

Staff Briefing Papers

Meeting Date	August 16, 2018	Agenda Item *7
Company	Minnesota Power, Otter Tail Power, and Xcel Energy	
Docket No.	E015/RP-15-690 E017/RP-16-386 E002/RP-15-21	
	In the Matter of Minnesota Power’s 2016–2030 Integrated Resource Plan	
	In the Matter of Otter Tail Power Company’s 2017– 2031 Integrated Resource Plan	
	In the Matter of Xcel Energy’s 2016–2030 Integrated Resource Plan	
Issues	Should the Commission approve the Department’s request for authority to seek specialized technical services for capacity expansion modeling?	
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Relevant Documents

Date

Department of Commerce Request

June 25, 2018

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The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

I. Statement of the Issues

Should the Commission approve the Department of Commerce's (Department or DOC) request for authority to seek specialized technical services for capacity expansion modeling?

II. Background

Minn. Stat. § 216A.07 specifies duties of the Commissioner of the Department of Commerce. Subdivision 3 of Minn. Stat. § 216A.07 (Intervention in commission proceedings) refers to the Department's intervention as a party in all proceedings before the Commission, which for integrated resource planning (IRP) dockets, the Department has done since IRP's inception in the 1990s.

In 2011, a new subdivision (subd. 3a) was added to 216A.07 specifying duties with respect to representing the State's interests in regional and national matters. At the same time, Minn. Stat. § 216B.62, on assessments, was amended by adding a subdivision (subd. 3b) allowing the Department to assess utilities for its activities under 216A.07, subd. 3a. Minn. Stat. § 216B.62, subd. 3b states in part:

In addition to other assessments in subdivision 3, the department may assess up to \$500,000 per fiscal year for performing its duties under section 216A.07, subdivision 3a ... This subdivision expires June 30, 2018.¹

The Department asked in its legislative proposals for the 2018 session that the assessment authority be extended to June 30, 2019. The extension to June 30, 2019 was included in the Omnibus bill (SF 3656) that was vetoed by the Governor, and therefore did not get enacted.

Because the funding the Department anticipated using under Minn. Stat. § 216B.62, subd. 3 to conduct capacity expansion modeling is no longer available, on June 25, 2018, the Department requested the Commission approve the authority for DOC to seek specialized technical services under Minn. Stat. § 216B.62, subd. 8, which provides:

If the commission, in a proceeding upon its own motion, on complaint, or upon an application to it, determines that it is necessary, in order to carry out its duties imposed under this chapter or chapter 216, 216A, 216E, 216F, or 216G, to conduct an investigation or audit of any public utility operations, practices, or policies requiring specialized technical professional investigative services for the inquiry, the commission may request the commissioner of commerce to seek authority from the commissioner of management and budget to incur costs reasonably attributable to the specialized services.²

¹ <https://www.revisor.mn.gov/statutes/cite/216b.62>

² *Id.*

III. Department Request

For IRP proceedings, as well as for other dockets that employ capacity expansion modeling, the Department and many Minnesota utilities use the Strategist software tool. In the summer of 2017, the Department was informed by the owner of Strategist, ABB Group, that the model would no longer be supported.

To be proactive, the Department requested Minnesota Power (MP), Otter Tail Power (OTP), and Xcel Energy (Xcel)—all of whom use Strategist for their IRP petitions—to begin a process to evaluate other capacity expansion models and select a potential replacement. The utilities ran an open selection process, informing the Department, Commission staff, and other interveners such as the Clean Energy Organizations about the steps being taken. Final decisions on which model to acquire have not been made in all cases,³ although the Department noted that the list of candidates has narrowed to two.

There are a number of resource plan dockets that are on-going, and several more are scheduled to be filed in 2019. The Department provided the current IRP schedule as Table 1 of its request:

Table 1: IRP Schedule

UTILITY	FILING DATE
Great River Energy	On-going
SMPA	On-going
Interstate	On-going
MMPA	01-Aug-18
Xcel	01-Feb-19
OTP	03-Jun-19
Minnkota	01-Jul-19
MP	01-Oct-19
MRES	01-Jul-21

Of note, not all utilities will be acquiring new modeling software at the same time, and in some cases utilities might use two different models during the transition phase. For example, the Department noted that Xcel intends to still use Strategist for its forthcoming February 1, 2019 IRP, while OTP intends to use a new capacity expansion model for its IRP due June 3, 2019. Thus, the timing of events will require the Department to have access to two models (Strategist and the other model chosen) at least for 2019 and potentially longer.

The Department anticipated using funding under Minn. Stat. § 216B.62, subd. 3b to obtain a new capacity expansion model, go through the necessary training, and so forth. However, since these funds are no longer available, the Department is seeking Commission approval for the authority for DOC to seek specialized services under Minn. Stat. § 216B.62, subd. 8. As discussed earlier, under Minn. Stat. § 216B.62, subd. 8, if the Commission determines that it is

³ In a May 2018 press release, Anchor Power Solutions announced Great River Energy (GRE) selected its EnCompass model for GRE's future IRPs.

necessary, it may “request the commissioner of commerce to seek authority from the commissioner of management and budget to incur costs reasonably attributable to the specialized services.”⁴

IV. Staff Analysis

A. *The Department’s Role in Resource Planning*

The Department’s analysis, in particular its capacity expansion modeling, is indispensably important to the resource planning process. To use a somewhat arbitrary example to illustrate why, below staff includes an excerpt from the Department’s comments in Xcel Energy’s 2015 IRP docket, in which the Department explained its general process that guides its resource planning evaluation:

The general process followed by the Department when reviewing Strategist modeling is as follows:

1. obtain from the applicant a base case file, and the commands necessary to recreate the various scenarios explored by the Company;
2. re-run the applicant’s base case file to make sure the outputs match and that the Department is working with the correct file;
3. review the base case’s inputs and outputs for reasonableness;
4. create a new base case, which includes any changes deemed necessary to the Company’s base case;
5. run scenarios of interest on the new base case to explore various risks and alternative futures;
6. assess the results of the scenarios and establish a new preferred case; and
7. run scenarios of interest on the new preferred case to test the robustness of the preferred case.

Crucial to the IRP process is the ability to, at a minimum, verify that a utility’s data set is replicable; to be able to obtain, re-run, and review the applicant’s inputs and outputs helps ensure that a utility’s economic analysis is reasonable and unbiased. In addition, the Department’s technical proficiency in evaluating utility proposals, measuring risk, and exploring alternative futures greatly enhances the Commission’s ability to comprehensively review complex resource planning issues.

⁴ Minn. Stat. § 216B.62, subd. 8 (<https://www.revisor.mn.gov/statutes/cite/216b.62>)

In its request, the Department refers to the fact that it “has performed independent economic modeling in IRPs for two decades,” and that its capacity expansion modeling allows it “to identify underlying assumptions, ensure that they are consistent, and test what happens when the assumptions change.”⁵ Indeed this is valuable to IRP, but on a broader level, the seven steps outlined above serve the public interest significantly by, among other things, creating transparency, providing a robust evaluation of legislative goals and requirements, and facilitating responsible regulation. Given the fundamental importance of the Department’s role in IRP proceedings, staff strongly supports Commission approval of the Department’s request for the authority to seek specialized services.

B. Access to Two Models

As the Department noted, the reason for transitioning to new modeling software at this time is because Strategist will soon no longer be actively supported by the vendor. But in addition, a stated goal of the open selection process the Department referenced in its request was to acquire a new, state-of-the-art resource planning modeling product with certain desired capabilities that the utilities’ current models do not have. These functionalities include: providing more granularity for simulations, including sub-hourly dispatch; identifying hourly chronological constraints, including unit ramp rates, operational constraints, and ancillary services; and modeling distributed energy resources, demand response programs, and energy efficiency programs.

As utilities shift to more granular and technically complex modeling, it is important the Department has the necessary support to be able to obtain the new model as well and have sufficient time for training. In addition, since utilities will not be transitioning to different models at the same time, it is likewise important for the Department to be able to have access to two models at least for 2019 and potentially longer.

C. Past Commission Approvals of Request for Specialized Services

The Commission has in the past approved requests from the Department to receive specialized services under Minn. Stat. § 216B.62, subd. 8. For instance, in the environmental externalities docket, the Commission authorized the Department to take the steps necessary to retain a consultant.⁶ Also, when the Commission opened the investigation into Xcel’s handling of the Monticello Life Cycle Management / Extended Power Uprate Project, it authorized the retention of an expert to assist the Department’s investigation on the Commission’s behalf.⁷ Given the importance of the Department’s modeling in IRP proceedings, staff believes the same action is warranted here.

⁵ Request, page 1.

⁶ Docket No. 14-643, Commission Notice and Order for Hearing (October 15, 2014).

⁷ Docket No. 13-754, Commission Order Approving Investigation and Notice for Hearing (December 18, 2013).

V. Decision Options

1. Approve the Department's request for authority to seek specialized services. Specifically, the Department would both obtain the capacity expansion model selected by the utilities and the necessary training in preparation for integrated resource plans to be filed in 2019, along with continuing to use Strategist for the utilities that use that capacity expansion model. *(Department, Staff)*
2. Deny the Department's request.