

September 9, 2019

Via Email Transmission (URCCComments@urc.in.gov)

Indiana Utility Regulatory Commission
c/o Ryan Heater
101 E. Washington Street, Suite 1500 East
Indianapolis, Indiana 46204

Re: Study to the 21st Century Energy Policy Development Task Force

Dear Mr. Heater:

Thank you for the opportunity to participate in the Indiana Utility Regulatory Commission's ("Commission") study of the statewide impacts of transitions in fuel sources and other electric generation resources, as well as the impacts of new and emerging technologies on electric generation capacity, system reliability, system resilience, and the cost of electric utility service for consumers ("Study"). Northern Indiana Public Service Company LLC ("NIPSCO") appreciates the ability to participate in this process as well as the Commission's transparent approach to this study. Regarding the Commission's recent request for comments on scenarios and sensitivities to consider in its modeling as part of the Study, NIPSCO submits the following comments.

Demand Growth

There are varying outlooks related to demand growth, with load growth forecasts generally trending down over time throughout the region. Because of this, NIPSCO recommends including a zero load growth scenario in the modeling, which would hold peak load and energy sales flat at the latest historical levels. Since 2007, U.S. electricity demand has remained essentially flat, with small declines observed in Indiana (see table below from the U.S. Energy Information Administration, or EIA)¹. This has been driven by a range of factors (economy/ energy efficiency and demand side management), and this scenario will provide a means for incorporating a continuation of this trend.

¹ Sourced from data available at: <https://www.eia.gov/electricity/data.php>

Year	U.S. Electricity Sales (thousands of MWh)	Indiana Electricity Sales (thousands of MWh)
2007	3,764,561	109,420
2008	3,733,965	106,981
2009	3,596,795	99,312
2010	3,754,841	105,994
2011	3,749,846	105,818
2012	3,694,650	105,173
2013	3,724,868	105,487
2014	3,764,700	106,943
2015	3,758,992	104,515
2016	3,762,462	103,705
2017	3,723,356	98,966

Transition Timing

As the authors are considering ways to assess the timing of various retirements, NIPSCO suggests benchmarking against, and aligning the timing to, the Midcontinent Independent System Operator, Inc. (“MISO”) Transmission Expansion Plan (“MTEP”) assumptions, as it considers the future resource mix across four scenarios: limited change, continued change, accelerated change, and distributed and emerging technologies. Given the number of stakeholders involved in the process and the fact that the study considers a 15-year timeframe, the MTEP provides a good mechanism for considering a variety of possible transition scenarios. Note that MISO has observed that market trends may be now moving faster than the Accelerated Fleet Change scenario, so NIPSCO recommends ensuring that the Commission’s scenarios are *at least* considering this pathway.²

New Resource Portfolio Mix

NIPSCO also recommends that the Commission review the MTEP scenarios for potential new resource portfolio mixes, but notes that MISO has recently terminated work on its 2020 scenarios in favor of devoting more time to a significant update in 2021. MISO’s Director of System Planning has recently indicated that “members are taking actions that are outpacing even what we bookended³.” Therefore, NIPSCO recommends

² See MTEP19 Futures Summary for additional detail: <https://cdn.misoenergy.org/MTEP19%20Futures%20Summary291183.pdf>

³ See “MISO Halts Futures Work for 2020, Plans 2021 Rebuild,” *RTO Insider*, August 20, 2019. Available at <https://rtoinsider.com/miso-halts-futures-work-141391/> (subscription required).

that the Commission expand beyond the MTEP guidance and develop a scenario that is heavily focused on renewable and storage additions after the first five to ten years of announced capacity changes from published integrated resource plans (“IRPs”). For simplicity, NIPSCO proposes that in this scenario, the future unforced capacity (UCAP) needs across the state of Indiana (*beyond* a benchmark year of 2025 that would include firm announced additions) be met by: 40% solar, 30% battery storage,⁴ 10% wind, and 20% natural gas. The Commission should also consider that a portion of these additions, especially solar and storage, might be distributed energy resources even though they may not be modeled any differently than central-scale resources in Aurora.

Sensitivities

NIPSCO’s recent IRP experience confirmed that EIA’s Annual Energy Outlook often has dated new build cost assumptions for certain resource types, especially renewables and emerging technologies. NIPSCO appreciates that the Commission plans to use National Renewable Energy Laboratory (“NREL”) decline rates in its cost analysis for new resources, but suggests that the Commission also directly use the mid and low scenarios for capital costs for key new resource additions from NREL’s recently released Annual Technology Baseline for 2019.⁵ NIPSCO has provided an attached spreadsheet summary of these cases with recommended capacity factors for intermittent resources from its recent IRP experience.

Other Topics for Consideration

NIPSCO recognizes the modeling and timing constraints the Commission faces, but suggests that the Study consider the evolution of the ancillary services market as well as potential MISO market reforms related to resource adequacy. Topics for consideration (either quantitatively or qualitatively) may include:

- The potential for increases in regulation and reserves pricing and the types of resources within Indiana that will be positioned to offer such services and receive value;

⁴ Note that battery storage resources may be deployed in multiple ways. One application could be to firm a solar resource to minimize potential future capacity credit declines for solar. Another application could be a stand-alone storage resource that could achieve full capacity value with sufficient (currently 4-hour) storage duration. NIPSCO understands that simplifications may be made for modeling purposes, but recommends modeling a future that considers significant solar and storage resource additions in the analysis.

⁵ See <https://atb.nrel.gov> for documentation

- The potential evolution of resource adequacy requirements towards a seasonal or monthly structure; and
- The potential for changes in capacity accreditation for certain resources over time, including the role storage might play in firming capacity value for intermittent resources.

In addition to these suggestions, based on its experience with the stakeholder process in developing its IRP, NIPSCO suggests that the Commission allow for interim review of the consolidated input that will be guiding the Commission's development of its scenarios and sensitives prior to starting any modeling. Although it takes more time on the front-end of the process, coming to as much consensus as possible regarding what will be modeled allows for more streamlined discussion of the outputs of the modeling process.

Based on NIPSCO's experience, the method could be something similar to what is outlined in the table below. While each utility obtains stakeholder feedback in a slightly different manner, the overall goal is to develop key inputs, obtain feedback on those inputs, and then perform the analysis after establishing a baseline understanding, if not agreement, on major assumptions. NIPSCO understands that the Commission will be attempting to integrate a large number of stakeholder suggestions, resulting in the potential consolidation of multiple ideas into a shorter set of actionable assumptions. Allowing for a review of these assumptions will help ensure that stakeholder input has been incorporated accurately and within reason. NIPSCO understands that the timeframe for completing this Study is short. It is hoped that this suggested process allows for the authors to consider stakeholder feedback at meaningful points in the process.

Task Area	Future Indiana “Portfolios”	Sensitivities/Scenarios
<i>Preliminary Input Definition</i>	Commission can take stakeholder input and develop a set of statewide supply-demand projections that are diverse in their load growth, retirement schedule, and new build resource composition <ul style="list-style-type: none"> • Can come from specific stakeholder load growth and buildout recommendations • May come from running long-term portfolio optimization in Aurora with stakeholder input assumptions 	Commission can compile all input on sensitivity levers and develop a reasonable short-list of key sensitivities/scenarios that will be evaluated. <ul style="list-style-type: none"> • Could include a mix of various inputs to create integrated themes • Could include important “one-off” sensitivities to test
<i>Stakeholder Review and Comment</i>	Commission can share detailed specifications of supply-demand portfolio projections for stakeholder review/comment	Commission can share short-list of key sensitivities and scenarios for stakeholder review/comments
<i>Core Analysis</i>	Analysis would then evaluate <i>each</i> supply-demand “Indiana portfolio” against <i>each</i> sensitivity/scenario to produce a range of outcomes	

Once again, thank you for the opportunity to participate in this process and to provide input at this early stage of the process. If you have any additional questions or require more information, please contact Alison Becker at abecker@nisource.com or 317-684-4910.