ 61,295 (2009); *Midwest Independent Transmission System Operator, Inc.*, 129 FERC ¶ 61,301 (2009); *Midwest Independent Transmission System Operator, Inc.*, 138 FERC ¶ 61,233 (2012), *order on reh'g and compliance filing*, 139 FERC ¶ 61,253 (2012).

<sup>22</sup> See August 13, 2015 Presentation at MISO Interconnection Process Task Force [https://www.misoenergy.org/\\_layouts/MISO/ECM/Redirect.aspx?ID=205513](https://www.misoenergy.org/_layouts/MISO/ECM/Redirect.aspx?ID=205513)

<sup>23</sup> Petition at p. 33.

identified operational performance issues. Generation dispatch under light load system conditions, sometimes as low as 30% of summer peak in some regions, differs markedly from that under peak load conditions, particularly for units powered by intermittent, renewable resources, such as wind. The goal of performing light load reliability analysis is to ensure that the system transmission is capable of delivering generating capacity under such light load conditions, and PJM continues to work with its stakeholders to address these issues in an equitable, but reliable, manner.<sup>24</sup>

SPP, which also has a large geographic footprint and large wind queue, has undergone two efforts to reform interconnection procedures<sup>25</sup> through its Market and Operations Policy Committee since 2009 that has allowed greater flexibility to developers to “right-size” their Interconnection Request, has facilitated SPP’s clearing out its backlog of study requests, and has allowed it to interconnect and place in service almost 10,000 MW of wind in a system that has summer peak load of 45,000 MW. In regards to concerns about the study level of dispatched wind generators, SPP observed that during its wind peak on February 1, 2015, wind was operating at approximately 91% of nameplate.<sup>26</sup> These wind generators represented geographical diversity from southeastern New Mexico to the Nebraska-South Dakota border, a

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<sup>24</sup> Since 2011, PJM has utilized light load study assumptions which have studied wind plants at 80% of output during light load conditions and assumes electricity demand is 50% of peak demand during light load hours. While these assumptions helped to alleviate operational performance issues it was found that wind generation would often exceed the 80% capacity factor assumed in the modeling. Specifically, analysis of maximum wind capacity between 2001 and 2014 showed, on average, that wind capacity for those PJM zones containing wind generation was 92.5%. As such, PJM is reviewing with its stakeholders the proposal to utilize light load study assumptions assuming wind plants at 100% of output during light load condition and to assume that electricity demand is 35% of peak demand during light load hours. However, currently, those assumptions have not been adopted and are still being developed with stakeholders.

<sup>25</sup> See generally Docket Nos. ER09-1254 and ER14-781.

<sup>26</sup> SPP’s wind peak on February 1, 2015 was 8,412MW of wind generating in the RTO footprint out of 9,200MW of wind on-line. This equated to a 35% penetration of wind generation during this time period.

distance of 900 miles. SPP's current study practice, to include all wind generation within a 75-100 mile radius at 100% output in its light load models, is certainly reasonable given these experiences.

Through these efforts, IRC members are taking great strides toward increasing transparency in the interconnection study process, providing additional flexibility to all developers and making their interconnection procedures more efficient. With the involvement of regional stakeholders in the development of such queue improvement measures, the ultimate tariff revisions are largely unopposed and are more likely to address the needs of all interested stakeholders as opposed to only one or two stakeholders. The improvements resulting from such efforts are therefore easier to implement, less likely to be subject to dispute and are tailored to the specific regional needs of each ISO/RTO. Considering the significant variations that exist among the IRC members in their interconnection procedures, this regional, stakeholder-driven process is the approach the IRC recommends for addressing AWEA's concerns.

Interestingly, while AWEA members are active in the stakeholder processes of some ISOs and RTOs, they are relatively inactive in others. The NYISO's experience, for example, has been that neither AWEA, nor its individual members, are active participants in its stakeholder committees which are engaged with interconnection issues, including potential modifications to the current procedures – except when pursuing their individual projects. In contrast, AWEA and its regional partner CalWEA are among the most active stakeholders in CAISO on interconnection reforms. This difference in AWEA's own involvement in the various regions further highlights the regional differences among the ISOs and RTOs and AWEA's need to address issues individually in the respective regions in which its members are most impacted by the concerns it raises.

### C. Specific Comments on the Petition

The Petition proposes a number of revisions to the *pro forma* interconnection procedures. Most troubling to the IRC are the proposed modifications discussed below. The IRC is concerned that these proposals have conflicting goals, are inconsistent with processes that have been developed in response to regional stakeholder input and will only serve to thwart the underlying principles of Order Nos. 2003 and 2006.

#### 1. Liquidated Damages

The Commission should reject AWEA's request that Transmission Providers pay liquidated damages if they cannot provide study results by the date listed in the interconnection procedures or if there are changes after the completion of a study.<sup>27</sup> For the reasons discussed below, AWEA has not demonstrated that this is an appropriate application of a liquidated damages provision.

The Commission correctly determined in Order No. 2003 that liquidated damages should not apply to a Transmission Provider's performance of interconnection studies.<sup>28</sup> In its Order, the Commission recognized that the application of liquidated damages could undermine a Transmission Provider's ability to economically administer its study process and was not appropriate during the study phase of the process when it is unclear whether a developer will even proceed to complete its project.<sup>29</sup>

The Commission should not revisit its determination in Order No. 2003. AWEA does not provide any support in its Petition for its assertions that Transmission Providers are performing

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<sup>27</sup> Petition at 58-67.

<sup>28</sup> Order No. 2003 at PP 898-899. AWEA did not request rehearing on the Commission's determination in Order No. 2003 to not impose liquidated damages on a Transmission Provider for their performance of interconnection studies. *See Standardization of Generator Interconnection Agreements and Procedures*, Request for Rehearing of American Wind Energy Association, Docket No. RM2-1-001 (August 25, 2003).

<sup>29</sup> Order No. 2003 at PP 898-899.

interconnection studies nationwide in a manner that is not timely or accurate in light of the significant flexibility afforded to developers. In addition, AWEA does not provide support for the use of liquidated damages or the appropriateness of the amount of its proposed damages as a just and reasonable solution to its stated concerns. Rather, AWEA's proposal would significantly, and inappropriately, shift the risk of developer's project development onto Transmission Providers, including ISO/RTOs that are only capable of recovering such costs from Market Participants and, ultimately, ratepayers.

As with many of its proposals, AWEA's request for the imposition of liquidated damages is tied to the establishment of a more rigid, standardized process that would restrict the ISOs' and RTOs' flexibility in administering their interconnection processes, including limiting the significant flexibility currently provided to developers under those processes. Such rigidity does not take into account the wide variety of projects and proposed interconnections that must be reviewed in each region's interconnection process. If the ISOs and RTOs were required to perform their interconnection studies within strict standardized timeframes under the threat of liquidated damages, they would have to be exceedingly inflexible with respect to developer modifications and developer-driven delays.

AWEA mischaracterizes a Transmission Provider's existing exposure to liquidated damages under the Pro Forma GIA.<sup>30</sup> The Pro Forma GIA does not automatically expose a Transmission Provider to liquidated damages. Rather, a Transmission Provider is only subject to liquidated damages if it agrees to be so bound. As the Commission stated in Order No. 2003:

In response to the comments questioning the imposition of liquidated damages by regulatory fiat, we clarify that the Final Rule, like the NOPR, does not require liquidated damages. A Transmission Provider has the option to agree to liquidated damages provision after agreeing to the dates for designing, procuring

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<sup>30</sup> See AWEA Petition at pp 60-61.

and constructing the Interconnection Facilities and Network Upgrades designated by the Interconnection Customer. If the Parties are unable to agree on an acceptable schedule, they may negotiate terms and conditions – including revisions to the liquidated damages provision – under the Negotiated Option in Article 5.1.4 of the Final Rule LGIA. So, rather than impose liquidated damages, the Final Rule LGIA provides liquidated damages as an option that may become a provision in the interconnection agreement signed by the Parties.<sup>31</sup>

Order No. 2003, therefore, provided the Transmission Provider with the opportunity to manage its own risk in determining whether to perform certain services on the developer's behalf that would subject it to liquidated damages. The ISOs and RTOs, on the other hand, do not have the option of turning down their performance of interconnection studies simply because the requesting project creates unique complexities that require more time and resources to evaluate. Moreover, because the connecting transmission owner may perform certain design, procurement, and construction work associated with the interconnection of a developer's project, the ISO or RTO is expressly excluded under an interconnection agreement from being subject to liquidated damages.<sup>32</sup>

In arguing for the imposition of liquidated damages on the Transmission Provider, AWEA conjures an analogy between a Transmission Provider's performance of interconnection studies with its requirements to abide by mandatory Reliability Standards, for which an ISO/RTO may be subject to penalties. The attempted analogy fails for a multitude of reasons. The ISOs' and RTOs' maintenance of the reliability of their respective systems in compliance with mandatory NERC Reliability Standards, along with other applicable regional, state, and local reliability requirements, is their core responsibility, upon which all other ISO and RTO

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<sup>31</sup> Order No. 2003 at P 858 (internal citations removed); *see also* Order No. 2003-A at PP 249, 260 (“249. Order No. 2003 does not require liquidated damages. Rather it offers liquidated damages only when the Parties agree.”).

<sup>32</sup> *See, e.g.*, NYISO Standard Large Facility Interconnection Agreement § 5.3 (“In no event shall NYISO have any liability whatever to Developer for liquidated damages associated with the engineering, procurement or construction of Attachment Facilities or System Upgrade Facilities or System Deliverability Upgrades.”).



responsibilities, including interconnection processes, are dependent. By comparison, an interconnection study is simply the mechanism by which a project developer identifies the means, and costs, by which it will be permitted to proceed to interconnect its project without adversely impacting an existing reliable system. Given the fundamental importance of reliability, the Energy Power Act of 2005 included in Section 215 of the Federal Power Act requirements for the enforcement of mandatory Reliability Standards.<sup>33</sup> In approving the application of such penalties to the ISO/RTOs, the Commission was implementing these statutory requirements.<sup>34</sup> AWEA cannot point to any similar statutory requirements applicable to the performance of interconnection studies and does not, and cannot, provide support for its attempt to elevate a Transmission Provider's performance of an interconnection study with its obligation to maintain system reliability.<sup>35</sup>

## 2. Expanding the Scope of Interconnection Studies While Making Results More Binding and Deadlines More Rigid

AWEA seeks to revamp the modeling assumptions used in interconnection studies, expand the scope of interconnection studies to include operations assessments and information regarding curtailment risk, forecasted congestion and available capacity; require more certain cost estimates within more rigid study deadlines; and eliminate the "Reasonable Efforts" standard.<sup>36</sup> AWEA's proposals introduce irreconcilable goals: a significantly expanded scope;

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<sup>33</sup> 16 U.S.C. § 824o(e).

<sup>34</sup> *See Rules Concerning Certification of the Electric Reliability Organization; and Procedures for Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672-A, 114 FERC ¶ 61,328 (2006) at P 56 ("The statute specifically authorizes the imposition of a penalty on a user, owner or operator for the violation of a Reliability Standard.").

<sup>35</sup> Moreover, the NERC enforcement requirements, including the imposition of penalties, concerning mandatory Reliability Standards require a detailed notice and hearing process. AWEA does not propose any such safeguards.

<sup>36</sup> Petition at 16-17, 37-50.

more binding results; and more expeditious evaluations. Its proposals also introduce conflicts that will necessarily sacrifice the existing flexibility afforded to developers in order to accommodate more rigid study deadlines.

The IRC recognizes the value of providing developers with accurate, detailed information on a timely basis. Current interconnection procedures recognize this and strike the appropriate balance between the need to hold Transmission Providers to certain standards with the need to ensure that required analyses are completed in both a thorough and timely manner. Qualitative standards, such as the specific guidelines regarding the scope of interconnection studies, are detailed yet ultimately subject to Good Utility Practice and engineering judgment. Quantitative standards, such as study deadlines, are set forth in the interconnection procedures, but are subject to a Reasonable Efforts standard. These provisions are appropriate because they necessarily recognize that while certain guidelines are necessary, the interconnection procedures cannot function in a rigid framework that does not allow for engineering judgment, recognize the study and engineering implications of transmission systems with substantially different physical characteristics, or allow sufficient time to ensure the required analyses are completed.

As the Commission emphasized in Order No. 2003, Reasonable Efforts are not simply actions that are timely and consistent with Good Utility Practice; the definition also requires such effort to be “substantially equivalent to those a Party would use to protect its own interests.”<sup>37</sup> In response to concerns that the definition is too vague, the Commission refused to further restrict the definition, noting that the addition of the above clause suffices to ensure comparable treatment.<sup>38</sup> On rehearing, in response to concerns regarding the “substantially equivalent”

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<sup>37</sup> See Order No. 2003 at P 67.

<sup>38</sup> *Id.* at P 69 (noting that, “If a Party normally exceeds Good Utility Practice when it protects its own interests, it must do so for others as well.”).

standard, the Commission affirmed its decision in Order No. 2003 that this is the correct standard.<sup>39</sup> The IRC urges the Commission to resist efforts to remove this standard from the interconnection procedures.

Removing the “Reasonable Efforts” requirements from the interconnection procedures and replacing it with strict study deadlines is unworkable for many reasons. For example, for projects that involve numerous affected systems,<sup>40</sup> the amount of study work, the number of parties involved in discussions and reviews, and the amount of data involved in the studies are considerable. Likewise, for projects interconnecting in areas where the transmission network is weak, the depth and breadth of studies and the challenges to planning effective solutions can be extensive. To adopt rigid study deadlines with no flexibility for engineering judgment or Reasonable Efforts puts Transmission Providers in an untenable conflict between mandatory reliability standards and rigid study deadlines, and ultimately could compromise the generating unit’s operation. That would be contrary to what the Commission envisioned when it implemented Order Nos. 2003 and 2006.

Indeed, AWEA’s requests for additional operational- and congestion-forecasting studies (that go well beyond the scope of an interconnection study) as part of the interconnection process are inconsistent with AWEA’s requests for shorter study timeframes, as the extra studies will require *more* time to accomplish. The sole focus of the interconnection study process should remain the identification of upgrades required to meet the interconnection standard.

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<sup>39</sup> See Order No. 2003-A at P 82 (adding that, “It is a fundamental requirement of FPA Sections 205 and 206 that a public utility provide comparable service to non-Affiliates, and we do indeed expect it to provide this service.”).

<sup>40</sup> For purposes of these comments, “affected systems” refer to neighboring ISO/RTOs’ systems and affected transmission owners located outside of the control area in which the project seeks to interconnect.

The imposition of more strict study deadlines is in direct conflict with the flexibility developers are currently provided to make project modifications and to extend Commercial Operation Dates. In short, AWEA's proposed deadlines and structures would convert a flexible, workable process into a rigid, unworkable process, and are inconsistent with its requests for other types of studies and additional developer flexibility.

### 3. Providing Facility Cost Information Before the Facilities Study is Completed

AWEA urges the Commission to impose upon all ISOs and RTOs a practice such as that used by the CAISO that collapses certain of the interconnection studies into a two-phase process.<sup>41</sup> Under its phased process, the CAISO first evaluates the impact of all interconnection requests in a cluster, preliminarily identifies all network upgrades and interconnection facilities and assigns to each project a maximum cost responsibility for required interconnection facilities. The CAISO later performs a reassessment that takes into account projects that have withdrawn from the queue, downsized projects and changes from its current regional transmission plan, and provides updated facility cost responsibility. While the CAISO process is appropriate for CAISO, as was recognized by its stakeholders who were key architects of the phased approach, it may not be what stakeholders in other regions want or what is appropriate for other regions that have entirely different queue dynamics than CAISO. For example, the CAISO has a significant volume of Interconnection Requests and a very high percentage of renewable resources and energy storage in its queue. Indeed, as AWEA recognizes, "the CAISO phased process may not be the sole means of providing facility study-type cost information earlier in the process, it could be adopted if no other method is shown to be superior."<sup>42</sup>

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<sup>41</sup> See Petition at 30-31.

<sup>42</sup> Petition at p. 31.

Part of the AWEA proposal is its desire that Transmission Providers be required to provide binding facility costs information earlier in the interconnection process – at the System Impact Study (“SIS”) stage. While most IRC members provide non-binding facility cost estimates at the SIS stage already, binding cost estimates – in the regions in which such estimates are provided – are not developed and finalized until the final study in the interconnection process – the Facilities Study. It is only after the more detailed engineering design requirements are determined in the Facilities Study that a realistic final cost estimate can be developed. To require binding facility cost information before the Facilities Study effectively eliminates that final study and ensures that the facility cost information will be stale prior to the facility going in-service. Moreover, any requirement for prematurely locking in a binding cost determination would likely result in the addition of a significant contingency factor to address the added risks – thus potentially increasing the cost to the developer.

4. System Upgrade Cost Estimates Subject to More Limited Margins and More Restrictive Caps

System upgrade cost estimates are already subject to specific provisions in the IRC Members’ interconnection procedures that address what costs above those estimates may be allocated to a developer. It is necessarily inconsistent for developers to insist on cost estimates earlier in the interconnection process yet, at the same time, require the accuracy margins to be narrower and the ability for Transmission Providers to recoup actual costs to be more limited. This is yet another example of conflicting goals that make AWEA’s proposals unworkable.

**D. One Stakeholder Should Not be the Only Guiding Factor in Determining the Need for a Nationwide Rulemaking Initiative**

As discussed above, the IRC finds a national rulemaking unnecessary and a less efficient approach to resolving AWEA’s concerns than that afforded by the regional stakeholder processes

of IRC members. If, however, the Commission ultimately determines that issues raised in AWEA's petition need to be addressed through a rulemaking process, the IRC encourages the Commission to consider alternatives from other parties. The IRC urges the Commission to resist considering AWEA's voice in isolation and to consider the valuable input that other interested parties might offer, including suggested alternatives from not only ISOs and RTOs, but also transmission owners, other developers, and other interested parties.

## II. CONCLUSION

WHEREFORE, the IRC respectfully asks that the Commission continue to allow for regional flexibility in proposing and implementing modifications to each region's interconnection procedures, as necessary, to address the concerns AWEA enunciated in the Petition. The Commission should reject AWEA's petition to mandate one-size-fits-all changes to all existing regional tariffs that have been approved by the Commission and direct AWEA and its members to address their concerns by participating in the appropriate regional stakeholder processes. To the extent the Commission finds it appropriate to initiate a rulemaking to consider reforms that would impact a previously approved modification in an ISO's or RTO's interconnection procedures, the IRC asks that the Commission consider the above suggestions and, in all cases, continue to allow for flexibility in the implementation of any changes to those existing processes.

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**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 8th day of September, 2015.

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