



**IURC Request to Indiana Electric Utilities
regarding Advanced Transmission Technologies**

As you may be aware, Senate Enrolled Act (SEA) 422 from the 2025 legislative session requires the Indiana Utility Regulatory Commission (“Commission” or “IURC”) to conduct a study on advanced transmission technologies (“ATTs”). The Commission is requesting your input, comments, ideas, research, and any relevant information you would like to provide regarding ATTs, including responses to the questions below developed by Electric Power Engineer, LLC (“EPE”) who will be drafting the study report.

Please provide your responses no later than June 3, 2026. Thank you!

Transmission Planning SME

1. What are the key challenges the utility faces in its transmission system, such as transfer limits, transmission constraints, load center areas, etc.?

CEI South Response: The generation transition (from dispatchable to renewable) combined with the increasing computation load growth.

2. How does the utility coordinate transmission system upgrades with neighboring utilities in case of affected system?

CEI South Response: CenterPoint Indiana (SIGE) is a member of MISO, who conducts affected system studies and coordinates system upgrades with member Transmission Owners (TOs) and neighboring entities.

3. How does the utility coordinate transmission system upgrades that are derived from diverse assessments, (e.g., reliability-driven projects based on transmission reliability assessments) and policy-driven projects informed by economic or generation deliverability evaluations?

CEI South Response: CenterPoint Indiana conducts internal reliability and load growth studies and coordinates with neighboring entities for proposed system upgrades. As Planning Coordinator (PC) and Reliability Coordinator (RC), MISO handles the coordination of various studies that consider reliability, market efficiency, and generation interconnections. CenterPoint Indiana prioritizes resulting reliability and load growth projects based on needed in-service dates.

4. When multiple facilities are overloaded, does the utility assess whether the facilities belong to the same corridor before choosing mitigation strategies? If so, how does corridor grouping influence the utility's solutions?

CEI South Response: Yes. CenterPoint Indiana evaluates both upgrading the overloaded corridor and upgrading other facilities outside the overloaded corridor or building new lines in new corridors. The solution with best reliability and cost effectiveness is selected.

5. How does the utility coordinate and integrate mitigation plans initiated by steady-state, short-circuit, and stability assessments?

CEI South Response: The annual MISO Transmission Expansion Plan (MTEP) process covers these assessments and mitigation plans. The resulting transmission mitigations are integrated into future MTEP cycles and future capital expenditures at CenterPoint Indiana.

6. What is the utility's timeline for conducting transmission assessments to comply with NERC TPL-001-5.1?

CEI South Response: MISO performs the TPL-001-5 assessments on behalf of CenterPoint Indiana. We provide MISO with CenterPoint Indiana system data in the 18-month MTEP window.

7. What unique assumptions underpin the reliability assessment base cases, including factors such as load projections, transfer limits to neighboring systems, and transmission constraints?

CEI South Response: CenterPoint Indiana provides load projections via the latest Integrated Resource Plan (IRP). Large loads approved through MISO's Expedited Project Review (EPR) process are also included. MISO studies transmission system transfers and system constraints as part of the annual MTEP process.

8. For which potential future violations does the utility propose mitigation plans? For example, are plans developed for violations forecasted to occur in 2, 5, or 10 years?

CEI South Response: CenterPoint Indiana provides mitigations for all violations across the 10-year planning horizon.

9. What methodologies and criteria are used to identify transmission system violations and develop mitigation plans? (e.g., emergency ratings compared to continuous ratings)?

CEI South Response: CenterPoint Indiana uses emergency ratings as the threshold for thermal rating violations. Our planning criteria establishes normal and emergency voltage

limits for determining system voltage violations. CenterPoint Indiana's planning criteria is publicly available on MISO's website.

10. Are there any documented records of limiting factors for line ratings and transformer ratings, such as jumpers and disconnect switches? If yes, are the limiting factors taken into consideration while developing mitigation plans?

CEI South Response: Yes. CenterPoint Indiana maintains a facility ratings database. This database documents all elements in the current flow path for a given facility. When developing thermal violation mitigations, CenterPoint Indiana reviews the limiting element(s) when considering facility upgrades.

11. What is the regulatory process for proposing and approving of the proposed mitigation plan?

CEI South Response: The majority of proposed transmission system mitigations are handled through MISO processes (MTEP, EPR, and Definitive Planning Process (DPP)). Where transmission system mitigations are developed internally, outside of the MISO process, CenterPoint Indiana follows established recovery methods with the IURC.

12. What is the utility's approach to prioritizing transmission projects?

CEI South Response: CenterPoint Indiana prioritizes transmission system reliability projects while considering new load/generation in-service dates, aging infrastructure, procurement limitations, and capital planning.

13. What planning restrictions exist within the utility's system, such as proximity to sensitive facilities and specific areas with or challenging land acquisition?

CEI South Response: CenterPoint Indiana considers land usage and general siting feasibility when recommending transmission system mitigations. Historically these considerations have not been barriers to proposed transmission projects.

14. Has the utility implemented alternative transmission technologies in the past? If so, what were the outcomes?

CEI South Response: CenterPoint Indiana has recently implemented Ambient Adjusted Ratings (AAR) methodology coupled with an advanced software application (CASCADE) to calculate AAR to comply with FERC Order 881. This improves the capacity of existing transmission assets.

15. What initial screening criteria or engineering judgment do you use to decide whether an advanced transmission technology (“ATT”) is worth evaluating?

CEI South Response: CenterPoint Indiana considers both initial capital expenditure and ongoing maintenance costs as well as a comparison to other solutions. The impact to design standards is also considered and how widespread the ATT can be deployed.

16. Do you have preferred or commonly used mitigation technologies (e.g., advanced conductors, tower lifting), or are all options evaluated equally?

CEI South Response: These technologies would be evaluated equally on a case-by-case basis.

17. What are the common practices the utility uses to mitigate transient (dynamic) stability issues?

CEI South Response: CenterPoint Indiana makes necessary transmission system protection updates. Typically, this involves settings changes and not infrastructure upgrades.

18. What are the common practices the utility uses to mitigate voltage stability issues, including post contingency voltage recovery, reactive margin, etc.?

CEI South Response: CenterPoint Indiana has historically not had this issue given our system strength and proximity to dispatchable generation.

19. When voltage issues are identified, are they typically addressed with local reactive support, or do they trigger broader system-level planning studies?

CEI South Response: Most voltage issues in the CenterPoint Indiana system are addressable with local reactive support. Broader system-level planning studies would be necessary for more widespread voltage issues.

20. How does the utility determine the need for additional reactive power support?

CEI South Response: Post contingent low voltages are the trigger for the addition of reactive power support.

21. What challenges exist in estimating the costs of ATTs?

CEI South Response: Ongoing maintenance and O&M costs are the primary challenges with estimating costs for ATTs. New technologies with unknown lifecycles make estimating these costs a challenge.

22. What are the utility’s environmental permitting requirements for transmission upgrades?

CEI South Response: CenterPoint Indiana generally requires Indiana Rule 5 (SWPPP), Floodway permits, Army Corps of Engineers, Wetland evaluation, archaeological study, and endangered species assessments.

23. What is the typical timeline for permitting a new transmission project?

CEI South Response: Typically, 2-3 years.

24. How does the utility handle land acquisition challenges for new transmission corridors?

CEI South Response: CenterPoint Indiana has an internal Land Services group that handles land acquisition for transmission projects.

25. Under what conditions does the utility consider RAS as a mitigation strategy?

CEI South Response: CenterPoint Indiana considers RAS as a temporary solution pending a permanent transmission system upgrade.

26. What types of facilities or system conditions are considered critical, where topology changes or flow control solutions are restricted?

CEI South Response: CenterPoint Indiana has a few tie line facilities under post contingent conditions that are considered critical. CenterPoint Indiana maintains internal and MISO operational guides which allow for topology changes to address the specific network constraint. CenterPoint Indiana does not have topology or flow control solution restrictions.

27. How does the utility evaluate the complexity of RAS solutions compared to conventional upgrades?

CEI South Response: CenterPoint Indiana does not prefer to use RAS solutions in place of conventional upgrades, since we consider RAS solutions to be temporary in nature.

28. Is there flexibility to modify mitigation plans, such as substituting transmission line upgrades with new substations?

CEI South Response: CenterPoint Indiana includes new substations and non-transmission alternatives (batteries, capacitor banks, STATCOM, etc.) as part of the initial mitigation plan evaluation. Mitigation plans may be modified as new system conditions emerge.

29. What is the procedure of cost allocation to the interconnection requests in a cluster study?

CEI South Response: MISO handles cluster studies of generation interconnections to the transmission system via the DPP process (BPM-015). MISO handles cluster studies of new

load interconnections via the MTEP/EPR process (BPM-020). *See the next response regarding internal load studies.

30. What is the procedure of cost allocation for load interconnection requests?

CEI South Response: New load interconnections are allocated 100% of necessary network upgrades. New load interconnections are evaluated on a first come first serve basis.

System Protection SME

31. How does the utility evaluate the impact of new generation and transmission upgrades on system protection settings?

CEI South Response: As with any projected system change, system protection engineering runs internal studies and evaluated existing protection assets to ensure proper coordination between protection schemes.

32. What are the protection constraints that should be taken into consideration when implementing alternative transmission technologies?

CEI South Response: Relay loadability per NERC Standard PRC-023 as it applies to FERC Order 881 or potential future Dynamic Line Rating (DLR) implementation. Changes to transmission line impedance must also be considered for advanced conductors or power flow control devices, such as series reactors or capacitors.

Future Outlook and ATTs Constraints

33. What regulatory or environmental barriers could impact the adoption of ATTs?

CEI South Response: CenterPoint Indiana does not view ATTs to have any difference in regulatory or environmental barriers when compared to traditional construction methodologies or technologies.

34. What lessons has the utility learned from past transmission projects that could inform future decisions?

CEI South Response: Past projects have shown the need to initiate surveying and design efforts early to meet project schedule needs. This is driven by increasing procurement time due to long lead times for critical equipment.

35. Please list any initial concern that limits the implementation of the ATTs listed below in the utility's territory. For instance: (1) transmission switching might not be allowed near certain

facilities; (2) tower lifting is not feasible in some areas or voltage levels due to environmental, regulatory, or pole structure constraints.

- Advanced Conductors
- Advanced Power Flow Control Devices (APFC)
- Static Synchronous Compensators (STATCOMs)
- Static VAR Compensators (SVCs)
- Synchronous Condensers
- Transmission Switching Technologies
- Tower Lifting Techniques
- Voltage Source Converters (VSCs)
- Dynamic Line Ratings (DLRs)

CEI South Response: Advanced conductors and tower lifting techniques are generally not as cost effective in CenterPoint Indiana's system due to a lack of necessity given our present construction standards. Using these technologies would incur additional O&M and material stocking costs that are unnecessary.

CenterPoint Indiana does not have any initial concerns with dynamic var support technologies in our territory other than procurement lead times for such equipment.

CenterPoint Indiana has concerns with the implementation of the equipment needed for DLR implementation (sensors, SCADA equipment, etc.) due to the added capital and O&M costs for advanced software and equipment. With AAR implementation and recent transmission investments (e.g. MISO LRTP) the need for these devices in our region has become negligible given our lack of congestion on the transmission system.