

MISO Generator Interconnection Study Metrics

Overview

Updated: 5/1/2022

The attached report is MISO's 2022 Quarter 1 interconnection queue metrics. FERC Order Nos. 845 and 845-A require the quarterly posting of interconnection study metrics on its OASIS or its website. With these postings, interconnection customers have access to more granular information regarding the length of the interconnection study portion of the process and transparency regarding MISO's ability to meet its Definitive Planning Phase timeframes. MISO along with our third-party consultants have spent over 12,390 hours studying generation interconnection projects affects on the Bulk Electric System during 2022 Q1.

MISO's 2022 Q1 metrics demonstrate that while study delays across the MISO regions continue to impact the ability to complete multiple study cycles, several severely delayed cycles have advanced to their next phases. Though progress has been made on multi-month Affected System delays, model and mitigation development on large study groups continue to be a challenge. The current Definitive Planning Phase schedule is posted on the website at the following link: https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/

MISO and SPP continue to collaborate on a joint study designed to identify transmission projects with comprehensive, cost effective and efficient upgrades. Both RTOs are looking for solutions to historical challenges facing generation interconnection customers in areas where their boundaries connect.

Facilities Studies for Interconnection Facilities continues to be a challenge to complete in a 90 Calendar Day window. MISO is working to reduce factors that delay initiation of studies, such as establishment of study agreements or purchase orders with Transmission Owners, in order to reduce overall study time frames.

Historical schedule updates are available with past Interconnection Process Working Group (IPWG) meeting materials: <https://www.misoenergy.org/stakeholder-engagement/committees/interconnection-process-working-group/>

MISO Generator Interconnection Study Metrics

3.4.2.1 Preliminary Interconnection System Impact Studies in Definitive Planning Phase I

Updated: 5/1/2022

3.4.2.1 Preliminary Interconnection System Impact Studies in Definitive Planning Phase I

| | | 2022 | | | | |
|------------------------------------------|-------------------|----------|----------|----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ SIS Completed | (A) | 0 | | | | Number of Interconnection Requests that had Preliminary System Impact Studies in Definitive Planning Phase I |
| SIS Completed > 120 days | (B) | 0 | | | | Number of Interconnection Requests that had Preliminary System Impact Studies in Definitive Planning Phase I exceeding 120 Calendar Days |
| Requests Ongoing SIS > 120 days | (C) | 502 | | | | Number of Interconnection Requests with ongoing incomplete Preliminary System Impact Studies in Definitive Planning Phase I exceeding 120 Calendar Days |
| SIS Mean # of days | (D) | - | | | | Mean time (in Calendar Days from 90 days after Application deadline date), for Preliminary System Impact Studies completed in Definitive Planning Phase I* |
| Percentage > 120 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | | | | Percentage of Interconnection Requests with Preliminary System Impact Studies in Definitive Planning Phase I exceeding 120 Calendar Days |

Active study groups during 1st Qtr. 2022

- DPP-2020-Cycle-Central: (0 Completed / 82 Ongoing)
- DPP-2021-Cycle-Central: (0 Completed / 119 Ongoing)
- DPP-2020-Cycle-East (ATC): (0 Completed / 37 Ongoing)
- DPP-2021-Cycle-East (ITC): (0 Completed / 54 Ongoing)
- DPP-2021-Cycle-South: (0 Completed / 144 Ongoing)
- DPP-2021-Cycle-West: (0 Completed / 66 Ongoing)

*Phase 1 began 45 days after application deadline for cycles prior to 2020

Refer to the **Definitive Planning Phase Schedule** posted at https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/ for current schedule updates. Historical schedule updates are available with past Interconnection Process Working Group (IPWG) meeting materials: <https://www.misoenergy.org/stakeholder-engagement/committees/interconnection-process-working-group/>

Refer to Section 3.4.2.1 of the **ATTACHMENT X – GENERATOR INTERCONNECTION PROCEDURES (GIP)** for an explanation of the MISO Generator Interconnection Study Metrics [Attachment X GIP](#).



MISO Generator Interconnection Study Metrics

3.4.2.2 Revised Interconnection System Impact Studies in Definitive Planning Phase II

Updated: 5/1/2022

3.4.2.2 Revised Interconnection System Impact Studies in Definitive Planning Phase II

| | | 2022 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ SIS Completed | (A) | 80 | | | | Number of Interconnection Requests that had Revised System Impact Studies in Definitive Planning Phase II |
| SIS Completed > 59 days | (B) | 80 | | | | Number of Interconnection Requests that had Revised System Impact Studies in Definitive Planning Phase II exceeding 59 Calendar Days |
| Requests Ongoing SIS > 59 days | (C) | 270 | | | | Number of Interconnection Requests with ongoing incomplete Revised System Impact Studies in Definitive Planning Phase II exceeding 59 Calendar Days |
| SIS Mean # of days | (D) | 349 | | | | Mean time (in Calendar Days), for Revised System Impact Studies completed in Definitive Planning Phase II |
| Percentage > 59 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | | | | Percentage of Interconnection Requests with Revised System Impact Studies in Definitive Planning Phase II exceeding 59 Calendar Days |

Active study groups during 1st Qtr. 2022

- DPP-2019-Cycle-Central: (0 Completed / 102 Ongoing)
- DPP-2019-Cycle-East (ATC): (16 Completed / 0 Ongoing)
- DPP-2019-Cycle-East (ITC): (28 Completed / 0 Ongoing)
- DPP-2019-Cycle-West: (36 Completed / 0 Ongoing)
- DPP-2020-Cycle-East (ATC): (0 Completed / 33 Ongoing)
- DPP-2020-Cycle-East (ITC): (0 Completed / 29 Ongoing)
- DPP-2020-Cycle-South: (0 Completed / 65 Ongoing)
- DPP-2020-Cycle-West: (0 Completed / 41 Ongoing)

Refer to the **Definitive Planning Phase Schedule** posted at https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/ for current schedule updates. Historical schedule updates are available with past Interconnection Process Working Group (IPWG) meeting materials: <https://www.misoenergy.org/stakeholder-engagement/committees/interconnection-process-working-group/>

Refer to Section 3.4.2.2 of the **ATTACHMENT X – GENERATOR INTERCONNECTION PROCEDURES (GIP)** for an explanation of the MISO Generator Interconnection Study Metrics [Attachment X GIP](#).



MISO Generator Interconnection Study Metrics

3.4.2.3 Final Interconnection System Impact Studies in Definitive Planning Phase III

Updated: 5/1/2022

3.4.2.3 Final Interconnection System Impact Studies in Definitive Planning Phase III

| | | 2022 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ SIS Completed | (A) | 0 | | | | Number of Interconnection Requests that had Final System Impact Studies in Definitive Planning Phase III |
| SIS Completed > 44 days | (B) | 0 | | | | Number of Interconnection Requests that had Final System Impact Studies in Definitive Planning Phase III exceeding 44 Calendar Days |
| Requests Ongoing SIS > 44 days | (C) | 0 | | | | Number of Interconnection Requests with ongoing incomplete Final System Impact Studies in Definitive Planning Phase III exceeding 44 Calendar Days |
| SIS Mean # of days | (D) | - | | | | Mean time (in Calendar Days), for Final System Impact Studies completed in Definitive Planning Phase III |
| Percentage > 44 days per Total Complete | $(E)=(B+C)/(A+C)$ | - | | | | Percentage of Interconnection Requests with Final System Impact Studies in Definitive Planning Phase III exceeding 44 Calendar Days |

Active study groups during 1st Qtr. 2022

DPP-2019-Cycle-East (ATC): (0 Completed / 16 Ongoing)

DPP-2019-Cycle-East (ITC): (0 Completed / 28 Ongoing)

DPP-2019-Cycle-West: (0 Completed / 36 Ongoing)

Refer to the **Definitive Planning Phase Schedule** posted at https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/ for current schedule updates. Historical schedule updates are available with past Interconnection Process Working Group (IPWG) meeting materials: <https://www.misoenergy.org/stakeholder-engagement/committees/interconnection-process-working-group/>

Refer to Section 3.4.2.3 of the **ATTACHMENT X – GENERATOR INTERCONNECTION PROCEDURES (GIP)** for an explanation of the MISO Generator Interconnection Study Metrics [Attachment X GIP](#).



MISO Generator Interconnection Study Metrics

3.4.2.4 Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities

Updated: 5/1/2022

3.4.2.4 Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities

| | | 2022 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ IC FS Completed | (A) | 2 | | | | Number of Interconnection Requests that had Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities |
| IC FS Completed > 90 days | (B) | 2 | | | | Number of Interconnection Requests that had Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities exceeding 90 Calendar Days |
| Requests Ongoing IC FS > 90 days | (C) | 15 | | | | Number of Interconnection Requests with ongoing incomplete Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities exceeding 90 Calendar Days |
| IC FS Mean # of days | (D) | 219 | | | | Mean time (in Calendar Days), for Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities completed |
| Percentage > 90 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | | | | Percentage of Interconnection Requests with with delayed Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities exceeding 90 Calendar Days |

Active study groups during 1st Qtr. 2022

DPP-2019-Cycle-South: (0 Completed / 14 Ongoing)

DPP-2020-Cycle-East (ATC): (2 Completed / 1 Ongoing)

DPP-2020-Cycle-South: (0 Completed / 1 Ongoing)

Refer to the **Definitive Planning Phase Schedule** posted at https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/ for current schedule updates. Historical schedule updates are available with past Interconnection Process Working Group (IPWG) meeting materials: <https://www.misoenergy.org/stakeholder-engagement/committees/interconnection-process-working-group/>

Refer to Section 3.4.2.4 of the **ATTACHMENT X – GENERATOR INTERCONNECTION PROCEDURES (GIP)** for an explanation of the MISO Generator Interconnection Study Metrics [Attachment X GIP](#).



MISO Generator Interconnection Study Metrics

3.4.2.5 Interconnection Facilities Studies for Network Upgrades

Updated: 5/1/2022

3.4.2.5 Interconnection Facilities Studies for Network Upgrades

| | | 2022 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ NU FS Completed | (A) | 12 | | | | Number of Interconnection Requests that had Interconnection Facilities Studies for Network Upgrades |
| NU FS Completed > 90 days | (B) | 0 | | | | Number of Interconnection Requests that had Interconnection Facilities Studies for Network Upgrades exceeding 90 Calendar Days |
| Requests Ongoing NU FS > 90 days | (C) | 14 | | | | Number of Interconnection Requests with ongoing incomplete Interconnection Facilities Studies for Network Upgrades exceeding 90 Calendar Days |
| NU FS Mean # of days | (D) | 57 | | | | Mean time (in Calendar Days), for Interconnection Facilities Studies for Network Upgrades completed |
| Percentage > 90 days per Total Complete | $(E)=(B+C)/(A+C)$ | 54% | | | | Percentage of Interconnection Requests with delayed Interconnection Facilities Studies for Network Upgrades exceeding 90 Calendar Days |

Active study groups during 1st Qtr. 2022

DPP-2019-Cycle-South: (12 Completed / 14 Ongoing)

*Actual start was 211 days prior to final report posting with actual study length < 90 days.

Refer to the **Definitive Planning Phase Schedule** posted at https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/ for current schedule updates. Historical schedule updates are available with past Interconnection Process Working Group (IPWG) meeting materials: <https://www.misoenergy.org/stakeholder-engagement/committees/interconnection-process-working-group/>

Refer to Section 3.4.2.5 of the **ATTACHMENT X – GENERATOR INTERCONNECTION PROCEDURES (GIP)** for an explanation of the MISO Generator Interconnection Study Metrics [Attachment X GIP](#).



MISO Generator Interconnection Study Metrics

3.4.2.6 Interconnection Requests Withdrawn from Interconnection Queue

Updated: 5/1/2022

3.4.2.6 Interconnection Requests Withdrawn from Interconnection Queue

| | | 2022 | | | | |
|-------------------------------------|-----|----------|----------|----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Total Number Projects Withdrawn | (A) | 24 | | | | Number of Interconnection Requests withdrawn |
| Projects Withdrawn Pre-Kickoff | (B) | 0 | | | | Number of Interconnection Requests withdrawn before the start of the Definitive Planning Phase I |
| Projects Withdrawn DPP Phase I | (C) | 7 | | | | Number of Interconnection Requests withdrawn from start of the Definitive Planning Phase I to Decision Point I window expired |
| Projects Withdrawn DPP Phase II | (D) | 17 | | | | Number of Interconnection Requests withdrawn after the Decision Point I window expired to Decision Point II window expired |
| Withdrawn DPP Phase III & GIA Phase | (E) | 0 | | | | Number of Interconnection Requests withdrawn after the Decision Point II window expired to execution of a Generator Interconnection Agreement |
| Withdrawn Post GIA Execution | (F) | 0 | | | | Number of Interconnection Requests withdrawn after execution of a Generator Interconnection Agreement |
| Mean # of days from Queue Date | (G) | 894 | | | | Mean time (in Calendar Days), for withdrawn Interconnection Requests, from Application deadline date to when Transmission Provider withdrew from the queue |

Refer to the **Definitive Planning Phase Schedule** posted at https://www.misoenergy.org/planning/generator-interconnection/GI_Queue/ for current schedule updates. Historical schedule updates are available with past Interconnection Process Working Group (IPWG) meeting materials: <https://www.misoenergy.org/stakeholder-engagement/committees/interconnection-process-working-group/>

Refer to Section 3.4.2.6 of the **ATTACHMENT X – GENERATOR INTERCONNECTION PROCEDURES (GIP)** for an explanation of the MISO Generator Interconnection Study Metrics [Attachment X GIP](#).



MISO Generator Interconnection Study Metrics

3.4.2.1 Preliminary Interconnection System Impact Studies in Definitive Planning Phase I

3.4.2.1 Preliminary Interconnection System Impact Studies in Definitive Planning Phase I

| | | 2021 | | | | |
|------------------------------------------|-------------------|----------|----------|----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ SIS Completed | (A) | 101 | 0 | 225 | 70 | Number of Interconnection Requests that had Preliminary System Impact Studies in Definitive Planning Phase I |
| SIS Completed > 120 days | (B) | 101 | 0 | 225 | 70 | Number of Interconnection Requests that had Preliminary System Impact Studies in Definitive Planning Phase I exceeding 120 Calendar Days |
| Requests Ongoing SIS > 120 days | (C) | 352 | 355 | 152 | 85 | Number of Interconnection Requests with ongoing incomplete Preliminary System Impact Studies in Definitive Planning Phase I exceeding 120 Calendar Days |
| SIS Mean # of days | (D) | 599 | 0 | 474 | 283 | Mean time (in Calendar Days from 90 days after Application deadline date), for Preliminary System Impact Studies completed in Definitive Planning Phase I* |
| Percentage > 120 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | 100% | 100% | 100% | Percentage of Interconnection Requests with Preliminary System Impact Studies in Definitive Planning Phase I exceeding 120 Calendar Days |

MISO Generator Interconnection Study Metrics

3.4.2.2 Revised Interconnection System Impact Studies in Definitive Planning Phase II

3.4.2.2 Revised Interconnection System Impact Studies in Definitive Planning Phase II

| | | 2021 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ SIS Completed | (A) | 139 | 0 | 0 | 0 | Number of Interconnection Requests that had Revised System Impact Studies in Definitive Planning Phase II |
| SIS Completed > 59 days | (B) | 139 | 0 | 0 | 0 | Number of Interconnection Requests that had Revised System Impact Studies in Definitive Planning Phase II exceeding 59 Calendar Days |
| Requests Ongoing SIS > 59 days | (C) | 0 | 94 | 215 | 243 | Number of Interconnection Requests with ongoing incomplete Revised System Impact Studies in Definitive Planning Phase II exceeding 59 Calendar Days |
| SIS Mean # of days | (D) | 340 | 0 | 0 | 0 | Mean time (in Calendar Days), for Revised System Impact Studies completed in Definitive Planning Phase II |
| Percentage > 59 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | 100% | 100% | 100% | Percentage of Interconnection Requests with Revised System Impact Studies in Definitive Planning Phase II exceeding 59 Calendar Days |

MISO Generator Interconnection Study Metrics

3.4.2.3 Final Interconnection System Impact Studies in Definitive Planning Phase III

3.4.2.3 Final Interconnection System Impact Studies in Definitive Planning Phase III

| | | 2021 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ SIS Completed | (A) | 0 | 46 | 0 | 67 | Number of Interconnection Requests that had Final System Impact Studies in Definitive Planning Phase III |
| SIS Completed > 44 days | (B) | 0 | 46 | 0 | 67 | Number of Interconnection Requests that had Final System Impact Studies in Definitive Planning Phase III exceeding 44 Calendar Days |
| Requests Ongoing SIS > 44 days | (C) | 24 | 69 | 73 | 0 | Number of Interconnection Requests with ongoing incomplete Final System Impact Studies in Definitive Planning Phase III exceeding 44 Calendar Days |
| SIS Mean # of days | (D) | 0 | 154 | 0 | 231 | Mean time (in Calendar Days), for Final System Impact Studies completed in Definitive Planning Phase III |
| Percentage > 44 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | 100% | 100% | 100% | Percentage of Interconnection Requests with Final System Impact Studies in Definitive Planning Phase III exceeding 44 Calendar Days |

MISO Generator Interconnection Study Metrics

3.4.2.4 Interconnection Facilities Studies in Interconnection Facilities or Connection Facilities

3.4.2.4 Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities

| | | 2021 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ IC FS Completed | (A) | 25 | 18 | 27 | 36 | Number of Interconnection Requests that had Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities |
| IC FS Completed > 90 days | (B) | 25 | 18 | 24 | 36 | Number of Interconnection Requests that had Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities exceeding 90 Calendar Days |
| Requests Ongoing IC FS > 90 days | (C) | 8 | 62 | 61 | 26 | Number of Interconnection Requests with ongoing incomplete Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities exceeding 90 Calendar Days |
| IC FS Mean # of days | (D) | 235 | 100 | 202 | 154 | Mean time (in Calendar Days), for Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities completed |
| Percentage > 90 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | 100% | 69% | 100% | Percentage of Interconnection Requests with with delayed Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities exceeding 90 Calendar Days |

MISO Generator Interconnection Study Metrics

3.4.2.5 Interconnection Facilities Studies in Network Upgrades

3.4.2.5 Interconnection Facilities Studies for Network Upgrades

| | | 2021 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ NU FS Completed | (A) | 1 | 15 | 6 | 0 | Number of Interconnection Requests that had Interconnection Facilities Studies for Network Upgrades |
| NU FS Completed > 90 days | (B) | 1 | 0 | 0 | 0 | Number of Interconnection Requests that had Interconnection Facilities Studies for Network Upgrades exceeding 90 Calendar Days |
| Requests Ongoing NU FS > 90 days | (C) | 0 | 0 | 30 | 31 | Number of Interconnection Requests with ongoing incomplete Interconnection Facilities Studies for Network Upgrades exceeding 90 Calendar Days |
| NU FS Mean # of days | (D) | 93 | 36* | 98 | - | Mean time (in Calendar Days), for Interconnection Facilities Studies for Network Upgrades completed |
| Percentage > 90 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | 0% | 83% | N/A | Percentage of Interconnection Requests with delayed Interconnection Facilities Studies for Network Upgrades exceeding 90 Calendar Days |

MISO Generator Interconnection Study Metrics

3.4.2.6 Interconnection Requests Withdrawn from Interconnection Queue

3.4.2.6 Interconnection Requests Withdrawn from Interconnection Queue

| | | 2021 | | | | |
|-------------------------------------|-----|----------|----------|----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Total Number Projects Withdrawn | (A) | 93 | 5 | 39 | 69 | Number of Interconnection Requests withdrawn |
| Projects Withdrawn Pre-Kickoff | (B) | 24 | 0 | 11 | 39 | Number of Interconnection Requests withdrawn before the start of the Definitive Planning Phase I |
| Projects Withdrawn DPP Phase I | (C) | 16 | 0 | 0 | 11 | Number of Interconnection Requests withdrawn from start of the Definitive Planning Phase I to Decision Point I window expired |
| Projects Withdrawn DPP Phase II | (D) | 50 | 0 | 25 | 16 | Number of Interconnection Requests withdrawn after the Decision Point I window expired to Decision Point II window expired |
| Withdrawn DPP Phase III & GIA Phase | (E) | 3 | 3 | 1 | 2 | Number of Interconnection Requests withdrawn after the Decision Point II window expired to execution of a Generator Interconnection Agreement |
| Withdrawn Post GIA Execution | (F) | 0 | 2 | 2 | 1 | Number of Interconnection Requests withdrawn after execution of a Generator Interconnection Agreement |
| Mean # of days from Queue Date | (G) | 678 | 1473 | 621 | 322 | Mean time (in Calendar Days), for withdrawn Interconnection Requests, from Application deadline date to when Transmission Provider withdrew from the queue |

MISO Generator Interconnection Study Metrics

3.4.2.1 Preliminary Interconnection System Impact Studies in Definitive Planning Phase I

3.4.2.1 Preliminary Interconnection System Impact Studies in Definitive Planning Phase I

| | | 2020 | | | | |
|------------------------------------------|-------------------|----------|----------|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ SIS Completed | (A) | 108 | 0 | 64 | 0 | Number of Interconnection Requests that had Preliminary System Impact Studies in Definitive Planning Phase I |
| SIS Completed > 120 days | (B) | 108 | 0 | 64 | 0 | Number of Interconnection Requests that had Preliminary System Impact Studies in Definitive Planning Phase I exceeding 120 Calendar Days |
| Requests Ongoing SIS | (C) | 277 | 102 | 194 | 272 | Number of Interconnection Requests with ongoing incomplete Preliminary System Impact Studies in Definitive Planning Phase I |
| SIS Mean # of days | (D) | 644 | 0 | 399 | 0 | Mean time (in Calendar Days from 45 days after Application deadline date), for Preliminary System Impact Studies completed in Definitive Planning Phase I |
| Percentage > 120 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | 100% | 100% | 100% | Percentage of Interconnection Requests with Preliminary System Impact Studies in Definitive Planning Phase I exceeding 120 Calendar Days |

MISO Generator Interconnection Study Metrics

3.4.2.2 Revised Interconnection System Impact Studies in Definitive Planning Phase II

3.4.2.2 Revised Interconnection System Impact Studies in Definitive Planning Phase II

| | | 2020 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|--------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ SIS Completed | (A) | 14 | 32 | 0 | 0 | Number of Interconnection Requests that had Revised System Impact Studies in Definitive Planning Phase II |
| SIS Completed > 59 days | (B) | 14 | 32 | 0 | 0 | Number of Interconnection Requests that had Revised System Impact Studies in Definitive Planning Phase II exceeding 59 Calendar Days |
| Requests Ongoing SIS | (C) | 97 | 100 | 100 | 139 | Number of Interconnection Requests with ongoing incomplete Revised System Impact Studies in Definitive Planning Phase II |
| SIS Mean # of days | (D) | 123 | 187 | 0 | 0 | Mean time (in Calendar Days), for Revised System Impact Studies completed in Definitive Planning Phase II |
| Percentage > 59 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | 100% | 100% | 100% | Percentage of Interconnection Requests with Revised System Impact Studies in Definitive Planning Phase II exceeding 59 Calendar Days |

MISO Generator Interconnection Study Metrics

3.4.2.3 Final Interconnection System Impact Studies in Definitive Planning Phase III

3.4.2.3 Final Interconnection System Impact Studies in Definitive Planning Phase III

| | | 2020 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|-------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ SIS Completed | (A) | 40 | 12 | 0 | 10 | Number of Interconnection Requests that had Final System Impact Studies in Definitive Planning Phase III |
| SIS Completed > 44 days | (B) | 40 | 12 | 0 | 10 | Number of Interconnection Requests that had Final System Impact Studies in Definitive Planning Phase III exceeding 44 Calendar Days |
| Requests Ongoing SIS | (C) | 0 | 0 | 25 | 11 | Number of Interconnection Requests with ongoing incomplete Final System Impact Studies in Definitive Planning Phase III |
| SIS Mean # of days | (D) | 93 | 66 | 0 | 176 | Mean time (in Calendar Days), for Final System Impact Studies completed in Definitive Planning Phase III |
| Percentage > 44 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | 100% | 100% | 100% | Percentage of Interconnection Requests with Final System Impact Studies in Definitive Planning Phase III exceeding 44 Calendar Days |

MISO Generator Interconnection Study Metrics

3.4.2.4 Interconnection Facilities Studies in Interconnection Facilities or Connection Facilities

3.4.2.4 Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities

| | | 2020 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ IC FS Completed | (A) | 50 | 32 | 41 | 3 | Number of Interconnection Requests that had Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities |
| IC FS Completed > 90 days | (B) | 47 | 31 | 41 | 3 | Number of Interconnection Requests that had Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities exceeding 90 Calendar Days |
| Requests Ongoing IC FS | (C) | 46 | 47 | 43 | 41 | Number of Interconnection Requests with ongoing incomplete Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities |
| IC FS Mean # of days | (D) | 121 | 156 | 159 | 225 | Mean time (in Calendar Days), for Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities completed |
| Percentage > 90 days per Total Complete | $(E)=(B+C)/(A+C)$ | 97% | 99% | 100% | 100% | Percentage of Interconnection Requests with with delayed Interconnection Facilities Studies for Interconnection Facilities or Connection Facilities exceeding 90 Calendar Days |

MISO Generator Interconnection Study Metrics

3.4.2.5 Interconnection Facilities Studies in Network Upgrades

3.4.2.5 Interconnection Facilities Studies for Network Upgrades

| | | 2020 | | | | |
|-----------------------------------------|-------------------|----------|----------|----------|----------|----------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Requests w/ NU FS Completed | (A) | 1 | 0 | 0 | 0 | Number of Interconnection Requests that had Interconnection Facilities Studies for Network Upgrades |
| NU FS Completed > 90 days | (B) | 1 | 0 | 0 | 0 | Number of Interconnection Requests that had Interconnection Facilities Studies for Network Upgrades exceeding 90 Calendar Days |
| Requests Ongoing NU FS | (C) | 1 | 1 | 1 | 0 | Number of Interconnection Requests with ongoing incomplete Interconnection Facilities Studies for Network Upgrades |
| NU FS Mean # of days | (D) | 235 | - | - | - | Mean time (in Calendar Days), for Interconnection Facilities Studies for Network Upgrades completed |
| Percentage > 90 days per Total Complete | $(E)=(B+C)/(A+C)$ | 100% | N/A | N/A | N/A | Percentage of Interconnection Requests with delayed Interconnection Facilities Studies for Network Upgrades exceeding 90 Calendar Days |

MISO Generator Interconnection Study Metrics

3.4.2.6 Interconnection Requests Withdrawn from Interconnection Queue

3.4.2.6 Interconnection Requests Withdrawn from Interconnection Queue

| | | 2020 | | | | |
|-------------------------------------|-----|----------|----------|----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | |
| Total Number Projects Withdrawn | (A) | 59 | 29 | 37 | 76 | Number of Interconnection Requests withdrawn |
| Projects Withdrawn Pre-Kickoff | (B) | 15 | 14 | 9 | 71 | Number of Interconnection Requests withdrawn before the start of the Definitive Planning Phase I |
| Projects Withdrawn DPP Phase I | (C) | 35 | 0 | 25 | 3 | Number of Interconnection Requests withdrawn from start of the Definitive Planning Phase I to Decision Point I window expired |
| Projects Withdrawn DPP Phase II | (D) | 2 | 11 | 0 | 0 | Number of Interconnection Requests withdrawn after the Decision Point I window expired to Decision Point II window expired |
| Withdrawn DPP Phase III & GIA Phase | (E) | 4 | 1 | 0 | 0 | Number of Interconnection Requests withdrawn after the Decision Point II window expired to execution of a Generator Interconnection Agreement |
| Withdrawn Post GIA Execution | (F) | 3 | 3 | 3 | 2 | Number of Interconnection Requests withdrawn after execution of a Generator Interconnection Agreement |
| Mean # of days from Queue Date | (G) | 689 | 639 | 447 | 156 | Mean time (in Calendar Days), for withdrawn Interconnection Requests, from Application deadline date to when Transmission Provider withdrew from the queue |