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May 19, 2025

VIA ELECTRONIC FILING

The Honorable Debbie Ann Reese, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A
Washington, DC 20426-0001

Re: *PJM Interconnection, L.L.C.; Docket No. ER25-2038-001*
Amendment to Proposed Improvements to the Joint Operating Agreement
Between Midcontinent Independent System Operator, Inc. and PJM
Interconnection, L.L.C.

Dear Secretary Reese:

On April 25, 2025, pursuant to section 205 of the Federal Power Act,¹ Part 35 of the rules and regulations of the Federal Energy Regulatory Commission (“Commission”),² and the Joint Operating Agreement (“JOA”)³ between Midcontinent Independent System Operator, Inc. (“MISO”) and PJM Interconnection, L.L.C. (“PJM”), PJM submitted for filing⁴ agreed upon

¹ 16 U.S.C. § 824d (2022).

² 18 C.F.R. Part 35 (2022).

³ The formal name of the JOA is the “Joint Operating Agreement Between Midcontinent Independent System Operator, Inc. and PJM Interconnection, L.L.C.” The JOA is designated as MISO’s Rate Schedule FERC No. 05 and is available on MISO’s website at: <https://www.misoenergy.org/legal/tariff/>. The JOA is designated as PJM’s Rate Schedule No. 38 and is available on PJM’s website at: <https://www.pjm.com/pjmfiles/directory/merged-tariffs/miso-joa.pdf>. All capitalized terms not otherwise defined herein have the meaning given to them in the JOA or in PJM’s Open Access Transmission Tariff (“Tariff”). “Proposed JOA” refers to the revisions proposed herein.

⁴ PJM and MISO each maintains its own version of the JOA in its respective eTariff database at the Commission. Accordingly, PJM and MISO must each separately file the Proposed JOA. Other than modifications to reflect each respective party’s tariff, PJM and MISO intend for the transmittal letters to be substantively the same.

proposed revisions to JOA, section 9.3.3.⁵ The Proposed JOA is the result of ongoing coordination and collaboration between PJM and MISO to align the Affected System study processes for interconnection requests pending in the RTOs' respective queues.⁶

After submittal of PJM's filing, the Commission notified PJM there were discrepancies between the proposed revisions submitted by MISO and PJM. PJM submits this filing to correct those errors and to reconcile PJM's and MISO's revisions.⁷ PJM provides the chart below detailing the revisions that have been made highlighted in yellow.⁸

Section	PJM 4/25/25 Filing	PJM 5/19/25 Amended Filing
9.3.3 (a)	Service that may impact Affected Systems	Service that may impact the Affected Systems
9.3.3 (a) Footnote 1	MISO-JOA, section 9.2, Data and Information Exchange.	MISO-JOA, section 9.2, Data and Information Exchange.
9.3.3 (c)	Relative cycle priority under PJM OATT, Parts VII, VIII and IX PJM has cycle priority.	Relative Queue Priority under PJM OATT, Parts VII, VIII and IX PJM has cycle priority.
9.3.3 (d)(i)(a-b)	(a), (b)	a., b.
9.3.3 (d)(ii)	(d)(iii)	(d)(i)
9.3.3 (e)(ii)	MISO request	MISO requests
9.3.3 (e)(vii)	If the Parties cannot mutually agree on the	If the Parties cannot mutually agree on the

⁵ *PJM Interconnection, L.L.C.*, Proposed Improvements to the Joint Operating Agreement Between Midcontinent Independent System Operator, Inc. and PJM Interconnection LLC, Docket No. ER25-2038-000 (April 25, 2025) ("April 25 Filing").

⁶ While the Commission declined to require MISO and PJM to coordinate their Affected System revisions on compliance with the Commission's Order No. 2023, the Commission encouraged voluntary coordination among transmission providers. *Improvements to Generator Interconnection Procedures and Agreements*, 184 FERC ¶ 61,054 (2023) ("Order 2023"). *Improvements to Generator Interconnection Procedures and Agreements*, Order No. 2023-A, 186 FERC ¶ 61,199 (2024).

⁷ MISO will also be submitting a filing to correct discrepancies and reconcile the revisions submitted in their April 25, 2025 filing submitted in Docket No. ER25-2040-000.

⁸ Revised redlines and clean revisions are contained in Attachment A and Attachment B respectively to this transmittal letter.

	nature of the studies to be performed they can. .	nature of the studies to be performed, they can. .
9.3.3 (f)(i)	. . . operate > 69kV to less 500 kV or ≥ 10 percent distribution factor on MISO facilities that operate at or above 500 kV under system intact conditions. MISO will provide PJM a list of the interconnection project(s)	. . . operate ≥ 69 kV to less than 500 kV or ≥ 10 percent distribution factor on MISO facilities that operate at or above 500 kV, under system intact conditions. MISO will provide to PJM a list of the interconnection project(s) . . .
9.3.3 (f)(ii)	. . . following the completion of DP1 PJM shall provide updated New Service Request information to MISO.	. . . following the completion of DP1, PJM shall provide updated New Service Request information to MISO.
9.3.3 (f)(iii)	. . . PJM shall provide to MISO . . . and analytical modeling data, for MISO and the MISO transmission owners . . . MISO transmission system and provide the study results including load flow, short circuit, and stability studies, to PJM 10 business days prior to the PJM Phase III SIS posting date. . . allowing a calendar day Affected System study period. . .	. . . PJM shall provide to MISO . . . and analytical modeling data, for MISO and the MISO transmission owners . . . MISO transmission system and provide the study results, including load flow, short circuit, and stability studies, to PJM 10 business days prior to the PJM Phase III SIS posting date. . . allowing a 90 calendar day Affected System study period. . .
9.3.3 (f)(iv)	A PJM New Service Request project relying on the Interconnection System Impact Study for Affected System shall have limited injection rights until those Network	A PJM New Service Request project relying on the Network Upgrades identified in the MISO Interconnection System Impact Study for Affected System shall have limited injection

	Upgrades are placed into service.	rights until those Network Upgrades are placed into service.
9.3.3 (g)(ii)	PJM shall study . . . and provide Affected System Study results including load flow studies to MISO . . . allowing 90 calendar days Affect System studies period.	PJM shall study . . . and provide the Affected System Study results including load flow studies to MISO . . . allowing 90 calendar days Affect ed System studies period.
9.3.3 (g)(iv)	During the course of PJM's Affected System Study for MISO interconnection projects, PJM shall apply testing applicable to Energy Resource Interconnection Service (ERIS) modeling methodology. This modeling methodology shall apply to MISO cycles starting with DPP 2021 effective upon signature of the last Party to this JOA. Detailed information about the modeling process and assumptions used by PJM for such analysis when PJM is the Affected System are located in PJM's Manual 14B, Addendum 2.	During the course of PJM's Affected System Study for MISO interconnection projects, PJM shall apply testing applicable to Energy Resource Interconnection Service (ERIS) modeling methodology. This modeling methodology shall apply to MISO cycles starting with DPP 2021 effective upon signature of the last Party to this JOA. Detailed information about the modeling process and assumptions used by PJM for such analysis, when PJM is the Affected System, are located in PJM's Manual 14B, Addendum 2.
9.3.3(i)	If the coordinated interconnection system impact study identifies constraints . . .	Affected System Facilities Studies: If the coordinated interconnection system impact study identifies constraints . . .
9.3.3 (k)(i-ii)	(a), (b)	a., b.
9.3.3 (k)(ii)(b)	MISO Performing Affected	MISO Performing Affected

	Interconnection Facilities Study for PJM Projects	Interconnection Facilities Study for PJM Projects
9.3.3 (k)(ii)(b)	For PJM projects identified to require MISO's Affected System facility studies, MISO will first estimate the funding required to complete the facility studies.	For PJM projects identified to require MISO's a Affected s System facility studies, MISO will first estimate the funding required to complete the facility studies.
9.3.3 (k)(ii)(b)	PJM will then have 30 calendar days to provide the additional required funds.	PJM will then have (30) calendar days to provide the additional required funds.
9.3.3 (o)	Each Party will maintain separate request for Interconnection Service queues.	Each Party will maintain separate request s for Interconnection Service queues.

I. DOCUMENTS SUBMITTED WITH THIS FILING

In addition to this Transmittal Letter, this submission includes:

1. Attachment A – Revisions to JOA – Redlined Format; and
2. Attachment B – Revisions to JOA – Clean Format.

II. CONCLUSION

PJM hereby submits this eTariff amendment with the required corrections. The RTOs request that the Commission accept the revisions effective as previously requested, June 25, 2025, and grant a waiver of any regulations that the Commission deems applicable to this filing.

Respectfully submitted,

By: /s/ Alexa Neifield

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Attachment A

Revisions to the Joint Operating Agreement
Between the
Midcontinent Independent System Operator,
Inc.
And
PJM Interconnection, L.L.C.

(Marked Format)

9.3 Coordinated System Planning.

The primary purpose of coordinated transmission planning and development of the Coordinated System Plan is to ensure that coordinated analyses are performed to identify expansions or enhancements to transmission system capability needed to maintain reliability, improve operational performance, enhance the competitiveness of electricity markets, or promote public policy. The Parties will conduct such coordinated planning as set forth in this Section 9.3 and subsections thereof.

9.3.1 Single Party Planning.

Each Party shall engage in such transmission planning activities, including expansion plans, system impact studies, and generator interconnection studies, as are necessary to fulfill its obligations under its OATT or as it otherwise shall deem appropriate. Such planning shall conform to applicable reliability requirements of the Party, NERC, applicable regional reliability councils, or any successor organizations, and any and all applicable requirements of federal, state, or provincial laws or regulatory authorities. Each Party agrees to prepare a regional transmission planning report that documents its annual regional plan prepared according to the procedures, methodologies, and business rules documented by the region. The Parties further agree to share, on an ongoing basis, information that arises in the performance of such single party planning activities as is necessary or appropriate for effective coordination between the Parties, including, in addition to the information sharing requirements of Sections 9.2 and 9.3, information on requests received from generation resources that plan on permanently retiring or suspending operation consistent with the timelines of each Party's OATT for such studies, and the identification of proposed transmission system enhancements that may affect the Parties' respective systems.

9.3.2 Coordinated System Plan.

The Coordinated System Plan is the result of the coordination of the regional planning that is conducted under this Agreement. The Parties will coordinate any studies required to assure the reliable, efficient, and effective operation of the transmission system. Results of such coordinated studies will be included in the Coordinated System Plan as further described in Section 9.3.7. The Coordinated System Plan shall also include the results of ongoing analyses of requests for interconnection and ongoing analyses of requests for long-term firm transmission service. The Parties shall coordinate in the analyses of these ongoing service requests in accordance with Sections 9.3.3 and 9.3.4. The Coordinated System Plan shall be an integral part of the expansion plans of each Party. To the extent that the JRPC agrees to combine with or participate in similarly established joint planning committees amongst multiple planning entities engaging in coordinated planning studies as provided for under Section 9.1.1.2, the coordinated planning analyses of this Protocol may be integrated into any joint coordinated planning analyses engaged

in by the multiple parties, provided that the requirements of the Coordinated System Plan are integrated into the scope of such joint coordinated planning analyses.

9.3.3 Analysis of ~~Interconnection~~ Requests for Interconnection Service.

In accordance with the procedures under which the Parties provide ~~I~~interconnection ~~S~~service, each Party will coordinate with the other ~~to~~he conduct ~~of any~~ studies required in determining the impact of a request for ~~Interconnection Service generator or merchant transmission interconnection~~. Results of such coordinated studies will be included in the impacts reported to the ~~Project Developer and I~~interconnection ~~C~~eustomers as appropriate. The process for coordination ~~of interconnection studies and Network Upgrades~~ is detailed below:

- (a) Consistent with the data exchange provisions of ~~this~~e Agreement,¹ the Parties will exchange current modeling data as necessary for the study and coordination of ~~request for I~~interconnection ~~Service that may impact the Affected System~~requests. This will include the associated update of the other Party's relevant ~~queue~~ requests ~~for Interconnection Service~~, contingency elements, monitoring elements data, and other data as may be required.
- (b) The coordinated ~~I~~interconnection ~~S~~studies will determine the potential impact on the ~~direct-connect-host~~ system and on the ~~Affected System~~impacted Party. The ~~direct-connect-host~~ system will be responsible for communicating coordinated ~~I~~interconnection ~~S~~study results to the ~~direct-connect-Project Developer or I~~interconnection ~~C~~eustomer.
- (c) Relative Queue Priority under PJM OATT, Parts VII, VIII and IX

The ~~relative queue priority position for MISO and PJM Interconnection Requests between the PJM New Service Request Cycles and MISO Definitive Planning Phase ("DPP") cycles for purposes of affected system analysis performed by MISO and cost responsibility for the MISO identified system upgrades~~ shall be established as follows:

- (i) ~~(i)~~—The ~~requests for Interconnection Service included in the cycle having the earlier Decision Point I (DP1) close date will have higher queue priority. DP1 is the first Project Developer and Interconnection Customer Decision Point following Phase I of the PJM New Service Request Cycle or MISO Definitive Planning Phase ("DPP") cycle. For purposes of Affected System studies performed by PJM, PJM shall establish the same relative queue priority for all MISO regions, if applicable, within a given cycle, based on the earliest DP1 close date of the DPP Central, East-ATC, East-ITC, and West regions.~~

¹ JOA, section 9.2, Data and Information Exchange.

~~Requests included in the study having the earlier deadline will have the higher queue priority. The deadlines for each Party are:~~

- ~~a. The MISO Definitive Planning Phase (“DPP”) cycle application deadline per the MISO OATT.~~
- ~~b. The PJM System Impact Study start date per the PJM OATT.~~
- (ii) Requests for Interconnection Requests Service in MISO and PJM will not be considered to have equal queue priority. ~~In the event that the deadline established under subsection (c)(i)(a) falls on the same date as the study start date established in (c)(i)(b), queue priority for such Interconnection Requests shall be established based on each RTO’s respective anticipated System Impact Study start date, with the earlier start date having the higher queue priority.~~ In the event that both Parties have cycles with the same DP1 close date, queue priority for such cycles shall be established based on each Party’s respective anticipated start date for Decision Point II (DP2), calculated as the first day after of the close of Phase II, with the earlier start date having higher queue priority.
- (d) Relative Queue Priority Under PJM OATT, Part VI² ~~The queue position assigned to PJM and MISO Interconnection Requests for purposes of affected system analysis performed by PJM and cost responsibility assignments for PJM identified system upgrades shall be established as follows:~~

For all requests for Interconnection Service prior to the MISO DPP 2022 cycle and PJM Transition Cycle No. 1 (TC1), the following are the established queue priority for each Party:

- (i) ~~For Interconnection Requests submitted to PJM under PJM’s OATT, the Interconnection Customer must submit a complete and fully executed Generation Interconnection Feasibility Study Agreement. The Interconnection Customer shall be assigned a priority, or Queue Position, based on the date and time all required information and requisite deposits are received in accordance with the PJM OATT, Part VI.~~
- (ii) ~~For Interconnection Requests submitted through MISO’s Generator Interconnection Procedures under the MISO OATT, the Interconnection Customer shall be assigned a queue priority based on the DPP Phase II Completion Date compared to the PJM System Impact Study deadline. The queue priority for Interconnection~~

~~Requests in the same MISO DPP cycle will be based on alphanumeric ordering of the Interconnection Request's project number.~~

- ~~(i) The relative queue priorities as determined by the methodology in effect at the time are:~~
 - ~~a. MISO queue priority from the highest to the lowest: DPP 2018, AD1, AD2, DPP 2019, AE1, AE2, AF1, DPP 2020, AF2, AG1, DPP 2021.~~
 - ~~b. PJM queue priority from the highest to the lowest: AD1, AD2, AE1, DPP 2018, AE2, AF1, AF2, DPP 2019, DPP 2020, AG1, DPP 2021.~~
- ~~(ii) For any subsequent restudies requests for Interconnection Service prior to the MISO DPP 2022/PJM TC1 cycles, MISO and PJM will utilize the queue priority established by subsection (d)(i).~~
- (e) The Parties will coordinate and mutually agree on the nature of studies to be performed to ~~test~~determine the impacts of the interconnection on the ~~potentially impacted Party~~Affected System.
 - (i) The transmission reinforcement and the study criteria used in the coordinated ~~I~~interconnection ~~S~~studies will conform to and incorporate provisions as outlined in the PJM Manuals and MISO Business Practices Manuals and the Parties' respective ~~Tariff~~OATTs.
 - (ii) The PJM and PJM transmission owner study requirements, reinforcement criteria and cost allocation rules will apply to studies performed to determine impacts on the PJM transmission system when

² See *PJM Interconnection, L.L.C.*, Notification of Occurrence of Transition Date, Docket Nos. ER22-22110-000 et al. (July 11, 2023).

PJM evaluates the impact of MISO requests for Interconnection Service~~generation~~ on PJM transmission facilities.

- (iii) The MISO and MISO transmission owner study requirements, reinforcement criteria and cost allocation rules will apply to studies performed to determine impacts on the MISO transmission system when ~~MISO evaluates the impact of PJM generation requests for~~ Interconnection Service on MISO transmission facilities. During the course of MISO's Interconnection System Impact Study for Affected

System, MISO shall apply Energy Resource Interconnection Service (ERIS) criteria to all of PJM's requests for Interconnection Service. Detailed information about the modeling process and assumptions used by MISO for such analysis when MISO is the Affected System are in MISO's Generator Interconnection Business Practices Manual, BPM-015.

- (iv) For all tie lines between MISO and PJM, ~~the reinforcement criteria and cost allocation rules will be applied based on which region identified the violation.~~if a Party identifies a criteria violation on a tie line path interconnecting the PJM and MISO transmission systems and the limiting element(s) on such tie line path is not under the authority of the Party that identified the criteria violation, then the limiting element(s) for the tie line path will be required to be upgraded and implemented in accordance with the business practices and OATT of the Party that owns or controls the limiting element(s) such that it is no longer a limiting element (i.e. the final facility rating or limit needs to satisfy the identifying system's requirement).
 - (v) In case the host system study and Affected System study for the same cycle identify different upgrades and/or have different contributors, MISO and PJM shall develop and coordinate the final upgrade scope and cost allocation.
 - (vi) —The identification of all impacts on the Parties' transmission systems shall include a description of the ~~scope of the required Network Upgrades, and system reinforcement(s),~~ an estimated planning level cost ~~and construction schedule estimates~~ of the -Network Upgrades ~~system reinforcements~~.
 - (vii) If the Parties cannot mutually agree on the nature of the studies to be performed, they can resolve the differences through the dispute resolution procedures documented in Article XIV of this Agreement. The Parties will strive to minimize the costs associated with the coordinated study process.
 - (viii) During the course of Aaffected Ssystem studies, MISO will sink the output of a PJM ~~interconnection~~ New Service Rrequest in the same area or subregion, if applicable, as PJM, and PJM will sink the output of a MISO Interconnection Rrequest in the same area or subregion, if applicable, as MISO.
- (f) MISO Interconnection System Impact Study for Affected System for PJM New Service Requests

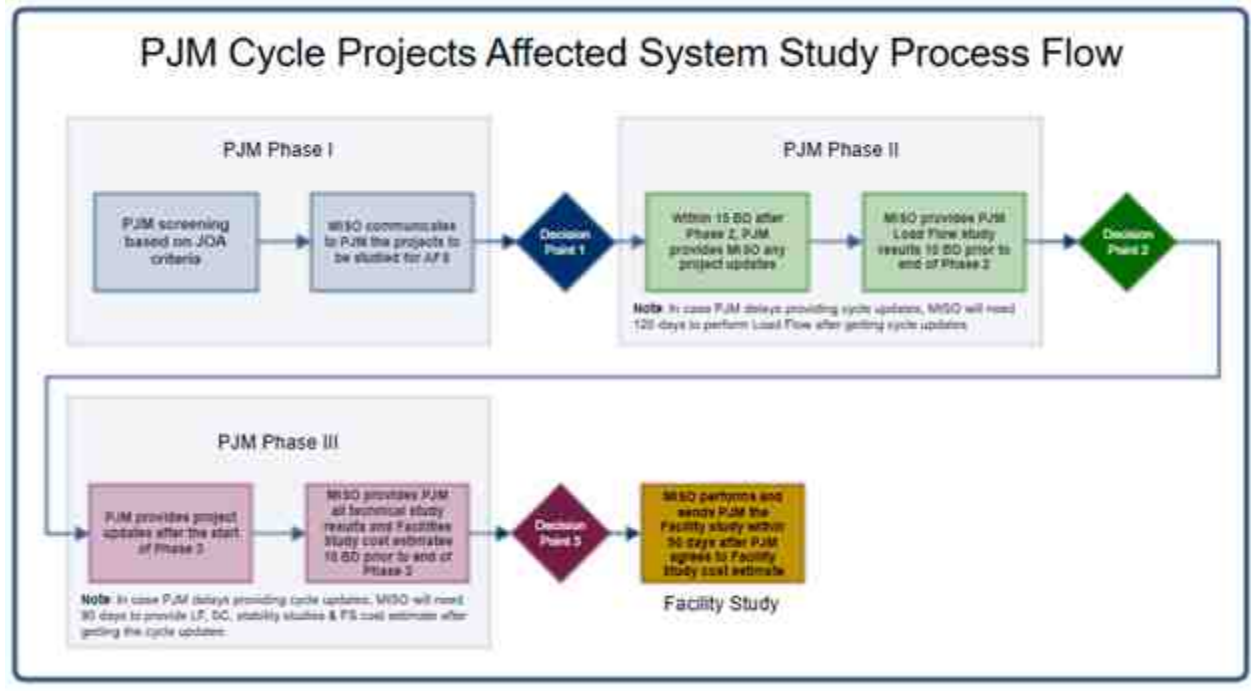
The Interconnection System Impact Study for Affected System by MISO ~~affected system study~~ for PJM New Service~~Interconnection~~ Requests will be coordinated as follows (also see Figure 1 for process flow):

- (i) During the course of PJM's ~~its interconnection feasibility~~ Phase I studies, PJM shall monitor the MISO transmission system and provide to MISO the draft results of the potential impacts to the MISO transmission system. This monitoring will include an examination of the potential for projects to impact the MISO system by determining whether the project under study has a ≥ 3 percent distribution factor on MISO facilities that operate $\geq 69\text{kV}$ to less than ~~below~~ 500 kV or ≥ 10 percent distribution factor on MISO facilities that operate at or above 500 kV, under system intact conditions. MISO will provide PJM a list of the interconnection project(s) that will be included in the MISO Affected System studies prior to the PJM Phase I completion date.
- (ii) Following the ~~issuance~~ posting, pursuant to PJM OATT, of the PJM Feasibility Phase I System Impact Study (SIS) report and within fifteen (15) business days ~~after the following the completion of DP1, Interconnection Customer executes the PJM System Impact Study Agreement, PJM shall forward~~ provide updated New Service Request information to MISO, at a minimum of twice per year (March 15 and September 15), information of all Interconnection Requests that are entering the System Impact Study phase, necessary for MISO and the MISO transmission owners to study the impact of the PJM Interconnection Request(s) on the MISO transmission system. MISO and the MISO transmission owners shall study the impact(s) of the PJM Interconnection Request(s) on the MISO transmission system and provide draft results to PJM by: MISO and the MISO transmission owners shall study the impact(s) of the PJM New Service Request(s) on the MISO transmission system and MISO will provide Affected System study results from load flow studies to PJM no later than ten (10) business days prior to the Phase II SIS posting date, on condition that PJM provided the updated project information allowing a 120 calendar day Affected System study period. PJM shall provide stability and short circuit study data to MISO prior to the start of PJM's DP2.
 - a. February 1 for PJM Interconnection Request(s) provided to MISO on or before September 15 of the previous year; and
 - b. August 1 for PJM Interconnection Request(s) provided to MISO on or before March 15 of the same year.
- (iii) Prior to commencing the PJM Phase III SIS study, PJM shall provide MISO the latest available information necessary, including but not limited to project status, description and analytical modeling data for

MISO and the MISO transmission owners to study the impact of the PJM New Service Request(s) on the MISO transmission system. MISO and the MISO transmission owners may study the impact of the PJM New Service Request(s) on the MISO transmission system and provide the study results, including load flow, short circuit, and stability studies, to PJM 10 business days prior to the PJM Phase III SIS posting date, on condition that PJM provided the updated project information allowing a 90 calendar day Affected System study period. Together with the final study results, MISO shall provide a Facilities Study cost estimate to PJM. MISO and MISO transmission owners shall complete the Facilities Study and provide the study report(s) to PJM within 90 calendar days after PJM agrees to the study cost estimate. During the course of MISO's affected system interconnection study for PJM interconnection projects, MISO shall apply Energy Resource Interconnection Service (ERIS) criteria to all of PJM's Interconnection Request(s). Detailed information about the modeling process and assumptions used by MISO for such analysis when MISO is the affected system are located in MISO's Generation Interconnection Business Practices Manual, BPM-015 at section 6.

- (iv) During the determination of reinforcements for an Interconnection Request that are required to mitigate MISO constraint(s), PJM and MISO may identify other planned non-MISO reinforcement(s) that may alleviate such constraint(s) inside the MISO region. Under such circumstances, any A PJM interconnectionNew Service Request project relying on those the Network Upgrades identified in the MISO reinforcement(s)Interconnection System Impact Study for Affected System shall have limited injection rights until those reinforcement(s) Network Upgrades are placed into service. Upon request, MISO shall determine the necessary injection limits associated with the PJM New ServiceInterconnection Request that will be implemented in Real Time until the necessary upgrades identified through MISO's Aaffected Ssystem analysis are placed in service.
- (v) The results received from MISO, including any required transmission system reinforcementsNetwork Upgrades, shall be included in the PJM System Impact Study or Facilities Study report consistent with the PJM OATT.

Figure 1: PJM Cycle Projects Affected System Study Process Flow



(g) PJM Affected System Study for MISO Interconnection Requests: The Affected System study for MISO Interconnection Requests will be coordinated as follows (also see Figure 2 for process flow):

- (i) During the course of MISO's Phase I studies, After completion of DPP cycle application deadline and at least thirty (30) days prior to the commencement of the DPP Phase I, MISO shall perform screening analysis to monitor the PJM transmission system and provide to PJM the draft results of the potential impacts to the PJM transmission system. This monitoring will include an examination of the potential projects to impact the PJM system through determination if the project under study has a ≥ 53 percent distribution factor or ≥ 5 MW impact or ≥ 1 percent of facility rating on any PJM facilities 69kV or above under normal and contingency conditions. PJM shall provide to MISO a list of the interconnection project(s) that will be included in the PJM Affected System study prior to MISO's Phase I completion date.
- (ii) No later than five (5) Business Days after the commencement of the MISO DPP Phase I study, MISO shall forward to PJM information necessary for PJM and the PJM transmission owners to study the impact of the MISO Interconnection Request(s), that entered DPP Phase I on the PJM transmission system. PJM and the PJM transmission owners may study the impact of the MISO Interconnection Request(s) on the PJM transmission system and

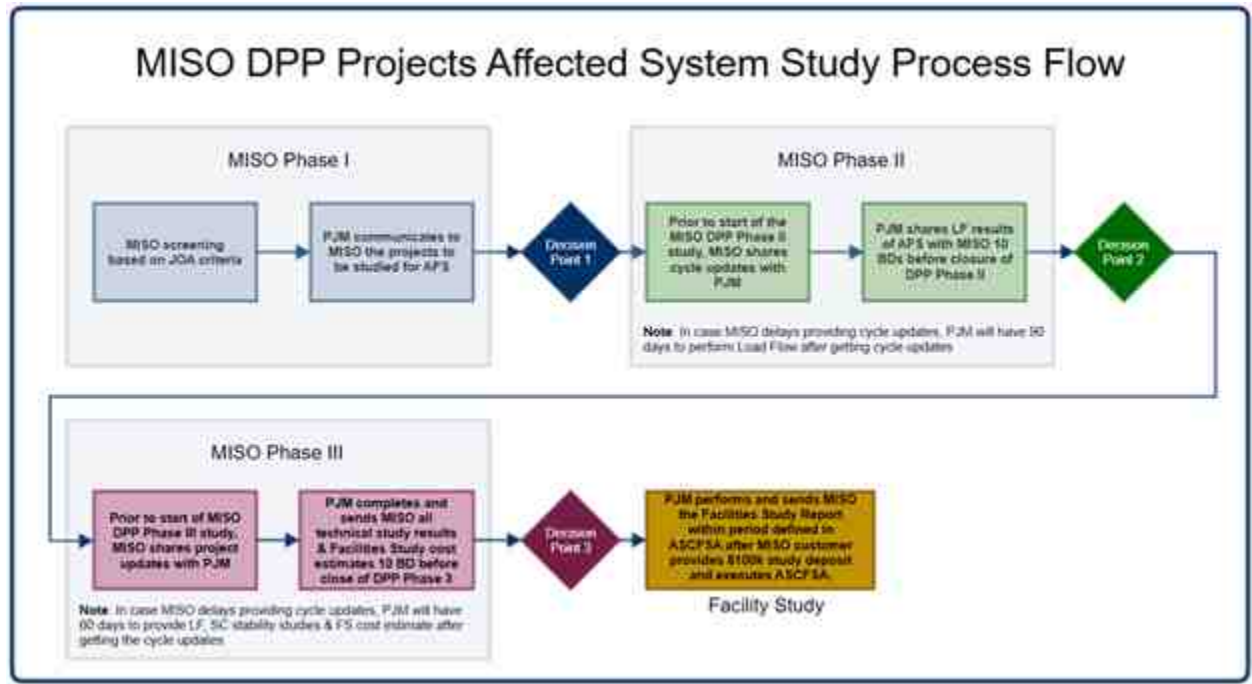
~~provide any available preliminary results to MISO within 100 days following commencement of DPP Phase I.~~

- (iii) Prior to commencing the MISO DPP Phase II study, MISO shall forward to PJM the latest available information necessary for PJM and the PJM transmission owners to study the impact of the MISO Interconnection Request(s) included in such study on the PJM transmission system. ~~PJM and the PJM transmission owners shall study the impact of the MISO Interconnection Request(s) on the PJM transmission system and provide the study results to MISO no later than 30 days prior to the completion of DPP Phase II. PJM shall study the impact(s) of the MISO Interconnection Request(s) on the PJM transmission system and provide the Affected System Study results including load flow studies to MISO 10 business days prior to MISO Phase II SIS posting date, on condition that MISO provided the updated project information allowing 90 calendar days Affected System studies period. Stability and short circuit study data shall be provided to PJM prior to the start of MISO's DP2.~~
- (iii) Prior to commencing the MISO DPP Phase III study, MISO shall forward to PJM the latest available information necessary for PJM and the PJM transmission owners to study the impact of the MISO Interconnection Request(s) on the PJM transmission system. ~~PJM and the PJM transmission owners may study the impact of the MISO Interconnection Request(s) on the PJM transmission system and provide the study results to MISO no later than 30 days prior to the completion of DPP Phase III. PJM shall study the impact(s) of the MISO Interconnection Request(s) on the PJM transmission system and provide Affected System Study results, including load flow, short circuit, and stability studies, to MISO 10 business days prior to MISO Phase III SIS posting date, on condition that MISO provided the updated project information allowing 60 calendar days Affected System Study period. Together with study results, PJM shall tender an Affected System Customer Facilities Study Application and Agreement (PJM OATT, Part IX, Subpart L) to the MISO Interconnection Customer and they will have 30 calendar days to execute. Upon agreement execution, PJM and PJM transmission owners shall complete Facilities Study and provide study report(s) to MISO within the timeframe agreed upon in the Affected System Customer Facilities Study Application and Agreement.~~
- (iv) During the course of PJM's ~~A~~affected ~~S~~system ~~interconnection S~~study for MISO interconnection projects, PJM shall apply testing applicable to model all MISO interconnection projects that have requested Network Resource Interconnection Service (NRIS) under the MISO OATT as a Capacity Resource under the PJM OATT and all MISO interconnection projects that have requested ERIS under the MISO

~~OATT as an Energy Resource under the PJM OATT. All projects will be modeled and studied using the criteria and methodology described in PJM Manual 14B, section 2, and further supplemented by requirements in PJM Manual 14A, section 4. These sections detail the processes and modeling used by PJM for all its planning analyses, including affected system studies. Energy Resource Interconnection Service (ERIS) modeling methodology. Detailed information about the modeling process and assumptions used by PJM for such analysis, when PJM is the Affected System, are located in PJM's Manual 14B, Addendum 2.~~

- (vi) The results received from PJM, including any required ~~transmission system reinforcements~~ Network Upgrades, shall be included in the MISO System Impact Study report.
- ~~(vi)~~ (h) During the determination of reinforcements for an Interconnection Request that are required to mitigate PJM constraint(s), PJM and MISO may identify other planned non-PJM reinforcement(s) that may alleviate a constraint inside the PJM region. Under such circumstances, ~~A~~ any MISO interconnection project relying on those Network Upgrades identified by PJM Affected System studies reinforcement(s) shall have limited injection rights until those reinforcement(s)-Network Upgrades are placed into service. Upon request, in accordance with the Interim Deliverability Procedure outlined in PJM Manual 14H, PJM shall determine the necessary injection limits associated with the MISO Interconnection Request that will be implemented in Real Time until the necessary upgrades identified through PJM's Aaffected Ssystem studies analysis are in-service.

Figure 2: MISO DPP Projects Affected System Study Process Flow



- (i) If the coordinated interconnection study identifies constraints that require infrastructure additions on the impacted system to mitigate them, then the potentially impacted Party may perform its own analysis, in conjunction with the direct connect Party's Interconnection Studies. The interconnection customer whose project requires mitigation of constraint(s) found on an impacted Party's system shall enter into the appropriate Facilities Study agreement as required under the impacted Party's OATT.
- (hj) Affected System Impact Study Costs: The host direct connect system will collect from the Interconnection Customer or Project Developer the costs incurred by the Affected System potentially impacted Party associated with the performance of the PJM Affected System Impact Study or MISO's Interconnection System Impact Study for Affected System and forward collected amounts to the affected Party such studies and forward collected amounts to the potentially impacted Party.
- (i) Affected System Facilities Studies: If the coordinated interconnection system impact study identifies constraints that require Network Upgrades on the Affected System to mitigate them, then the Affected System may perform its own Facilities Study, in conjunction with the host system's Facilities Studies.
- (j) Affected System Facilities Study Costs:

(i) PJM New Service Requests receiving MISO Affected System Study: PJM will collect from the PJM Project Developer the costs incurred by MISO associated with the performance of the Interconnection Facilities Study and forward collected amounts to MISO.

(ii) MISO DPP Interconnection Requests receiving PJM Affected System Study: PJM will tender an Affected System Customer Facilities Study Application and Agreement (PJM OATT, Part IX, Subpart L) to the MISO Interconnection Customer. PJM will collect the requisite deposit from the MISO Interconnection Customer for the affected PJM Transmission Owner to perform the Affected System Facilities Study.

(k) Billing

(i) Affected System Impact Study Billing

a. PJM Performing Affected System Impact Study for MISO Projects

PJM will perform Affected System impact studies for MISO projects and issue monthly invoices to MISO. Each invoice will include a lump sum amount for all studies conducted during the billing period. PJM monthly billing for the current Affected System impact study shall cease after sixty (60) days from the study completion. MISO shall pay PJM within thirty (30) calendar days of receiving the invoice, utilizing funds from MISO Interconnection Customers' study funds. Payments should be remitted as specified in the invoice.

b. MISO Performing Interconnection System Impact Study for Affected System for PJM Projects

MISO will perform Affected System impact studies for PJM projects and issue invoices within sixty (60) days to PJM following completion of the study.

PJM shall pay MISO within thirty (30) days of receiving the invoice, utilizing funds from PJM Project Developers' study funds. Payments shall adhere to the terms outlined in the invoice.

(ii) Affected System Facility Study Billing

a. PJM Performing Affected System Facility Study for MISO Projects

For MISO projects requiring PJM's Affected System facility study, MISO Interconnection Customers will provide a deposit of \$100,000 per project to PJM before the commencement of the studies per the Affected System Customer Facilities Study Application and Agreement with PJM. Upon receipt of the deposit and Affected System Customer Facilities Study Application and Agreement, PJM and the relevant PJM Transmission Owners will begin the affected system facility study process.

The deposit is refundable, and any unused funds for each project will be returned to the MISO Interconnection Customer upon completion of the study. If additional funds are required to complete the study, PJM will notify the MISO Interconnection Customer immediately. The MISO Interconnection Customer will then have thirty (30) calendar days to provide the additional required funds. PJM will maintain detailed accounting of the deposits and provide updates to MISO as needed to ensure transparency.

b. MISO Performing Interconnection Facilities Study for PJM Projects

For PJM projects identified to require MISO's affected system facility studies, MISO will first estimate the funding required to complete the facility studies. The estimated amount will be submitted to PJM for review and approval along with the final Phase III MISO Interconnection System Impact Study for Affected System results. Once PJM agrees with the estimate, PJM will provide MISO with the required deposit amount to fund the study utilizing funds from PJM Project Developers' study funds.

The deposit is refundable, and any unused funds for each project will be returned to PJM upon completion of the study. If additional funds are required to complete the study, MISO will notify PJM immediately. PJM will then have (30) calendar days to provide the additional required funds. Upon receipt of the deposit, MISO will initiate the facility study process.

MISO will maintain detailed accounting of the deposits, as per MISO regular business processes, and provide updates to PJM if requested to ensure transparency.

- (1) If the results of the coordinated study process indicate that Network Upgrades are required in accordance with procedures, guidelines, criteria, or standards applicable to the ~~Affected potentially impacted~~ System, the ~~host direct connect~~ system will identify the need for such Network Upgrades in the

appropriate study report and agreement prepared for the Interconnection Customer or Project Developer.

- (m) Requirements for construction of such Network Upgrades will be under the terms of the applicable OATT, agreement among owners of transmission facilities subject to the control of the Affected System ~~potentially impacted Party~~ and consistent with applicable federal, state or provincial regulatory policy.
- ~~(m) The Interconnection Customer whose project requires mitigation of constraint(s) found on an impacted Party's system shall enter into the appropriate Facilities Study Agreement as required under the impacted Party's Tariff.~~
- (n) In the event that Network Upgrades are required on the Affected ~~potentially impacted Party's~~ System, then Interconnection Service will commence on a schedule mutually agreed upon among the Parties. This schedule will include milestones with respect to the Network Upgrade construction and the amount of Interconnection Service that can commence after each milestone.
- (o) Each Party will maintain ~~a~~ separate requests for Interconnection Service queues. The Parties will maintain a composite listing of ~~interconnection~~ requests for all ~~interconnection~~ projects that have been identified as potentially impacting the systems of both Parties. These lists will be presented annually to the IPSAC.

9.3.4 Analysis of Long-Term Firm Transmission Service Requests.

In accordance with applicable procedures under which the Parties provide long-term firm transmission service, the Parties will coordinate the conduct of any studies required to determine the impact of a request for such service. Results of such coordinated studies will be included in the impacts reported to the transmission service customers as appropriate. The process for the coordination of studies and Network Upgrades shall be documented in the respective Party's business practices manuals that are publicly available on each Party's website. Both Parties' manual language shall be coordinated so as to ensure the communication of requirements is consistent and includes the following:

- (a) The Parties will coordinate the calculation of AFC values associated with the service, based on contingencies on the systems of each Party that may be impacted by the granting of the service.
- (b) Upon the posting to the OASIS of a request for service, the Party receiving the request will coordinate the study of the request, pursuant to each Party's business practices manuals, which will determine the potential impact on each Party's system. The Party receiving the request will be responsible for communicating coordinated study results to the customer requesting such service.

- (c) If the potentially impacted Party determines that its system may be materially impacted by the service, and the nature of the service is such that a request on the potentially impacted Party's OASIS is unnecessary (i.e., the potentially impacted Party is "off the path"), then the potentially impacted Party will contact the Party receiving the request and request participation in the applicable transmission service studies. The Parties will coordinate with respect to the nature of studies to be performed to test the impacts of the requested service on the potentially impacted Party, who will perform the studies. The Parties will strive to minimize the costs associated with the coordinated study process. The JRPC will develop screening procedures to assist in the identification of service requests that may impact systems of parties other than the system receiving the request.
- (d) Any coordinated studies will be performed in accordance with the mutually agreed upon study scope and timeline requirements developed by the Parties. If the Parties cannot mutually agree on the nature and timeline of the studies to be performed they can resolve the differences through the dispute resolution procedures documented in Article XIV of this Agreement.
- (e) If constraints are identified during the coordinated study on the impacted system, then the potentially impacted Party may perform its own analysis in conjunction with the studies performed by the Party that has received the request for service. The customer whose request for service requires mitigation of constraint(s) found on an impacted Party's system shall enter into the appropriate facilities study agreement as required under the impacted Party's OATT. During the Facilities Study, the potentially impacted Party will conduct its own Facilities Study as a part of the Party receiving the request's Facilities Study. The study cost estimates indicated in the study agreement between the Party receiving the request and the transmission service customer will reflect the costs and the associated roles of the study participants. The Party receiving the request will review the cost estimates submitted by all participants for reasonableness, based on expected level of participation and responsibilities in the study.
- (f) The Party receiving the request will collect from the transmission service customer and forward to the potentially impacted system the costs incurred by the potentially impacted systems associated with the performance of such studies.
- (g) If the results of a coordinated study indicate that Network Upgrades are required in accordance with procedures, guidelines, criteria, or standards applicable to the potentially impacted system, the Party receiving the request will identify the need for such Network Upgrades in the system impact study prepared for the transmission service customer.

- (h) Requirements for the construction of such Network Upgrades will be under the terms of the OATTs, agreement among owners of transmission facilities subject to the control of the potentially impacted Party and consistent with applicable federal, state, or provincial regulatory policy.
- (i) In the event that Network Upgrades are required on the potentially impacted Party's system, then transmission service will commence on a schedule mutually agreed upon among the Parties. This schedule will include milestones with respect to the Network Upgrade construction and the amount of service that can commence after each milestone.

9.3.5 **Analysis of Incremental Auction Revenue Rights Requests.**

The Parties will coordinate, as deemed appropriate,^{3.1} the conduct of any studies in response to a request for Incremental Auction Revenue Rights ("Incremental ARRs") ("Incremental ARR Request") made under one Party's tariff to determine its impact on the other Party's system. Results of such coordinated studies will be included in the impacts reported to the customer requesting Incremental ARRs as appropriate. Coordination of studies and Network Upgrades will include the following:

- (a) The Parties will coordinate the base Firm Flow Entitlement values associated with the Coordinated Flowgates that may be impacted by the Incremental ARR Request.
- (b) Upon receipt of an Incremental ARR Request or the review of studies related to the evaluation of such request, the Party receiving the Incremental ARR Request will determine whether the other Party is potentially impacted. If the other Party is potentially impacted, the Party receiving the Incremental ARR Request will notify the other Party and convey the information provided in the request in addition to but not limited to the list of impacted constrained facilities.
- (c) During the System Impact Study, the potentially impacted Party may participate in the coordinated study by providing input to the studies to be performed by the Party receiving the Incremental ARR Request. The potentially impacted Party shall determine the Network Upgrades, if any, needed to mitigate constraints on identified impacted facilities. The Parties shall coordinate to ensure any proposed Network Upgrades maintain the reliability of each Party's transmission system.
- (d) Any coordinated System Impact Studies will be performed in accordance with the mutually agreed upon study timeline requirements developed by the Parties. If the Parties cannot mutually agree on the nature and timeline of the studies to be performed they can resolve the differences through the dispute resolution procedures documented in Article XIV of this Agreement in accordance with applicable tariff provisions.

- (e) During the Facilities Study, the potentially impacted Party may conduct its own Facilities Study as a part of Facilities Study being conducted by the Party that received the Incremental ARR request. The study cost estimates indicated in the Facility Study Agreement between the Party receiving the request and the Incremental ARR customer will reflect the costs and the associated roles of the study participants, including the potentially impacted Party. The Party receiving the request will review the cost estimates submitted by all participants for reasonableness, based on expected level of participation and responsibilities in the study.
- (f) The Party receiving the Incremental ARR Request shall collect from the Incremental ARR customer, and forward to the potentially impacted Party, the agreed upon payments associated with the performance of such studies.
- (g) If the results of the coordinated study indicate that Network Upgrades are required in accordance with procedures, guidelines, criteria, or standards applicable to the potentially impacted Party, the Party receiving the request will identify the need for such Network Upgrades in the System Impact Study prepared for the Incremental ARR customer.
- (h) The construction of such Network Upgrades will be subject to the terms of the potentially impacted Party's tariff, the agreement among owners transferring functional control of transmission facilities to the control of the potentially impacted Party, and applicable federal, state, or provincial regulatory policy.
- (i) In the event that Network Upgrades are required on the potentially impacted Party's system, the Incremental ARR will commence on a schedule mutually agreed upon among the Parties. This schedule will include milestones with respect to the Network Upgrade construction and the amount of service that can commence after each milestone.

³⁴-Infra (b).

9.3.6 Analysis of Generator Deactivations (retirements and suspensions).

- (a) The Party (“Noticed Party”) receiving a new request from a generation owner to retire, deactivate, or mothball (or suspend operations as defined under the MISO Tariff) its generation unit will notify the other Party of such deactivation request no later than five (5) business days after receipt of the notice by the Noticed Party. The other Party (“Other Party”) will determine if any study is required to evaluate potential impacts to its system due to the proposed generator deactivation in the Noticed Party’s system. Any studies required due to a notice to deactivate (retire or suspend operations as defined under the MISO Tariff) will be performed under each Party’s respective Tariff. Each Party’s regional study results will be documented and provided to the other Party for informational purposes only.
- (b) Both Parties will share all information necessary to evaluate potential impacts to their respective systems due to the notice. Such coordination shall provide for:
 - (i) Exchange of current power flow modeling data as necessary for the study and coordination of generator deactivations (retirements and suspensions). This will include the associated update of the other Party’s generator availability, contingency elements, monitoring elements data, and other data as may be required.
 - (ii) Coordination by the Parties to align the assumptions of any analyses during development of the scope of any required studies. The scope design will include, as appropriate, evaluation of the transmission system against the criteria applicable to each Party for such studies.
- (c) Following the exchange of information pursuant to section 9.3.6(b), the Other Party will conduct screening and evaluation of projects needed to mitigate identified impacts on its system. The Other Party will use reasonable efforts to perform an initial assessment and provide an indication of the impacts on its system to the Noticed Party within 65 days of receipt of the notice from the Noticed Party. The Other Party will provide a list of potential system reinforcements required on its system and estimated time for completion of those system reinforcements to the Noticed Party as soon as they are available.
- (d) Each Party will be responsible for any regional Network Upgrades or other mitigation required on their respective system as a result of a request to deactivate (retirement or suspension).

- (e) Any impact(s) on the Other Party's system identified in the analysis will not be used to determine the need to retain the generator requesting to deactivate.
- (f) The identification of Network Upgrades required for generator deactivation (retirement or suspension) in the Other Party's system may require coordination through the JRPC. The Parties will endeavor to make such information available to the JRPC in a timely manner following publication of information through the Parties' regional processes. Additional coordination, as may be needed, will be conducted pursuant to the Coordinated System Plan study process as mutually agreed to be the Parties in accordance with the provisions of Section 9.3.7.
- (i) The JRPC will incorporate any needed regional upgrades that may be identified by the generator deactivation studies coordinated pursuant to this section 9.3.6 into the annual review processes of Section 9.3.7 for the purpose of determining if there is a more efficient or cost effective Interregional Reliability Project that may replace one or more of the identified regional Network Upgrades required for the generator deactivation.
- (ii) The JRPC will consider the results of the deactivation analyses forwarded to the committee at the next scheduled JRPC meeting or within 30 days of receipt of the completed study information from both Parties. Depending on the timing of the receipt of the study information, the JRPC will determine the most appropriate process for including the regional deactivation results into the development of the Coordinated System Plan. Such process will include IPSAC review according to the Coordinated System Plan process of Section 9.3.7.

Throughout the interregional review process any confidentiality provisions of the Parties Tariff's will be respected. Critical identified Interregional Reliability Projects for which the need to begin development is urgent will be presented to the Parties' Boards for approval as soon as possible after identification through the Coordinated System Plan study process. Other identified Interregional Reliability Projects presented to the Parties' Boards for approval in the normal regional planning process cycle as long as this cycle does not delay the implementation of a necessary upgrade.

9.3.7 Development of the Coordinated System Plan.

9.3.7.1

Each Party agrees to assist in the preparation of a Coordinated System Plan applicable to the Parties' systems. Each Party's annual transmission planning reports will be incorporated into the Coordinated System Plan, however, neither Party shall have the right to veto any planning of the other Party nor shall either Party have the right, under this Section, to obtain financial compensation due to the impact of another Party's plans or additions. The Coordinated System Plan will be finalized only after the IPSAC has had an opportunity to review it and respond. The Coordinated System Plan shall:

- (a) Integrate the Parties' respective transmission expansion plans, including any market-based additions to system infrastructure (such as generation, market participant funded, or merchant transmission projects) and Network Upgrades identified jointly by the Parties, together with alternatives to Network Upgrades that were considered;
- (b) Set forth actions to resolve any impacts that may result across the seams between the Parties' systems due to the integration described in the preceding part (a); and
- (c) Describe results of the joint transmission analysis for the combined transmission systems, as well as explanations, as may be necessary, of the procedures, methodologies, and business rules utilized in preparing and completing the analysis.

9.3.7.2

Coordination of studies required for the development of the Coordinated System Plan will include the following: 1) annual issues review to determine the need for a Coordinated System Plan study described in Section 9.3.7.2.a; and 2) Coordinated System Plan study described in Section 9.3.7.2.b.

- (a) Determine the Need for a Coordinated System Plan Study.
 - (i) On an annual basis, beginning in the fourth quarter of each calendar year and continuing through the first quarter of the following calendar year, the Parties shall perform an annual evaluation of transmission issues identified by each Party including issues from the respective Party's market operations and annual planning processes, or Third-Parties. This annual review of transmission issues will be administered by the JRPC on a mutually agreed to schedule taking into consideration each Party's regional planning cycles.

- (ii) The JRPC's annual review of transmission issues shall include the following steps:
 - a. Exchange of the following information during the fourth quarter of each calendar year or as specified below:
 - i. Regional issues and newly approved regional projects located near the interface or expected to impact the adjacent region;
 - ii. Newly identified regional transmission issues for which there is no proposed solution;
 - iii. Interconnection and long-term firm transmission service requests under coordination by the Parties located near the interface or expected to impact the adjacent region will be exchanged pursuant to sections 9.3.3 and 9.3.4, respectively;
 - iv. Market-to-market historical flowgate congestion between the Parties.
 - b. Joint review by the Parties of regional issues and solutions in January of each calendar year;
 - c. Receipt of Third Party issues in the first quarter of each calendar year;
 - d. Review of regional issues with input from stakeholders at the IPSAC meeting conducted during the first quarter of each calendar year; and
 - e. Decision by the JRPC on whether or not to conduct a Coordinated System Plan study.
- (iii) The JRPC through each Party's respective electronic distribution lists shall provide a minimum of 60 calendar days advance notice of the IPSAC meeting to be held in the first quarter of each year to review identified transmission issues. Stakeholders may identify and submit transmission issues and supporting analysis no later than 30 calendar days in advance of the meeting for consideration by the IPSAC and JRPC.
- (iv) Within 45 days following the annual issues evaluation meeting with IPSAC in the first quarter of the calendar year, the JRPC will determine, taking into consideration input provided by the IPSAC, the need to perform a Coordinated System Plan study. A Coordinated System Plan study shall be initiated by either of the following: (1) each Party in the JRPC votes in favor of performing

the Coordinated System Plan study; or (2) if after two consecutive years in which a Coordinated System Plan study has not been performed, and one Party votes in favor of performing a Coordinated System Plan study. The JRPC shall inform the IPSAC of the decision whether or not to initiate a Coordinated System Plan study within five business days of the JRPC's decision.

- (v) When a Coordinated System Plan study is determined to be necessary, the JRPC shall agree to the start date of the study and identify whether it is a targeted study as defined in this Section at (vi) or a more complex, two-year cycle study as defined in this Section at (vii).
- (vi) If a Coordinated System Plan study includes targeted studies of particular areas, needs or potential expansions to ensure that the coordination of the reliability and efficiency of the Parties' transmission systems, then such targeted studies will be conducted during the first half of the calendar year. In years when the Coordinated System Plan study includes only targeted studies as defined herein, they may be conducted at any time during the calendar year but shall be completed within the calendar year in which they are identified.
- (vii) A Coordinated System Plan study may include more complex, longer duration studies that may involve development of a joint model, as appropriate, to address reliability, market efficiency or public policy needs. Such studies will be conducted on a two-year cycle commencing in the third quarter of the first year of the two-year cycle, if the need is determined by the JRPC. A Coordinated System Plan study scheduled on a two-year cycle will conclude no later than the end of the second year of the two-year cycle.
 - a. For a Coordinated System Plan study scheduled on a two-year cycle, the JRPC will provide notice to the IPSAC in the fourth quarter of the year preceding commencement of the two-year study cycle.
 - b. The first year of the two-year study cycle will consist of model preparation and issue identification and be timed in accordance with each RTO's regional planning processes for model preparation and issue identification. Two-year study cycle activities and their interaction with regional activities are further described in the applicable sections of 9.3.7, particularly in section 9.3.7.2(b)(vii).

- (viii) When a Coordinated System Plan study is determined to be necessary by the JRPC, the specific study process steps will depend on the type and scope of the study. The JRPC shall provide a schedule and binding deadlines for each step in the Coordinated System Plan study process no later than 15 days after the IPSAC meeting provided for in Section 9.3.7.2(b)(ii) following the JRPC's decision to initiate such study.

(b) Coordinated System Plan Study Process

- (i) Each Party will be responsible for providing the technical support required to complete the analysis for the study. The responsibility for the coordinated study and the compilation of the coordinated study report will alternate between the Parties.
- (ii) The JRPC will develop a scope and procedure for the coordinated planning analysis. The scope of the studies will include evaluations of issues resulting from the annual coordinated review and analysis of the Parties transmission issues. The scope and schedule for the Coordinated System Plan study will include the schedule of IPSAC review and input at all stages of the study. Study scope and assumptions will be documented and provided to the IPSAC for review and comment at an IPSAC meeting scheduled no later than 30 days after the decision to conduct a Coordinated System Plan study.
- (iii) Ad hoc study groups may be formed as needed to address localized seams issues or to perform targeted studies of particular areas, needs, or potential expansions and to ensure the coordinated reliability and efficiency of the systems. Under the direction of the Parties, study groups will formalize how activities will be implemented. Targeted studies will utilize the best available regional models for transmission and market efficiency analysis.
- (iv) The Coordinated System Plan study will consider the identified issues reviewed by the JRPC and IPSAC for further evaluation of potential remedies consistent with the criteria of this Protocol and each Party's criteria. Stakeholder input will be solicited for potential remedies to identified issues, which includes stakeholder and transmission developer proposals for Interregional Projects. The study scope developed under Section 9.3.7.2(b)(ii) will include the schedule for acceptance of such stakeholder Interregional Project proposals including supporting analyses that address issues identified in the JRPC solicitation.
- (v) The Parties will document the scope and assumptions including the process and schedule for the conduct of the study. The scope

design will include, as appropriate, evaluation of the transmission system against the reliability criteria, operational performance criteria, economic performance criteria, and public policy needs applicable to each Party.

- (vi) The Parties will use planning models that are developed in accordance with the procedures to be established by the JRPC. If the JRPC develops joint study models, the JRPC will do so consistent with the models and assumptions used for the regional planning cycle most recently completed, or underway, as appropriate. If the Coordinated System Plan study requires transmission evaluations driven by different regional needs (for example transmission that addresses any combination of needs including regional reliability, economics and public policy), then the coordination of studies, models, and assumptions will include the analyses appropriate to each region. The Parties will develop compromises on assumptions when feasible and will incorporate study sensitivities as appropriate when different regional assumptions must be accommodated. Known updates and revisions to models will be incorporated in a comprehensive fashion when new base planning models are available. Prior to the availability of a new comprehensive base model, known updates will be factored in, as necessary, into the review of results. Models will be available for stakeholder review subject to confidentiality and Critical Energy Infrastructure Information (CEII) processes of the Parties. The IPSAC will have the opportunity to provide feedback to the JRPC regarding the study models.
- (vii) When Coordinated System Plan studies are undertaken pursuant to a two-year study cycle defined in this Section at (a)(vii), the following schedule will be followed unless otherwise mutually agreed to by the Parties.
 - a. Parties will provide updated identification of regional issues identified in this Section at (a) by January of the second year of the two-year cycle.
 - i. If MISO conducts a regional Market Congestion Planning Study as part of the MTEP, MISO will use that Market Congestion Planning Study to identify the MISO regional issues that will be incorporated into the Coordinated System Plan study. MISO regional issues identified in a regional Market Congestion Planning Study will be made available for incorporation into the Coordinated System Plan study between November of the first year and January of the second year of the two-year cycle. If MISO does not conduct a regional Market Congestion Planning Study as

part of the MTEP, MISO will use MISO's most recent production cost models to identify regional issues and will provide the regional issues identified for incorporation into the Coordinated System Plan study between November of the first year and January of the second year of the two-year cycle. For matters addressing reliability specifically, MISO will use issues identified in the most recent MTEP report, available annually in December, and the reliability projects, submitted in September of the prior year being considered for inclusion in the current MTEP. MISO will include these projects in the regional issues made available for incorporation into Coordinated System Plan study.

- ii. PJM regional reliability and Market Efficiency analyses will be used to identify regional issues that will be incorporated into the Coordinated System Plan study. Regional reliability analysis proceeds throughout the calendar year identifying PJM issues, including issues near the seam. These seams issues are presented to all stakeholders at the PJM Transmission Expansion Advisory Committee meetings and the PJM competitive window process, if eligible. PJM's long-term economic analysis cycles are conducted during two consecutive calendar years according to the schedule presented to stakeholders at the Transmission Expansion Advisory Committee meetings. The development of the economic model occurs throughout the first three quarters of the first year of the two-year study cycle and is made available for stakeholder review and comment prior to opening PJM's long-term proposal window later in the first year of the two-year study cycle. Both regional and interregional project proposals are submitted through the PJM project proposal windows consistent with Schedule 6, section 1.5.8(c) of the PJM Amended and Restated Operating Agreement. Interregional Project proposals entered into a PJM short-term or long-term proposal window will be analyzed along with PJM regional project proposals. Consistent with Schedule 6, section 1.5.8(d) of the PJM Amended and Restated Operating Agreement, PJM, in consultation with the Transmission Expansion Advisory Committee, shall determine the more efficient or cost effective transmission enhancements and expansions available for incorporation into the Coordinated System Plan study.

- b. MISO and PJM regional models will be made available to the IPSAC for stakeholder review and comment in the first year of the two-year cycle as detailed below:
 - i. MISO will make available its most recent MTEP cycle long-term multi-year power flow models for reliability analysis and multi-year production cost models with multiple economic Futures for economic analysis, annually by November 30.
 - ii. PJM will make available its most recent regional reliability model that is updated annually in the first quarter of each calendar year. PJM's regional economic model is prepared according to the assumptions and schedule as discussed at the Transmission Expansion Advisory Committee meeting scheduled in the first quarter of year one of PJM's long-term regional planning cycle. The economic model is available for stakeholder review and feedback during the third quarter of the first year of PJM's two year planning cycle.
- c. Stakeholder Interregional Project proposals, satisfying applicable regional and interregional requirements, will be accepted by PJM in its project proposal windows as detailed in Schedule 6 of the PJM Amended and Restated Operating Agreement.
- d. Stakeholder identification of Interregional Project proposals satisfying the applicable regional and interregional requirements will be accepted in the MISO MTEP regional process approximately between January through March of the second year of the two-year cycle. A precise timeframe will be provided in each MTEP cycle.
- e. The Parties will evaluate each Interregional Project proposal in its regional process, using the criteria and benefit determination in Sections 9.4.4.1 and 9.4.4.2 and applicable subsections, during the second year of the two-year cycle to determine if a project is eligible for inclusion in the respective regional plans. If recommended by the JRPC per Section 9.3.7.2(b)(xi), an Interregional Project must be presented to the respective Parties' Boards for approval and, if approved, in each Party's regional plan to become an Interregional Project. The Parties shall present the proposed projects, including any proposed Interregional Projects, to their respective Board of Directors or

Managers by December 31 of the second year of the two-year cycle.

- i. In MISO, regional analysis typically occurs between February and September each year. Potential Interregional Projects will be evaluated against the MISO regional criteria and collectively with other potential regional projects to ensure cohesive benefits.
 - ii. In PJM, regional reliability analysis occurs annually. Regional market efficiency analysis occurs biennially. Interregional evaluations will occur in PJM's regional proposal window process as outlined in Section 9.3.7.2(b)(vii)(a)(ii).
- (viii) The IPSAC will have the opportunity to provide input into the development of potential solutions. Feedback by the IPSAC stakeholders shall be provided to each region consistent with each region's regional processes for accepting project proposals. Potential solutions submitted through each region's respective planning processes specific to submitting project proposals shall be communicated between the Parties in a timely manner. The JRPC will be responsible for the screening and evaluation of potential solutions, including evaluating the proposed projects for designation as an Interregional Project pursuant to Section 9.4.4.1. Proposed solution criteria and benefits shall be evaluated by each region pursuant to Sections 9.4.4.1 and 9.4.4.2 and applicable subsections.
- (ix) Transmission upgrades identified through the analyses conducted according to this Protocol and satisfying the applicable Protocol and regional planning requirements will be included in the Coordinated System Plan after the conclusion of the Coordinated System Plan study and applicable regional analyses.
- (x) The JRPC shall produce and submit to the IPSAC for review reports documenting the Coordinated System Plan study, including the transmission issues evaluated, studies performed, solutions considered, and, if applicable, recommended Interregional Projects with the associated cost allocation to the Parties pursuant to Section 9.4.4.2. The review of any proposed allocation of costs under the Coordinated System Plan pursuant to Section 9.4.4 will be accomplished during the periodically scheduled IPSAC meetings held during the course of the Coordinated System Plan study according to this Section 9.3.7.2. In addition, explanations why proposed Interregional Projects did not move forward in the process will be provided in the final Coordinated System Plan

study report to the IPSAC for review. The IPSAC shall be provided the opportunity to provide input to the JRPC on the Coordinated System Plan study reports. Results of, comments and responses to comments on the final Coordinated System Plan study report shall be posted on each Party's website. Fulfillment of the requirements of this subsection will be accomplished through periodically scheduled IPSAC meetings held during the course of the Coordinated System Plan study.

- (xi) The JRPC's recommended Interregional Projects identified in the Coordinated System Plan study shall be reviewed by each Party through its respective regional processes. These regional reviews will be integrated into the interregional process as further described in Sections 9.3 and 9.4. Transmission plans to resolve problems will be identified, included in the respective plans of the Parties and will be presented to the respective Parties' Boards for approval and implementation using each Party's procedures for approval. Critical upgrades for which the need to begin development is urgent will be reviewed by each Party in accordance with their procedures and presented to the Parties' Boards for approval as soon as possible after identification through the coordinated planning process. Other projects identified will be reviewed by each Party in accordance with their procedures and presented to the Parties' Boards for approval in the normal regional planning process cycle as long as this cycle does not delay the implementation of a necessary upgrade. The JRPC shall inform the IPSAC of the outcome of each Party's review of the recommended Interregional Projects.

(c) Targeted Market Efficiency Project Study

The Coordinated System Plan study may include a Targeted Market Efficiency Project study consistent with Section 9.3.7.2(b)(iii). The Targeted Market Efficiency Project study will evaluate, analyze, and determine upgrades to remedy identified historical market-to-market congestion on Reciprocal Coordinated Flowgates on the PJM-MISO market border. Identified issues under this section will be expected to persist and are not expected to be substantially alleviated by system changes planned in the five (5) year planning horizon. Identification of issues will include, but not be limited to, the RTO's determination, based on historical operational information, of any historical flowgate congestion known to be caused by outage conditions. The RTOs will not consider for purposes of a Targeted Market Efficiency Project study, historical congestion on a Reciprocal Coordinated Flowgate caused by outages or will determine a proportionally reduced amount of congestion associated with that flowgate, as appropriate. Any Targeted Market Efficiency Project study initiated by the JRPC under this section will be

conducted under the process defined for a Coordinated System Plan study, except as modified by this section and the following subsections.

- (i) Issues identified in the Targeted Market Efficiency Project study will be reviewed to determine the cause of the market issues, including: (a) the specific limiting elements, (b) verification of the ratings of the limiting elements, (c) whether approved, planned system changes may alleviate the issue, (d) whether outages contribute to all or a portion of the historical congestion, (e) estimates of the cost of upgrading the limiting elements, and (f) whether upgrades to the limiting elements could substantially relieve the constraints;
- (ii) Using the results of the review under subsection (i) and the applicable criteria of Section 9.4, the JRPC will provide to the IPSAC the criteria used to evaluate whether congestion is likely to be persistent. The JRPC will post results of the analysis for input from the IPSAC and will solicit proposals for Targeted Market Efficiency Projects that meet the criteria of Sections 9.3.7.2(c) and 9.4 applicable to a Targeted Market Efficiency Project;
- (iii) The JRPC will determine the list of limiting element upgrades and Targeted Market Efficiency Project proposals to analyze the benefits to PJM and MISO for presentation to and input from the IPSAC;
- (iv) Prior to making the determination outlined in Section 9.3.7.2(c)(vi) below, the JRPC will provide to the IPSAC any additional criteria used to evaluate potential Targeted Market Efficiency Project solutions;
- (v) The JRPC will provide to the IPSAC for input an explanation of: (a) why the JRPC did not evaluate whether a potential Targeted Market Efficiency Project could economically address congestion on a particular congested Reciprocal Coordinated Flowgate, and (b) why a potential Targeted Market Efficiency Project that the JRPC evaluated is not recommended to the MISO and PJM Boards for approval;
- (vi) Based on the analysis and stakeholder process conducted consistent with Sections 9.3.7.2(c) and 9.4, the JRPC will determine any Targeted Market Efficiency Project proposals to recommend to their respective Boards for approval; and
- (vii) Solely for the purposes of conducting the Targeted Market Efficiency Project analysis, the regional processes referred to in

Section 9.3.7.2(b) will be the JRPC analysis conducted for the Targeted Market Efficiency Project study according to the scope and procedures developed under Sections 9.3.7.2(b)(ii) and 9.3.7.2(c). The joint JRPC analysis together with the associated stakeholder process will be sufficient for any resulting JRPC recommended Interregional Transmission Projects to be presented for approval to the respective RTOs' Board as described in 9.3.7.2(b)(xi).

Attachment B

Revisions to the Joint Operating Agreement
Between the
Midcontinent Independent System Operator,
Inc.
And
PJM Interconnection, L.L.C.

(Clean Format)

9.3 Coordinated System Planning.

The primary purpose of coordinated transmission planning and development of the Coordinated System Plan is to ensure that coordinated analyses are performed to identify expansions or enhancements to transmission system capability needed to maintain reliability, improve operational performance, enhance the competitiveness of electricity markets, or promote public policy. The Parties will conduct such coordinated planning as set forth in this Section 9.3 and subsections thereof.

9.3.1 Single Party Planning.

Each Party shall engage in such transmission planning activities, including expansion plans, system impact studies, and generator interconnection studies, as are necessary to fulfill its obligations under its OATT or as it otherwise shall deem appropriate. Such planning shall conform to applicable reliability requirements of the Party, NERC, applicable regional reliability councils, or any successor organizations, and any and all applicable requirements of federal, state, or provincial laws or regulatory authorities. Each Party agrees to prepare a regional transmission planning report that documents its annual regional plan prepared according to the procedures, methodologies, and business rules documented by the region. The Parties further agree to share, on an ongoing basis, information that arises in the performance of such single party planning activities as is necessary or appropriate for effective coordination between the Parties, including, in addition to the information sharing requirements of Sections 9.2 and 9.3, information on requests received from generation resources that plan on permanently retiring or suspending operation consistent with the timelines of each Party's OATT for such studies, and the identification of proposed transmission system enhancements that may affect the Parties' respective systems.

9.3.2 Coordinated System Plan.

The Coordinated System Plan is the result of the coordination of the regional planning that is conducted under this Agreement. The Parties will coordinate any studies required to assure the reliable, efficient, and effective operation of the transmission system. Results of such coordinated studies will be included in the Coordinated System Plan as further described in Section 9.3.7. The Coordinated System Plan shall also include the results of ongoing analyses of requests for interconnection and ongoing analyses of requests for long-term firm transmission service. The Parties shall coordinate in the analyses of these ongoing service requests in accordance with Sections 9.3.3 and 9.3.4. The Coordinated System Plan shall be an integral part of the expansion plans of each Party. To the extent that the JRPC agrees to combine with or participate in similarly established joint planning committees amongst multiple planning entities engaging in coordinated planning studies as provided for under Section 9.1.1.2, the coordinated planning analyses of this Protocol may be integrated into any joint coordinated planning analyses engaged

in by the multiple parties, provided that the requirements of the Coordinated System Plan are integrated into the scope of such joint coordinated planning analyses.

9.3.3 Analysis of Requests for Interconnection Service.

In accordance with the procedures under which the Parties provide Interconnection Service, each Party will coordinate with the other to conduct studies required in determining the impact of a request for Interconnection Service. Results of such coordinated studies will be included in the impacts reported to the Project Developer and Interconnection Customer as appropriate. The process for coordination is detailed below:

- (a) Consistent with the data exchange provisions of this Agreement,¹ the Parties will exchange current modeling data as necessary for the study and coordination of request for Interconnection Service that may impact the Affected System. This will include the associated update of the other Party's relevant requests for Interconnection Service, contingency elements, monitoring elements data, and other data as may be required.
- (b) The coordinated Interconnection Studies will determine the potential impact on the host system and on the Affected System. The host system will be responsible for communicating coordinated Interconnection Study results to the Project Developer or Interconnection Customer.
- (c) Relative Queue Priority under PJM OATT, Parts VII, VIII and IX

The relative queue priority between the PJM New Service Request Cycles and MISO Definitive Planning Phase ("DPP") cycles shall be established as follows:

- (i) The requests for Interconnection Service included in the cycle having the earlier Decision Point I (DP1) close date will have higher queue priority. DP1 is the first Project Developer and Interconnection Customer Decision Point following Phase I of the PJM New Service Request Cycle or MISO Definitive Planning Phase ("DPP") cycle. For purposes of Affected System studies performed by PJM, PJM shall establish the same relative queue priority for all MISO regions, if applicable, within a given cycle, based on the earliest DP1 close date of the DPP Central, East-ATC, East-ITC, and West regions.

¹ JOA, section 9.2, Data and Information Exchange.

- (ii) Requests for Interconnection Service in MISO and PJM will not be considered to have equal queue priority. In the event that both Parties have cycles with the same DP1 close date, queue priority for such cycles shall be established based on each Party's respective anticipated start date for Decision Point II (DP2), calculated as the first day after of the close of Phase II, with the earlier start date having higher queue priority.

(d) Relative Queue Priority Under PJM OATT, Part VI²

For all requests for Interconnection Service prior to the MISO DPP 2022 cycle and PJM Transition Cycle No. 1 (TC1), the following are the established queue priority for each Party:

- (i) The relative queue priorities as determined by the methodology in effect at the time are:
 - a. MISO queue priority from the highest to the lowest: DPP 2018, AD1, AD2, DPP 2019, AE1, AE2, AF1, DPP 2020, AF2, AG1, DPP 2021.
 - b. PJM queue priority from the highest to the lowest: AD1, AD2, AE1, DPP 2018, AE2, AF1, AF2, DPP 2019, DPP 2020, AG1, DPP 2021.
 - (ii) For any subsequent restudies requests for Interconnection Service prior to the MISO DPP 2022/PJM TC1 cycles, MISO and PJM will utilize the queue priority established by subsection (d)(i).
- (e) The Parties will coordinate and mutually agree on the nature of studies to be performed to determine the impacts of the interconnection on the Affected System.
- (i) The transmission reinforcement and the study criteria used in the coordinated Interconnection Studies will conform to and incorporate provisions as outlined in the PJM Manuals and MISO Business Practices Manuals and the Parties' respective OATTs.
 - (ii) The PJM and PJM transmission owner study requirements, reinforcement criteria and cost allocation rules will apply to studies performed to determine impacts on the PJM transmission system when

² See *PJM Interconnection, L.L.C.*, Notification of Occurrence of Transition Date, Docket Nos. ER22-22110-000 et al. (July 11, 2023).

PJM evaluates the impact of MISO requests for Interconnection Service on PJM transmission facilities.

- (iii) The MISO and MISO transmission owner study requirements, reinforcement criteria and cost allocation rules will apply to studies performed to determine impacts on the MISO transmission system when MISO evaluates the impact of PJM requests for Interconnection Service on MISO transmission facilities. During the course of MISO's Interconnection System Impact Study for Affected System, MISO shall apply Energy Resource Interconnection Service (ERIS) criteria to all of PJM's requests for Interconnection Service. Detailed information about the modeling process and assumptions used by MISO for such analysis when MISO is the Affected System are in MISO's Generator Interconnection Business Practices Manual, BPM-015.
- (iv) For all tie lines between MISO and PJM, if a Party identifies a criteria violation on a tie line path interconnecting the PJM and MISO transmission systems and the limiting element(s) on such tie line path is not under the authority of the Party that identified the criteria violation, then the limiting element(s) for the tie line path will be required to be upgraded and implemented in accordance with the business practices and OATT of the Party that owns or controls the limiting element(s) such that it is no longer a limiting element (i.e. the final facility rating or limit needs to satisfy the identifying system's requirement).
- (v) In case the host system study and Affected System study for the same cycle identify different upgrades and/or have different contributors, MISO and PJM shall develop and coordinate the final upgrade scope and cost allocation.
- (vi) The identification of all impacts on the Parties' transmission systems shall include a description of the scope of the required Network Upgrades, and an estimated planning level cost of the Network Upgrades.
- (vii) If the Parties cannot mutually agree on the nature of the studies to be performed, they can resolve the differences through the dispute resolution procedures documented in Article XIV of this Agreement. The Parties will strive to minimize the costs associated with the coordinated study process.
- (viii) During the course of Affected System studies, MISO will sink the output of a PJM New Service Request in the same area or subregion, if applicable, as PJM, and PJM will sink the output of a MISO Interconnection Request in the same area or subregion, if applicable, as MISO.

(f) MISO Interconnection System Impact Study for Affected System for PJM New Service Requests

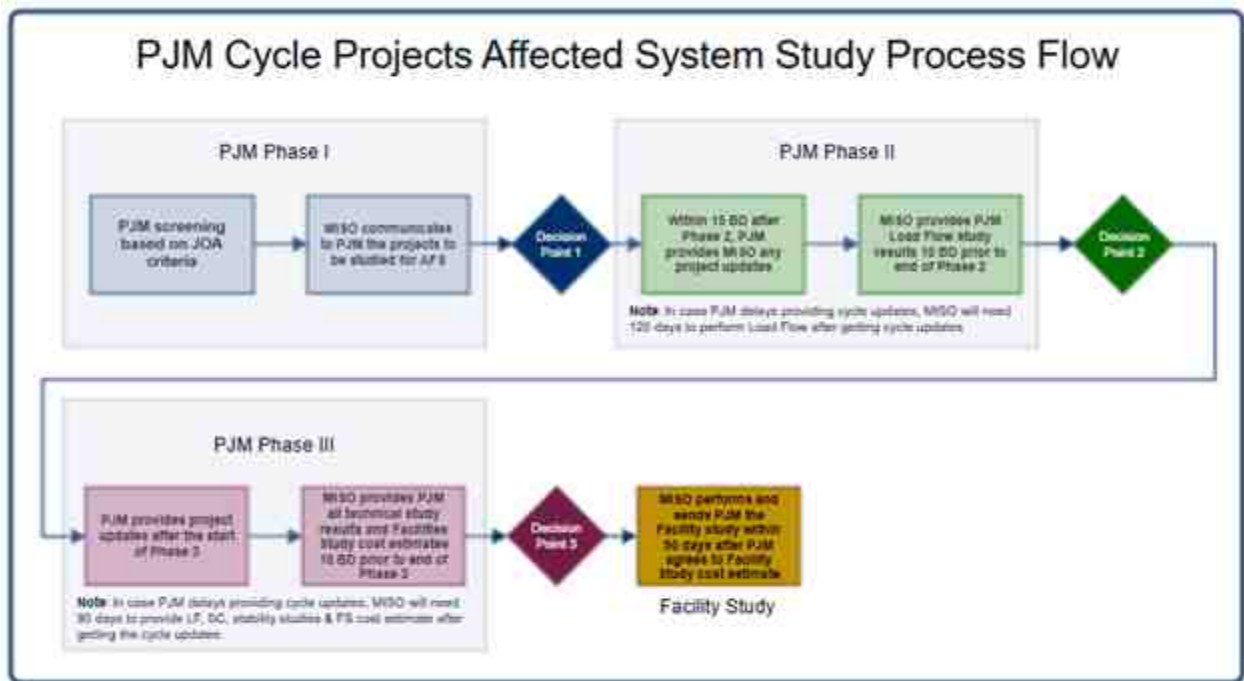
The Interconnection System Impact Study for Affected System by MISO for PJM New Service Requests will be coordinated as follows (also see Figure 1 for process flow):

- (i) During the course of PJM's Phase I studies, PJM shall monitor the MISO transmission system and provide to MISO the draft results of the potential impacts to the MISO transmission system. This monitoring will include an examination of the potential for projects to impact the MISO system by determining whether the project under study has a ≥ 3 percent distribution factor on MISO facilities that operate ≥ 69 kV to less than 500 kV or ≥ 10 percent distribution factor on MISO facilities that operate at or above 500 kV, under system intact conditions. MISO will provide PJM a list of the interconnection project(s) that will be included in the MISO Affected System studies prior to the PJM Phase I completion date.
- (ii) Following the posting, pursuant to PJM OATT, of the PJM Phase I System Impact Study (SIS) report and within fifteen (15) business days following the completion of DP1, PJM shall provide updated New Service Request information to MISO. MISO and the MISO transmission owners shall study the impact(s) of the PJM New Service Request(s) on the MISO transmission system and MISO will provide Affected System study results from load flow studies to PJM no later than ten (10) business days prior to the Phase II SIS posting date, on condition that PJM provided the updated project information allowing a 120 calendar day Affected System study period. PJM shall provide stability and short circuit study data to MISO prior to the start of PJM's DP2.
- (iii) Prior to commencing the PJM Phase III SIS study, PJM shall provide MISO the latest available information necessary, including but not limited to project status, description and analytical modeling data for MISO and the MISO transmission owners to study the impact of the PJM New Service Request(s) on the MISO transmission system. MISO and the MISO transmission owners may study the impact of the PJM New Service Request(s) on the MISO transmission system and provide the study results, including load flow, short circuit, and stability studies, to PJM 10 business days prior to the PJM Phase III SIS posting date, on condition that PJM provided the updated project information allowing a 90 calendar day Affected System study period. Together with the final study results, MISO shall provide a Facilities Study cost estimate to PJM. MISO and MISO transmission owners shall complete the Facilities Study and provide the study report(s) to

PJM within 90 calendar days after PJM agrees to the study cost estimate.

- (iv) A PJM New Service Request project relying on the Network Upgrades identified in the MISO Interconnection System Impact Study for Affected System shall have limited injection rights until those Network Upgrades are placed into service. Upon request, MISO shall determine the necessary injection limits associated with the PJM New Service Request that will be implemented in Real Time until the necessary upgrades identified through MISO's Affected System analysis are placed in service.
- (v) The results received from MISO, including any required Network Upgrades, shall be included in the PJM System Impact Study or Facilities Study report consistent with the PJM OATT.

Figure 1: PJM Cycle Projects Affected System Study Process Flow



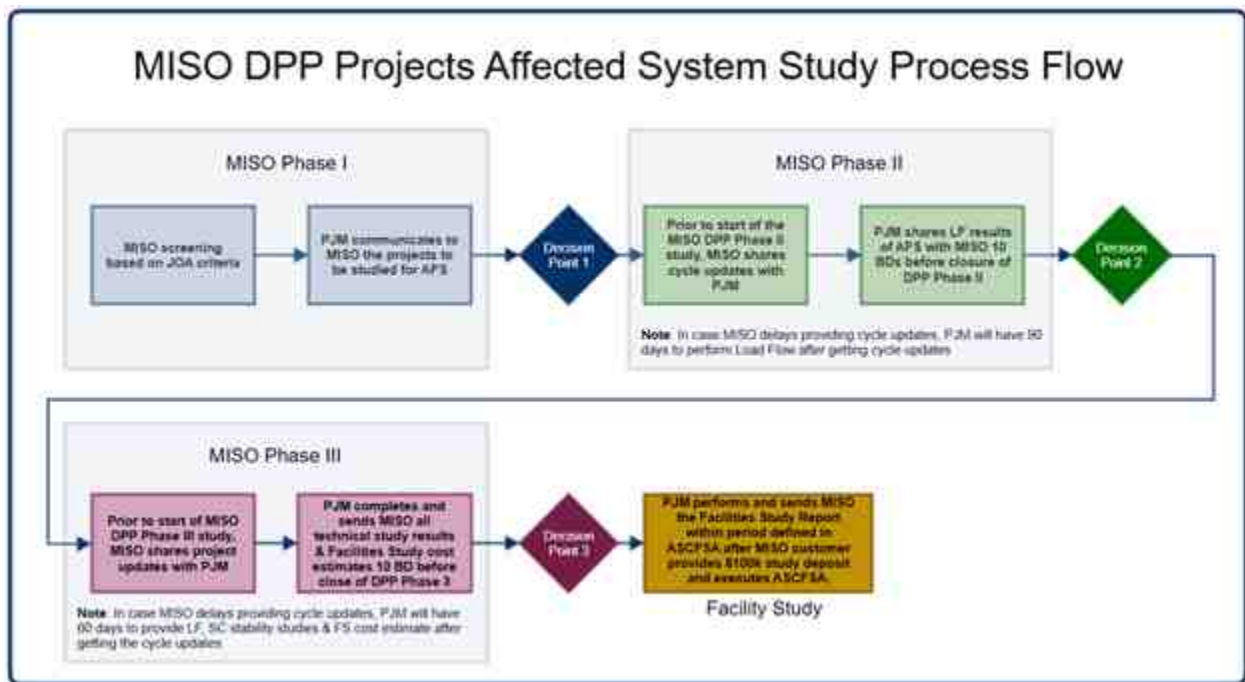
- (g) PJM Affected System Study for MISO Interconnection Requests: The Affected System study for MISO Interconnection Requests will be coordinated as follows (also see Figure 2 for process flow):

- (i) During the course of MISO's Phase I studies, MISO shall perform screening analysis to monitor the PJM transmission system and provide to PJM the draft results of the potential impacts to the PJM transmission system. This monitoring will include an examination of the potential projects to impact the PJM system through determination if the project under study has a ≥ 5 percent distribution factor or ≥ 5 MW impact or ≥ 1 percent of facility rating on any PJM facilities 69kV or above under normal and contingency conditions. PJM shall provide to MISO a list of the interconnection project(s) that will be included in the PJM Affected System study prior to MISO's Phase I completion date.
- (ii) Prior to commencing the MISO DPP Phase II study, MISO shall forward to PJM the latest available information necessary for PJM and the PJM transmission owners to study the impact of the MISO Interconnection Request(s) included in such study on the PJM transmission system. PJM shall study the impact(s) of the MISO Interconnection Request(s) on the PJM transmission system and provide the Affected System Study results including load flow studies to MISO 10 business days prior to MISO Phase II SIS posting date, on condition that MISO provided the updated project information allowing 90 calendar days Affected System studies period. Stability and short circuit study data shall be provided to PJM prior to the start of MISO's DP2.
- (iii) Prior to commencing the MISO DPP Phase III study, MISO shall forward to PJM the latest available information necessary for PJM and the PJM transmission owners to study the impact of the MISO Interconnection Request(s) on the PJM transmission system. PJM shall study the impact(s) of the MISO Interconnection Request(s) on the PJM transmission system and provide Affected System Study results, including load flow, short circuit, and stability studies, to MISO 10 business days prior to MISO Phase III SIS posting date, on condition that MISO provided the updated project information allowing 60 calendar days Affected System Study period. Together with study results, PJM shall tender an Affected System Customer Facilities Study Application and Agreement (PJM OATT, Part IX, Subpart L) to the MISO Interconnection Customer and they will have 30 calendar days to execute. Upon agreement execution, PJM and PJM transmission owners shall complete Facilities Study and provide study report(s) to MISO within the timeframe agreed upon in the Affected System Customer Facilities Study Application and Agreement.
- (iv) During the course of PJM's Affected System Study for MISO interconnection projects, PJM shall apply testing applicable to Energy Resource Interconnection Service (ERIS) modeling methodology. Detailed information about the modeling process and assumptions

used by PJM for such analysis, when PJM is the Affected System, are located in PJM's Manual 14B, Addendum 2.

- (v) The results received from PJM, including any required Network Upgrades, shall be included in the MISO System Impact Study report.
- (vi) Any MISO interconnection project relying on those Network Upgrades identified by PJM Affected System studies shall have limited injection rights until those Network Upgrades are placed into service. Upon request, in accordance with the Interim Deliverability Procedure outlined in PJM Manual 14H, PJM shall determine the necessary injection limits associated with the MISO Interconnection Request that will be implemented in Real Time until the necessary upgrades identified through PJM's Affected System studies are in-service.

Figure 2: MISO DPP Projects Affected System Study Process Flow



- (h) **Affected System Impact Study Costs:** The host system will collect from the Interconnection Customer or Project Developer the costs incurred by the Affected System associated with the performance of the PJM Affected System Impact Study or MISO's Interconnection System Impact Study for Affected System and forward collected amounts to the affected Party.
- (i) **Affected System Facilities Studies:** If the coordinated interconnection system impact study identifies constraints that require Network Upgrades on the

Affected System to mitigate them, then the Affected System may perform its own Facilities Study, in conjunction with the host system's Facilities Studies.

(j) Affected System Facilities Study Costs:

- (i) PJM New Service Requests receiving MISO Affected System Study: PJM will collect from the PJM Project Developer the costs incurred by MISO associated with the performance of the Interconnection Facilities Study and forward collected amounts to MISO.
- (ii) MISO DPP Interconnection Requests receiving PJM Affected System Study: PJM will tender an Affected System Customer Facilities Study Application and Agreement (PJM OATT, Part IX, Subpart L) to the MISO Interconnection Customer. PJM will collect the requisite deposit from the MISO Interconnection Customer for the affected PJM Transmission Owner to perform the Affected System Facilities Study.

(k) Billing

(i) Affected System Impact Study Billing

- a. PJM Performing Affected System Impact Study for MISO Projects
PJM will perform Affected System impact studies for MISO projects and issue monthly invoices to MISO. Each invoice will include a lump sum amount for all studies conducted during the billing period. PJM monthly billing for the current Affected System impact study shall cease after sixty (60) days from the study completion.
MISO shall pay PJM within thirty (30) calendar days of receiving the invoice, utilizing funds from MISO Interconnection Customers' study funds. Payments should be remitted as specified in the invoice.
- b. MISO Performing Interconnection System Impact Study for Affected System for PJM Projects
MISO will perform Affected System impact studies for PJM projects and issue invoices within sixty (60) days to PJM following completion of the study.
PJM shall pay MISO within thirty (30) days of receiving the invoice, utilizing funds from PJM Project Developers' study funds. Payments shall adhere to the terms outlined in the invoice.

(ii) Affected System Facility Study Billing

a. PJM Performing Affected System Facility Study for MISO Projects

For MISO projects requiring PJM's Affected System facility study, MISO Interconnection Customers will provide a deposit of \$100,000 per project to PJM before the commencement of the studies per the Affected System Customer Facilities Study Application and Agreement with PJM. Upon receipt of the deposit and Affected System Customer Facilities Study Application and Agreement, PJM and the relevant PJM Transmission Owners will begin the affected system facility study process.

The deposit is refundable, and any unused funds for each project will be returned to the MISO Interconnection Customer upon completion of the study. If additional funds are required to complete the study, PJM will notify the MISO Interconnection Customer immediately. The MISO Interconnection Customer will then have thirty (30) calendar days to provide the additional required funds.

PJM will maintain detailed accounting of the deposits and provide updates to MISO as needed to ensure transparency.

b. MISO Performing Interconnection Facilities Study for PJM Projects

For PJM projects identified to require MISO's affected system facility studies, MISO will first estimate the funding required to complete the facility studies. The estimated amount will be submitted to PJM for review and approval along with the final Phase III MISO Interconnection System Impact Study for Affected System results. Once PJM agrees with the estimate, PJM will provide MISO with the required deposit amount to fund the study utilizing funds from PJM Project Developers' study funds.

The deposit is refundable, and any unused funds for each project will be returned to PJM upon completion of the study. If additional funds are required to complete the study, MISO will notify PJM immediately. PJM will then have (30) calendar days to provide the additional required funds.

Upon receipt of the deposit, MISO will initiate the facility study process.

MISO will maintain detailed accounting of the deposits, as per MISO regular business processes, and provide updates to PJM if requested to ensure transparency.

- (l) If the results of the coordinated study process indicate that Network Upgrades are required in accordance with procedures, guidelines, criteria, or standards applicable to the Affected System, the host system will identify the need for such Network Upgrades in the appropriate study report and agreement prepared for the Interconnection Customer or Project Developer.
- (m) Requirements for construction of such Network Upgrades will be under the terms of the applicable OATT, agreement among owners of transmission facilities subject to the control of the Affected System and consistent with applicable federal, state or provincial regulatory policy.
- (n) In the event that Network Upgrades are required on the Affected System, then Interconnection Service will commence on a schedule mutually agreed upon among the Parties. This schedule will include milestones with respect to the Network Upgrade construction and the amount of Interconnection Service that can commence after each milestone.
- (o) Each Party will maintain separate requests for Interconnection Service queues. The Parties will maintain a composite listing of requests for all projects that have been identified as potentially impacting the systems of both Parties. These lists will be presented annually to the IPSAC.

9.3.4 Analysis of Long-Term Firm Transmission Service Requests.

In accordance with applicable procedures under which the Parties provide long-term firm transmission service, the Parties will coordinate the conduct of any studies required to determine the impact of a request for such service. Results of such coordinated studies will be included in the impacts reported to the transmission service customers as appropriate. The process for the coordination of studies and Network Upgrades shall be documented in the respective Party's business practices manuals that are publicly available on each Party's website. Both Parties' manual language shall be coordinated so as to ensure the communication of requirements is consistent and includes the following:

- (a) The Parties will coordinate the calculation of AFC values associated with the service, based on contingencies on the systems of each Party that may be impacted by the granting of the service.
- (b) Upon the posting to the OASIS of a request for service, the Party receiving the request will coordinate the study of the request, pursuant to each Party's business practices manuals, which will determine the potential impact on each Party's system. The Party receiving the request will be responsible for communicating coordinated study results to the customer requesting such service.
- (c) If the potentially impacted Party determines that its system may be materially impacted by the service, and the nature of the service is such that a request on the potentially impacted Party's OASIS is unnecessary

(i.e., the potentially impacted Party is “off the path”), then the potentially impacted Party will contact the Party receiving the request and request participation in the applicable transmission service studies. The Parties will coordinate with respect to the nature of studies to be performed to test the impacts of the requested service on the potentially impacted Party, who will perform the studies. The Parties will strive to minimize the costs associated with the coordinated study process. The JRPC will develop screening procedures to assist in the identification of service requests that may impact systems of parties other than the system receiving the request.

- (d) Any coordinated studies will be performed in accordance with the mutually agreed upon study scope and timeline requirements developed by the Parties. If the Parties cannot mutually agree on the nature and timeline of the studies to be performed they can resolve the differences through the dispute resolution procedures documented in Article XIV of this Agreement.
- (e) If constraints are identified during the coordinated study on the impacted system, then the potentially impacted Party may perform its own analysis in conjunction with the studies performed by the Party that has received the request for service. The customer whose request for service requires mitigation of constraint(s) found on an impacted Party’s system shall enter into the appropriate facilities study agreement as required under the impacted Party’s OATT. During the Facilities Study, the potentially impacted Party will conduct its own Facilities Study as a part of the Party receiving the request’s Facilities Study. The study cost estimates indicated in the study agreement between the Party receiving the request and the transmission service customer will reflect the costs and the associated roles of the study participants. The Party receiving the request will review the cost estimates submitted by all participants for reasonableness, based on expected level of participation and responsibilities in the study.
- (f) The Party receiving the request will collect from the transmission service customer and forward to the potentially impacted system the costs incurred by the potentially impacted systems associated with the performance of such studies.
- (g) If the results of a coordinated study indicate that Network Upgrades are required in accordance with procedures, guidelines, criteria, or standards applicable to the potentially impacted system, the Party receiving the request will identify the need for such Network Upgrades in the system impact study prepared for the transmission service customer.
- (h) Requirements for the construction of such Network Upgrades will be under the terms of the OATTs, agreement among owners of transmission

facilities subject to the control of the potentially impacted Party and consistent with applicable federal, state, or provincial regulatory policy.

- (i) In the event that Network Upgrades are required on the potentially impacted Party's system, then transmission service will commence on a schedule mutually agreed upon among the Parties. This schedule will include milestones with respect to the Network Upgrade construction and the amount of service that can commence after each milestone.

9.3.5 Analysis of Incremental Auction Revenue Rights Requests.

The Parties will coordinate, as deemed appropriate,³ the conduct of any studies in response to a request for Incremental Auction Revenue Rights ("Incremental ARR") ("Incremental ARR Request") made under one Party's tariff to determine its impact on the other Party's system. Results of such coordinated studies will be included in the impacts reported to the customer requesting Incremental ARRs as appropriate. Coordination of studies and Network Upgrades will include the following:

- (a) The Parties will coordinate the base Firm Flow Entitlement values associated with the Coordinated Flowgates that may be impacted by the Incremental ARR Request.
- (b) Upon receipt of an Incremental ARR Request or the review of studies related to the evaluation of such request, the Party receiving the Incremental ARR Request will determine whether the other Party is potentially impacted. If the other Party is potentially impacted, the Party receiving the Incremental ARR Request will notify the other Party and convey the information provided in the request in addition to but not limited to the list of impacted constrained facilities.
- (c) During the System Impact Study, the potentially impacted Party may participate in the coordinated study by providing input to the studies to be performed by the Party receiving the Incremental ARR Request. The potentially impacted Party shall determine the Network Upgrades, if any, needed to mitigate constraints on identified impacted facilities. The Parties shall coordinate to ensure any proposed Network Upgrades maintain the reliability of each Party's transmission system.
- (d) Any coordinated System Impact Studies will be performed in accordance with the mutually agreed upon study timeline requirements developed by the Parties. If the Parties cannot mutually agree on the nature and timeline of the studies to be performed they can resolve the differences through the dispute resolution procedures documented in Article XIV of this Agreement in accordance with applicable tariff provisions.
- (e) During the Facilities Study, the potentially impacted Party may conduct its own Facilities Study as a part of Facilities Study being conducted by the

Party that received the Incremental ARR request. The study cost estimates indicated in the Facility Study Agreement between the Party receiving the request and the Incremental ARR customer will reflect the costs and the associated roles of the study participants, including the potentially impacted Party. The Party receiving the request will review the cost estimates submitted by all participants for reasonableness, based on expected level of participation and responsibilities in the study.

- (f) The Party receiving the Incremental ARR Request shall collect from the Incremental ARR customer, and forward to the potentially impacted Party, the agreed upon payments associated with the performance of such studies.
- (g) If the results of the coordinated study indicate that Network Upgrades are required in accordance with procedures, guidelines, criteria, or standards applicable to the potentially impacted Party, the Party receiving the request will identify the need for such Network Upgrades in the System Impact Study prepared for the Incremental ARR customer.
- (h) The construction of such Network Upgrades will be subject to the terms of the potentially impacted Party's tariff, the agreement among owners transferring functional control of transmission facilities to the control of the potentially impacted Party, and applicable federal, state, or provincial regulatory policy.
- (i) In the event that Network Upgrades are required on the potentially impacted Party's system, the Incremental ARR will commence on a schedule mutually agreed upon among the Parties. This schedule will include milestones with respect to the Network Upgrade construction and the amount of service that can commence after each milestone.

³ Infra (b).

9.3.6 Analysis of Generator Deactivations (retirements and suspensions).

- (a) The Party (“Noticed Party”) receiving a new request from a generation owner to retire, deactivate, or mothball (or suspend operations as defined under the MISO Tariff) its generation unit will notify the other Party of such deactivation request no later than five (5) business days after receipt of the notice by the Noticed Party. The other Party (“Other Party”) will determine if any study is required to evaluate potential impacts to its system due to the proposed generator deactivation in the Noticed Party’s system. Any studies required due to a notice to deactivate (retire or suspend operations as defined under the MISO Tariff) will be performed under each Party’s respective Tariff. Each Party’s regional study results will be documented and provided to the other Party for informational purposes only.
- (b) Both Parties will share all information necessary to evaluate potential impacts to their respective systems due to the notice. Such coordination shall provide for:
 - (i) Exchange of current power flow modeling data as necessary for the study and coordination of generator deactivations (retirements and suspensions). This will include the associated update of the other Party’s generator availability, contingency elements, monitoring elements data, and other data as may be required.
 - (ii) Coordination by the Parties to align the assumptions of any analyses during development of the scope of any required studies. The scope design will include, as appropriate, evaluation of the transmission system against the criteria applicable to each Party for such studies.
- (c) Following the exchange of information pursuant to section 9.3.6(b), the Other Party will conduct screening and evaluation of projects needed to mitigate identified impacts on its system. The Other Party will use reasonable efforts to perform an initial assessment and provide an indication of the impacts on its system to the Noticed Party within 65 days of receipt of the notice from the Noticed Party. The Other Party will provide a list of potential system reinforcements required on its system and estimated time for completion of those system reinforcements to the Noticed Party as soon as they are available.
- (d) Each Party will be responsible for any regional Network Upgrades or other mitigation required on their respective system as a result of a request to deactivate (retirement or suspension).

- (e) Any impact(s) on the Other Party's system identified in the analysis will not be used to determine the need to retain the generator requesting to deactivate.
- (f) The identification of Network Upgrades required for generator deactivation (retirement or suspension) in the Other Party's system may require coordination through the JRPC. The Parties will endeavor to make such information available to the JRPC in a timely manner following publication of information through the Parties' regional processes. Additional coordination, as may be needed, will be conducted pursuant to the Coordinated System Plan study process as mutually agreed to be the Parties in accordance with the provisions of Section 9.3.7.
- (i) The JRPC will incorporate any needed regional upgrades that may be identified by the generator deactivation studies coordinated pursuant to this section 9.3.6 into the annual review processes of Section 9.3.7 for the purpose of determining if there is a more efficient or cost effective Interregional Reliability Project that may replace one or more of the identified regional Network Upgrades required for the generator deactivation.
- (ii) The JRPC will consider the results of the deactivation analyses forwarded to the committee at the next scheduled JRPC meeting or within 30 days of receipt of the completed study information from both Parties. Depending on the timing of the receipt of the study information, the JRPC will determine the most appropriate process for including the regional deactivation results into the development of the Coordinated System Plan. Such process will include IPSAC review according to the Coordinated System Plan process of Section 9.3.7.

Throughout the interregional review process any confidentiality provisions of the Parties Tariff's will be respected. Critical identified Interregional Reliability Projects for which the need to begin development is urgent will be presented to the Parties' Boards for approval as soon as possible after identification through the Coordinated System Plan study process. Other identified Interregional Reliability Projects presented to the Parties' Boards for approval in the normal regional planning process cycle as long as this cycle does not delay the implementation of a necessary upgrade.

9.3.7 Development of the Coordinated System Plan.

9.3.7.1

Each Party agrees to assist in the preparation of a Coordinated System Plan applicable to the Parties' systems. Each Party's annual transmission planning reports will be incorporated into the Coordinated System Plan, however, neither Party shall have the right to veto any planning of the other Party nor shall either Party have the right, under this Section, to obtain financial compensation due to the impact of another Party's plans or additions. The Coordinated System Plan will be finalized only after the IPSAC has had an opportunity to review it and respond. The Coordinated System Plan shall:

- (a) Integrate the Parties' respective transmission expansion plans, including any market-based additions to system infrastructure (such as generation, market participant funded, or merchant transmission projects) and Network Upgrades identified jointly by the Parties, together with alternatives to Network Upgrades that were considered;
- (b) Set forth actions to resolve any impacts that may result across the seams between the Parties' systems due to the integration described in the preceding part (a); and
- (c) Describe results of the joint transmission analysis for the combined transmission systems, as well as explanations, as may be necessary, of the procedures, methodologies, and business rules utilized in preparing and completing the analysis.

9.3.7.2

Coordination of studies required for the development of the Coordinated System Plan will include the following: 1) annual issues review to determine the need for a Coordinated System Plan study described in Section 9.3.7.2.a; and 2) Coordinated System Plan study described in Section 9.3.7.2.b.

- (a) Determine the Need for a Coordinated System Plan Study.
 - (i) On an annual basis, beginning in the fourth quarter of each calendar year and continuing through the first quarter of the following calendar year, the Parties shall perform an annual evaluation of transmission issues identified by each Party including issues from the respective Party's market operations and annual planning processes, or Third-Parties. This annual review of transmission issues will be administered by the JRPC on a mutually agreed to schedule taking into consideration each Party's regional planning cycles.

- (ii) The JRPC's annual review of transmission issues shall include the following steps:
 - a. Exchange of the following information during the fourth quarter of each calendar year or as specified below:
 - i. Regional issues and newly approved regional projects located near the interface or expected to impact the adjacent region;
 - ii. Newly identified regional transmission issues for which there is no proposed solution;
 - iii. Interconnection and long-term firm transmission service requests under coordination by the Parties located near the interface or expected to impact the adjacent region will be exchanged pursuant to sections 9.3.3 and 9.3.4, respectively;
 - iv. Market-to-market historical flowgate congestion between the Parties.
 - b. Joint review by the Parties of regional issues and solutions in January of each calendar year;
 - c. Receipt of Third Party issues in the first quarter of each calendar year;
 - d. Review of regional issues with input from stakeholders at the IPSAC meeting conducted during the first quarter of each calendar year; and
 - e. Decision by the JRPC on whether or not to conduct a Coordinated System Plan study.
- (iii) The JRPC through each Party's respective electronic distribution lists shall provide a minimum of 60 calendar days advance notice of the IPSAC meeting to be held in the first quarter of each year to review identified transmission issues. Stakeholders may identify and submit transmission issues and supporting analysis no later than 30 calendar days in advance of the meeting for consideration by the IPSAC and JRPC.
- (iv) Within 45 days following the annual issues evaluation meeting with IPSAC in the first quarter of the calendar year, the JRPC will determine, taking into consideration input provided by the IPSAC, the need to perform a Coordinated System Plan study. A Coordinated System Plan study shall be initiated by either of the following: (1) each Party in the JRPC votes in favor of performing

the Coordinated System Plan study; or (2) if after two consecutive years in which a Coordinated System Plan study has not been performed, and one Party votes in favor of performing a Coordinated System Plan study. The JRPC shall inform the IPSAC of the decision whether or not to initiate a Coordinated System Plan study within five business days of the JRPC's decision.

- (v) When a Coordinated System Plan study is determined to be necessary, the JRPC shall agree to the start date of the study and identify whether it is a targeted study as defined in this Section at (vi) or a more complex, two-year cycle study as defined in this Section at (vii).
- (vi) If a Coordinated System Plan study includes targeted studies of particular areas, needs or potential expansions to ensure that the coordination of the reliability and efficiency of the Parties' transmission systems, then such targeted studies will be conducted during the first half of the calendar year. In years when the Coordinated System Plan study includes only targeted studies as defined herein, they may be conducted at any time during the calendar year but shall be completed within the calendar year in which they are identified.
- (vii) A Coordinated System Plan study may include more complex, longer duration studies that may involve development of a joint model, as appropriate, to address reliability, market efficiency or public policy needs. Such studies will be conducted on a two-year cycle commencing in the third quarter of the first year of the two-year cycle, if the need is determined by the JRPC. A Coordinated System Plan study scheduled on a two-year cycle will conclude no later than the end of the second year of the two-year cycle.
 - a. For a Coordinated System Plan study scheduled on a two-year cycle, the JRPC will provide notice to the IPSAC in the fourth quarter of the year preceding commencement of the two-year study cycle.
 - b. The first year of the two-year study cycle will consist of model preparation and issue identification and be timed in accordance with each RTO's regional planning processes for model preparation and issue identification. Two-year study cycle activities and their interaction with regional activities are further described in the applicable sections of 9.3.7, particularly in section 9.3.7.2(b)(vii).

- (viii) When a Coordinated System Plan study is determined to be necessary by the JRPC, the specific study process steps will depend on the type and scope of the study. The JRPC shall provide a schedule and binding deadlines for each step in the Coordinated System Plan study process no later than 15 days after the IPSAC meeting provided for in Section 9.3.7.2(b)(ii) following the JRPC's decision to initiate such study.

(b) Coordinated System Plan Study Process

- (i) Each Party will be responsible for providing the technical support required to complete the analysis for the study. The responsibility for the coordinated study and the compilation of the coordinated study report will alternate between the Parties.
- (ii) The JRPC will develop a scope and procedure for the coordinated planning analysis. The scope of the studies will include evaluations of issues resulting from the annual coordinated review and analysis of the Parties transmission issues. The scope and schedule for the Coordinated System Plan study will include the schedule of IPSAC review and input at all stages of the study. Study scope and assumptions will be documented and provided to the IPSAC for review and comment at an IPSAC meeting scheduled no later than 30 days after the decision to conduct a Coordinated System Plan study.
- (iii) Ad hoc study groups may be formed as needed to address localized seams issues or to perform targeted studies of particular areas, needs, or potential expansions and to ensure the coordinated reliability and efficiency of the systems. Under the direction of the Parties, study groups will formalize how activities will be implemented. Targeted studies will utilize the best available regional models for transmission and market efficiency analysis.
- (iv) The Coordinated System Plan study will consider the identified issues reviewed by the JRPC and IPSAC for further evaluation of potential remedies consistent with the criteria of this Protocol and each Party's criteria. Stakeholder input will be solicited for potential remedies to identified issues, which includes stakeholder and transmission developer proposals for Interregional Projects. The study scope developed under Section 9.3.7.2(b)(ii) will include the schedule for acceptance of such stakeholder Interregional Project proposals including supporting analyses that address issues identified in the JRPC solicitation.
- (v) The Parties will document the scope and assumptions including the process and schedule for the conduct of the study. The scope

design will include, as appropriate, evaluation of the transmission system against the reliability criteria, operational performance criteria, economic performance criteria, and public policy needs applicable to each Party.

- (vi) The Parties will use planning models that are developed in accordance with the procedures to be established by the JRPC. If the JRPC develops joint study models, the JRPC will do so consistent with the models and assumptions used for the regional planning cycle most recently completed, or underway, as appropriate. If the Coordinated System Plan study requires transmission evaluations driven by different regional needs (for example transmission that addresses any combination of needs including regional reliability, economics and public policy), then the coordination of studies, models, and assumptions will include the analyses appropriate to each region. The Parties will develop compromises on assumptions when feasible and will incorporate study sensitivities as appropriate when different regional assumptions must be accommodated. Known updates and revisions to models will be incorporated in a comprehensive fashion when new base planning models are available. Prior to the availability of a new comprehensive base model, known updates will be factored in, as necessary, into the review of results. Models will be available for stakeholder review subject to confidentiality and Critical Energy Infrastructure Information (CEII) processes of the Parties. The IPSAC will have the opportunity to provide feedback to the JRPC regarding the study models.
- (vii) When Coordinated System Plan studies are undertaken pursuant to a two-year study cycle defined in this Section at (a)(vii), the following schedule will be followed unless otherwise mutually agreed to by the Parties.
 - a. Parties will provide updated identification of regional issues identified in this Section at (a) by January of the second year of the two-year cycle.
 - i. If MISO conducts a regional Market Congestion Planning Study as part of the MTEP, MISO will use that Market Congestion Planning Study to identify the MISO regional issues that will be incorporated into the Coordinated System Plan study. MISO regional issues identified in a regional Market Congestion Planning Study will be made available for incorporation into the Coordinated System Plan study between November of the first year and January of the second year of the two-year cycle. If MISO does not conduct a regional Market Congestion Planning Study as

part of the MTEP, MISO will use MISO's most recent production cost models to identify regional issues and will provide the regional issues identified for incorporation into the Coordinated System Plan study between November of the first year and January of the second year of the two-year cycle. For matters addressing reliability specifically, MISO will use issues identified in the most recent MTEP report, available annually in December, and the reliability projects, submitted in September of the prior year being considered for inclusion in the current MTEP. MISO will include these projects in the regional issues made available for incorporation into Coordinated System Plan study.

- ii. PJM regional reliability and Market Efficiency analyses will be used to identify regional issues that will be incorporated into the Coordinated System Plan study. Regional reliability analysis proceeds throughout the calendar year identifying PJM issues, including issues near the seam. These seams issues are presented to all stakeholders at the PJM Transmission Expansion Advisory Committee meetings and the PJM competitive window process, if eligible. PJM's long-term economic analysis cycles are conducted during two consecutive calendar years according to the schedule presented to stakeholders at the Transmission Expansion Advisory Committee meetings. The development of the economic model occurs throughout the first three quarters of the first year of the two-year study cycle and is made available for stakeholder review and comment prior to opening PJM's long-term proposal window later in the first year of the two-year study cycle. Both regional and interregional project proposals are submitted through the PJM project proposal windows consistent with Schedule 6, section 1.5.8(c) of the PJM Amended and Restated Operating Agreement. Interregional Project proposals entered into a PJM short-term or long-term proposal window will be analyzed along with PJM regional project proposals. Consistent with Schedule 6, section 1.5.8(d) of the PJM Amended and Restated Operating Agreement, PJM, in consultation with the Transmission Expansion Advisory Committee, shall determine the more efficient or cost effective transmission enhancements and expansions available for incorporation into the Coordinated System Plan study.

- b. MISO and PJM regional models will be made available to the IPSAC for stakeholder review and comment in the first year of the two-year cycle as detailed below:
 - i. MISO will make available its most recent MTEP cycle long-term multi-year power flow models for reliability analysis and multi-year production cost models with multiple economic Futures for economic analysis, annually by November 30.
 - ii. PJM will make available its most recent regional reliability model that is updated annually in the first quarter of each calendar year. PJM's regional economic model is prepared according to the assumptions and schedule as discussed at the Transmission Expansion Advisory Committee meeting scheduled in the first quarter of year one of PJM's long-term regional planning cycle. The economic model is available for stakeholder review and feedback during the third quarter of the first year of PJM's two year planning cycle.
- c. Stakeholder Interregional Project proposals, satisfying applicable regional and interregional requirements, will be accepted by PJM in its project proposal windows as detailed in Schedule 6 of the PJM Amended and Restated Operating Agreement.
- d. Stakeholder identification of Interregional Project proposals satisfying the applicable regional and interregional requirements will be accepted in the MISO MTEP regional process approximately between January through March of the second year of the two-year cycle. A precise timeframe will be provided in each MTEP cycle.
- e. The Parties will evaluate each Interregional Project proposal in its regional process, using the criteria and benefit determination in Sections 9.4.4.1 and 9.4.4.2 and applicable subsections, during the second year of the two-year cycle to determine if a project is eligible for inclusion in the respective regional plans. If recommended by the JRPC per Section 9.3.7.2(b)(xi), an Interregional Project must be presented to the respective Parties' Boards for approval and, if approved, in each Party's regional plan to become an Interregional Project. The Parties shall present the proposed projects, including any proposed Interregional Projects, to their respective Board of Directors or

Managers by December 31 of the second year of the two-year cycle.

- i. In MISO, regional analysis typically occurs between February and September each year. Potential Interregional Projects will be evaluated against the MISO regional criteria and collectively with other potential regional projects to ensure cohesive benefits.
 - ii. In PJM, regional reliability analysis occurs annually. Regional market efficiency analysis occurs biennially. Interregional evaluations will occur in PJM's regional proposal window process as outlined in Section 9.3.7.2(b)(vii)(a)(ii).
- (viii) The IPSAC will have the opportunity to provide input into the development of potential solutions. Feedback by the IPSAC stakeholders shall be provided to each region consistent with each region's regional processes for accepting project proposals. Potential solutions submitted through each region's respective planning processes specific to submitting project proposals shall be communicated between the Parties in a timely manner. The JRPC will be responsible for the screening and evaluation of potential solutions, including evaluating the proposed projects for designation as an Interregional Project pursuant to Section 9.4.4.1. Proposed solution criteria and benefits shall be evaluated by each region pursuant to Sections 9.4.4.1 and 9.4.4.2 and applicable subsections.
- (ix) Transmission upgrades identified through the analyses conducted according to this Protocol and satisfying the applicable Protocol and regional planning requirements will be included in the Coordinated System Plan after the conclusion of the Coordinated System Plan study and applicable regional analyses.
- (x) The JRPC shall produce and submit to the IPSAC for review reports documenting the Coordinated System Plan study, including the transmission issues evaluated, studies performed, solutions considered, and, if applicable, recommended Interregional Projects with the associated cost allocation to the Parties pursuant to Section 9.4.4.2. The review of any proposed allocation of costs under the Coordinated System Plan pursuant to Section 9.4.4 will be accomplished during the periodically scheduled IPSAC meetings held during the course of the Coordinated System Plan study according to this Section 9.3.7.2. In addition, explanations why proposed Interregional Projects did not move forward in the process will be provided in the final Coordinated System Plan

study report to the IPSAC for review. The IPSAC shall be provided the opportunity to provide input to the JRPC on the Coordinated System Plan study reports. Results of, comments and responses to comments on the final Coordinated System Plan study report shall be posted on each Party's website. Fulfillment of the requirements of this subsection will be accomplished through periodically scheduled IPSAC meetings held during the course of the Coordinated System Plan study.

- (xi) The JRPC's recommended Interregional Projects identified in the Coordinated System Plan study shall be reviewed by each Party through its respective regional processes. These regional reviews will be integrated into the interregional process as further described in Sections 9.3 and 9.4. Transmission plans to resolve problems will be identified, included in the respective plans of the Parties and will be presented to the respective Parties' Boards for approval and implementation using each Party's procedures for approval. Critical upgrades for which the need to begin development is urgent will be reviewed by each Party in accordance with their procedures and presented to the Parties' Boards for approval as soon as possible after identification through the coordinated planning process. Other projects identified will be reviewed by each Party in accordance with their procedures and presented to the Parties' Boards for approval in the normal regional planning process cycle as long as this cycle does not delay the implementation of a necessary upgrade. The JRPC shall inform the IPSAC of the outcome of each Party's review of the recommended Interregional Projects.

(c) Targeted Market Efficiency Project Study

The Coordinated System Plan study may include a Targeted Market Efficiency Project study consistent with Section 9.3.7.2(b)(iii). The Targeted Market Efficiency Project study will evaluate, analyze, and determine upgrades to remedy identified historical market-to-market congestion on Reciprocal Coordinated Flowgates on the PJM-MISO market border. Identified issues under this section will be expected to persist and are not expected to be substantially alleviated by system changes planned in the five (5) year planning horizon. Identification of issues will include, but not be limited to, the RTO's determination, based on historical operational information, of any historical flowgate congestion known to be caused by outage conditions. The RTOs will not consider for purposes of a Targeted Market Efficiency Project study, historical congestion on a Reciprocal Coordinated Flowgate caused by outages or will determine a proportionally reduced amount of congestion associated with that flowgate, as appropriate. Any Targeted Market Efficiency Project study initiated by the JRPC under this section will be

conducted under the process defined for a Coordinated System Plan study, except as modified by this section and the following subsections.

- (i) Issues identified in the Targeted Market Efficiency Project study will be reviewed to determine the cause of the market issues, including: (a) the specific limiting elements, (b) verification of the ratings of the limiting elements, (c) whether approved, planned system changes may alleviate the issue, (d) whether outages contribute to all or a portion of the historical congestion, (e) estimates of the cost of upgrading the limiting elements, and (f) whether upgrades to the limiting elements could substantially relieve the constraints;
- (ii) Using the results of the review under subsection (i) and the applicable criteria of Section 9.4, the JRPC will provide to the IPSAC the criteria used to evaluate whether congestion is likely to be persistent. The JRPC will post results of the analysis for input from the IPSAC and will solicit proposals for Targeted Market Efficiency Projects that meet the criteria of Sections 9.3.7.2(c) and 9.4 applicable to a Targeted Market Efficiency Project;
- (iii) The JRPC will determine the list of limiting element upgrades and Targeted Market Efficiency Project proposals to analyze the benefits to PJM and MISO for presentation to and input from the IPSAC;
- (iv) Prior to making the determination outlined in Section 9.3.7.2(c)(vi) below, the JRPC will provide to the IPSAC any additional criteria used to evaluate potential Targeted Market Efficiency Project solutions;
- (v) The JRPC will provide to the IPSAC for input an explanation of: (a) why the JRPC did not evaluate whether a potential Targeted Market Efficiency Project could economically address congestion on a particular congested Reciprocal Coordinated Flowgate, and (b) why a potential Targeted Market Efficiency Project that the JRPC evaluated is not recommended to the MISO and PJM Boards for approval;
- (vi) Based on the analysis and stakeholder process conducted consistent with Sections 9.3.7.2(c) and 9.4, the JRPC will determine any Targeted Market Efficiency Project proposals to recommend to their respective Boards for approval; and
- (vii) Solely for the purposes of conducting the Targeted Market Efficiency Project analysis, the regional processes referred to in

Section 9.3.7.2(b) will be the JRPC analysis conducted for the Targeted Market Efficiency Project study according to the scope and procedures developed under Sections 9.3.7.2(b)(ii) and 9.3.7.2(c). The joint JRPC analysis together with the associated stakeholder process will be sufficient for any resulting JRPC recommended Interregional Transmission Projects to be presented for approval to the respective RTOs' Board as described in 9.3.7.2(b)(xi).