NORTHERN INDIANA PUBLIC SERVICE COMPANY’S RESPONSE TO THE DIRECTOR’S DRAFT REPORT ON NIPSCO’S 2016 INTEGRATED RESOURCE PLAN

Introduction

NIPSCO appreciates the Director’s feedback as provided through the Draft Report. As the Director noted several times, NIPSCO continues to look for ways to improve its process and modeling software. The Director’s comments regarding the improvements NIPSCO made in the 2016 report were appreciated. The NIPSCO team invested a great deal of time and effort into those improvements, and it is welcomed feedback noting that the improvements made a difference to the stakeholder community.

NIPSCO is committed to maintaining and building upon those improvements going forward. That said, the NIPSCO team also recognizes that the Integrated Resource Plan (“IRP”) process is always evolving; NIPSCO is continuously looking for ways to improve the analysis, transparency, organization and communication of its IRP. NIPSCO will take both the Director’s comments and all of the stakeholders’ comments and suggestions into account when preparing its next IRP and designing the public advisory process as part of that preparation. The comments included in this document are meant to provide clarity where necessary on NIPSCO’s IRP based on comments in the Draft Report and to provide thoughts on the general comments.

NIPSCO’s Responses

Fuel and Commodity Price Analysis

The Director expressed concern that NIPSCO’s fuel price projections do not capture the “nuanced and dynamic relationships between oil and natural gas or whether the historic correlations between natural gas and coal markets are changing.” NIPSCO takes note that the Director also noted that NIPSCO needs to do more than simply have a correlated price forecast. NIPSCO accepts the Director’s observation and will do so in future IRPs.
The Director also expressed concern regarding the transparency and availability of data underlying the fuel forecasts. For the fuel price projections, NIPSCO relied on PIRA Energy Group (“PIRA”), a subscription-based service that is used widely within the industry. It was not possible for NIPSCO to share certain underlying forecast information due to the terms of the PIRA License Agreement for Retainer Services. NIPSCO was granted, however, a one-time display of PIRA’s input assumptions, including its commodity price inputs, which it held with stakeholders via web broadcast.

NIPSCO agrees that, in its next IRP, underlying forecast information needs to be available for stakeholder review. NIPSCO also concurs that the models relied upon to generate the fuel price forecast need to reflect the interrelated aspects of coal, gas, oil, and power markets. NIPSCO has engaged a consultant that independently forecasts fuel prices using an integrated market model. Moreover, the consultant intends to provide underlying assumptions, alongside benchmarking to publicly available forecasts, to support its analysis. NIPSCO also notes the Director’s agreement that several of the Indiana Coal Council’s (“ICC”) comments merit consideration. To that end, NIPSCO has had follow-up meetings with the ICC to discuss its concerns.

Sequence of Retirement Analysis and Resource Optimization

Regarding the Director’s comment on performing the retirement analysis prior to the resource optimization, this was done due to model constraints of ABB Strategist ® Proview. Moreover, as explained to the stakeholders at the August 23, 2016 Public Advisory Meeting, the focus of the analysis is whether “…the ongoing cost of operating an existing NIPSCO unit, including all required environmental compliance controls,[is] greater than the cost of retiring the unit and replacing with an alternative?”¹. NIPSCO needed to have the information to feed into the model as an input rather than having it as an output of the model.

Scenario and Risk Analysis

The Director expressed concern regarding the application of the scorecard to the retirement analysis. The Director indicated that it was not clear how different metrics were weighted and applied to a retirement recommendation. NIPSCO used the scorecard as a means of conveying information for internal and external review, which was an improvement over previous IRPs. NIPSCO expects to continue to use a scorecard in

future IRPs, and will provide more detailed narrative and quantification of metrics, where possible.

NIPSCO also will ensure any narratives provide reasonable opportunity for stakeholder feedback. While NIPSCO intends to consider weightings on the next scorecard, it is important to note that the scorecard is a decision support tool to assist NIPSCO management in the decision process. The scorecard is not intended to be a mathematical model or mechanical result that produces a preferred path forward without further stakeholder input and management assessment and decision making.

As discussed above, the addition of the scorecard in the 2016 IRP was intended to be an additional visual representation of the scenarios. Recognizing that the scorecard was presented to stakeholders throughout the public advisory process meetings and included in the IRP, NIPSCO could have done a better job of tying the scorecard to the data contained in the submittal. NIPSCO did include a description of the scorecard in Daniel Douglas’s Revised Direct Testimony in Cause No. 44872. There Mr. Douglas explains that the scorecard shows the cost to the customer and a ranking for all risk scenarios and sensitivities analyzed. Specifically:

In all scenarios and sensitivities, retirement of all coal units and replacement with an alternative is the least cost or second least cost portfolio. In 13 out of 15 risk cases analyzed, NIPSCO’s preferred portfolio, reflecting CCR and ELG compliance capital on Units 12, 14, and 15, is the third least expensive option of the generation portfolios analyzed and was the fourth lowest cost combination in the remaining two cases.

In addition to the [net present value revenue requirement] ranking which takes into consideration the overall costs to customers, NIPSCO also considered portfolio diversity, reliability of the system, employee and community impacts, and readiness to meet the proposed Clean Power Plan compliance targets, if and when promulgated.

The diversity of each environmental compliance portfolio was evaluated from fuel, technology, and duration of commitments perspectives. Fuel and technology diversity is important as over-reliance on a single fuel source may leave a utility and its customers unnecessarily exposed to various operational and financial risks from fuel supply disruptions and/or price volatility. Fuel and technology diversity is quantified by the capacity mix by the end of the planning period. Duration diversity is a measure of the length of commitment to any supply option. Electric generating plants
are generally long-lived and capital-intensive, making these investments inherently risky for utilities and highly-sensitive to forecasts of fuel prices and availability. NIPSCO views a supply portfolio with diversity of fuel, technology, and duration of commitments to provide less risk for its stakeholders than one with less diversity.

As previously discussed, NIPSCO also considered other impacts of coal unit comply/retire decisions on surrounding communities. These impacts include the loss of work for NIPSCO employees and its service providers/suppliers, as well as reductions to the property tax base for surrounding communities. While these factors do not directly impact power supply costs for customers, NIPSCO believes they are important considerations in selection of its environmental compliance decisions.

Based on the above criteria, NIPSCO created a scorecard to explore relative differences between the environmental compliance portfolios using a number of quantitative and qualitative measures. The scorecard simplifies considerations into a red, yellow, or green measure. A red measure is viewed as worse; a yellow is better; and a green measure is viewed as good. Selecting an environmental compliance portfolio with a red measure may have significant difficulties or hurdles to overcome. No environmental compliance combination has a green score across all measures, but combination 4 scores best among all combinations.

... Portfolio 4, representing CCR and ELG compliance on Units 12, 14, and 15 and 50% coal retirement, was selected as the preferred portfolio option. In this option, NIPSCO has balanced stakeholder risk through fuel diversity and duration of commitment to the communities it serves.²

The concept of a scorecard was a significant step towards a more robust decision making process for its customers, employees and stakeholders. As with the introduction of most new concepts, there is progress but also clear opportunities for improvement. In the future, NIPSCO will consider and incorporate appropriate feedback into the scorecard process.

² Verified Direct Testimony of Daniel L. Douglas, Pages 15-18 (Cause No. 44872).
Comments and Concerns Related to Descriptions and Modeling

1. Comment that Descriptions of Commodity Cases are Too Simplistic

NIPSCO agrees with the Director that the Figures and text in section 8.1.2 of the IRP could benefit from additional explanatory narrative around drivers of commodity and capacity prices. NIPSCO agrees that showing figures alone (e.g., Figures 8-7, 8-8 and 8-9) does not provide adequate insight into driving forces and resulting outcomes for commodity prices. In its 2016 IRP, NIPSCO relied on PIRA to produce integrated sets of commodity and capacity prices for scenarios and sensitivities and utilized the explanatory narrative from its subject matter experts. NIPSCO has already selected a new consultant to produce commodities forecast for the next IRP and has verified that it will be able to provide open and robust support around methodology, models, and explanatory detail around commodity price drivers, outcomes and correlations. The Director points out that the following four inconsistencies are contained in the descriptions of the scenarios throughout the various sections of the report:

2. Base Scenario Assumption (on page 122) and Powder River Basin Coal

The Director points out that the Base Scenario Assumptions on page 122 state that “[t]he average price of Powder River Basin coal is slightly above $1.00/MMBtu by 2025,” which is not consistent with Figure 8-4. The base scenario uses the base Powder River Basin coal price assumption displayed in Figure 8-4 on page 118. NIPSCO agrees that the price is difficult to read from the figure, but it is right around $1.00/MMBtu in 2025. NIPSCO recognizes that PIRA limited NIPSCO’s ability to provide the underlying data. With the engagement of NIPSCO’s new consultant, NIPSCO will be able to provide more specific data in tables in its next IRP.

3. Assumptions about coal prices not in Table 8-1

NIPSCO agrees with the Director’s comments about the coal prices not being presented in Table 8-1. This omission in Table 8-1 was evident in conversations with stakeholders. NIPSCO subsequently produced the following update to Table 8-1 with coal price assumptions for the purpose of post-submittal discussions with stakeholders:
4. Challenged Economy Scenario Assumption (page 123), not clear what Powder River Basin coal trajectory was used and is inconsistent with Figures 8-7 and 8-8

Challenged economy uses Low coal prices. Base Carbon pricing starts in 2023, as shown in Figure 8-6. Modest power price increases, consistent with increased carbon prices are reflected in the power prices shown in Figures 8-7 and 8-8. NIPSCO agrees with the overall theme that it is difficult to pick off pricing and interactions with figures alone (i.e. when there are no tables of values or explanatory narrative). NIPSCO intends to improve in the future with the selection of a consultant that can provide additional detail.

5. Aggressive Environmental Regulation Scenario and Booming Economy Scenario (pages 124 and 125)

The Director notes that the load in the Aggressive Environmental Regulation Scenario Assumptions is the same as that of the Booming Economy Scenario Assumptions. The Aggressive Environmental Scenario uses the base load assumption. The description on page 124 is incorrect. The correct text is: “Energy load is increasing at
0.33% and peak demand is increasing at 0.45% (Compound Annual Growth Rate –CAGR 2016-2037) annually over the study period.”

Similarly, the Director notes that the Booming Economy Scenario mentions a national carbon price in effect in 2023, and that Table 8-1 on page 130 shows Base carbon trajectory, but Figure 8-6 has no trajectory that matches the description. The Booming Economy uses the Base carbon price assumption. The description on page 125 is incorrect. The correct text is: “A national carbon price comes into effect in 2023 ($6.75/ton nominal increasing to ~$36/ton in 2035).”

**Demand Side Management**

As the Director noted, the modeling of demand side management (“DSM”) continues to be handled differently by the various utilities and NIPSCO has studied the other utilities’ IRPs, the stakeholder comments and the draft Director’s Report for suggestions on how to model DSM in its future IRPs. One item of clarification: although NIPSCO did sequentially optimize the residential, commercial and industrial groupings, there were two follow up steps to ensure that it was equivalent to optimizing the whole 26 groupings simultaneously.

A follow up to this concern was that the DSM groupings did not receive the same treatment as supply side resources which were all included together in each scenario run. Although the narrative may have been unclear, each of the groupings were available to be selected in each of the cases. However, as the Director noted, NIPSCO’s model was limited insofar as it did not permit the ability to optimize DSM with other resources and it is NIPSCO’s goal to improve this in future IRPs.

NIPSCO is unclear what additional demand response programs it could have modeled outside of the air conditioning and water heating programs. Two programs, Curtailment and Interruptible, were not considered in the DSM Groupings, but they were included in the IRP, in accordance with the Order in Cause No.44688.3 Taken as a whole, this provides a robust amount of demand response, but NIPSCO will continue to research additional programs to be considered in future IRP models.

The Director expressed concern that it was unclear how the DSM bundle cost changed over time. Although Appendix B, which contains NIPSCO’s DSM Market Potential Study includes utility costs by program, greater clarity could have been provided by putting this detail in the IRP itself.

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3 See page 96 of NIPSCO’s IRP.
Preferred Portfolio/Plan

NIPSCO understands the Director’s concern with the presentation of the Preferred Plan. Although the information is all provided in the IRP, it could have been provided in one place in a more uniform and user-friendly manner. NIPSCO will utilize this feedback in developing its next IRP.

General Comments

The Director commented that regional resources must also be considered and noted that utilities must work with regional transmission organizations to consider the broader regional implications as part of the IRP process. NIPSCO agrees and takes an active role in the Midcontinent Independent System Operator (“MISO”) process and its various committees and workgroups. However, it is important to note that each utility is just one voice in the MISO stakeholder process. NIPSCO will continue to work as part of that process and continue to reflect those efforts in its IRP. Beyond participating in the MISO stakeholder process, NIPSCO intends to procure a portion of its capacity needs from market purchases, including potential purchases from the MISO Planning Resource Auction. To this end, NIPSCO recently conducted a request for proposal and executed a purchase capacity from regional resources to meet its expected capacity requirement for the 2018/2019 planning year.

The Director noted a need for multiple independent fuel forecasts to be used and for the utilities to compare the supply interactions among oil, coal and natural gas. Although it is NIPSCO’s view that PIRA’s forecast already took those intermediate steps into account as part of its forecasting process, NIPSCO sees the value placed upon the process by the Director and will endeavor to include such items into its forecast in future IRPs. NIPSCO has engaged a consultant that will be able to run alternative fuel price scenarios through its model that consider, for instance, how changes in technically recoverable natural gas resource size in the United States impacts pricing. In addition, as suggested by the Director, NIPSCO will strengthen the long-term regional estimates so that they are better supported by the narratives provided in the report. Finally, as noted by the Director, NIPSCO understands the need to discuss uncertainties, risks and ramifications of fuel, technology and resource diversity (and duration diversity) under the chosen scenarios, as this is a fundamental building block of the IRP.
The Director also encouraged utilities to consider low probability but highly consequentially scenarios, which is something NIPSCO attempted to do as part of this IRP process, but will continue to refine in subsequent IRPs. Similarly, as noted by the Director, NIPSCO needs to inject greater use of probabilistic analysis into the IRP. NIPSCO plans to do this in its next IRP and has already taken steps to ensure this is accomplished. This should improve NIPSCO’s risk analysis, which was a concern noted by the Director.

Regarding DSM, NIPSCO continues to look for the best way to bundle the measures, particularly related to load shapes. There is a great deal of debate about which portion of the “potential” from a market potential study to use when putting together the bundles. In the Draft Report, it was noted that Achievable Potential is conservative. However, after recently going through the bidding process and having real-world responses based on the amount of savings determined by the IRP, it may be that Achievable Potential as determined by a market potential study, which is just that, a study, may not be conservative enough. NIPSCO hopes to have further discussions with the Director and other Commission staff on this issue.

Ultimately, the Director noted the objective is a robust and resilient plan. NIPSCO takes that objective seriously and appreciates the Director’s guidance in helping NIPSCO obtain that goal. NIPSCO has reviewed PJM’s properties of diversity as included in the Draft Report and will utilize those as appropriate. NIPSCO also looks forward to further discussions on the usefulness of individual metrics as well as the weighting of individual risk measures.

Conclusion

NIPSCO hopes the clarifications provided in this response address in at least some part the concerns or confusion expressed in the Director’s Draft Report. NIPSCO is always available to meet with the Commission staff for further discussion on its IRP. In fact, as part of its public advisory process, NIPSCO established a continued on-going communications process with all stakeholders. NIPSCO appreciated the participation of its stakeholder group, including the Indiana Utility Regulatory Commission and staff, in its IRP public advisory process. NIPSCO will look to incorporate these lessons learned into the next public advisory process. It is NIPSCO’s hope that these responses will help
provide further clarity regarding its 2016 IRP filing, and serve as a starting point for further informal discussions to support its next IRP filing.