

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

**Improvements to Generator Interconnection     )     Docket No. RM22-14-000**  
**Procedures and Agreements                             )**

**COMMENTS OF  
SOUTHWEST POWER POOL INC.**

Southwest Power Pool, Inc. (“SPP”) respectfully submits the following comments in response to the Federal Energy Regulatory Commission’s (“Commission” or “FERC”) Notice of Proposed Rulemaking issued on June 16, 2022, proposing to reform both the *pro forma* generator interconnection procedures and generator interconnection agreements to address interconnection queue backlogs, improve certainty, and prevent undue discrimination for new technologies.<sup>1</sup>

**I.     Introduction**

In the NOPR, the Commission proposes reforms to the *pro forma* Large Generator Interconnection Procedures (“LGIP”), Small Generator Interconnection Procedures (“SGIP”), Large Generator Interconnection Agreement (“LGIA”) and Small Generator Interconnection Agreement (“SGIA”).<sup>2</sup>

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<sup>1</sup>     *Improvements to Generator Interconnection Procedures and Agreements*, 179 FERC ¶ 61,194 (2022) (“NOPR”).

<sup>2</sup>     NOPR at P 1.

Attachment V of SPP’s Open Access Transmission Tariff<sup>3</sup> contains the SPP Generator Interconnection Procedures (“GIP”) and the SPP *pro forma* Generator Interconnection Agreements (“GIA”).<sup>4</sup>

SPP appreciates the opportunity the Commission has provided in this proceeding to share comments relating to reforms outlined in the NOPR. SPP is also grateful for the Commission’s recognition that transmission providers have already undertaken efforts to address interconnection queue management issues, and that this NOPR is not intended to divert or slow the progress of the Commission-approved changes to its tariff that have been effective in resolving these issues.

## **II. Comments**

### **A. Reforms to Implement a First-Ready, First-Served Cluster Study Process**

#### **1. Interconnection Information Access**

##### **a. Informational Interconnection Study**

SPP is not supportive of the informational interconnection study proposal due to its past experiences in offering such a study and based on feedback received from its Interconnection Customers. SPP formerly offered two types of informational interconnection studies to Interconnection Customers: a feasibility study and a “preliminary” system impact study. Both were cluster-type studies and both provided information similar to the proposed informational study, albeit with longer timeframes (90

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<sup>3</sup> Southwest Power Pool, Inc., Open Access Transmission Tariff, Sixth Revised Volume No. 1 (“Tariff”). Capitalized terms not otherwise defined herein shall have the definitions assigned by the Tariff.

<sup>4</sup> Attachment V of the Tariff contains SPP’s GIP. Appendices 6, 8, 13 and 14 of Attachment V contain SPP’s *pro forma* GIAs.

and 150 days, respectively). SPP envisioned these optional studies as “stepping stones” to the mandatory “Definitive” Interconnection System Impact Study (“DISIS”) with the idea that customers would use the studies as filters to determine the projects that should proceed to the DISIS. SPP expected a large number of requests to enter the feasibility study, fewer to enter the preliminary system impact study, and the fewest number—only the most promising—to proceed to the DISIS.

The reality, however, was quite different. The feasibility and preliminary studies were rarely used. SPP’s Interconnection Customers explained that their time could be more effectively spent working on the DISIS, and that the feasibility and preliminary impact studies did not provide results that could be relied on in making business decisions. The latter resulted from the fact that many of the results in the DISIS were a direct result of the type and number of requests included in the cluster study. If the cluster requests were different in the DISIS than in the preliminary or feasibility study, then the results would differ. SPP anticipates that this same outcome would be true of the proposed informational interconnection study. Due to the lack of value realized by its Interconnection Customers, in 2019 SPP filed to remove these optional studies from its Tariff, and the Commission accepted the filing.<sup>5</sup>

Additionally, during the most recent stakeholder initiative to improve SPP’s planning processes, the Strategic and Creative Re-engineering of Integrated Planning Team (“SCRIPT”) discussed with Interconnection Customers a proposal for informational studies similar to the one proposed by the Commission in the NOPR. In response to the

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<sup>5</sup> Revisions to Modify the Generator Interconnection Procedures to Implement a Three-Stage Study Process of Southwest Power Pool, Inc., Docket No. ER19-1579-000 (April 16, 2019). *Sw. Power Pool, Inc.*, 167 FERC ¶ 61,275 (2019).

proposal, SPP's Interconnection Customers indicated that they preferred impact studies being completed faster, as they provide better cost-certainty, over informational, preliminary studies that would eat up valuable time for Interconnection Customers and SPP while providing information of limited value in making business decisions. More recently, SPP staff has specifically asked for Interconnection Customers' feedback on this proposal from participants in SPP's Generator Interconnection User Forum. Those Interconnection Customers indicated that an informational interconnection study would not be very valuable and thought SPP staff's time would be better spent conducting system impact studies.

**b. Public Interconnection Information**

An outgrowth of the SCRIPT initiative is for SPP to implement an online tool that would provide much of the functionality proposed by the Commission in the NOPR. SPP continues to work with stakeholders to implement a tool that provides useful and valuable information for both new generator interconnections and new block load additions, and SPP expects that these and other SCRIPT initiatives will be fully implemented by the beginning of 2025.

Although SPP does see potential value in a public information tool, SPP does not support mandating it for all transmission providers. Similar to the informational studies, the information that customers would be able to gain from a public information tool would be highly sensitive to the types of data put into the tool, the way the data is organized and assessed, and the way in which the results are presented. Technology, information, and tools are evolving rapidly within our industry, which could make a standardized public information tool obsolete before it can be implemented. Instead, transmission providers

should work with transmission owners and interconnection customers to determine what information is most beneficial to post, and develop a tool that responds to those needs. Mandating a tool to be used by all transmission providers could provide limited value that is not utilized by customers, and in turn, is not worth maintaining.

## **2. Cluster Study**

SPP has utilized the cluster interconnection study approach since 2009 and has experienced the benefits of such an approach. SPP believes that its current cluster study process is equal or superior to the Commission's proposal and expects that it would be able to comply as-is with the proposal in the NOPR.

However, SPP believes that it may not be appropriate to mandate cluster studies for every transmission provider. Cluster studies can be more complex and expensive to administer and to conduct. For transmission providers who consistently see low volumes of interconnection requests, the benefits of a cluster study may not justify the cost and complexity of administration of those studies. Some of SPP's Transmission Owners who administer interconnection queues for their non-SPP facilities would fall into this category.

Additionally, cluster studies by their nature create interdependencies between different interconnection requests within a given cluster study. These interdependencies have the potential to create significant value for transmission providers and interconnection customers by virtue of the potential to identify more efficient network upgrades and to share the cost of upgrades between multiple interconnection customers. However, the interdependencies that exist within cluster studies significantly increase the risk of restudies as the business decisions made by one interconnection customer have the potential to impact the cost assignment (and thus viability) of other interconnection

customers. As SPP has seen in its own experience, perpetual restudies within large cluster studies result in significant queue backlogs that take years to resolve.

While SPP is a proponent of using cluster studies within its region, the Commission should take steps to ensure the benefits of using cluster studies are emphasized while minimizing the downside risks of restudies. One area the Commission could clarify is the appropriate triggers for a restudy as well as the obligations of withdrawing interconnection customers. SPP believes it is important for both transmission providers and interconnection customers to have certainty as to when an interconnection request may no longer be at risk for being subjected to a potential restudy. Financial securities, site control requirements, and development milestones are all viable, effective measures currently employed by SPP that help to reduce the risk of late-stage withdrawals, however the risk still exists that an interconnection request may be withdrawn at any time prior to reaching commercial operation. Unless boundaries are placed on the risk of increasing costs to remaining interconnection customers or the length of time that remaining interconnection customers may be subject to restudy, such occurrences of late-stage withdrawal can have devastating consequences to a transmission provider's ability to timely process other requests in its queue and presents unacceptable risk to other interconnection customers who have a seemingly unbounded risk of changing costs for network upgrades.

One potential boundary might be the point in time at which all interconnection customers in a given cluster study have executed their GIAs. However, clarity is needed on what happens to the costs of network upgrades that were otherwise assigned to a withdrawing interconnection customer. SPP's Tariff currently permits the use of financial securities to offset "harm" to other interconnection customers but that only partially

addresses this issue. Having the withdrawing interconnection customer continue to bear 100% of the cost obligation it accepted by executing its GIA might help address this issue if those costs can actually be collected from the withdrawing customer. Another option could be to have any costs that are not otherwise offset by forfeited financial securities “rolled forward” to subsequent lower queued interconnection requests. While there may be any number of additional options for addressing the issue of restudies, SPP believes it is especially important in a cluster-based study process that interconnection customers and transmission providers have certainty on when a restudy is no longer permitted.

### **3. Allocation of Cluster Study Costs**

SPP has long allocated cluster study costs using a split of 50% per MW and 50% per capita. This 50/50 split has thus far served SPP and its Interconnection Customers well in balancing the allocation of costs between the volume and size of interconnection requests within a given cluster study. SPP would not support mandating a 90/10 split, but would prefer that flexibility be afforded to transmission providers given their individual risk assessments.

### **4. Shared Network Upgrades**

SPP does not support the Commission’s proposal, as laid out in the NOPR, to require transmission providers to allocate the costs for network upgrades between interconnection customers in an earlier cluster study and interconnection customers in a subsequent cluster study that benefit from the network upgrade.<sup>6</sup> SPP anticipates this proposal will add a significant administrative burden to transmission providers with little commensurate benefit for interconnection customers. The proposal appears quite complex

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<sup>6</sup> NOPR at P 98.

and similar to SPP’s transmission revenue credit stacking process in Attachment Z2 of the SPP Tariff (“Z2 Crediting Process”) for reimbursement of Directly Assigned Upgrade Costs. That process took years to develop, has been extremely controversial and is still mired in protests and litigation.<sup>7</sup> Indeed, SPP eliminated the Z2 Crediting Process for new upgrades due to its complexity and controversy,<sup>8</sup> but continues to administer it for legacy upgrades.

To be clear, SPP does not oppose, in concept, the appropriate sharing of costs and benefits among users of the transmission system. SPP is currently considering how best to accomplish this in the context of its development of a “consolidated” planning process.<sup>9</sup> This process is intended to combine generator interconnection and transmission service requests with reliability and economic planning processes to produce an optimized transmission expansion plan that better reflects the comprehensive use of the transmission system and appropriately balances costs and benefits among all customers. The approach SPP is considering is a forward-looking rate-based mechanism that it believes is superior and would be easier to administer relative to a participant-funded mechanism that shares costs solely between interconnection customers impacting a particular network upgrade. If the Commission proceeds with the proposed requirement to cost share network upgrades

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<sup>7</sup> See generally Commission Docket Nos. ER16-1341, EL17-21, EL18-9, EL19-75, EL19-77, EL19-96. See also Nos. 20-1062, 20-1101, 20-1429, 22-1049, 22-1064 before the United States Court of Appeals for the District of Columbia Circuit.

<sup>8</sup> Submission of Tariff Revisions to Eliminate Attachment Z2 Transmission Revenue Credits Prospectively of Southwest Power Pool, Inc., Docket No. ER20-1687-000 (April 29, 2020). *Sw. Power Pool, Inc.*, 171 FERC ¶ 61,272 (2020).

<sup>9</sup> Strategic and Creative Re-engineering of Integrated Planning Team (“SCRIPT”) Report and Recommendations at recommendation C1: Implementation of a Consolidated Planning Process (<https://www.spp.org/spp-documents-filings/?id=242482>).



between clusters using a participant-funded mechanism, it should be made as simple as possible to administer and costs and upgrades should be considered final once included in an effective generator interconnection agreement. Untangling financial obligations between multiple parties over many years has proved to be extremely difficult in SPP's experience with the Z2 Crediting Process and this proposal appears to have many of the same features. Determining interconnection customers' financial obligations to previous interconnection customers who funded upgrades will add complexity, time and expense. SPP is concerned that study timeliness and efficiency will be hindered rather than helped.

## **5. Increased Financial Commitments and Readiness Requirements**

### **a. Study Deposits**

SPP is currently reviewing its schedule of study deposits and is considering changes in response to increasing study costs experienced in recent years, and is therefore supportive of higher study deposits. However, SPP would prefer to collect study deposits only once upon entry into the cluster, rather than at each stage of the study process, to reduce administrative burden on SPP and its Interconnection Customers. SPP currently requires an initial deposit at the time the Interconnection Customer executes an interconnection customer study agreement. The amount of study deposit is based on the requested capacity included in the Interconnection Customer's interconnection request, and twenty percent of that study deposit is non-refundable at the start of DISIS Phase 1.<sup>10</sup> SPP believes that this better aligns with the Interconnection Customer's performance obligation

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<sup>10</sup> Tariff at Attachment V, Section 8.2(b)

and SPP's risk of non-recovery of study costs than does receiving incremental study deposits throughout the study process.

SPP would urge the Commission to permit flexibility in this area to allow transmission providers to meet the needs of their individual experiences and situations.

**b. Demonstration of Site Control**

SPP believes that permitting a deposit in lieu of evidence of site control for the generating facility is not a sufficient demonstration of readiness. The example cited by the Commission justifying a deposit in lieu of evidence was related to interconnection facilities and network upgrades and not the generating facility itself. SPP believes it is reasonable to require 100% site control for the generating facility. SPP has had such a requirement<sup>11</sup> for many years and has experienced only minimal resistance from its Interconnection Customers. As evidenced by the volume of interconnection requests in SPP's queue, this requirement has not served as an unreasonable barrier to entry for interconnection customers.

**c. Commercial Readiness**

SPP supports requirements for interconnection customers to demonstrate commercial readiness in order to enter and proceed through the interconnection process, and SPP has adopted several such requirements in its existing process. With respect to the proposed additional alternatives, SPP does not support site-specific purchase orders or statements attesting to supply of major components as evidence of commercial readiness. Reviewing, assessing, and maintaining such documentation would be an administrative

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<sup>11</sup> Tariff at Attachment V, Section 8.2(a).

burden that is not commensurate with the additional flexibility it affords interconnection customers.

**d. Withdrawal Penalties**

The Commission proposes a framework in which interconnection customers who withdraw are subject to a financial penalty that increases with each stage of the study process. SPP currently employs a similar method in its procedures, but with some significant differences. Under SPP's current GIP, Interconnection Customers provide progressively increased financial security deposits at each stage of the study process. The amounts of the financial security deposits required to enter into later stages of the study are based on the amount of upgrade costs assigned in the previous stage. As the Interconnection Customer progresses through the study process, the amount of financial security that is subject to forfeiture upon withdrawal increases.<sup>12</sup> This was intended to both send a signal to the Interconnection Customer of the risk their withdrawal might pose to other Interconnection Customers and to mitigate the financial harm to other Interconnection Customers in the event of withdrawal. SPP's view of the Commission's proposal is that, although it achieves the same thing generally, SPP's method does so more directly in that it is related to the risk and harm a withdrawal would pose.

**B. Reforms to Increase the Speed of Interconnection Queue Processing**

**1. Elimination of Reasonable Efforts Standard**

SPP opposes the elimination of the reasonable efforts standard. SPP believes that elimination of the standard will incent timeliness over quality and will not achieve the outcome the Commission desires. SPP notes that timely, accurate facilitation of the

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<sup>12</sup> Tariff at Attachment V, Section 8.14.

interconnection process is a responsibility shared by transmission providers, transmission owners, and interconnection customers. Cluster studies in particular are more prone to study delays given the interdependencies that exist between interconnection requests and that multiple transmission owners within a regional transmission organization (“RTO”) or independent system operator (“ISO”) may be implicated in every cluster study. SPP’s Interconnection Customers have indicated in numerous forums that they value cost certainty. Similarly, Interconnection Customers have expressed to SPP that timely results that are inaccurate are useless and that it is imperative that they be able to rely on study results to make sound business decisions. When forced to choose speed over precision, transmission providers will have no choice but to resort to less rigorous, less accurate, and less time-consuming study methods in order to finish on-time, which will necessarily produce lower-quality study results.

Additionally, the Commission’s proposal will incent interconnection customers to delay withdrawal of un-economic projects. When interconnection customers find that the initial impact study results regularly overestimate their final upgrade costs due to overly simplified and conservative study methods, interconnection customers will decide rightly that the longer they can “stick it out” in the study process, the better the chances that their costs will fall. Then, when interconnection customers are finally forced to abandon uneconomic projects due to upgrade costs, it will be so late in the process that it will force more restudies, create needless delay, negatively impact more interconnection customers, and thereby defeat the purpose of the Commission’s reforms.

Another concern of SPP’s is that the Commission’s proposal will detract from efforts to acquire from interconnection customers accurate, near-final technical

information for the study, because interconnection customers will reason that no matter how poor the quality of information submitted, the transmission provider will be forced to complete the study on-time or risk late penalties. The proposal may even incent interconnection customers to provide technical information anticipated to produce fewer problems and result in fewer upgrades initially, knowing that the transmission provider will be hard-pressed to find time to scrutinize the submitted data.

The Commission notes in the NOPR that it has never found a transmission provider to have violated the reasonable efforts standard despite wide-spread study delays. Since it is reasonable to assume that the Commission has taken complaints of failure to use reasonable efforts seriously, it is also reasonable to assume that transmission providers have been and are compliant with using reasonable efforts to complete studies as expeditiously as possible. The Commission has not provided evidence demonstrating a lack of compliance nor has it provided a sufficient argument for elimination of the reasonable efforts standard. Insisting that transmission providers complete studies within an arbitrary time period without regard to the volume of requests or to the complexities of the studies is to require efforts that go beyond “reasonable.”

Several of the Commission’s other proposals would add significant burdens to the study process that will make it even more challenging to complete studies on time (e.g. optional resource solicitation studies that have to be done in parallel with and completed in advance of the corresponding cluster study, without delaying the cluster study; informational studies; requirement to evaluate advanced transmission technologies at the request of the interconnection customer). In addition to these proposals, other factors such as the granting of tariff waivers can cause a study to be delayed – a delay that is outside of

transmission provider's control – and further exacerbate interconnection queue backlogs.<sup>13</sup> For these reasons, SPP urges the Commission to carefully consider whether the benefits of these new proposals outweigh the risk of further queue delays and whether it is reasonable to place additional burdens on transmission providers before the factors causing queue backlogs have been addressed.

## **2. Penalties for Missed Interconnection Deadlines**

As explained above, SPP does not support the elimination of the reasonable efforts standard and urges the Commission to reconsider its proposal to require fixed penalties to be paid or assessed by transmission providers for missing study deadlines. The penalty mechanism proposed in the NOPR is not an effective or cost efficient tool for addressing queue delays, and is likely to create a significant administrative and litigation burden that will disrupt already backlogged queue processes. Moreover, SPP respectfully submits that the imposition of penalties against transmission providers for missed deadlines on a strict liability basis as proposed in the final rule is unjust, unreasonable, unlikely to address the actual source of delay, and highly disruptive to the efficient processing of interconnection requests

As acknowledged by the Commission in the NOPR, transmission providers have undertaken efforts to address interconnection queue management.<sup>14</sup> SPP believes that the Commission's NOPR efforts, at this stage when RTO/ISO improvement efforts are being implemented or are pending before the Commission, are better focused on ensuring

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<sup>13</sup> *Lookout Solar Park I, LLC*, 176 FERC ¶ 61,100 (2021), Commissioner Christie dissenting at 2.

<sup>14</sup> NOPR at P 6.

successful implementation and course correction where needed rather than on imposing automatic penalties without regard to particular facts and circumstances. The Commission's proposal of a strict liability mechanism will likely incentivize behavior that is counter to the efforts transmission providers are undertaking to reform their queue processes. Rather than assessing automatic penalties, SPP strongly believes that the Commission's focus should be on addressing the root causes of delays and requiring process changes to enable timeliness rather than punishing its absence.

To this end, SPP proposes the Commission retain its long-held reasonable efforts standard and either make improvements to the standard or enforce the standard more strictly. Through the reasonable efforts standard, should the Commission find that a transmission provider's behavior rises to the level of being so egregious that the Commission believes it should be penalized, then the Commission already has the authority to take such action. At a minimum, however, any penalty imposed upon a transmission provider should take into account whether their imposition will achieve compliance or, in the alternative, whether the imposition of the penalty will unduly harm RTO/ISO customers and not serve their intended purpose when applied to RTOs/ISOs. For these reasons, SPP requests the Commission reconsider its proposal to eliminate the reasonable efforts and enforce automatic penalties for missing study deadlines.

### **3. Affected Systems**

#### **a. Affected System Study Process**

SPP notes that although the Commission has proposed to require cluster studies for native interconnection requests, it has proposed a serial approach for Affected System Studies. SPP has found it beneficial to tailor its Affected System Studies to match the

timeline and processes used by the host transmission provider rather than use the same approach in all cases. Accordingly, SPP would urge the Commission not to impose a rigid requirement for the approach to be used for Affected System Studies, but to allow transmission providers to tailor their procedures to fit the needs of their interconnection customers and the interconnection customers of the other transmission provider.

Prescribing a one-size-fits-all approach could lead to negative outcomes rather than positive. For example, if the Midcontinent Independent System Operator, Inc. (“MISO”) were required to use a serial approach to evaluate SPP’s cluster study interconnection requests, MISO would be forced to evaluate each request individually and assign upgrade costs to the first interconnection customer to cause a constraint. This would cause interconnection customers in SPP’s cluster study to evaluate their costs differently than they would if they were sharing upgrade costs on the MISO system in a similar way to how they would share upgrade costs on the SPP system. In addition, a serial approach places a significant administrative burden on SPP and other transmission providers, such as MISO, to deal with each interconnection customer individually, rather than the more-efficient process currently used of conducting cluster studies and passing on the costs to the host transmission provider to include in invoices to their interconnection customers. The benefits of SPP’s cluster studies including shared upgrade costs and the efficiency of processing and administration multiple interconnection requests simultaneously would be sharply reduced by the Commission’s proposal.

SPP also notes that the Commission’s proposal abandons the usual approach which involves an impact study followed by a facilities study. SPP believes that a two-stage approach is appropriate, especially for large, expensive upgrades where careful scoping



that would be conducted by the transmission owner during the facilities study may be required to fully apprise the interconnection customer of the expected cost and timing. The Commission's proposal does not prescribe any particular level of precision for the cost and timing estimates associated with Affected System upgrades (i.e. 20% vs 30%, 90-days vs 180 days), so the results received by the interconnection customer could lack sufficient detail, leaving the interconnection customer facing higher than anticipated costs.

Overall, SPP is supportive of transparency and clarity in the Affected System Study process, but is concerned that a one-size-fits-all process incorporated in the *pro forma* tariff will restrict transmission provider's ability to meet the needs of interconnection customers. SPP, for example, currently coordinates interconnection requests with neighboring transmission providers ranging from large RTOs/ISOs who process hundreds of interconnection requests annually to small cooperatives who may go years without receiving an interconnection request, and several others that fall somewhere in-between. With the smaller transmission providers, adequate coordination can often be done on an *ad hoc* basis as the need arises. With the larger ones, coordination occurs daily and SPP has established procedures designed for that transmission provider's specific processes. It is difficult to see how mandating a single process for all variously-situated providers will improve coordination or speed processing.

While SPP does not support a one-size-fits-all approach for affected systems coordination, SPP does believe there is plenty of room for innovation and process improvement in this space. Notably, SPP and MISO have begun discussing a novel approach to affected systems coordination that could address many of the issues targeted by the Commission in the NOPR. As part of the Joint Targeted Interconnection Queue

(“JTIQ”) initiative, SPP and MISO have proposed to their respective stakeholders that a forward-looking study that uses regional planning futures and information from each RTO’s interconnection queue could proactively anticipate transmission needs needed to facilitate the interconnection of new generation along the SPP-MISO seam. This is in contrast with the current approach that evaluates transmission needs reactively based on individual interconnection requests within each RTO’s interconnection process. Another key feature of SPP’s and MISO’s proposal is upfront cost certainty for interconnection customers who are determined to impact each RTO’s transmission system through pre-established impact criteria. While SPP and MISO are still working with stakeholders to finalize details of their proposal in advance of requisite filings with the Commission, these types of innovative approaches will be constrained if uniform requirements such as those proposed in the NOPR are ultimately adopted for universal application. SPP instead urges the Commission to encourage and incentivize the types of creative approaches being discussed between SPP and MISO.

**b. Pro Forma Affected Systems Agreements**

**i. Pro Forma Affected System Study Agreements**

Similar to SPP’s comments above, there is not a one-size-fits-all approach to Affected Systems Study Agreements. While SPP is not opposed to the implementation of a *pro forma* Affected System Study Agreement, an exception should be made for affected systems studies coordinated between two transmission providers. For example, SPP currently has provisions in a joint operating agreement with MISO whereby the transmission providers coordinate Affected System Studies following each transmission

provider's impact studies.<sup>15</sup> Rather than invoicing each interconnection customer individually, the transmission providers invoice each other for study costs. This allows the host transmission provider to use existing study deposits when available, and otherwise collect from its interconnection customers as needed. To require a *pro forma* Affected System Study Agreement, and individualized invoicing, for all affected systems study requests coming out of another transmission provider's cluster study would be a significant administrative burden for transmission providers who process large volumes of interconnection requests as well as requiring the interconnection customer to deal with multiple providers instead of the host provider. Instead, transmission providers should be allowed to work together to determine processes that work best for the interconnection customers in their regions. Where an Affected System Study is required for an interconnection customer that is not interconnecting to another transmission provider's transmission system, a request to interconnect to a distribution facility, for example, use of a *pro forma* Affected System Study Agreement would be beneficial.

**ii. Pro Forma Affected Systems Facilities  
Construction Agreement**

SPP agrees that there is a need for a *pro forma* Affected Systems Facilities Construction Agreement ("FCA"). Today, SPP's version of FCA is similar to the *pro forma* FCA found in MISO's Open Access Transmission, Energy and Operating Reserve Markets Tariff ("MISO Tariff")<sup>16</sup> and adding such an agreement to SPP's Tariff would increase

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<sup>15</sup> Joint Operating Agreement Between the Midcontinent Independent System Operator, Inc. And Southwest Power Pool, Inc. at Section 9.4. The agreement is filed as Rate Schedule No. 9 under SPP's Rate Schedules and Seams Agreements Tariff.

<sup>16</sup> See generally Docket Nos. ER19-473, ER19-1763, ER19-2730, ER21-2974.

administrative efficiency. SPP also supports the addition of a *pro forma* multi-party affected systems FCA, similar to the form of agreement currently included in the MISO Tariff.

**c. Affected System Modeling and Study Assumptions**

The Commission proposes that an affected system operator make a section 205 filing under the Federal Power Act and provide supporting documentation amounting to evidence that the affected system operator could only obtain if it conducted a study using the standards of the heightened level of service, something it would not have permission to require until FERC granted a waiver to require such a study.

SPP is concerned that network resource interconnection service (“NRIS”) that grants deliverability rights without having to go through additional study procedures may expose an affected system to impacts that it has not had a reasonable opportunity to evaluate if limited to the energy resource interconnection service (“ERIS”) standard. This is an important context in how the generator interconnection, transmission service, and congestion management procedures are intertwined in various markets. Currently within SPP, firm transmission service is required before a generator can be granted deliverability, and thus, is recognized as “firm” when determining the impacts that generator has on the systems of neighboring transmission providers. MISO, on the other hand, evaluates deliverability of resources in their interconnection process and thus recognizes its resources as “firm” once having been deemed deliverable through the interconnection process. There is no separate requirement that generators in MISO go through a transmission service evaluation to gain firm deliverability. In other words, once a generator is granted NRIS from MISO it is considered a Network Resource (i.e. “firm” resource) under the MISO

Tariff regardless of whether a Network Integration Transmission Service (“NITS”) customer of MISO designates that resource as such. Such NRIS resources may then be allocated firm impact rights in the congestion management process on both the affected system and the host system with no additional firm transmission service. SPP does not take issue with how MISO evaluates deliverability or recognizes its resources as being “firm” on SPP’s transmission system because SPP is currently afforded the flexibility to evaluate that higher level of service (i.e. firm deliverability) through the affected system coordination process. However, if the Commission’s proposed reform is adopted, SPP will have no other avenue available to it in which to study the impacts of MISO’s resources requesting “firm” deliverability since those resources are not required to request transmission service. The outcome of this will be significant equity issues where MISO’s “firm” generators will not be subject to mitigating issues on SPP’s transmission system unless they impact a constraint by at least 20% while generators in SPP requesting firm transmission service are subjected to thresholds as low as 5%. Furthermore as outlined above, “firm” resources, or resources with “firm” deliverability, are considered higher priority than energy-only resources in the congestion management processes, which results in exacerbation of the equity issues related to transmission system upgrades required for interconnection.

#### **4. Optional Resource Solicitation Study**

It is not clear to SPP how the evaluation of requests in an optional resource solicitation study (“Optional Study”) would differ from those not in an Optional Study. For example, should the evaluation assume that the requests outside the Optional Study are queued earlier, later, equally, or not at all? Should upgrade costs be allocated differently

between the Optional Study requests and the others? Should the costs of conducting the Optional Study requests be allocated only to those requests or to all requests in the cluster? A clearer explanation of the objectives and requirements for the Optional Study would be helpful.

SPP is concerned that the Optional Study could create significant additional burdens on the transmission provider that could hinder its ability to complete studies on-time and frustrate one of the Commission's primary goals of the NOPR, i.e. to speed processing of interconnection requests. Although it may be possible to utilize some of the results of the Optional Study for the wider cluster study and vice-versa, there will be some aspects that would have to be repeated multiple times in different scenarios, and thereby multiply the amount of study work and time required.

For an example of a potential scenario, imagine that SPP received 100 requests in a cluster study window. A resource planning entity requests that 20 of the 100 requests be evaluated in an Optional Study in five different combinations. A second resource planning entity requests that 20 different requests be evaluated in an Optional Study in five different combinations. This results in at least 25 different permutations that must be done in parallel within 60 days under SPP's current Tariff required timeline.<sup>17</sup> The results of these 25 permutations must be presented as contingent on each other and could be very confusing for the customer trying to make a business decision. If the Commission proceeds with this proposal, SPP urges the Commission to allow additional time for the completion of extra work created by these Optional Studies.

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<sup>17</sup> Tariff at Attachment V, Section 8.5(a).

**C. Reforms to Incorporate Technological Advancements into the Interconnection Process**

**1. Increasing Flexibility in the Generator Interconnection Process**

**a. Co-Located Resources**

SPP currently accepts single requests with co-located generators and generally supports the proposal to standardize the concept. However, SPP notes that in the NOPR,<sup>18</sup> the Commission proposes to define “Co-Located Resources” as “more than one resource located behind the same point of interconnection,”<sup>19</sup> whereas the proposed definition in the *pro forma* tariff reads, “Co-Located Resource shall mean multiple Generating Facilities located on the same site.”<sup>20</sup> Two generators can be located on the same site without connecting behind the same point of interconnection. The Commission should clarify in the final rule which definition of Co-Located Resource is required. SPP supports a definition that explicitly states the generators must connect at the same point of interconnection.

It is unclear what the Commission intended in the NOPR by proposing to require that generating facilities “address differences in terminal voltage between the co-located generating facilities to ensure that these generating facilities have the same voltage levels.”<sup>21</sup> It would be simpler to require that they connect at the same point of interconnection and leave the details as to how to do that to the customer.

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<sup>18</sup> NOPR at P 243.

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

<sup>20</sup> NOPR at page 265 (Appendix B: Compilation of proposed changes to the *pro forma* LGIP, Section 1. Definitions).

<sup>21</sup> NOPR at P 245.

**b. Material Modifications**

SPP’s Tariff provisions for material modifications align with the Commission’s proposal.<sup>22</sup> SPP does not automatically consider a change to a request to be a material modification. SPP evaluates change requests to determine whether there is an adverse impact to the cost or timing of lower or equally-queued requests. In response to the Commission’s request for comments, SPP does believe there may be instances where a request that does not alter the interconnection amount could require a full interconnection study.<sup>23</sup> For example, a request to change a generator from one type to another may so significantly change the electrical characteristics that it impacts stability, fault current, or both. Such a change could result in requiring a change to a shared upgrade that would result in increased costs to lower or equally-queued interconnection customers. This could be true even when the amount of service requested is unchanged.

**c. Surplus Interconnection Service**

SPP’s Tariff provisions for surplus service align with the Commission’s proposal. An interconnection customer with an effective GIA may make Surplus Interconnection Service available.

**d. Operating Assumptions**

SPP’s current interconnection study procedures require that energy storage devices be evaluated primarily on the impact of their injection into the system. SPP explicitly limits the interconnection study process to only determining the minimum interconnection

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<sup>22</sup> See Tariff at Attachment V, Section 4.4.

<sup>23</sup> To clarify, SPP does not currently allow fuel-type changes (i.e. adding electric storage) during the study process and instead considers this type of change a material modification. See NOPR at P 253.



facilities needed to permit charging. Moreover, the interconnection customer may choose to opt out of the charging evaluation completely if they agree to forego in their interconnection agreement any ability to charge from the transmission system. SPP's view is that the evaluation of charging impact to the transmission system is better suited to existing processes designed to assess load impact such as the long-term transmission service study process, the short-term transmission service evaluation process, or market processes. Electric storage resources in SPP must use one of those processes in order to charge from the transmission system. SPP urges the Commission to permit flexibility in the final rule that would accommodate SPP's current procedures in this area.

To the extent that the Commission's final rule does require evaluation of charging impact during the interconnection study process, SPP again encourages the Commission to be mindful of the added burden inherent in its proposal to allow customers the ability to specify specific operating parameters that may be complex and time-consuming for the transmission provider to complete within a limited time window.

## **2. Incorporating Alternative Transmission Technologies into the Generator Interconnection Process**

The Commission proposes to permit interconnection customers to require the transmission provider, at the request of the interconnection customer, to evaluate a set or subset of alternative technologies when it determines that there is an adverse impact that requires mitigation.<sup>24</sup>

SPP has a number of concerns with this proposal. First, like the proposal to require parallel optional resource solicitation studies and the proposal to allow interconnection

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<sup>24</sup> NOPR at P 297.

customers to specify operating assumptions, this proposal will significantly add to the list of tasks that the transmission provider must complete within a short timeframe, thereby heightening the risk that studies will be delayed or that other tasks, like reliability analysis will be given short shrift.

Second, the proposal increases the probability that interconnection customers will dispute the upgrades assigned to them, once again leading to delays for other interconnection customers while disputes are being resolved. The Commission's proposal sets up these disputes by requiring the transmission provider to evaluate technologies even when such technologies have not been sufficiently vetted by transmission owners, operators and stakeholders; when such technologies are not suitable due to operational complexity or the technology's operating reliability, or when the transmission owners and operators are simply not equipped to implement them. Even though the Commission has stated that transmission providers retain the discretion regarding whether to use such technologies, the very fact that the transmission provider is required to evaluate them will lead to disputes if the transmission provider then exercises that discretion.

If the Commission's goal is to gather information to determine whether there is merit to certain technologies, SPP believes there are better ways to gather that information than requiring transmission providers to "consider" them in their studies but not utilize them as solutions. For example, the Commission could request that transmission providers assess specific technologies outside of the interconnection process and report on them. The Commission could convene technical conferences. The Commission could engage an independent consultant to do an assessment. SPP has already made plans to initiate a program to regularly review new technologies through its stakeholder groups with the goal

of establishing policies for their use in all of SPP's planning studies, not just interconnection studies. SPP believes that a similar approach is superior to the Commission's proposal here.

### **3. Modeling and Performance Requirements for Non-Synchronous Generating Facilities**

#### **a. Modeling Requirements**

SPP has been closely monitoring events that have occurred across the country in recent years, in which inverter-based resources have failed to perform as expected, placing their host transmission systems in jeopardy. Having the highest penetration of such resources of any regional transmission organization,<sup>25</sup> SPP is particularly sensitive to the potential harm that could occur if such events were to occur in SPP's region. SPP generally supports the Commission's proposed improvement to modeling and performance requirements.

SPP has also undertaken its own analyses<sup>26</sup> of inverter-based resources and identified risks and mitigations to those risks. Among other initiatives, SPP has recently made changes to its technical requirements for interconnection service application in an effort to improve the quality and consistency of information available and thus improve the study results as well as the ultimate performance of generators once they are in-service.<sup>27</sup> During the course of discussions with stakeholders about such changes, SPP

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<sup>25</sup> See March 29, 2022 news release: <https://www.spp.org/newsroom/press-releases/spp-sets-regional-records-for-renewable-energy-production/>.

<sup>26</sup> See SPP's 2019 Inverter Based Generation Integration Study: <https://www.spp.org/documents/64834/20190828%20-%20spp%202019%20inverter%20based%20generation%20integration%20study.pdf>.

<sup>27</sup> See Docket Nos. ER21-2562 and ER22-1905.

experienced resistance from some manufacturers to providing more specific data due to its potential market value. In SPP's experience, some manufacturers do not support Western Electricity Coordinating Council-approved generic dynamics models. SPP believes that having Commission support for more specific, detailed, and vetted modeling information requirements will be helpful to improve data quality and access.

**b. Ride-through Requirements**

SPP supports the proposed ride-through requirement for non-synchronous generating facilities and would also support specific enforcement mechanisms.

**D. Implementation Costs**

SPP has done a rough estimate of costs associated with the proposals in the NOPR. SPP estimates that implementation of all of the proposals would range between \$600,000 and \$3.3 million. The wide range is due to the uncertainty over how much of SPP's current Tariff procedures are already compliant with the NOPR. SPP estimates that the ongoing cost of administering the new procedures would total approximately \$5 million annually. These cost estimates are net of any cost reductions due to replacement of existing procedures. SPP estimates that roughly \$3.3 million of the additional \$5 million annual cost increase would be passed through to interconnection customers, while approximately \$1.7 million would be borne annually by SPP's transmission customers.

### **III. Conclusion**

SPP respectfully requests that the Commission consider these comments in developing a final rule.

Respectfully submitted,

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