

Supplemental Stakeholder Comment

Feedback was received for: MTEP21 Future Sites and Draft Expansion (20200713)

Feedback Submission

Submitter: Bonnie Janssen

Email: janssenb@michigan.gov

Company: Michigan Public Service Commission

Sector:

The feedback was submitted on: 07/27/2020 02:34

I approve my feedback to be made available on this site. Yes

Feedback: The Michigan Public Service Commission Staff (MIPSC Staff) appreciated the opportunity to respond to the feedback request following the July 13, 2020 MTEP Futures Workshop. The MIPSC Staff support MISO including carbon capture and sequestration (CCS) technology in the MTEP21 Futures planning models. All available resource technologies should be considered MISO's MTEP Futures to meet aggressive carbon reduction goals set by utilities, cities, states and corporations. Allowing the selection of CCS technology in the MTEP Futures, as presented by MISO in the July 13th Workshop, will demonstrate the technological requirements of the transmission system necessary to achieve these carbon reduction goals, especially in Michigan.

The MIPSC Staff would support MISO evaluating the potential to site CCS resources in Zone 7. Michigan's oil reservoirs and pipeline networks could potentially facilitate enhanced oil recovery; and the geological formations in the lower peninsula of Michigan could also possibly facilitate CCS, depending on the location of the natural gas power plant, reservoir, pipelines and transmission lines.

The MIPSC Staff request that MISO incorporate the Zone 7 resource expansion spreadsheet data provided for the Michigan CIL-CEL Study into these MTEP Futures. As reported by each utility, the Michigan CIL-CEL study resource expansion data shows that both DTE and Consumers Energy are anticipating several Gigawatts of new solar generation coming online before 2040 as evident by the most recent IRPs approved by the Michigan Commission.

Finally, the J.B. Sims Generating Station should be classified as retirement in the MTEP Futures Data spreadsheet since it was retired in February 2020.

Supplemental Stakeholder Comment

Feedback was received for: MTEP21 Future Sites and Draft Expansion (20200713)

Feedback Submission

Submitter: Steve Leovy

Email: sleovy@wppienergy.org

Company: WPPI Energy

Sector:

The feedback was submitted on: 07/27/2020 02:34

I approve my feedback to be made available on this site. Yes

Feedback:

We have no comments about infeasible sites for thermal generation siting, or about buses where battery storage should be located. We do have comments on other aspects of the information presented at the workshop, however:

1. The *Thermal_Retired_Site_Key* tab of the posted spreadsheet appears to show zeroes where existing generation at a site is assumed to be retired, and non-zero values where that generation is assumed to remain in service during the year in question. Given this, and the thermal-unit retirement criteria in the posted presentation (in which retirement ages are monotonically declining across the three futures), we don't understand why a number of units have identical values in Future 1 and Future III for Y5, Y10, Y15, but have zero values for all years in Future II. We request that MISO review this spreadsheet and revise and repost as appropriate.
 2. The *Solar_Sites_All* tab of the posted spreadsheet shows sixty siting buses. These are presumably to be used to site roughly 40-70 GW of photovoltaic that appear in the models for the three futures through 2039. At roughly 1 GW per bus, this appears to be far too few locations to site this much PV in the MISO region. We note that LRZ 3 includes only one location, and LRZ 2—while it includes three interconnection buses—really includes only two sites since two of these buses are at a single site in the relatively heavily forested northern part of the state. This presents a marked contrast to the interconnection queue, which shows a median PV size of 100 MW, and dozens of sites in most states. These circumstances do not give us confidence that the VCE sites provide a good representation of actual future PV development.
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Supplemental Stakeholder Comment

Feedback was received for: MTEP21 Future Sites and Draft Expansion (20200713)

Feedback Submission

Submitter: Simon Mahan

Email: simon@southernwind.org

Company: Southern Wind Energy Association

Sector: Environmental/Other Stakeholder Organizations (non-member sector)

The feedback was submitted on: 07/27/2020 02:34

I approve my feedback to be made available on this site. Yes

Feedback:

Please see the comments submitted by Simon Mahan (simon@southernwind.org) for the EO Sector.

Supplemental Stakeholder Comment

Feedback was received for: MTEP21 Future Sites and Draft Expansion (20200713)

Feedback Submission

Submitter: Ben Sloan

Email: ben@misostates.org

Company: Organization of MISO States

Sector:

The feedback was submitted on: 07/27/2020 02:34

I approve my feedback to be made available on this site. Yes

Feedback:

MTEP21 Future Sites and Draft Expansion (20200713)

OMS Transmission Planning Work Group

The OMS Transmission Planning Work Group (TPWG) appreciates the opportunity to respond to the feedback request following the July 13, 2020, MTEP Futures Workshop. This feedback does not represent the views of the OMS Board of Directors.

This TPWG feedback pertains to the modeling of carbon capture and sequestration (CCS) technology in the MTEP21 Futures. The introduction of CCS into the MTEP

Futures as suggested by MISO in the July 13, 2020 MTEP Futures Workshop could have large implications for future transmission projects and should not be considered merely a fix to a non-convergent model.

MISO engineers found that reliability of the transmission system cannot be guaranteed under the carbon reduction goals in Future III given the current portfolio of technologies used in the model. As such, MISO suggests equipping combined cycle (CC) natural gas facilities with carbon capture and sequestration technology to reduce the carbon emissions of the CC facilities. Doing so will allow the EGEAS capacity expansion model to increase the number of CC plants to address reliability issues without violating the strict emission reductions of Future III.

The TPWG believes that the EGEAS outputs are not considering a full suite of technological solutions. MISO should not base the reliability of the future transmission system on a single emerging technology (CCS), which may never be financially viable for utility-scale deployment. Instead, MISO should also consider a suite of existing and emerging technologies that can improve system reliability such as siting battery storage at wind and solar facilities/bus locations, hydrogen fueled CCs or CTs, modular nuclear units, or smaller pumped storage units. CCS is one of several emerging technologies that can help improve system reliability while limiting carbon emissions. Expanding the portfolio of technologies considered will mitigate the risk of failure associated with any one technology, and this diversification may reduce the burden on customers of unreasonably high system investment costs. The TPWG is classifying its feedback into the following three categories: CCS modeling assumptions, the inclusion of additional emerging technologies, and modeling considerations for existing resources.

Current CCS modeling assumptions

1. The cost assumptions for CCS need to include the cost of carbon sequestration.

The capital cost assumptions proposed for CCS seem to only consider cost of carbon capture but not of sequestration. [\[1\]](#) The inclusion of carbon sequestration costs in the unit costs for CCS technology should be considered. [\[2\]](#)

2. Allow CCS to be built in both red and gray zones of the USGS Geological CO₂ Storage Resources map presented at the July 13 MISO workshop.

The USGS has assessed both the published (red) and unpublished (gray) zones and has found both to be viable carbon sequestration sites. [\[3\]](#) By only allowing CC-CCS

sites to be sited on the published (red) zones, EGEAS will disproportionately build natural gas facilities in MISO South and not in MISO North. Doing so will likely stress the North-South transfer limit and require additional transmission resources that might not be needed. As drilling/storage techniques improve over time and experience in deep underground storage is acquired, a better understanding of these process may make the unpublished zones viable.

Inclusion of additional emerging technologies

3. Consider a suite of emerging technologies as planning alternatives.

The inclusion of a diverse portfolio of emerging technologies would help mitigate the risk of relying too heavily on any single technology. The consideration of CCS technology alone to manage system reliability and dumped energy issues in EGEAS is likely to skew the results of the modeling analysis towards building more CC-CCS units.

Several emerging technologies, in addition to carbon capture and sequestration, provide grid services with low carbon emissions. These include advanced modular nuclear reactors, fuel cells, compressed air energy storage, and other long-duration storage technologies. Numerous government and industry research reports consider the costs and effectiveness of long-duration storage technologies that could be used in the MTEP Futures models. [\[4\]](#), [\[5\]](#), [\[6\]](#)

Modeling considerations for existing resources

4. Allow existing resources to provide more grid services.

There are several existing technologies (*e.g.*, wind, solar, hydropower, demand response, battery storage) used in the MTEP model that are capable of providing the necessary reliability services. [\[7\]](#) These existing resources should be allowed to provide the full suite of reliability services they are technologically capable of providing in the EGEAS analysis. Disallowing their services will result in over-build of CC-CCS and the resulting over-build of transmission facilities solely for reliability services, leading to unjustifiable system costs for ratepayers. MISO need not limit the use of existing resources from use in ancillary services due to existing market rules. If we are to include emerging technologies in the MTEP Future modeling, then we should first include the full suite of grid services provided by existing technologies.

MISO should consider reviewing, and if necessary modifying, any market rules and similar constraints that inhibit the full deployment of emerging and existing technologies that offer more effective and efficient ancillary services.

5. Consider a modeling sensitivity where nuclear units are included in the generation fleet.

The reliability challenges raised in both Futures II and III, as a result of increased reliance on intermittent generation, can be partly mitigated in a carbon-free manner by relying on more nuclear generation units. This could be achieved through the extension of existing operating licenses for existing nuclear units, as well as through the introduction of new nuclear units that apply emerging nuclear technologies being evaluated and introduced in other jurisdictions, including small-scale modular units that represent lower capital investment risk concentration.

[1] Sargent & Lundy, “Capital Cost Study,” p. 9-1. 202.

Online: https://www.eia.gov/analysis/studies/powerplants/capitalcost/pdf/capital_cost_AEO2020.pdf

[2] For reference, a comprehensive list of current CCS projects can be found in the National Energy Technology Laboratory’s 2020 Compendium of Carbon Capture Technology: <https://netl.doe.gov/sites/default/files/2020-07/Carbon-Capture-Technology-Compendium-2020.pdf>

[3] USGS, “National Assessment of Geologic Carbon Dioxide Storage Resources—Summary.” 2013. Online: <https://pubs.usgs.gov/fs/2013/3020/pdf/FS2013-3020.pdf>

[4] International Renewable Energy Agency, “Electricity Storage and Renewables: Costs and Markets to 2030.” 2017. Online: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2017/Oct/IRENA_Electricity_Storage_Costs_2017.pdf

[5] Pacific Northwest National Laboratory, “Techno-economic Performance Evaluation of Compressed Air Energy Storage in the Pacific Northwest.” 2013. Online: <https://caes.pnnl.gov/pdf/PNNL-22235.pdf>

[6] Sargent & Lundy, “Capital Cost Study,” p. 9-1. 202.

Online: https://www.eia.gov/analysis/studies/powerplants/capitalcost/pdf/capital_cost_AEO2020.pdf

[7] M. Milligan “Sources of Grid Reliability Services,” The Electricity Journal, vol 31(9), 2018.

Online: <https://www.sciencedirect.com/science/article/pii/S104061901830215X>

Supplemental Stakeholder Comment

Feedback was received for: MTEP21 Future Sites and Draft Expansion (20200713)

Feedback Submission

Submitter: David Carr

Email: david.carr@psc.ms.gov

Company: Mississippi Public Service Commission

Sector:

The feedback was submitted on: 07/27/2020 02:34

I approve my feedback to be made available on this site. Yes

Feedback:

Feedback from the Mississippi Public Service Commission re: 7/13/2020 MTEP Futures Workshop

The Mississippi Public Service Commission appreciates the opportunity to comments on issues discussed during the July 13th MTEP Futures Workshops, and offers the following comments:

1. Concern regarding the extremity and uncertainty of Future III: The technical and economic uncertainty associated with the electrification-driven demand and the preferred supply resource selection underpinning Future III have raised significant concerns, particularly in light of the Equal Weight given to each future in the cost-benefit assessment of proposed transmission projects.
 - o MISO has not yet produced an assessment or even a summary explanation of the federal and state policies and fiscal (or other incentives) that would be required to incent the electrification level predicted in Future III. With no identification of mechanisms by which these electrification levels would be achieved, it is not possible to assess the plausibility of Future III, and it consequently amounts to speculation.

- The AEG study of electrification potential used in Future III predates the COVID-19 pandemic and response, including widespread economic lockdown. Future III thus excludes any COVID-related effects, from a potentially protracted economic recession to longer-term structural changes in sectoral demand likely spawned by it. As a result, the current Future III load forecast is almost certainly overoptimistic in both volume and timing over an extended period. At a minimum, it is clear already that the effects of the pandemic will last longer than once hoped, and that the economic rebound will not be “v-shaped”.
- The rationale used to select carbon-free generating resources which led to the replacement of nuclear with gas-fired generation incorporating carbon and capture sequestration (CCCS) was not satisfactorily explained during the workshop. Uncertainty in the technical and economic viability of CCCS, and in the availability of underground storage formations and/or the marketability of CO₂ and related byproducts is high – arguably higher than that of new nuclear construction or spent fuel handling and storage.
 - Specifically:
 - CCS technology is not currently commercially viable, and uncertainty regarding technologies and costs are high.
 - Underground CO₂ storage is geographically limited;
 - Reliability of underground CO₂ sequestration over time is untested;
 - The market for CO₂ used in enhanced oil recovery is uncertain in an increasingly decarbonized Future;
 - Uncertain economics of other carbon sequestration approaches; i.e. injection into basalt formations and sequestration in (Ca²⁺, Mg²⁺, Fe²⁺) CO₃;
 - Compared to:
 - AP1000 nuclear generating units have been completed in China, and nearly completed in the US. Even in the context of recent reported challenges, the AP1000 is an approved design based on proven decades-old technology.
 - Fully-established and permitted mechanisms of on-site nuclear waste storage. Even in the absence of a functioning “permanent” repository, nuclear waste is safely stored and secured at existing facilities, with well-established cost, and very low uncertainty regarding potential release.
 - Unexplained modest penetration of battery storage (2.5GW already in the queue even with current AS prices – suppressed by self-scheduling of coal?)

- Unexplained modest level of EE (almost the same as in Future II in spite of EE low costs)
2. Need for thorough assessment of projects driven by Future III: The much higher uncertainty levels associated with Future III indicate the need for more thorough analysis of transmission projects predominantly favored by this future. At a minimum, more expansive sensitivity testing is needed, which could be facilitated by placing such projects in a parking lot, similar to Appendix B for bottom-up projects. This would allow for additional study to reduce the uncertainty in current drivers, technical feasibility and costs by, while allowing for the start of long-lead preparatory activities (so that construction would not be unduly delayed if and when such projects are demonstrated to be cost-beneficial)
 3. Increased confidence in result: By continuing to test all proposed transmission projects under the three futures, and incorporating a particularly thorough analysis of projects that have value predominantly under the more-uncertain Future III, the process will ensure that those projects will provide value even if some of the demand and supply assumptions of Future III never materialize.
 4. Robust scenario planning: A generally-accepted principle of scenario planning is that any scenario warranting analysis be plausible and that the associated uncertainties and risk be adequately addressed by means of a plan of action. This is not the same as considering a “what-if” scenario, or sensitivity, which is primarily intended to inform on the influence of a given variable in its outcome. Thus, Future III, given its speculative demand and supply assumptions, appears more like a sensitivity than a full-fledged scenario comparable to Futures I and II.
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Supplemental Stakeholder Comment

Feedback was received for: MTEP21 Future Sites and Draft Expansion (20200713)

Feedback Submission

Submitter: Enrique Bacalao

Email: enrique.bacalao@wisconsin.gov

Company: Public Service Commission of Wisconsin

Sector:

The feedback was submitted on: 07/27/2020 02:34

I approve my feedback to be made available on this site. Yes

Feedback:

MTEP21 Future Sites and Draft Expansion (20200713)

Public Service Commission of Wisconsin Staff

The Public Service Commission of Wisconsin staff (PSCW Staff) appreciates the opportunity to respond to the feedback request following the July 13, 2020 MTEP Futures Workshop. This feedback does not represent the views of the Public Service Commission of Wisconsin.

Our response is organized into specific and general feedback comments.

Specific feedback was requested on the draft MTEP21 expansion, potential sites and siting criteria. PSCW Staff responds as follows:

- 1) The unit siting bus locations identified within the Wisconsin jurisdiction all appear to be feasible.
- 2) There are no specific buses that have been yet identified as required for CCS and battery siting in the Wisconsin jurisdiction.

The following general feedback comments are also offered because the PSCW Staff deems them relevant and timely to the successful development of the MTEP21 Futures.

- a) The portfolio of technologies used in the EGEAS model to achieve the carbon reduction goals in Future III should include a full suite of emerging solutions and not rely solely on carbon capture and sequestration (CCS). Our specific comments have been incorporated into the Organization of MISO States (OMS) response to this same

feedback request. PSCW engineering staff makes itself available to discuss this with MISO engineering staff.

b) The risk distribution represented by the three Futures remains asymmetrically skewed, undermining the planning value of Futures II and III. MISO has responded to this concern by establishing more conservative assumptions for all three Futures, but PSCW Staff considers those adjustments fall short of what is required. PSCW Staff makes itself available to examine what adjustments to assumptions and what other modeling modifications might reasonably address these concerns without compromising the challenging timeline MISO has set itself for completing the MTEP21 schedule. These alternatives might include steps to make sensitivity analyses more rigorous and address concerns regarding the reasonableness and affordability of proposed solutions.

c) PSCW Staff considers it possible to employ MISO's existing planning review and approval procedures and processes to more rigorously review those particular proposals that are justifiable primarily or exclusively on the basis of Future III. If adopted, such an approach would retain the value of planning ahead for that much higher degree of electric load growth without losing the value of rigorously testing the underlying assumptions and alternatives. It would also allow for the emerging technologies to more fully evolve and to more accurately demonstrate their potential and associated costs, reducing the risk for all MISO stakeholders.

PSCW Staff appreciates any opportunity to discuss the general comments offered to MISO.

Supplemental Stakeholder Comment

Feedback was received for: MTEP21 Future Sites and Draft Expansion (20200713)

Feedback Submission

Submitter: Jason Van Huss

Email: jvanhus@entergy.com

Company: Entergy

Sector:

The feedback was submitted on: 07/27/2020 02:34

I approve my feedback to be made available on this site. Yes

Feedback:

The Entergy Operating Companies [\[1\]](#) (“Op Cos” or “Entergy”) appreciate the opportunity to comment and submit, for MISO’s consideration, the following feedback on MISO’s “Futures Resource Expansion & Siting Review”, presented at the July 13, 2020 MCPS Futures workshop.

1. **Thermal Unit Siting:** We support capping thermal RRF unit capacity at brownfield sites to the lost capacity from deactivated units at those locations. When considering greenfield sites, MISO should take steps to ensure that fictitious economic benefit is not created through negative impact on local flowgates. The Pre-Site Screening Enhancement described on slide 8 is a good step for reducing negative impacts of generation at new locations, and we support it.

2. **Combined Cycle with Carbon Capture Sequestration:** Entergy has serious questions regarding the technical and economic feasibility of reaching the carbon emissions targets of Future III if it results in significant “dump energy” or in the alternative relies on technologies currently in early development. We believe that the deployment of Carbon Capture and Sequestration (CCS) gas units in 2030 is an unattainable and unreasonable assumption that MISO should revisit and reconsider. As noted below, if the CCS units are being added to the model in 2030 because they are needed to achieve a reliable dispatch in the model, that is a potentially significant finding that should be vetted with stakeholders, as it has implications for whether the MTEP Futures are reasonable. In other words, if the MTEP Futures’ reliability depends on the deployment of dispatchable resources that are infeasible to deploy within the timeframe assumed, the resulting transmission portfolio may not be reasonable.

- Regulatory requirements, the generation interconnection queue process and facility construction of a new Combined Cycle plant may take up to seven years to complete, meaning any CCS technology would have to be proven to be sufficiently scalable and reliable as early as 2023 to enter into any competitive solicitation or siting process for operation in 2030.
- While there are significant R&D efforts evaluating this technology, we believe it highly unlikely that large scale application of CCS units will be ready for inclusion in near-term resource plans in 3-5 years. If necessary, we suggest limiting the deployment of this technology to 2035 and beyond scenarios at the earliest.
- Additionally, we have concerns that sites for this technology in MISO's footprint are limited in large part to MISO South, while the policy drivers for the need for this technology are in the MISO North and Central states. MISO should take precautions to avoid over saturating one region with dispatchable resources. It is likely that stakeholders in each state in the MISO footprint will have concerns about locating dispatchable resources close enough to their customers to provide reliability benefits and locating these resources principally in one MISO region will lead to unnatural strains on the transmission system. Similarly, whether these resources are likely to be permitted and receive other regulatory approvals in the areas where siting is suitable must be considered. MISO's practice of assigning benefits to both the exporting zone and the importing zone may also impact regulatory support for these types of projects.
- In the past, MISO has provided analysis supporting the premise that the most reliable and cost-effective system development solutions consist of a mixture of local and remote renewable resources (resulting in the "bathtub" curve). While not specific to renewable resources, the predominant limitation of CCS technology deployment to MISO South states would seem to conflict with the logic of MISO's historical viewpoint of renewable resource deployment. The Entergy Operating Companies request additional analysis and discussion around the most reliable and cost-effective deployment locations for these resources.
- CCS technology itself is somewhat controversial in some parts of MISO South due to experiences with experimental CCS technologies and projects that were not operationally or financially successful. These negative experiences with CCS technology are themselves an additional impediment to the deployment of CCS technology in MISO South within the 2030 timeframe.

The addition of a new resource-type is a significant change at this stage in the Futures development process, and stakeholders should be given the opportunity to evaluate this solution relative to the modeling issue that drove the introduction of the CCS

resource type. If developing technology solutions are needed to be online in the ten-year timeframe in order to achieve a reliable dispatch in the model, that should be a key finding of the Futures development process (and the MTEP process more broadly) and should be presented as such.

Entergy suggests that MISO work with stakeholders to evaluate what other assumptions can be adjusted in the more near-term models (5 and 10 year) that may push the need for the proposed new technology to the 15-year model-set. For example, many member company goals are established for 2050, but MTEP21 looks out only to 2041, and a closer look could support moving the carbon target or other relevant assumptions driving the need for the proposed technology. MISO may want to consider having focused discussions with member companies who have set these goals to better understand the associated timelines.

3. Futures Development Schedule: Entergy appreciates the opportunity to review MISO's proposals and we view the review process as a critical component in Futures development. We support the opportunity to review and provide feedback on specific unit placement once preliminary siting has been performed and prior to RRF siting completion. As the Futures Development and MCPS schedule is adjusted to meet targets, deadlines should not compromise adequate review periods of the models and assumptions in the upcoming MCPS process.

Proposed MTEP21 RRF Unit Sites

Solar Siting: The list of zones for siting Solar RRF units needs to be updated to better represent the projected locations of future solar resources. For MISO South, there are 24 tiered zones listed in the MTEP21 RRF Sites spreadsheet, with the majority of those zones located in LRZ 10 (Mississippi). Only 2 zones are within LRZ 8 (Arkansas), with the remaining zones in south Louisiana, including one in New Orleans. There are no zones within either Texas or the northern region of Louisiana. This is contrary to the GI Queue, which has many resource interconnection requests in Arkansas, Texas, and the northern part of Louisiana. MISO should update the solar tier sites to incorporate the current trends, as indicated by the MISO queue. This should more realistically distribute the solar RRF resources and not have them concentrated in a small region in MISO South.

[1] The Entergy Operating Companies include Entergy Arkansas, LLC; Entergy Louisiana, LLC; Entergy Mississippi, LLC

Supplemental Stakeholder Comment

Feedback was received for: MTEP21 Future Sites and Draft Expansion (20200713)

Feedback Submission

Submitter: David Binkley

Email: david.binkley@dteenergy.com

Company: DTE Energy

Sector:

The feedback was submitted on: 07/27/2020 02:34

I approve my feedback to be made available on this site. Yes

Feedback:

DTE believes that the thermal resource sites identified by MISO may be feasible, but it is not possible to make a definitive determination due to a lack of information. If a specific resource is selected to be sited at one of these locations, several requirements must be considered including (but not limited to):

- Sufficient time to convert the site to be compatible with the new resource
- Voltage requirements at the site
- Access to fuel sources (if applicable)

In terms of distributed generation PV solar sites, an initial review found issues with all of the proposed buses. Specifically, the buses are highly congested, and concerns exist regarding voltage levels. DTE believes more time is needed to investigate these concerns before MISO moves forward with the process. Time for additional stakeholder review should be provided for other wind, solar and CIDSMS siting assumptions as well.

Supplemental Stakeholder Comment

Feedback was received for: MTEP21 Future Sites and Draft Expansion (20200713)

Feedback Submission

Submitter: Steve Leovy

Email: sleovy@wppienergy.org

Company: WPPI Energy

Sector:

The feedback was submitted on: 07/27/2020 02:33

I approve my feedback to be made available on this site. Yes

Feedback:

We note also that the presentation posted for the July 24 RIIA workshop describes a siting methodology for photovoltaic generation that is "informed by...recent queue trends." It would appear that an approach along these lines should be available for the MTEP futures as well.

Supplemental Stakeholder Comment

Feedback was received for: MTEP21 Future Sites and Draft Expansion (20200713)

Feedback Submission

Submitter: Yarrow Etheredge

Email: yethere@entergy.com

Company: Entergy

Sector: Transmission Owners (TO)

The feedback was submitted on: 07/27/2020 02:33

I approve my feedback to be made available on this site. Yes

Feedback:

Transmission Owner Sector Feedback on MTEP21 Futures

July 24, 2020

In the July 10, 2020 MTEP Futures Workshop focused on the futures expansion plan for MTEP21, MISO indicated its intent to add Combined Cycle Carbon Capture and Sequestration resources to the resource mix for this study.

The MISO Transmission Owners [\[1\]](#) feel that more discussion is needed on the addition of Combined Cycle Carbon Capture and Sequestration resources to resolve modeling issues. The Owners are concerned with the feasibility of the assumption that resources will be commercially available and in operation by 2030.

[\[1\]](#) Northern States Power, MidAmerican Energy Company, The ITC Companies, and Ameren do not join the Owners in these comments.