

Planning Advisory Committee
Summary of Review and Advice to Advisory Committee and Board of Directors
MISO Transmission Expansion Plan (MTEP20)
September 18, 2020

The Planning Advisory Committee, through its Sector representatives, has reviewed the draft MTEP20 report and provides the following summary advice to the Advisory Committee and the MISO Board of Directors with respect to the following aspects of the MTEP report.

This document contains the substantive comments received by MISO.

The comments received address the following areas:

- MTEP16 project withdrawal – Entergy LA Waterford to Churchill 230 kV line
- Transmission planning process

This document includes substantive comments from the following stakeholders:

- Occidental Chemical
- Louisiana Energy Users Group
- Texas Industrial Energy Consumers
- Environmental Sector

In addition, editorial comments were received from stakeholders during the review process. These comments, where applicable, were incorporated into the draft report and sent to the Board of Directors.

The following stakeholders sent editorial comments:

- WPPI Energy
- Prairie Power, Inc.
- Cooperative Energy
- Big Rivers Electric Corporation
- Hoosier Energy
- Southern Illinois Power Cooperative
- Entergy
- Environmental Sector

Summary of Stakeholder Comments and MISO Responses

Feedback Subject: Withdrawal of the Entergy Louisiana Southeast LA Project (Waterford to Churchill 230 kV line – MTEP16 project ID #12017)

Summary of Feedback Submitted by Occidental Chemical (OxyChem) and separately from Louisiana Energy Users Group and Texas Industrial Energy Consumers (LEUG & TIEC)

OxyChem, LEUG, and TIEC focus their comments on the withdrawal of the MISO Board approved Waterford to Churchill 230 kV line. This project was approved as an Economic Other Project in MTEP16. An Economic Other project is one that has costs recovered in the local pricing zone rather than regionally cost shared as with Market Efficiency Projects. The proposed 230 kV line would be located in the Amite South load pocket in Entergy Louisiana's transmission zone. At the time, MISO estimated the cost of the line project to be \$73.9M with a benefit-to-cost (B/C) ratio of 2.3. At the August 25, 2020 Sub-regional Planning Meeting (SPM) MISO informed stakeholders of the intent to recommend that the project be withdrawn from the MTEP based upon system changes that reduce the assessed B/C ratio to 0.2. With the increased cost estimates reported by Entergy this ratio is nearly zero.

The comments of all the parties primarily focus on the perceived lack of transparency of the process by which project withdrawals are considered, and the short time frame provided for stakeholders to provide comments on the withdrawal (August 25-September 2).

The commenters also expressed concerns about the impacts of the project withdrawal on project approvals that occurred subsequent to MTEP16.

In addition to the questions about the process and the downstream impacts of the project withdrawal, the commenters asked a number of clarifying questions around the analysis that MISO presented on August 25.

OxyChem also provided some specific suggestions around process changes and additional analysis that should be done.

MISO SUMMARY RESPONSE TO OXYCHEM AND LEUG/TIEC

MISO staff (staff) appreciates these comments to the MTEP20 report and process.

Staff agrees that the amount of time stakeholders have had to understand the MISO analyses supporting the withdrawal recommendation was limited. This occurred because, owing to the rigor applied to the determination of whether good cause existed to proceed with withdrawal, staff only recently determined that sufficient cause existed to bring the decision to stakeholders. In order to provide stakeholders with more opportunity to understand the staff evaluation, an additional Technical Study Task Force meeting is being scheduled for early October.

With respect to the numerous other questions posed by these three stakeholder entities, we summarize the MISO response as follows, and provide increased elaboration around the specific questions asked following the verbatim comments included later in this document.

1. MISO followed its tariff in posting and reporting status updates for the project since its approval in MTEP16. This included monitoring changes in cost projections provided by Entergy.
2. Although staff found that the change in cost was not a primary driver for the need to withdraw the project, the team did review the reasons for increased costs of this particular project with Entergy.

Those costs were then compared to other projects and staff original estimates. Staff found that this project appears to be unique in terms of its cost estimates compared to other area projects but does not have sufficient basis to dispute the expected high costs of this project.

3. MISO reviewed the need for the project given subsequently approved reliability driven upgrades and found the benefit to cost to be eroded to near zero – even at the original cost estimates.
4. MISO thoroughly reviewed the forward-looking reliability impacts of withdrawal of this reliability project and found no “downstream” dependencies impacting system reliability or other approved projects.

While MISO staff believes that it is appropriate to withdraw this project, staff also understands that there are a number of lingering questions about transmission needs associated with the load pockets in MISO South. As we commence work on the Long Range Transmission Plan, these potential needs will be an area of focus.

Verbatim Stakeholder Comments

Feedback Subject (OxyChem): Occidental Chemical’s position on the withdraw of Entergy Louisiana Southeast LA Project (Waterford to Churchill 230 kV line – MTEP16 project ID #12017

Occidental Chemical (“OxyChem”) welcomes the opportunity to provide these substantive comments as feedback to address the MISO proposal to withdraw the Entergy Louisiana Southeast LA Project (Waterford to Churchill 230kV line), which was approved by the MISO Board in MTEP16. However, OxyChem is disturbed with the lack of transparency surrounding the re-evaluation of this project and the compressed timeframe MISO has given stakeholders to respond. *The proposal to withdraw the Southeast LA Project was presented to stakeholders for the first time during the recent MTEP20 South Sub-Regional Planning Meeting on August 25, 2020* and MISO’s unwillingness to extend the time for stakeholders to comment on this proposal beyond the September 2, 2020 deadline is disingenuous to the goal of receiving “meaningful” feedback.

OxyChem is the owner of a large co-generation unit located near the Waterford substation in the Amite South Region of Entergy Louisiana, which provides power to its host chemical facility load and to the MISO wholesale market. It is also the owner of two other chemical facilities, which receive retail power from Entergy Louisiana in the New Orleans and Baton Rouge area. Therefore, OxyChem has a keen interest both as a wholesale power provider and as a retail power consumer, in the proper execution of MISO’s Transmission Expansion Planning (MTEP) process. The MTEP has been designed to ensure that transmission projects essential to meeting market efficiencies and reliability needs for generators and consumers in the MISO footprint are planned and put into service in a timely manner. To that end, OxyChem has serious concerns with the process that led to the outcome of the MTEP20 as it relates to MISO’s proposal to withdraw the MTEP16 Board approved Southeast LA Project (Waterford to Churchill 230kV line- “Waterford Line”) from Appendix A of MTEP20.

The MISO Board approved the Waterford Line as an Economic Other Project in MTEP16. The proposed 230kV line was located in the Amite South load pocket in Entergy Louisiana’s transmission zone. At the time, MISO estimated the cost of the project to be \$74MM with a B/C ratio of 2.3. In addition to alleviating constraints in Amite South, it increased import capability into the New Orleans area (DSG load pocket) by 600MW. Now, **four years later**, we learn that MISO has re-evaluated the project, at the request of Entergy, and has concluded that the B/C ratio is now 0.2 and the cost of the line, which has yet to begin construction, is in excess of \$107MM.

PROCESS ISSUES/QUESTIONS FOR MISO:

According to Chapter 1 of the MTEP20 draft report, “MISO’s transmission responsibilities include the monitoring of previously approved Appendix A projects.” Attachment FF, Section I (C) (11) of the MISO Tariff states that “The status of all project facilities recommended for implementation in the MTEP shall be reported to the Transmission Provider on a quarterly basis.” The tariff further states that the Transmission Owners (“TOs”) are required to submit reports “...that include the project expenditures to date.”

1. Over the course of the four years that Entergy has submitted its quarterly reports, did they ever report any project expenditures? If not, was there a process in place that would require MISO to ask why the project had not been started?
2. Prior to 2020, did MISO receive any reports from Entergy over the course of four years that alerted them to the fact that Entergy had concerns about the revised benefits of the project reducing the B/C ratio below the 1.25 threshold? How much of the 46% increase in cost affected the B/C ratio and how is it that MISO so miscalculated the cost of the project to begin with?
3. Where in the MISO tariff is the process for MISO’s obligation of “monitoring previously approved Appendix A projects” described? Section IX of Attachment FF, “Variance Analysis” goes into great detail about the process to review projects built by Selected Transmission Developers (“STDs”) if the project cost increases by 25% or if there are other impacts that affect the B/C ratio, but it does not appear that the same detailed process is applied to the TOs’ projects that are not subject to competitive bidding.

Given that the Waterford Line was approved by the MISO Board in MTEP16, it has been included in all of the Generation Interconnection Analysis, Reliability Project Analysis, Deliverability Tests, Economic Efficiency Analysis and any System Analysis MISO has conducted over the past four years.

1. How many projects has MISO approved over the last four years with the Waterford Line included in its model since 2016? Did MISO re-evaluate the benefits of those projects by removing the Waterford Line prior to making its decision to withdraw the line from Appendix A and if so, have any of the benefits of those projects- to either build or not build been affected? Does MISO have those analyses available for stakeholders to review?
2. If MISO has not done the required re-evaluation, why not? If MISO has not re-evaluated projects including those approved by the Board in the MTEP17 through MTEP20, which included the Waterford Line, does MISO at least have a plan on how and when to perform such re-evaluation?

In its presentation at the South Sub-Regional Planning meeting on August 25, 2020, MISO mentioned that there were several projects that are or will be in service, which caused the B/C to decrease since the MTEP16 approval. However, there was no evidence presented as to how those projects impacted the B/C ratio and in some instances, a couple of projects were already included in the MTEP16 congestion studies performed as part of the Waterford line project approval

1. In its presentation on August 25, 2020 MISO states that the Waterford to Vacherie line project and the Saint Charles Generation Station “provided further congestion relief” in the area thus impacting the need for the Waterford Line. However, Waterford-Vacherie was approved in the MTEP15 (and has yet to be completed) so it was included in any B/C analysis of the Waterford Line and the St Charles Generation Station was also included in the MTEP16 model as a sensitivity when the Waterford Line was studied (See the MISO presentation to the Economic Planning Users Group “Robustness Testing-Amite South/DSG” dated 7/14/16). How does MISO defend its statement of those projects having “new” impacts leading to the decrease in the B/C ratio?
2. In the August 25 ,2020 MTEP20 presentation at the South Sub-Regional Planning meeting, MISO also states that the Snakefarm-Labarre upgrade (Generation Interconnection Project) and the Little Gypsy-Claytonia 115kV upgrade (Base Line Reliability Project) address the same congestion concerns as the Waterford Line. However, these projects are minor upgrades in comparison to the 230kV Waterford line project and these minor upgrades do not provide the additional 600MW of import capability into the chronically congested DSG load pocket during peak loading conditions. Additionally, the Little Gypsy-Claytonia 115kV project is not scheduled to be completed before December 2022. Given Entergy Louisiana’s track-record to date, we can only hope MISO will be diligent in not letting this project follow the path of the Waterford Line.

When the Waterford Line was analyzed in the MTEP16, there were five weighted futures. The MTEP20 analysis was conducted using four non-weighted futures.

1. When MISO re-evaluated the Waterford Line, did it do so against the backdrop of the MTEP20 four non-weighted futures, which would undoubtedly lead to different results than using the five weighted futures used in MTEP16? If so, how much of an impact on the B/C decline is attributable to the re-evaluation having been conducted with a completely different set of futures and no weighting? Is it plausible that most, if not all the MTEP16 projects could face the same decline if they were analyzed today in the manner the Waterford Line has been analyzed?

These are but a few of the concerns that OxyChem has with what it perceives as a flawed MISO planning process as it applies to projects approved by the MISO Board and yet left in the hands of the local TOs to complete as Economic Other Projects or any other non-qualifying MEP project. MISO does not have the tools available under the Tariff to manage these projects effectively and has no well-established process to hold TOs accountable as they have for projects built by STDs. OxyChem remains concerned about the integrity and fairness of the MISO MTEP process as it pertains to projects left up to the control of member TOs. It appears to leave MISO planners vulnerable to the desires of the incumbent TOs and the TOs' plans for efficiencies to be created by new generation build vs. transmission solutions.

In conclusion, OxyChem would offer that our pointing out issues of concern with the re-evaluation process that led to MISO's decision to withdraw the Waterford Line from MTEP20, are to no avail if we do not also offer recommendations to address our concerns going forward. We do want to ensure that transmission projects essential to meeting economic efficiencies and system reliability are developed through the MTEP process. MISO's re-evaluation process of MISO Board approved projects must be as transparent and detailed as the process that got the project in the MTEP Appendix A in the first place. To that end OxyChem offers the following recommendations: 1) Create a Variance Analysis process for Economic Other Projects with estimated costs above \$5,000,000 2) Improve the project cost estimation process to prevent the extremely large variance we saw in this project (46% increase) 3) At a minimum re-evaluate the MISO South projects in Appendix A and Appendix B of MTEP2020 without the Waterford Line project included in the model and finally 4) In light of the proposed withdrawal of the Waterford Line project, perform a congestion study (MCPS) for Amite South/DSG region in the MTEP21 cycle.

Feedback Subject (LEUG & TIEC): Louisiana Energy Users Group and Texas Industrial Energy Consumer's position on the withdrawal of Entergy Louisiana Southeast LA Project (Waterford to Churchill 230 kV line – MTEP16 project ID #12017)

The Louisiana Energy Users Group ("LEUG") and Texas Industrial Energy Consumers ("TIEC") appreciate this opportunity to provide feedback to the Midcontinent Independent Transmission System Operator, Inc. ("MISO") with respect to MTEP20. These comments focus on MISO's sudden proposal to withdraw the Louisiana Waterford to Churchill 230 kV Other Economic Project that was approved by the MISO Board of Directors in MTEP16 for construction by Entergy, the lack of process and transparency by MISO in evaluating and pursuing such withdrawal, and questions that result from MISO's sudden change of direction regarding the project.

In its presentation "MTEP20 Project Information MISO Louisiana" at the August 25, 2020 MISO South Subregional Planning Meeting, MISO suddenly and unexpectedly proposed to withdraw the Waterford to Churchill 230 kV Other Economic Project that was approved by the MISO Board of Directors in MTEP16 with an in-service date of January 1, 2022. MISO has only given stakeholders eight calendar days to provide feedback on this proposal.

LEUG and TIEC are greatly concerned with respect to the manner and timing of this project withdrawal proposal as well as the issues it raises with respect to the impact on MISO planning work in MTEP17,

MTEP18 and MTEP19 where the Waterford to Churchill project would have been reflected in the analysis that would have been performed by MISO for 2022 and beyond.

If withdrawal of the already approved Waterford to Churchill 230 kV project was to be evaluated in MTEP20, this should have been indicated by MISO much earlier in the MTEP20 process to give adequate time for stakeholder review including full vetting of MISO's analysis that suggests withdrawal of the project may be appropriate. MISO springing this on stakeholders at the August 25th South SPM Meeting and only providing eight business days to provide comments on the proposal will not provide adequate time for stakeholder review including a full vetting of MISO's analysis.

In addition, before proceeding with its proposed recommendation that the project be withdrawn, MISO should have provided a process that addressed, at a minimum, questions such as:

- What impact would the withdrawal of the MTEP16 Waterford to Churchill project have on the adequacy of the transmission projects subsequently approved by the MISO Board of Directors in MTEP17, MTEP18 and MTEP19?
- To what degree do the Snakefarm to Labarre 230 kV and Little Gypsy to Claytonia 115 kV projects cited by MISO, along with the planned Waterford to Vacherie 230 kV upgrade project, actually reduce transmission congestion and/or increase import capability into the Downstream of Gypsy (DSG) load pocket?
- What is the current status of the planned Waterford to Vacherie 230 kV project?
- What are the differences in the resource assumptions within Amite South and DSG load pockets in the MTEP20 futures versus those used in the MTEP16 futures? To what extent did this drive the results in MISO's new analysis? Are the MTEP16 resource assumptions for Amite South and DSG more or less likely than the MTEP20 resource assumptions for Amite South and DSG?

In addition, the following should also be addressed:

- Has MISO in the past re-evaluated projects approved by the MISO Board of Directors and recommended that they be withdrawn? If so, what were those projects and what triggered the re-evaluation?
- What is the MISO process for re-evaluating projects that have already been approved by the MISO Board of Directors?
- When did Entergy first approach MISO with respect to having MISO re-evaluate the need for the Waterford to Churchill 230 kV project, was Entergy involved in the reevaluation process, and why were other stakeholders not included in the reevaluation process?
- What new information has been provided by Entergy to MISO regarding the project, and why has the information not been shared with other stakeholders including supporting documentation?
- What actions has MISO taken to date with respect to ensuring the Waterford to Churchill 230 kV project is and was being pursued by Entergy with due diligence as required under the MISO Transmission Owners Agreement?

In the end, irrespective of whether it may be appropriate for there to be a recommendation to the MISO Board of Directors regarding the Waterford to Churchill 230 kV project that was approved in MTEP16, such a recommendation should not occur unless and until adequate time has been provided for stakeholder review of the proposal including a full vetting of MISO's new analysis and answers provided to critical questions such as those outlined above.

The silence of LEUG and TIEC with respect to other aspects of MTEP20 should not be interpreted as a tacit endorsement of any position being taken, or recommendation being made, by MISO in MTEP20.

DETAILED MISO RESPONSE

Regarding the stakeholder questions addressing the monitoring of approved projects, MISO adhered to tariff requirements. Consistent with the tariff, as an approved locally recovered project¹, MISO has posted reported quarterly status updates for this project to the MISO website. MISO also reports annually to the MISO Board of Directors on the overall status of projects approved in prior MTEP cycles. As Entergy reported on this project and MISO monitored those reports staff noted that the Entergy estimated cost of the project was rising steadily from the initial Entergy estimate for the line of \$75.6M in 2017 to \$108M by mid-2019. MISO staff's MTEP scoping level cost estimate for the line of \$73.9M was close to Entergy's initial estimate. Entergy made no changes to this cost estimate since mid-2019, nor in the expected in-service date of June 2022.

In late 2019, Entergy informed staff that the costs of the project were significantly higher than originally estimated and that they had concerns about whether the benefits originally attributed to the project remained. In early 2020, MISO inquired to further understand the nature of the expected cost increases. Entergy has attributed the increases to extremely poor soil conditions, special foundation construction requirements, remote locations with marsh/swamp which require special construction techniques, wetland impact and pipeline crossings and specialized conductors. These conditions are beyond those that both Entergy and MISO expected at the time of the original estimates by both parties.

As staff reviewed the original congestion relief benefits for the project we discovered that two different and smaller in scope projects in the same area had proceeded in MTEP17 for different reasons, one as a Generator Interconnection Project (Snakefarm to Labarre 115 kV upgrade) and one as a Baseline Reliability Project (Gypsy to Claytonia 230 kV upgrade). When staff reviewed the benefits of the original Waterford to Churchill project with these two projects in service, even at the original cost estimate, the currently projected B/C has dropped to 0.2 which is well below the threshold level of 1.25 for an Economic Other project. While the current evaluation uses best available information including the expected MTEP20 futures, staff analysis found that the near total erosion of the congestion related benefit is due to the two subsequent projects that address the same congested path that the withdrawn project addressed rather than the future scenarios analyzed. The combined cost of these subsequently approved projects is approximately \$13M compared to the cost of the withdrawn project of more than \$108M.

Stakeholders state that the withdrawn project had shown increased import capability into the area of 600 MW and question whether this would be provided by the smaller projects that have been approved. Staff has not evaluated what the expected import capability is under the recommended configuration but the import capability into the area was not a decisional factor in justifying the original decision on the project now proposed for withdrawal.

Regarding staff representations at the August meeting of the beneficial effects in the area of the 2019 950 MW of newly installed generation at St. Charles and the previously approved Waterford to Vacherie 230 kV line upgrade, we clarify that these system additions will generally reduce congestion on outlet lines from Waterford. These additions do not impact the evaluated reductions in benefits of the withdrawn project.

MISO has addressed concerns about the “downstream” impacts of withdrawing a project. Potential cascading effects of retroactively changing the planned topology of the grid can introduce uncertainty in the

¹ Economic Other projects are projects that do not qualify for regional cost sharing as a Market Efficiency Project (MEP) does, and therefore are recovered locally and are not eligible for competitive development.

need and sufficiency of projects subsequently approved. This concern has to be balanced with recognition that in limited instances where system conditions and/or project costs substantially change, or original driving needs are known to no longer exist, or the project is otherwise determined to be infeasible, and where the withdrawal will not cause the system to perform outside of reliability design criteria, the withdrawal is appropriate. In this case, MISO evaluated more than 33,000 single and multiple facility contingent events over a five-year summer peak condition model to be certain that the withdrawal of this Economic project will not result in any system reliability issues. This assures that projects approved in MTEP17, MTEP18 and MTEP19 remain sufficient to address area reliability needs.

Staff disagrees that every project approved since MTEP16 must be newly evaluated for benefits as a result of the withdrawal. The vast majority of projects approved have been for reliability purposes and the reliability needs wouldn't be reduced by the withdrawal of an economic project. There have been a limited number of economic projects approved since MTEP16 and all of these are remote from the Waterford to Churchill project. There is no need to re-evaluate these other economic projects unless conditions noted provide a reason to do so.

MISO also disagrees with the representation that the outcome of projects is left in the hands of the Transmission Owners. Member TOs have an obligation to use good faith efforts to proceed with approved projects. Project withdrawals do occur for good cause from time to time and data on these projects are provided to the BOD annually as a part of overall MTEP project status reports. As of MTEP19, 326 projects have been withdrawn since MTEP03. This represents 7% of the total of more than 4,500 projects approved by MISO over that period and less than 6% of the total approved project cost of \$36B.

No project is withdrawn from the approved MTEP without scrutiny by MISO staff to ensure that the withdrawal is warranted and that there are no system reliability impacts caused by the withdrawal. MISO has performed this review for the Waterford to Churchill project and found no adverse effects on the reliability of the transmission system.

Staff thanks OxyChem for the specific recommendations they have provided and responds as follows:

- 1) Create a Variance Analysis process for Economic Other Projects with estimated costs above \$5,000,000

Staff believes that the present tariff supported processes are sufficient in not requiring the same enhanced level of project reporting and Variance Analysis for locally cost recovered projects as for regionally cost shared projects. If there is sufficient stakeholder interest to pursue this, however, staff will give this recommendation further consideration. As background, enhanced project reporting and the application of Variance Analysis to regionally cost-shared projects were enhancements to MISO's Order 1000 compliant developer qualification, selection, and monitoring processes to provide more transparency into the progress and costs of regionally cost shared projects since the project costs would likely be recovered across more than the single local State with jurisdiction over approval and recovery of the project.

- 2) Improve the project cost estimation process to prevent the extremely large variance we saw in this project (46% increase)

The MISO cost estimation process with few exceptions has tracked closely with developer estimates and we will continue to seek improvements and expand our capabilities. Each MTEP cycle, MISO solicits stakeholder input into the assumption and cost information in the MTEP Cost Estimation Guide used by MISO to develop cost estimates for projects in MISO. No other RTO has a cost estimation guide, and we have received supportive comments from industry with respect to our guide. Secondly, when MISO is considering alternatives for a transmission issue, MISO posts a detailed scoping level cost estimate and assumptions and then solicits input from MISO

stakeholders. There are multiple opportunities for peer review. Following MTEP16, MISO revised its process to increase our engagement with the Transmission Owner, and when it is determined that the facilities would not be eligible for the Competitive Transmission Process the initial estimate will be provided by the Transmission Owner and MISO will peer review it.

- 3) At a minimum re-evaluate the MISO South projects in Appendix A and Appendix B of MTEP2020 without the Waterford Line project included in the model

Staff has already evaluated the impact of the project withdrawal on the adequacy and appropriateness of all proposed MTEP20 projects in MISO South as described above.

- 4) In light of the proposed withdrawal of the Waterford Line project, perform a congestion study (MCPS) for Amite South/DSG region in the MTEP21 cycle

The MTEP21 and subsequent cycles will be devoted to development of the Long Range Transmission Plan and this work will include analysis of the transmission needs associated with the load pockets in the South region.

Feedback Subject (Non-member sector): ENVIRONMENTAL/OTHER STAKEHOLDER ORGANIZATIONS' COMMENTS ON THE DRAFT MTEP20 REPORT

SUMMARY OF FEEDBACK

The Environmental/Other Stakeholder Organizations' (herein Commenters) provided feedback on several areas to the MTEP report. This wide-ranging feedback submittal falls into three general categories:

1. Concern with the planning process, including how integrated plans across different need drivers can be accomplished
2. Concerns about the speed and frequency of long range transmission planning
3. Specific editorial comments related to the MTEP report

The Commenters raise a number of concerns with respect to the ability of the MISO planning process to produce the best planning outcomes for consumers. The Commenters focus many of their comments on the lack of alignment or integration of the reliability, generator interconnection, and economic planning processes. The Commenters argue that because of this lack of alignment insufficient opportunity is provided for the identification and development of meaningful alternative solutions.

The Commenters also point out that it has been a number of years since MISO has engaged in a regional planning initiative that considers multiple need drivers. They argue that MISO is behind from a timing perspective and that is causing a delay in the resource transition goals of the MISO membership.

The Commenters highlight that the majority of projects approved in the MTEP20 are in the "Other" category. Because "Other" projects make up such a large portion of the overall transmission investment they should be more affirmatively defined in the tariff and that more scrutiny overall should be applied to those projects. The Commenters question whether or not the MISO process appropriately considers alternatives for projects in the "Other" category.

The Commenters raise concerns with respect to the availability of modeling data for non-members. They note that this limits non-members' ability to review models and fully participate in the planning process.

MISO SUMMARY RESPONSE

MISO appreciates the process improvement feedback from the Commenters. This input will inform not only improvements to the MTEP20 report, but also future efforts for MTEP21 and beyond. As most of the Commenters feedback speaks to process improvements and planning initiatives, MISO would like to highlight two ongoing areas of focus.

First is the work being conducted through the Coordinated Planning Process Task Team (CPPTT). The CPPTT seeks to identify areas of the MISO planning process that can be better aligned so that the best overall planning outcomes are developed. MISO is working with stakeholders through the CPPTT to evaluate improvements to the planning processes.

Second is the Long Range Transmission Planning initiative, or LRTP. The LRTP initiative is intended to develop a comprehensive plan based on the Futures scenarios and expectations of the MISO membership. The LRTP will build upon information gained from current studies (Renewable Integration Impact Assessment (RIIA), North-South Market Congestion Planning Study, Michigan Import, and North Regional Transfer Study).

These two initiatives, LRTP and CPPTT, are highly related and will inform each other over time. The CPPTT is a valuable near-term process improvement effort. The LRTP is a longer-term strategic initiative that considers resource additions, reliability, and economic drivers all in one approach.

With respect to the editorial comments, MISO thanks the Commenters for that input. MISO will consider these suggestions as we work to update the MTEP report for the next posting cycle.

Verbatim Stakeholder Comments**Feedback Subject (Non-member sector): ENVIRONMENTAL/OTHER STAKEHOLDER ORGANIZATIONS' COMMENTS ON THE DRAFT MTEP20 REPORT**

MTEP20 Report Vol. 1, p. 9: Models are available to stakeholders with security measures as provided for in the Transmission Planning Business Practices Manual. MISO provides opportunity for stakeholders to review and comment on the posted models before commencing planning studies.

Environmental Sector Comment: Models are not available to non-members, which limits the environmental sector's ability to meaningfully participate in the MTEP processes. We appreciate MISO's willingness to work with our sector to gain access to the models, input/output files, and raw data results.

MTEP20 Report Vol. 1, p. 11: Other - Projects included in MTEP19 [sic] which do not qualify as Baseline Reliability Projects, New Transmission Access Projects, Targeted Market Efficiency Projects, Market Efficiency Projects, or Multi-Value Projects.

Environmental Sector Comment: The "Other Project" category should be defined by what this category of projects is meant to provide (in terms of benefits) or resolve (in terms of identified transmission issues). It currently is defined by what it is not. Affirmatively defining this important category is especially true given that the size of Other Projects now vastly overshadow all other categories of projects in terms of both costs (\$2.8B vs \$1.2B) and number (345 vs. 168 projects).

MTEP20 Report Vol. 1 p. 13: Of the 56 projects in MTEP20 that cost \$20 million and above in all categories, 50% of those are categorized as Other to specifically address localized reliability issues.

Environmental Sector Comment: The fact that “Other Projects” now make up 50% of larger (< \$20 million) MTEP20 projects should be a signal that these projects warrant further scrutiny for their potential to be consolidated or subsumed into projects that deliver multiple benefits or solve multiple issues. This is a large amount of customer dollars spent on an ambiguously defined category of bottom-up projects.

Also, throughout Vol. 4, MISO only addresses “alternatives considered” for BRP projects, not for “Other” projects. Why isn’t MISO considering alternatives for Other Projects, especially the larger ones?

MTEP20 Report Vol. 1, p. 15: Thirty-seven percent of MTEP facility costs go toward line upgrades, which include rebuilds, conversions and relocations. Eleven percent of facility costs are dedicated to new lines on new right-of-way across the MISO footprint.

Environmental Sector Comment: Forty-eight percent of the MTEP20 costs are for line upgrades or new lines. Did MISO evaluate those proposed lines in light of other needs in the same area (e.g., interconnections and congestion)? If there is insufficient time to do such an analysis, we recommend the MTEP20 Report recognize that limitation and the need for predictable bottom-up projects to be submitted to MISO sufficiently in advance to allow such an analysis. The more projects evaluated within the bottom-up process, the more opportunity MISO has to design larger and more cost-effective solutions that would address multiple needs.

MTEP20 Report Vol. 1, p. 15: Eighty-six percent of MTEP20 projects are declared to go into service by the end of 2023, ninety-five percent by the end of 2024.

MTEP20 Report Vol. 1 p. 17: [Appendix B] generally occurs when the preferred project does not yet need a commitment based on anticipated lead-time and there is still some uncertainty as to the prudence of selecting this project over an alternative project given potential changes in projected future conditions. MTEP Appendix B is limited to Baseline Reliability Projects and Other Projects and will be reviewed by MISO in subsequent cycles.

Environmental Sector Comment: When submitting predictable future projects, the TO’s must provide more lead time to MISO to allow for an evaluation of larger projects that could address multiple needs. Evaluating projects in Appendix B for possible consolidation is one option. Even better would be to extend the planning horizon for bottom-up projects to beyond five years. If the TO’s begin to submit projects with a predictable need between years five and 15, MISO may need to redefine Appendix B.

MTEP20 Report Vol. 2 p. 1: With the shift away from dispatchable generation close to load centers to remote variable energy resources, the transmission system no longer serves the same resources for which it was designed, and transmission upgrades are needed to enable integration of new generation facilities.

Environmental Sector Comment: Transmission upgrades are needed to enable integration of new generation facilities “and to capture the wide ranging benefits of those resources, including low-cost energy, economic development, pollution and carbon emission reductions, etc.” We recommend that MISO add the quoted text into the MTEP20 Report.

MTEP20 Report Vol. 2 p. 2: Wind has comprised a large portion of the interconnection queue volume in the last decade while solar resources have emerged more recently in part due to advances in solar technology and escalating transmission costs associated with wind development.

Environmental Sector Comment: The escalating transmission costs associated with wind development--while sometimes reflective of appropriate price signals to developers--at this juncture, is because wind generators are unable to cost-effectively connect to the grid. Accordingly, we urge MISO to include in the report an explanation that the decline in wind generation-interconnection applications is not due to solar technical advances outpacing wind or the due to the lack of interest in low-cost wind but instead is due to a regional transmission system that cannot accommodate these resources.

MTEP20 Report Vol. 2, p. 3: This broad regional approach to transmission planning [MVPs] recognized the benefits of a regional plan that would result in the most cost-effective transmission investment rather than an incremental build-out resulting from the generation interconnection process. ...As the industry transitions away from traditional central station generation to more dispersed and variable energy resources, transmission investment will be needed to facilitate the change and support continued reliability. A comprehensive approach to system planning and resource interconnection recognizes broader benefits of transmission investment while facilitating resource evolution in a timely manner.

Environmental Sector Comment: We agree that MISO needs a regular comprehensive approach to “system planning and resource interconnections,” which MISO does not currently have. MISO’s current standard operating procedure (SOP) for annual planning reflects an “incremental build-out resulting from the generation interconnection process.”

Given the speed and degree of changes in the generation portfolio that are expected between now and 2050, MISO needs to change its SOP for planning so that we do not find ourselves making up for lost time every ten years, i.e. every ten years, MISO initiates another long-range transmission plan (LRTP) that designs solutions which take 10-15 years to build, and then MISO goes back to its SOP for another ten years when MISO starts another LRTP. We urge MISO to change its SOP so that MISO is conducting a “comprehensive approach to system planning and resource interconnections” year-after-year.

MTEP20 Report Figure Located on Vol. 2, p. 3:

See Figure *Entitled MISO Transmission Investment for Interconnections*

Environmental Sector Comment: We recommend that the MTEP20 Report include the following:

- (1) A brief summary of the current estimates of the cost-benefits for the MVP projects;
- (2) A specific discussion of the figure entitled DPP Cycle for GI Regions explaining the link between MVP being fully subscribed and this increase in generation interconnection costs; and
- (3) A “threshold” line on the figure showing the point at which projects typically view interconnection costs as prohibitive (in \$/MW installed).

MTEP20 Report Vol. 2 p. 4: Due to the long lead time of constructing new transmission infrastructure (identification of project, design, regulatory approval, construction, and energization), effective transmission planning must occur nearly 10 years prior to a significant transmission need, in most cases. To address this, MISO has developed a process to prudently plan transmission over a 10 - to 20-year period that captures a wide array of potential resource fleet changes and conditions due to political, economic, technological, industrial, commercial, and consumer trends. This process utilizes multiple planning scenarios, or “Futures” to bookend the spectrum of potential changes before they happen.

Environmental Sector Comment: We applaud MISO’s announcement during the August PAC meeting regarding its initiation of LRTP. But MISO’s process of identifying long-range transmission needs has not been done effectively since the MVP initiative. Planning the grid that will be necessary to meet states’, utilities’ and customers’ needs of 2030, 2040 and 2050 must be done year-after-year.

MTEP20 Report Vol. 2 p. 9: MISO performs generator deliverability analysis as a part of the annual MTEP process to ensure continued deliverability of generating units with firm service, including Network Resource Interconnection Service. The generation deliverability analysis results in the identification of projects which mitigate transmission system constraints that restrict generation output below the established network resource amount. Results of the assessment are determined on an analysis of near-term (five-year) summer peak scenario.

Environmental Sector Comment: Because this section, § 2.5, comes directly after the section discussing treatment of new resources, § 2.5 should clarify that the generator deliverability analysis is limited to existing resources with firm service, not new or planned resources.

MTEP20 Report Vol. 3 p. 1: Many stakeholders share the position that now is the time for MISO to take action to ensure that the transmission grid is positioned to reliably and cost effectively enable the transitions that are occurring.

Environmental Sector Comment: While we appreciate this sentiment, the draft MTEP20 Report fails to recognize that a lack of action (and resulting lack of transmission investments) is currently a real barrier to this transition. Now actually is not the time to do this; yesterday was the time to do this.

It is worth MISO stressing the urgency of taking action now, not just the need. It is also worth recognizing that every year, MISO should be taking action “to ensure the transmission grid is positioned to reliability and cost effectively enable the transitions that are occurring.”

MTEP20 Report Vol. 3 p.1: Regional planning must:

- *Ensure the system is planned to be reliable, secure, and efficient over the entire planning horizon.*
- *Address differences across the MISO region.*
- *Holistically incorporate reliability and economic planning with future generation needs and expectations.*

Environmental Sector Comment: As the sponsor of the Consolidated Planning Integrated Road Map Issue (IR90), the Environmental Sector is delighted to see that MISO recognizes the need for “holistic” planning and looks forward to working with MISO and all of the stakeholders to evaluate improvements to MISO’s planning processes. Improving the regional planning process is also an urgent need.

MTEP20 Report Vol. 3 p. 1: While there are no proposed Appendix A projects in MTEP20 resulting from these investigations [North-South Interface, North Region Targeted Study, Michigan Capacity Import/Export Limit Study, the efforts performed provide a significant informational base going into the next planning cycle.

Environmental Sector Comment: We understand that the results of these investigations will provide, in part, the basis for MTEP21 and we look forward to seeing some concrete recommendations for Appendices A and B addressing the needs identified in these three investigations.

Given the amount of effort put into these three initiatives, the Environmental Sector hoped that some of the information could have been used in MTEP20 to design solutions for the needs identified.

North South Study:

MTEP20 Report Vol. 3 p. 3: Although MISO concluded the North-South Interface Study in the spring of 2020 with the MTEP19 project scope, MISO anticipates further analysis in MTEP21. The three main reasons for concluding the current study are (1) MISO has continuously collaborated with SPP and The Joint Parties and plans to continue that communication into the MTEP21 time period (2) Stakeholders would like MISO to consider benefit metrics beyond APC savings and avoided settlement costs to capture all of the benefits a transmission solution would provide (3) At the time of conclusion, the Tariff updates which included settlement agreement cost avoidance as a benefit metric was still pending FERC approval.

Environmental Sector Comment:

The Environmental Sector concurs that any benefit-cost analysis must “capture all of the benefits a transmission solution would provide.” That same approach should also be applied to NTAs.

However, the Environmental Sector does not believe the current metrics included in Attachment FF are sufficient to capture the “all of the benefits” provided by both transmission and NTAs. Accordingly, we urge MISO (and OMS) to evaluate new benefit metrics in the cost-allocation process that will likely occur in 2021. The Environmental Sector and the Clean Grid Alliance have submitted proposed benefit metrics in the past and we plan to develop updated proposals for consideration by the MISO stakeholders.

In addition to creating new benefit metrics, MISO must also change how it calculates benefit metrics. While applying benefit metrics, MISO should base its evaluation on expected future conditions and benefits based on the future projected capacity mix of more wind and solar. The dispatch model and ensuing energy/operational costs, without adequate transmission, will very likely result in reduced energy prices and increased potential for significant curtailment.

MTEP20 Report Vol. 3 p. 4: Outlook/Next Steps Study findings [from the North South Interface] will be summarized as they are determined.

Environmental Sector Comment: Given the rapid state of change in the MISO queue and rapidly evolving technologies (solar, storage, hybrid), please confirm in the MTEP20 Report that MISO will maintain the relevance of the North South Interface Study and will update it accordingly as it becomes one of the “significant informational bases” for the MTEP21 study.

North Region Targeted Study and the Michigan Capacity Import Limit Expansion Study:

MTEP20 Report Vol. 3 p. 4 et seq.:

Environmental Sector Comment: We are disappointed that the needs identified in these targeted studies have not been used to design projects in MTEP20. Please confirm in the MTEP20 Report that MISO will maintain the relevance of the North Regional Targeted study and the Michigan Capacity Import Limit Expansion Study and will update them accordingly as they become two of the “significant informational bases” for the MTEP21 study.

MTEP20 Report Vol. 4 p. 3. In conjunction with the MTEP planning process, an inclusive, transparent stakeholder process is utilized to facilitate open discussions and allow stakeholders to provide early and meaningful inputs into the development of transmission solutions in each planning cycle.

Environmental Sector Comment: Because models are not available to non-members, the process is not transparent to members of the Environmental Sector. We appreciate MISO’s willingness to work with our sector to gain access to the models, input/output files, and raw data results.

MTEP20 Report Vol. 4, p. 4: The vast majority of the recommended projects are driven by reliability (either baseline or local reliability), load growth, and age condition, and are expected to be in service within five years.

Environmental Sector Comment: Given the number of reliability projects contained within the “Other” category, does MISO need to redefine BRP?

MTEP20 Report Vol. 4 repeatedly states when describing projects: Generation redispatch or load shed is not feasible for thermal violations due to P6 contingency events if there is no applicable short-time emergency rating. No other alternatives considered.

Environmental Sector Comment: Apparently, MISO only evaluated “short-term emergency ratings” as alternatives, which seems insufficient. First, there is no mention of considering alternatives that might meet

multiple needs. Second, alternatives only seem to be considered by the TOs, but not by MISO itself. The Environmental Sector has been urging MISO to conduct its own robust analysis of potential alternatives and to seek consolidated projects that might meet multiple needs or solve multiple issues in a more cost-effective manner, as is required under the tariff.

MTEP20 Report Vol 4

Environmental Sector Comment: Of the ~533 projects proposed by stakeholders in this bottom-up process, MISO is recommending 96% of them (513 projects) for Appendix A to the Board. (The ~20 rejected projects came from two TOs: ITCT and METC.) While it is very possible that none of the 513 projects could be improved upon, this kind of acceptance rate begs the question of robustness of MISO’s review of potential alternatives.

MISO’s Transmission Planning Business Practice Manual states that “[o]nce issues are identified, the planning process will explore alternative solutions to those issues with the objective of recommending the best overall solutions.” Out of the hundreds of recommended MTEP20 projects, only 30 project descriptions indicate that any alternative solutions were explored. In addition, 33 project descriptions affirmatively state that no alternative solutions were considered at all. We question whether the TOs and MISO are meeting MISO’s transmission planning requirements when they choose not to consider alternatives. We also question whether the RTO’s purpose is being fulfilled by not thoroughly investigating alternatives which could address multiple issues and/or serve more than one TO’s needs at a time.

DETAILED MISO RESPONSE

One of the specific concerns raised by the Commenters was the availability of modeling information to non-Transmission Owner Members. MISO seeks to provide as much information as possible to all stakeholders while at the same time protecting commercially sensitive data and Critical Energy Infrastructure Information. Based on previously received comments, MISO, in coordination with stakeholders and under Coordinated Planning Issues (PAC005) at the PAC/PSC, is investigating whether it would be practical to allow other entities with an interest in the planning process to obtain confidential MISO data. However, for any potential rule change, MISO would need to balance information security and the expectations of entities supplying the confidential information to MISO with any potential expanded access.

Another area of concern from the Commenters was with regards to the volume of “Other” projects identified in MTEP20 and whether or not there is robust consideration of alternatives. The Commenters point out that the majority of projects in the MTEP are categorized as “Other” and question whether that category should be reclassified as something else and if alternatives are being evaluated. With respect to the project categories, the MTEP project types are defined in the MISO tariff and MISO does not see a need to redefine existing categories based on year to year fluctuations across the categories. As for the evaluation of alternatives, the project justification process includes consideration of a variety of factors including urgency of need, comparing various alternatives, expected performance, initial investment costs, robustness of the solution, longevity of the solution, regional and local needs. Although not all transmission issues have viable alternative solutions, the MISO process seeks out and provides opportunities for alternatives to be considered for all projects in the MTEP, including those classified as “Other”.
