

## Revised Decision Options

October 6, 2016

### A. Approval

1. Approve Xcel Energy's 2016-2030 Integrated Resource Plan
2. Approve Xcel Energy's 2016-2030 Integrated Resource Plan with Modifications
3. Reject Xcel Energy's 2016-2030 Integrated Resource Plan

### B. Forecasting

1. Approve Xcel's base energy forecast and peak demand forecast for planning purposes only (Department)
2. Find that Xcel's **Strategist**-modeled demand forecast is acceptable for planning purposes in the five-year action plan, but it should not be used for any resource acquisition proposal beyond the five-year action plan. (Staff)
3. Find that the Forecasted Load used in the Company's Load and Resources table overstates the Company's capacity need. (Staff)

### *Five-Year Action Plan*

#### C. Wind

1. Approve Xcel's plan to add 800 MW of wind in 2018. (Xcel, several parties and participants.)
2. Modify Xcel's resource plan. Xcel shall acquire about 1,000 MW of wind by 2019. (Department)
  - a. **The record shows that it is reasonable to acquire about 1,000 MW of wind by 2019; variations in acquired capacity are possible based on price, bidder qualifications, rate impact, transmission availability, and so forth. (Department, corrected)**

#### D. Solar

1. Approve Xcel's plan to add 200 MW of solar in 2018 and 200 MW of solar in 2020. (Xcel, several parties and participants.)
2. Modify Xcel's resource plan **to remove 400 MW of large-solar in 2016-2021**. Xcel's solar resources in ~~the five-year action plan~~ **this timeframe** shall be acquired through the Company's community solar gardens program. **However, since the record shows**

additional large-solar could be cost-effective in 2016-2021 using the low solar price sensitivities, Xcel should continue to pursue additional, cost-effective large-solar resources if it proves to be in the best interest of its customers. (Department, Xcel)

**E. Resource Acquisition (Five-Year Action Plan)**

1. Xcel shall acquire wind resources through the modified Track 2 process. (Department)
2. Set a filing date for Xcel's filing under Step 4 that will include the contracts for projects selected from the RFP, as well as a comparison between those projects and our [Xcel's] self-build proposal. (Department)
3. Xcel shall file a contingency plan early in the process to address the potential for the bidding process to fail. (Department)
4. The proper mix of purchased power and Company- owned resources shall be determined during the resource acquisition process. (Department, CEO, Institute for Local Self-Reliance)
5. Require that, in future wind acquisition proceedings, Xcel shall discuss locational benefits and wind curtailment risk on a project-specific basis. Further, Xcel shall describe how revenues from wind generation sold into the MISO market will be returned to Minnesota ratepayers and provide an estimate of these revenues. (Staff)
6. In Xcel's petition for approval of wind resources, the Company shall identify whether its wind is a Minnesota state energy policy choice. Further, Xcel shall identify the amount of wind it needs to meet the "24 percent or greater" wind requirement in 2020. (Staff)
7. Require Xcel to initiate a traditional, Track 2 competitive bidding process;  
Staff note: Xcel, the Department and the CEOs all agree that use of the historic process may not be the most appropriate approach for the reasons outlined above.
8. Require Xcel to use the modified Track 2 process;  
Staff note: this decision option would not 'approve' the process as an official bidding process) and therefore Xcel would need to use the RES-certificate of need exemption.
9. Authorize use of the modified Track 2 process and authorize the process as an Commission-authorized bidding process (DOC);
10. Authorize use of the modified Track 2 process and authorize the process as an Commission-authorized official bidding process for use on a case by case basis, with Commission prior approval before use (staff);
11. Request additional party comments on the modified Track 2 process, but allow Xcel's RFP process to continue (staff).

## **F. Other Resources**

1. Xcel shall not to pursue life extension projects and/or contract extensions for the Fibrominn, St. Paul Cogen, Laurentian, and Koda Energy units (Department).
2. Do not preclude an evaluation of life extension projects and/or contract extensions with Xcel's biomass units. (St. Paul Cogen)

### ***Intermediate-Term***

## **G. Sherco Units 1 and 2, Retirement**

1. Approve Xcel's plan to retire Sherco 1 and 2 in 2026 and 2023, respectively. (Xcel, several parties and participants)
  - a. Approve Xcel's plan to retire Sherco 1 and 2 pending the selection of replacement resources. (Staff alternative)
2. Xcel shall retire Sherco Unit 2 no later than 2023. The retirement of Sherco Unit 1 will be subject to further exploration of alternative sources of supply- and demand-side options, including transmission upgrades. (Staff alternative)
3. Require the Company to conduct further analysis of options for meeting its resource needs under a two-unit Sherco retirement scenario. The analysis shall evaluate combinations of demand-side options and transmission upgrade options, in addition to supply-side options, that could in aggregate, meet post-retirement energy and capacity needs as well as contribute to addressing grid support issues such as local voltage support and system black start. The company shall review with interested parties the proposed scope, key assumptions, and methodology and, to the extent appropriate and possible, incorporate feedback prior to beginning the analysis. The Company shall file its analysis with the next resource plan or, if earlier, with its next acquisition plan. (Staff alternative)

## **H. Sherco Units 1 and 2, Replacement**

1. Construct a 750-800 MW natural gas combined cycle unit at the Sherco site in Becker, Minnesota with an in-service date to coincide with the second unit retirement. (Xcel, Department, City of Becker, Sherburne County, State Representative Jim Newberger)
2. Take no action on replacement capacity because there is sufficient time for another resource plan cycle to be completed before decisions regarding replacement resources would be required. (*Staff note:* This was the Department's recommendation in its July 8, 2016 comments; the Department has since withdrawn its recommendation, however, staff believes it is still a valid option for the Commission to consider.)

## **I. Sherco Units 1 and 2, Resource Acquisition Process**

1. Xcel would acquire the resources—approximately 750 MW of intermediate capacity with an in-service date coinciding with the second Sherco retirement date—through the modified Track 2 process. (Department)
2. Allow Xcel to determine the date for making a filing that will start the modified Track 2 resource acquisition process. (Department)
3. Direct Xcel to work with the Department of Commerce on the specific aspects of an acquisition filing to ensure the Company provides the information necessary to fully analyze its proposal. (Xcel)

4. Clean Energy Organizations Proposal:

Find that additional proceedings related to replacement resources are required under Minn. Stat. § 216B.243 and that those proceedings should:

- be competitive processes to protect customers and developers;
  - be location-specific to protect the local community and regional reliability;
  - allow for utility ownership if determined to be in the best interest of customers;
  - comply with all relevant state energy policies; and
  - ensure public participation.
5. *Direct Xcel to use the Track 2 process, as set forth in the Commission’s 2006 Order Establishing Resource Acquisition Process, Establishing Bidding Process Under Minn. Stat. 216B.2422, Subd. 5..., unless an alternative process is ordered and approved by the Commission. Require Xcel to file within 30 days either 1) standard contract language that specifies as much as possible to address issues such as security, heat rate, etc. or 2) a request for a modified process and a detailed overview of that process.*

**J. Demand Response**

1. In its next IRP filing Xcel provide a full and thorough cost effectiveness study that takes into account the possibilities for expanded and more dispatchable demand response on its system including sensitivities at different economic dispatch price points. Pricing programs such as dynamic pricing and critical peak pricing should be considered in the report, as movement toward smart meters and interactive technology. (Department)
2. Modify Xcel’s Resource Plan to incorporate no less than 400 MW of additional demand response by 2023 (or some other date determined by the Commission). Prior to acquiring additional natural gas combustion turbines, Xcel shall take this modification into account. (Staff)
3. In its next resource plan, Xcel shall provide a full and thorough cost-effectiveness study that takes into account the technical and economic achievability of ~~2~~1,000 MW of **additional total** demand response, or approximately 20 percent of Xcel’s system peak **in total** by 2025. (Staff)

4. Within twelve months of the date of the Commission's order, Xcel shall propose a competitive bidding process for up to 400 MW of demand response resources. (Staff)

### **K. Fargo Natural Gas Combustion Turbine**

1. Modify the resource plan to change Xcel's proposed Fargo CT to a generic CT. (Staff)
2. Find that Xcel's inclusion of the Fargo combustion turbine in the resource plan is acceptable for informational purposes but does not imply that the resource is prudent or that the costs will be recovered by Minnesota ratepayers.
3. The Commission will allow for a combination of resources ranging from and including large hydropower, short-term life extensions for Company-owned peaking units, natural gas combustion turbines, demand response, and combined heat and power to meet the Company's resource need in the 2025-2030 timeframe. (Staff alternative)

### **L. Energy Efficiency and Savings**

1. Approve an average annual energy savings level of 444 GWh for all planning years. (Xcel, Department)
  - a. Approve a minimum energy savings level of 444 GWh for all planning years. Direct Xcel to pursue higher levels of DSM achievements using reasonable cost assumptions for energy efficiency and energy savings.
2. Approve an average annual energy savings level of 444-516 GWh for 2016-2021 and average annual energy savings of 516-444 GWh for 2022-2030. (Clean Energy Organizations)
3. Find that Xcel's analysis of energy efficiency and savings is not satisfactory for use in a resource acquisition proceeding. For any future resource acquisition proceedings, and in its next resource plan, Xcel shall include a DSM cost estimate for the post-2021 timeframe and must further use a range of DSM cost estimates. Within this range, Xcel shall include a sensitivity that uses a DSM cost assumption that is reflective of historical DSM costs. (Staff)
4. Xcel shall investigate the potential for an energy-efficiency competitive bidding process and summarize its investigation and findings in its next resource plan. (Staff)

### ***Long-Term Planning Issues***

#### **M. Allen S. King Plant**

1. In Xcel's next resource plan and/or if Xcel makes an acquisition filing in conjunction with a second Sherco unit retirement, Xcel shall compare evaluate scenarios retiring the King unit in the 2027-2030 timeframe in place of a second Sherco retirement. (Staff)

2. Require Xcel to initiate a study under Attachment Y2 of the MISO Tariff to evaluate the reliability impacts of ceasing or suspending the Allen S. King Plant in 2027 or 2030 and to determine whether the King Plant would ~~qualify~~ **could be designated** as a System Support Resource (SSR). (Staff)
3. Direct Xcel to continue the discussion regarding the early retirement of the Allen S. King coal-fired generation facility. (Center for Energy and Environment)

#### **N. Prairie Island**

*(Staff note: Approving the resource plan will assume continued operation of Prairie Island through the planning period; thus, N.1. may be a superfluous finding.)*

1. ~~No action will be taken on Prairie Island in this proceeding. Direct Xcel to~~ **shall** provide an in-depth analysis concerning ~~the future~~ **cost overruns and retirement scenarios of for** Prairie Island in Xcel's next resource plan **and, if preceding the next resource plan, a non-renewable resource acquisition filing.** (Xcel, Department, Staff)
2. Direct Xcel to conduct a more thorough analysis of the costs of operating the Prairie Island until the end of its operating licenses and earlier retirement dates, and include a detailed evaluation of decommissioning costs in that analysis. (Prairie Island Indian Community)
3. Find that approving the resource plan makes no determination regarding the prudence of cost overruns at Prairie Island. (Staff)

#### **O. Grid Modernization**

1. In its next resource plan, Xcel shall provide an estimate of costs and discussion of operational attributes for grid modernization to develop a reasonable optimization alternative for inclusion in its modeling. **As part of this analysis, Xcel shall include an estimate of the cost of deploying Advanced Metering Infrastructure (AMI) throughout its service territory and any additional system upgrades needed to enable demand response in conjunction with time-varying rates.** (Staff)

#### **P. Combined Heat and Power / Biomass**

1. In its next resource plan, Xcel shall explore the role of cost-effective combined heat power solutions, particularly those using biomass. (Saint Paul Chamber of Commerce)
2. Modify Xcel's resource plan to incorporate the 300 MW (or more) of economic combined heat and power (CHP) potential. (International District Energy Association)

#### ***Other Planning Issues***

### **Q. Jurisdictional Cost Allocation**

1. Take no action on jurisdictional cost allocation at this time issue. (*Staff note: If the Commission wishes to address jurisdictional cost allocation on a case-by-case basis, or believes jurisdictional cost allocation is more appropriate to address in PUC Docket No. 16-223, then staff suggests the Commission take no action on this issue.*)
2. Find that the Commission's approval of Xcel's resource plan, **as always**, assumes an integrated NSP system and, therefore, assumes traditional cost allocation will apply.
3. Find that no evidence has been presented to show that resources would (or would not) be cost-effective to meet Xcel's energy and capacity needs of only Xcel's Minnesota ratepayers.

### **R. Procedural Issues / Subsequent Filings / Date for Next Resource Plan**

1. Order Xcel to investigate how to model and plan for carbon-free replacement for additional aging baseload units before its next IRP is due. (Clean Energy Organizations)
2. Develop a better process for the replacement of retiring generation, so that the ability to meet needs currently met by that generation can be provided through a "Clean Energy First" approach. This would include the formation of a technical advisory committee of committed stakeholders to achieve 80 percent reductions in carbon emissions from the electric sector by 2040. (Center for Energy and Environment)
3. Within 30 days of the Commission's order in the resource plan, Xcel shall make a compliance filing showing its projected demand for the following:
  - Resource Plan forecast (w/ DSM Adjustment), as shown in Appendix I of its initial filing.
  - Resource Plan Net Peak, with 400 MW of new load management and 1.5% DSM.
  - Resource Plan, Strategist Modeling forecast.
  - 2016 MISO-OMS Resource Adequacy Survey Balance Sheet forecast, with a 444 GWh DSM Adjustment.
4. For its next resource plan, Xcel shall provide an analysis of alternatives to all or part of the energy and capacity that would otherwise be provided by natural gas combined cycle and combustion turbine resources, including alternatives such as (and combinations of) demand response, improved system or grid efficiencies, storage, combined heat and power, time of use rates, smart invertors or advanced meter infrastructure, and distributed energy resources, among other technological innovations available to the Company. Further, the Company should explain how it incorporated these options into its resource modeling and if there are alternative modeling options that could better incorporate these advanced system alternatives. (Staff)
5. Xcel shall file its next resource plan on July 2, 2018. (Xcel, Department)

**Replacement section for page 27-28 of staff briefing paper:**

### **3.Possible Commission Actions on the Five-Year Action Plan on Wind and Solar**

The Commission could simply approve Xcel’s five-year action plan on wind and solar acquisitions (to acquire 1GW to 1.5 GW of wind) and take no other action. This would provide both the Commission and the Company the most flexibility moving forward; however, this would give no direction to the resource acquisition process.

The Department, in its supplemental reply comments recommends the Commission modify Xcel’s action plan to acquire about 1,000 MW of wind by 2019 and to remove the large-scale solar from the action plan to allow for greater certainty from the CSG program. Further, the Department recommends the Commission approve Xcel’s modified Track 2 process (as an authorized competitive bidding process) for Xcel to acquire additional wind resources. And therefore allow Xcel to utilize the competitive bidding certificate of need exemption and not use the RES-certificate of need exemption.

An alternative action is to approve Xcel’s five-year action plan and provide clarity on which acquisition process Xcel should use. Staff sees several initial options the Commission could order for the wind acquisitions:

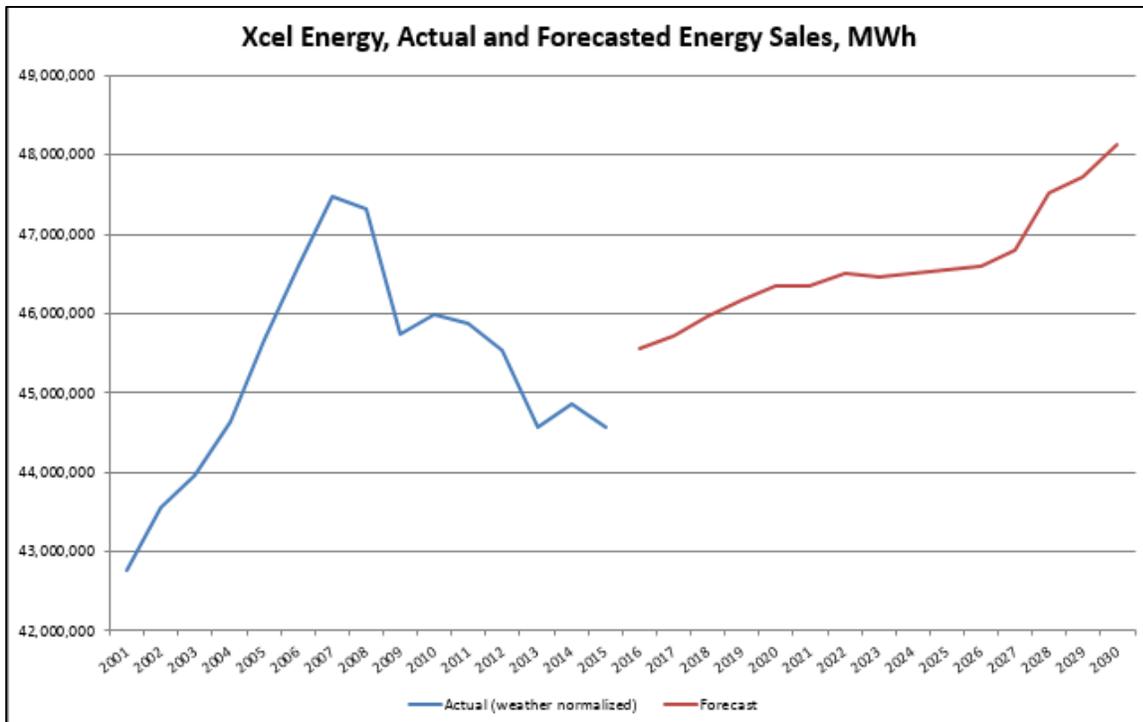
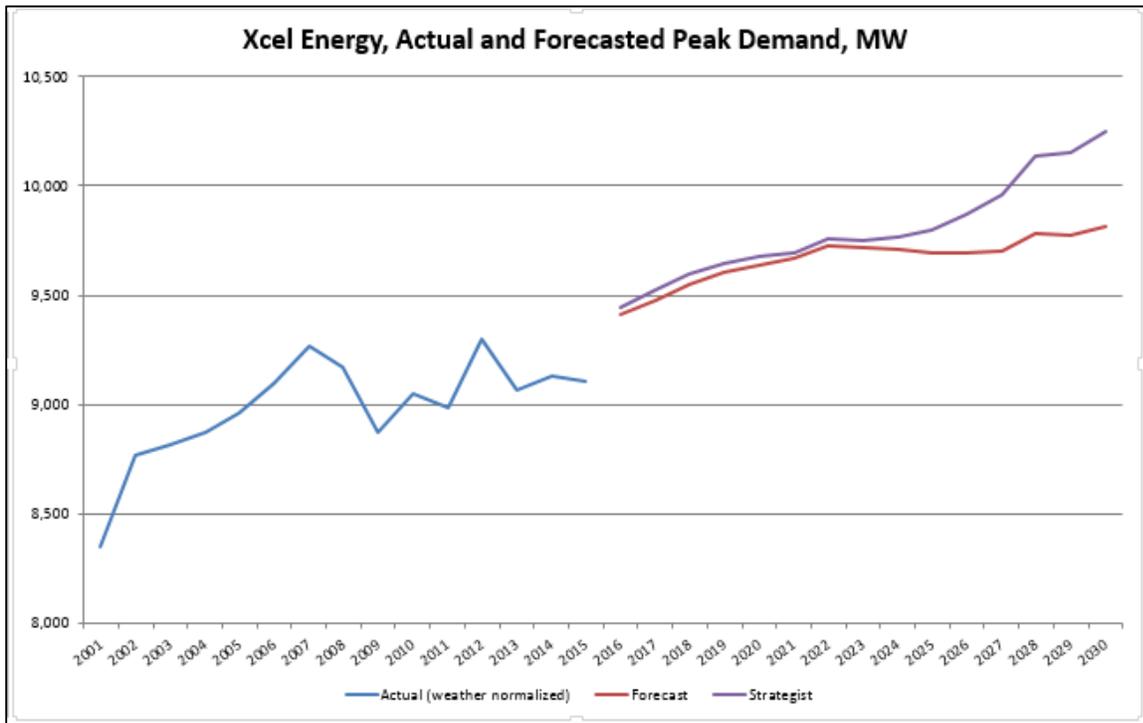
- 7) Xcel to initiate a traditional, Track 2 competitive bidding process  
Staff note: Xcel, the Department and the CEOs all agree that use of the historic process may not be the most appropriate approach for the reasons outlined above;
- 8) Xcel to use its modified Track 2 process (but not ‘approve’ the process as an official bidding process) and therefore Xcel would need to use the RES-certificate of need exemption (Xcel);
- 9) Authorize use of the modified Track 2 process and authorize the process as an Commission-authorized official bidding process (DOC);
- 10) Authorize use of the modified Track 2 process and authorize the process as an Commission-authorized official bidding process *for use on a case by case basis*, with Commission prior approval before use (staff);
- 11) Request additional party comments on the modified Track 2 process, but allowing Xcel’s RFP process to continue (staff).

Section E –  
Additional  
Decision  
Options

On the ownership versus PPA issue, the Commission could take no action; however, staff recommends the Commission address it in some fashion.

The Commission might also need to decide (or clarify) whether the proposed wind is RES-qualifying because, as it stands, Xcel states in the pending RES Compliance docket that it is in compliance at least through 2023; in the resource plan, Xcel claims it needs significant amount of new wind to be in compliance by 2020 (as discussed above in section d. RES Compliance and Cost Recovery).

MN PUC Staff Graph - MN PUC IR 33



Source: Actual: Xcel’s response to PUC IR 33, Table 1, page 2 – Commission Doc. ID 20169-125221-01

Forecast: Xcel’s IRP, Table 1, page 9