Minnesota Public Utilities Commission

Staff Briefing Papers

Meeting Date: March 23, 2017... **Agenda Item 5

Company: Minnesota Energy Resources Corporation (MERC)

Docket Nos. G-011/M-15-895
In the Matter of a Petition by Minnesota Energy Resources Corporation (MERC) for Project Evaluation and Approval of Rider Recovery for its Rochester Natural Gas Extension Project.

G-011/M-16-315
In the Matter of a Petition by Minnesota Energy Resources Corporation (MERC) for Project Evaluation and Approval of Rider Recovery for its Rochester Natural Gas Extension Project (Highly Sensitive Trade Secret).

Issues: Should the Commission approve Minnesota Energy Resources Corporation's (MERC's) request for advance approval of its Rochester Natural Gas Extension Project (NGEP)?

If so, should the Commission approve Minnesota Energy Resources Corporation's (MERC) request for a Natural Gas Extension Project (NGEP) Costs Rider for the Rochester project?

Should the Commission also approve MERC's proposal for recovery of Rochester project costs through MERC's base rates and its purchased gas adjustment (PGA) mechanism?

Staff: Bob Brill 651-201-2242
Sundra Bender 651-201-2247
Ann Schwieger 651-201-2238

Relevant Documents

Docket No. G-011/M-15-895

Commission Procedural Order	February 8, 2016
MERC – Direct Testimony	April 15, 2016
Office of the Attorney General (OAG) - Direct Testimony	July 1, 2016
Department of Commerce (Department) - Direct Testimony	July 1, 2016
MERC – Rebuttal Testimony	July 28, 2016
Public Comments – Submitted through Speak-up (Commission website)	July 29, 2016
Public Comments – Submitted in Directly to the Commission	July 29, 2016

Public Comments – Submitted in Directly to the Commission	August 24, 2016
OAG –Surrebuttal Testimony	August 25, 2016
Department – Surrebuttal Testimony	August 25, 2016
OAG – Errata to Surrebuttal Testimony	September 1, 2016
Court Reporter – Master Exhibit List	October 11, 2016
OAG – Initial Brief	October 11, 2016
Department – Initial Brief	October 11, 2016
MERC – Initial Brief	October 11, 2016
Representative Pat Garofalo – Letter in Support of the Rochester Project	October 25, 2016
MERC – Reply Brief	October 25, 2016
Department – Reply Brief	October 25, 2016
OAG – Reply Brief	October 25, 2016
OAG – Proposed Findings of Fact and Conclusions of Law	October 26, 2016
Department – Proposed Findings of Fact and Conclusions of Law	October 28, 2016

Docket No. G-011/M-16-315 **(Highly Sensitive Trade Secret (HSTS))**

MERC – Direct Testimony Exhibits (HSTS)	April 15, 2016
OAG - Direct Testimony and Exhibits (HSTS)	July 1, 2016
Department - Direct Testimony Exhibits (HSTS)	July 1, 2016
MERC – Rebuttal Testimony Exhibits (HSTS)	July 28, 2016
OAG – Rebuttal Testimony and Exhibits (HSTS)	July 28, 2016
OAG –Surrebuttal Testimony and Exhibits (HSTS)	August 25, 2016
OAG –Errata Direct and Rebuttal Testimony (HSTS)	Sept. 1, 2016
OAG –Errata Direct and Rebuttal Testimony (HSTS)	Sept. 2, 2016
OAG – Initial Brief (HSTS)	October 11, 2016
OAG – Revised Initial Brief (HSTS)	October 13, 2016
OAG – Reply Brief (HSTS)	October 25, 2016

Docket No. G-011/M-15-895 **(Continued)**

Office of Administrative Hearings (OAH) – ALJ Report	November 30, 2016
OAG – Exceptions to the ALJ's Report	December 20, 2016
Department – Reply to OAG Exceptions	December 29, 2016
MERC – Reply to OAG Exceptions	December 30, 2016

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

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Statement of the Issues

Should the Commission approve Minnesota Energy Resources Corporation's (MERC's) request for advance approval of its Rochester Natural Gas Extension Project (NGEP)?

If so, should the Commission approve Minnesota Energy Resources Corporation's (MERC) request for a Natural Gas Extension Project (NGEP) Costs Rider for the Rochester project?

Should the Commission also approve MERC's proposal for recovery of Rochester project costs through MERC's base rates and its purchased gas adjustment (PGA) mechanism?

Party Position Summary

Minnesota Energy Resources Corporation (MERC)

MERC seeks Commission pre-determination on:

- Approval of MERC's proposed Rochester Project's to upgrade its natural gas distribution system, estimated to cost approximately $44 million (Phase II);

- Approval of MERC's cost recovery proposals for its distribution system upgrades costing approximately $44 million and for its NNG contract costs of approximately $55 million (NPV), as follows:

    a. Recovery of up to 33 percent of MERC's distribution system upgrade costs ($44 million) through an NGEP Rider from all MERC customers, including transportation customers, with the remainder of those costs recovered through base rates; and

    b. Recovery of the costs incurred under the PA ($55 million NPV) for additional capacity through the commodity portion of the NNG-PGA area from all of MERC's firm and interruptible system sales customers.

- Acceptance of the Precedent Agreement ("PA") with NNG needed to bring interstate pipeline capacity to the Rochester area, estimated to cost approximately $55 million (Net Present Value or "NPV").

Department of Commerce

The Department recommended that the Commission find the Rochester Area is constrained and that the size of the project, as proposed by MERC, is reasonable and represents the best means of meeting current and expected Rochester Area need.[1] The Department recommended that the

[1] Department Direct Testimony, Heinen, pp. 58-59, Hearing Ex. 405.

Commission find that MERC's need projections are not unreasonable and likely represent an acceptable estimate of expected need for the Rochester Area.[2]

Super Large Gas Intervenors (SLGI)

SLGI supports the NGEP Rider and will help pay for MERC distribution infrastructure. SLGI reserves the right to provide comments in the future on cost recovery for the additional interstate pipeline capacity acquired from NNG.

Office of Attorney General

The OAG concluded that MERC had failed to demonstrate that the Rochester Project was reasonable, prudent, and necessary.[3] The OAG identified a number of issues (concerns):

- MERC's sales forecast;
- the RFP process; and
- how MERC analyzed the alternatives.[4]

The OAG believed that MERC's Rochester Project proposal is larger than necessary.[5]

The OAG recommended that MERC take a more phased-in approach in meeting its existing and future capacity requirements in the Rochester area. In the alternative, if the Commission finds the project is reasonable, the OAG recommended that MERC defer project cost recovery for the unused capacity until MERC needs the capacity to serve customers.[6]

Public Hearings and Comments Filed

Approximately 21 people attended the five public hearings, with 12 offering comments. In addition, the Commission received over 40 written comments from individuals, businesses, and government entities through Commission's SpeakUp! webpage or U.S. mail by the July 28, 2016 deadline.

Customers expressed their concerns regarding:[7]

- the burden of additional rate increases on low-income customers and customers living on a fixed income;
- being asked to pay for infrastructure costs that are designed to meet the needs of future customers - a number suggested that the Rochester costs should be borne only by customers in the Rochester area, the primary beneficiaries of the Project;

[2] Department Direct Testimony, Heinen, p. 26, Hearing Ex. 405; Department Rebuttal Testimony, Heinen, pp. 1-3, Hearing Ex. 406; Department Surrebuttal Testimony, Heinen, p. 6, Hearing Ex. 407.
[3] OAG Initial Brief, pp. 6-8 and 76 (October 11, 2016).
[4] Ibid, pp, 8 and 76.
[5] Ibid, pp. 76-77.
[6] OAG Amended Surrebuttal Testimony, pp. 24-25, Hearing Ex. 311.
[7] ALJ Report, p. 9, Attachment A, A-1 – A-8.

- the need for the Project;
- the importance of the Rochester project for reliability purposes; and
- a number of businesses and governmental entities in the Rochester area provided comments in support of the Project, whereas business leaders in the Albert Lea area raised concerns about the impact of a rate increase on the local economy.

Administrative Law Judge

Based upon the Findings of Fact and Conclusions of Law, the Administrative Law Judge recommended the following to the Commission:

- Find the Rochester area is constrained and MERC's Rochester Project is prudent, reasonable, and necessary to provide natural gas service to MERC's Rochester service area.

- Authorize rider recovery of up to 33 percent of the Phase II costs pursuant to the NGEP statute from all of MERC's customers.

- Limit total recovery of Phase II costs to MERC's estimate of $44,006,607, unless MERC can show that any costs above the initial estimate are due to unforeseen or extraordinary circumstances and the additional costs are otherwise reasonable and prudent.

- Authorize recovery of the costs incurred under the PA for additional capacity through the commodity portion of the NNG PGA from all of MERC's firm and interruptible system sales customers.

- Require MERC to reasonably pursue mitigation of costs for sales customers including, but not limited to: making every effort to obtain the best available terms for long-term and short-term release of excess capacity; encouraging the movement of customers to firm service; and utilizing excess capacity to avoid purchasing other more expensive capacity to serve other parts of the MERC-NNG PGA.

- Require MERC to provide, in future AAA filings and in the annual rider recovery filing in this docket, specific data for each capacity release associated with the Rochester area over the most recent gas year.

- Require MERC to petition the DMCC for state infrastructure aid if future work by the Company occurs within the development district, and report annually on the results of any applications made to the DMCC and the amount of any state aid received.

- Require MERC to provide a detailed analysis in its next general rate case regarding its existing interruptible and transportation rates and whether the rate structures and design for these classes are appropriate given the increased capacity associated with the proposed Project.

Background

MERC is a local distribution company (LDC) that provides retail natural gas service to approximately 230,000 customers in 184 communities in Minnesota. MERC is a subsidiary of WEC Energy Group, Inc. (WEC), a utility holding company headquartered in Milwaukee, Wisconsin.[8] MERC will construct, own, and operate the natural gas distribution infrastructure of the Rochester Project.[9] MERC is the sole provider of retail natural gas service to Rochester and surrounding communities.[10]

MERC serves three types of customers: firm, interruptible, and transportation. The Rochester area and southeastern Minnesota have experienced continued population growth, including industrial and residential expansion, in recent years. This expansion became necessary by the expanding health care facilities in and around Rochester.[11] MERC stated that its Rochester growth has created limited available capacity to provide safe and reliable natural gas service to existing firm customers and potential firm new customers.[12]

Northern Natural Gas (NNG), an interstate pipeline, is the sole natural gas transportation provider in the Rochester area. MERC holds NNG transportation contracts to deliver natural gas into its distribution system. During periods of heavy firm usage, MERC curtails its interruptible customers. Currently, NNG does not have additional capacity available in the Rochester area, because pipeline constraints on their system.

In 2013, the Mayo Clinic announced its $6 billion plan to become a destination medical center ("DMC") for the country and the world. The plan includes construction of new hospital space and the expectation that current staffing will substantially increase over the next twenty years. The Minnesota Legislature subsequently adopted legislation creating the Destination Medical Center Corporation (DMCC) to develop its own Destination Medical Center plan ("DMC Plan") for the development and construction of public and private facilities and infrastructure in the City of Rochester that support the Mayo Clinic as a DMC. The legislation earmarked approximately $585 million in state and local funds to pay for the facilities and infrastructure identified in the DMC Plan adopted by the DMCC.[13]

If the DMC's efforts are successful, the Mayo expansion will further accelerate MERC's anticipated demand growth. Recent reports indicate that the DMC initiative is on track to hit $200 million in private investment by the end of 2016, triggering the release of $585 million in public funding to support infrastructure improvements for the DMC.[14] Mayo Clinic provides

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[8] MERC Direct Testimony, Lee, p. 1, Hearing Exhibit Ex. 5.
[9] MERC Initial Petition, p. 6, Hearing Exhibit Ex. 1.
[10] MERC Initial Petition, p. 7, Hearing Exhibit Ex. 1.
[11] MERC Initial Petition, p. 2 and 19, Hearing Ex. 1.
[12] MERC Direct Testimony, Lee, pp. 8-9, Hearing Ex. 5.
[13] MERC Initial Petition, pp. 19-20; ("As stated on the DMC website: State officials determined there was compelling interest to authorize public investments in Rochester to help support Mayo Clinic in Rochester as a global medical destination center. These leaders worked together to develop DMC and create in statute the financing tools and public governance structure necessary to carry out the global destination vision.").
[14] MERC Surrebuttal Ex. 11 at 3-4 (Clabots Surrebuttal) (citing Matt McKinney, Redoing Rochester: Where Has Investment for the DMC Gone So Far? STAR-TRIBUNE(Aug. 11, 2016) (http://www.startribune.com/redoing-rochester-where-has-destination-medical-center-money-gone-sofar/389537791/)).

updated private investment amounts scheduled for April 2017 and the Office of the Department of Employment and Economic Department (DEED) certifies the data sometime this summer.

Because of NNG's firm upstream capacity shortage, MERC has limited ability to accommodate the Rochester area growth. This capacity constraint could also prevent MERC from reliably serving its existing firm customers in the Rochester area if a cold weather event occur.[15] Further, MERC's has operating pressure and piping configuration issues on its Rochester southern and northern distribution systems that prevent it from efficiently and reliably distributing its gas supply between these areas.[16]

MERC proposed its Rochester Project for unserved or inadequately served Rochester, Minnesota (MN) areas and the surrounding area. The Rochester area lacks adequate interstate pipeline infrastructure to meet MERC's existing or potential end-use demand, and the anticipated growth primarily caused by the Mayo Clinic, a Destination Medical Center.[17] Further, MERC needs to upgrade its distribution system. MERC stated that its Rochester project is uneconomic[18] to provide service through its service line and main extension tariff.

In order to accommodate future growth, MERC proposed its Rochester area development plan. MERC estimated its distribution upgrades would cost $44 million (Phase II) and NNG estimated its system upgrades would cost from $55 to $60 million. Because of the magnitude of investment (approximately $100 million), MERC requested regulatory review and approval of its Rochester project, Docket 15-895.[19]

MERC proposed Rochester project construction in two phases. Phase I recovered $5.6 million through its general rate case, Docket No. 15-736. Phase I construction was completed in early 2016[20] and will be recovered through MERC's base rates approved in 2015 rate case.[21] The Commission's February 8, 2016 Order in the 15-895 docket required MERC to remove all Rochester Project Phase II costs from its general rate case.[22] Subsequently, MERC removed $0.60 million of Phase II costs from the general rate case and placed the amount in the 15-895 docket.

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[15] MERC Initial Petition, p. 19, Hearing Ex. 1.

[16] MERC Direct Testimony, Lee, p. 11, Hearing Ex. 5.

[17] MERC's Rochester distribution system is currently at capacity, requiring upgrading to meet not only current customer demand, but also its anticipated growth.

[18] The project is not self-supporting.

[19] MERC Direct Testimony, Lee, pp. 8-9, Hearing Ex. 5; ("Because of the magnitude of this investment, MERC believes it is important to seek and obtain regulatory confirmation that the Project is justified and reasonable."); Evidentiary Hearing Transcript, Vol. 1 at 34 (Lee) ("Certainly we want regulatory certainty before we invest these capital dollars, that's correct.").

[20] Phase I costs included modernizing, standardizing, and interconnecting portions of MERC's district regulator stations ("DRS") and piping within the city of Rochester.

[21] Department Direct Testimony, Heinen, pp. 3-4, Hearing Ex. 405.

[22] *In the Matter of a Petition by Minn. Energy Res. Corp. for Evaluation and Approval of Rider Recovery for Its Rochester Nat. Gas Extension Project*, MPUC Docket No. G011/GP-15-895, NOTICE OF AND ORDER FOR HEARING (Feb. 8, 2016).

MERC estimated its total costs would range to be $100 to $105 million. MERC is requesting Commission approval of its total costs before it starts construction.[23] The estimate includes $44 million for MERC's distribution system improvements and $55 to $60 million for Northern Natural Gas (NNG) system improvements. The NNG facility upgrades necessary for MERC to receive adequate gas supply. MERC has not signed construction contracts nor has it signed the NNG contract for additional gas supply delivery.

MERC proposed to recover its $44 million distribution costs through two mechanisms, the Natural Gas Expansion Project (NGEP) Rider, pursuant to Minn. Stat. §216B.1638[24] and through base rates in future general rate cases. [25] MERC proposed to recover the NNG facility upgrade costs through its Purchased Gas Adjustment (PGA) demand cost recovery mechanism - as demand entitlements (contract) costs. [26]

In order to procure adequate natural gas supply, MERC sent out its Request for Proposal (RFP) and received bids from NNG, Northern Borders Pipeline (NBPL), and Twin Eagle. MERC selected the NNG's bid.[27] (NNG provided MERC with numerous construction scenarios.)

The parties filing interventions were the Department, the OAG, NNG, and the Super Large Intervenors (SLGI). NNG did not file testimony; participate in the hearings, or submit briefs. SLGI did not file testimony, but did submit its brief. The City of Rochester, Mayo Clinic, or the Destination Medical Center did not intervene, nor did these parties file comments.

The Administrative Law Judge (ALJ) concluded that MERC has shown by a preponderance of the evidence that the Rochester Project is necessary, reasonable, and prudent. Further, the ALJ concluded that the Project was eligible for NGEP Rider Statute cost recovery.

The OAG filed Exceptions to the ALJ Report, proposing approximately 70 modifications to the ALJ's findings of fact and conclusions of law report.

Both MERC and the Department filed responses to the OAG Exceptions.

(The ALJ provided a summary of the procedural background for this matter in her Report on pp. 5-9.)

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[23] Phase II involves upgrading the Rochester town border station ("TBS") system where MERC receives natural gas from NNG's high-pressure interstate pipeline system and then transmits the gas at a reduced pressure for delivery to MERC's low-pressure distribution system in the Rochester area. This will enable MERC to more efficiently and effectively balance the flow of natural gas on its low-pressure distribution system. Further, Phase II involves constructing a new 13-mile long high-pressure pipeline that interconnects the rebuilt TBS with a new TBS ("New TBS") and new high-pressure DRS ("New DRS"), which will tie together the northern and southern portions of our existing TBS system. This upgrade of our TBS system will allow MERC to manage the increased supply of natural gas delivered to its distribution system to meet customer demand. The Commission will determine the final pipeline route in Docket No. 15-858.

[24] Under this statute, the Commission may approve a rider that allows a utility to recover up to 33 percent of its project's annual revenue deficiency from all system customers.

[25] Minn. Stat. § 216B.1638, subd. 2(a), 3(b)(c)

[26] Existing customers will pay this cost, in addition to the new Phase II customers.

[27] See MERC's Petition dated October 26, 2015, Docket No. 15-895.

Recovery of Natural Gas Extension Project Costs. Minn. Stat. § 216B.1638 (2016)

Subdivision (Subd.) 1. Definitions.

a) For the purposes of this section, the terms defined in this subdivision have the meanings given them.

b) "Contribution in aid of construction" means a monetary contribution, paid by a developer or local unit of government to a utility providing natural gas service to a community receiving that service as the result of a natural gas extension project, that reduces or offsets the difference between the total revenue requirement of the project and the revenue generated from the customers served by the project.

c) "Developer" means a developer of the project or a person that owns or will own the property served by the project.

d) "Local unit of government" means a city, county, township, commission, district, authority, or other political subdivision or instrumentality of this state.

e) "Natural gas extension project" or "project" means the construction of new infrastructure or upgrades to existing natural gas facilities necessary to serve currently unserved or inadequately served areas.

f) "Revenue deficiency" means the deficiency in funds that results when projected revenues from customers receiving natural gas service as the result of a natural gas extension project, plus any contributions in aid of construction paid by these customers, fall short of the total revenue requirement of the natural gas extension project.

g) "Total revenue requirement" means the total cost of extending and maintaining natural gas service to a currently unserved or inadequately served area.

h) "Transport customer" means a customer for whom a natural gas utility transports gas the customer has purchased from another natural gas supplier.

i) "Unserved or inadequately served area" means an area in this state lacking adequate natural gas pipeline infrastructure to meet the demand of existing or potential end-use customers.

Subd. 2. Filing.

a) A public utility may petition the commission outside of a general rate case for a rider that shall include all of the utility's customers, including transport customers, to recover the revenue deficiency from a natural gas extension project.

b) The petition shall include:
   1) a description of the natural gas extension project, including the number and location of new customers to be served and the distance over which natural gas will be distributed to serve the unserved or inadequately served area;
   2) the project's construction schedule;
   3) the proposed project budget;
   4) the amount of any contributions in aid of construction;
   5) a description of efforts made by the public utility to offset the revenue deficiency through contributions in aid to construction;
   6) the amount of the revenue deficiency, and how recovery of the revenue deficiency will be allocated among industrial, commercial, residential, and transport customers;
   7) the proposed method to be used to recover the revenue deficiency from each customer class, such as a flat fee, a volumetric charge, or another form of recovery;
   8) the proposed termination date of the rider to recover the revenue deficiency; and
   9) a description of benefits to the public utility's existing natural gas customers that will accrue from the natural gas extension project.

Subd. 3. Review; approval.

a) The commission shall allow opportunity for comment on the petition.
b) The commission shall approve a public utility's petition for a rider to recover the costs of a natural gas extension project if it determines that:
   1) the project is designed to extend natural gas service to an unserved or inadequately served area; and
   2) project costs are reasonable and prudently incurred.
c) The commission must not approve a rider under this section that allows a utility to recover more than 33 percent of the costs of a natural gas extension project.
d) The revenue deficiency from a natural gas extension project recoverable through a rider under this section must include the currently authorized rate of return, incremental income taxes, incremental property taxes, incremental depreciation expenses, and any incremental operation and maintenance costs.

Subd. 4. Commission authority; order.

The commission may issue orders necessary to implement and administer this section.

Subd. 5. Implementation.

Nothing in this section commits a public utility to implement a project approved by the commission. The public utility seeking to provide natural gas service shall notify the commission whether it intends to proceed with the project as approved by the commission.

Subd. 6. Evaluation and report.

By January 15, 2017, and every three years thereafter, the commission shall report to the chairs and ranking minority members of the senate and house of representatives' committees having jurisdiction over energy policy:

1) the number of public utilities and projects proposed and approved under this section;
2) the total cost of each project;
3) rate impacts of the cost recovery mechanism; and

4) an assessment of the effectiveness of the cost recovery mechanism in realizing increased natural gas service to unserved or inadequately served areas from natural gas extension projects.

MERC's Sales Forecast – Rochester's Growth Rate

Minnesota Energy Resources Corporation (MERC)

MERC believes that the Rochester area's natural gas demand will continue to grow in the coming years, partly caused by the Mayo Clinic's $6 billion expansion plan to become a Destination Medical Center (DMC).[28] Because of the DMC expansion, new area jobs are expected, ranging from 35,000 to 45,000 over twenty years.[29]

To address its need concerns, MERC evaluated a number of alternatives including: take no action; conservation; distribution system options; and adding interstate pipeline capacity.[30] MERC chose the additional interstate pipeline capacity option, deciding its distribution system needed upgrading.[31]

On January 5, 2015, MERC issued its Request for Proposals (RFP) to obtain bids for additional interstate pipeline capacity to meet its forecasted needs. MERC received responses from three pipeline companies.[32] MERC evaluated the proposals and decided to enter into an additional NNG contract (has not been executed) for additional Rochester firm capacity of 45,000 Dth/day.[33] Currently, MERC has contracted with NNG for 55,169 Dth/day at its Rochester receipt points (referred to as demand entitlements), totaling 100,000 Dth/day of Rochester receipt capacity.

MERC calculated its Rochester project's Design Day requirements based on peak demand (coldest historical day within a time-period) to serve its firm customers. MERC compared its Design Day requirements to its available contracted interstate pipeline capacity (known as demand entitlements). MERC completed this task to determine if it has sufficient capacity to transport its Design Day requirements to its distribution system.[34] [35] MERC's Design Day requirements includes the residential, Small C&I, and Large C&I customer classes, it excludes interruptible and transportation customers.

MERC stated that its 2015/2016 winter heating season Rochester Design Day requirements were 60,929 Dth/day. When compared to its existing NNG capacity contracts of 55,169 Dth/day, this

[28] In January 2013, Mayo announced its DMC plan.
[29] MERC Initial Petition, pp. 19-20, Hearing Ex. 1.
[30] MERC Initial Petition, pp. 26-28, Hearing Ex. 1; MERC Direct Testimony, Mead, pp. 8-9, Hearing Ex. 12; MERC also considered peak shaving as an alternative, but not in the same level of detail as the other alternatives. MERC Rebuttal Testimony, Lyle, pp. 7-9, Hearing Ex. 8; Hearing Transcripts Vol. 1, pp. 63-64 (Lyle).
[31] MERC Initial Petition, pp. 1-2, Hearing Ex. 1; MERC Direct Testimony, Mead, pp. 8-9, Hearing Ex. 12; MERC Direct Testimony, Sexton, pp. 9-10, Hearing Ex. 40.
[32] MERC issued the RFP to all of the active pipeline companies operating in the general vicinity of Rochester, Minnesota. MERC Direct Testimony, Sexton, pp. 38, 41; Hearing Ex. 17.
[33] MERC Direct Testimony, Mead, pp. 11-12, Hearing Ex. 12.
[34] Demand entitlements less Design Day requirements equals the Reserve Margin.
[35] MERC Direct Testimony, Mead, pp. 11 and 21; Transcript Volume 1, p. 26 (Lee).

produced a ***negative*** 5,760 Dth/day reserve margin (capacity deficiency). As previously noted, NNG currently does not have any additional capacity to sell. [36] The interruptible and transportation customers are subject to interruption if insufficient capacity is not available to serve firm customers.[37]

MERC original study forecasted its 2016-2025 Rochester customer count would increase by approximately 20 percent.[38] MERC forecasted its estimated average annual growth rate at 1.5 percent for the Rochester area customers (includes Residential, Small C&I, and Large C&I), once MERC adjusted its forecast using Rochester-specific weather. The forecast used weighted weather data from the MERC-NNG-PGA area. [39]

MERC assumed that its annual Design Day growth rate would equal its 1.5 percent annual growth rate.[40] By applying, the Design Day 1.5 percent growth rate to the 2015/2016 Rochester Design Day of 60,929 Dth/day, MERC calculated its projected 2039/2040 Design Day requirements at 87,097 Dth/day. MERC estimated that its 2042/2043 Rochester Design Day would increase to approximately 91,000 Dth/day.[41] MERC added a 5 percent reserve margin, which produces a 2042/2043 Design Day requirement at approximately 96,000 Dth/day, MERC rounded its estimated Design Day requirements to 100,000 Dth/day. The 100,000 Dth/day requirements was used MERC in its Request for Proposals (RFP).[42] For MERC's calculations, see Attachment A, page 1. For a shorten version, see Table 1:

Table 1: MERC's Estimated Design Day Requirement for its RFP Process

	Design Day Requirements	Notes
2015/2016 Design Day Rochester Requirements	60,929 Dth/day	Original Design Day
2039/2040 Design Day	87,097 Dth/day	See staff's Attachment A
2040/2041 Design Day[43]	88,403 Dth/day	Previous yr. times 1.5 percent
2041/2042 Design Day	89,730 Dth/day	Previous yr. times 1.5 percent
2042/2043 Design Day	91,075 Dth/day	Previous yr. times 1.5 percent
Reserve Margin at 5%	95,629 Dth/day	Previous yr. times 5.0 percent
RFP Capacity	100,000 Dth/day	Previous line rounded up

After determining its Design Day requirements (100,000 Dth/day), MERC selected NNG's proposal to construct the necessary facilities to provide an additional 45,000 Dth/day of Rochester delivery capacity (contract has not been executed).[44] In order to enhance its receipt capabilities,

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[36] MERC Direct Testimony, Mead, p. 11, Hearing Ex. 12.
[37] Department Direct Testimony, Heinen, p. 9, Hearing Ex. 9; Transcript Vol. 1, 26 (Lee).
[38] Over the next 10-years, from 2016 to 2025; MERC Initial Petition, p. 20, Hearing Ex. 1; MERC Direct Testimony, Clabots, p. 3, Hearing Ex. 9.
[39] MERC Direct Testimony, Clabots, pp. 7-8, Hearing Ex. 9.
[40] MERC Direct Testimony, Mead, p. 21, Hearing Ex. 12; Department Direct Testimony, Heinen, p. 6, Hearing Ex 405.
[41] MERC Direct Testimony, Mead, p. 21, Table 1, Hearing Ex. 12; MERC Direct Testimony, Sexton, p. 40, Hearing Ex. 17.
[42] MERC Direct Testimony, Sexton, p. 40, Hearing Ex. 17.
[43] 2040/2041 Design Day calculated by applying 1.5 percent to MERC's 2039/2040 Design Day requirement, etc.
[44] MERC Direct Testimony, Mead, pp. 11-12, Hearing Ex. 12.

MERC proposed its Rochester area distribution system upgrades in two phases. MERC's Phase I construction was completed in early 2016 and cost recovery was incorporated into Docket No. 15-736, MERC's last rate case. Phase II costing $44 million for distribution system upgrades.

Pursuant to the Commission's February 8, 2016 Order in the 15-895 docket, MERC removed all Rochester Project Phase II costs from Docket No. 15-736, its general rate case.[45] Subsequently, MERC removed $0.64 million of Phase II costs from the general rate case and included the amount in the 15-895 docket. MERC stated that both project phases (Phase I and Phase 2) were necessary to meet its current service obligations and future (2015-2026) customer growth in the Rochester area.[46]

Department of Commerce (Department)

The Department noted that MERC's long-range sales forecast was unusual because natural gas utilities do not typically produce medium- to long-range forecasts for purposes of utility regulation. Unlike electric utilities in Minnesota, which are required to regularly file integrated resource plans (IRP), regulated natural gas utilities are not subject to Commission review of their long-range expansion plans, procurement plans, or expected growth.

MERC's sales estimation method in this proceeding was similar to its 2015 Rate Case short-term sales forecast methodology[47] and its firm peak estimation method (Design Day) used in its most recent annual demand entitlement filings.[48] In its annual entitlement filings, MERC focused on the reserved pipeline capacity required to serve its firm customers on Design Day, the coldest 24-hour average wind adjusted heating degree day (AHDD) for each regression area.[49]

In this docket, MERC prepared individual regression models for each Rochester Area TBS, adjusted for the AHDD coldest day, and risk adjustments to determine current (base) firm peak demand.[50] The Department believed that MERC further considered future Rochester project drivers: such as, the City of Rochester's "Renewable Proclamation" and the "2015 Rochester Public Utility (RPU) Updated Infrastructure Study (dated June 2015)." The Department believed that the Proclamation was non-binding, but believed the RPU Infrastructure Report discussed renewable generation, but placed emphasis on natural gas importance for electric generation, and the potential replacement of existing generating facilities in the Rochester Area.[51]

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[45] *In the Matter of a Petition by Minn. Energy Res. Corp. for Evaluation and Approval of Rider Recovery for Its Rochester Nat. Gas Extension Project*, MPUC Docket No. G011/GP-15-895, NOTICE OF AND ORDER FOR HEARING (Feb. 8, 2016).

46 See MERC's Initial Petition, p. 22, Table 3.

[47] Department Direct Testimony, Heinen, pp. 7-8, Hearing Ex. 405.

[48] Docket Nos. 15-722 (Consolidated), 15-723 (NNG), and 15-724 (Albert Lea).

[49] For the Rochester Area, the coldest AHDD day occurred in 1996 and was 101 AHDD, or approximately an average daily temperature of minus 36 degrees Fahrenheit, as adjusted.

[50] Department Direct Testimony, Heinen, pp. 9-10, Hearing Ex. 405.

[51] Department Initial Brief, pp. 17-18.

The Department reviewed MERC's projected forecast and was able to replicate the regression results using MERC's input data and model specifications.[52] The review identified the following Department concerns:

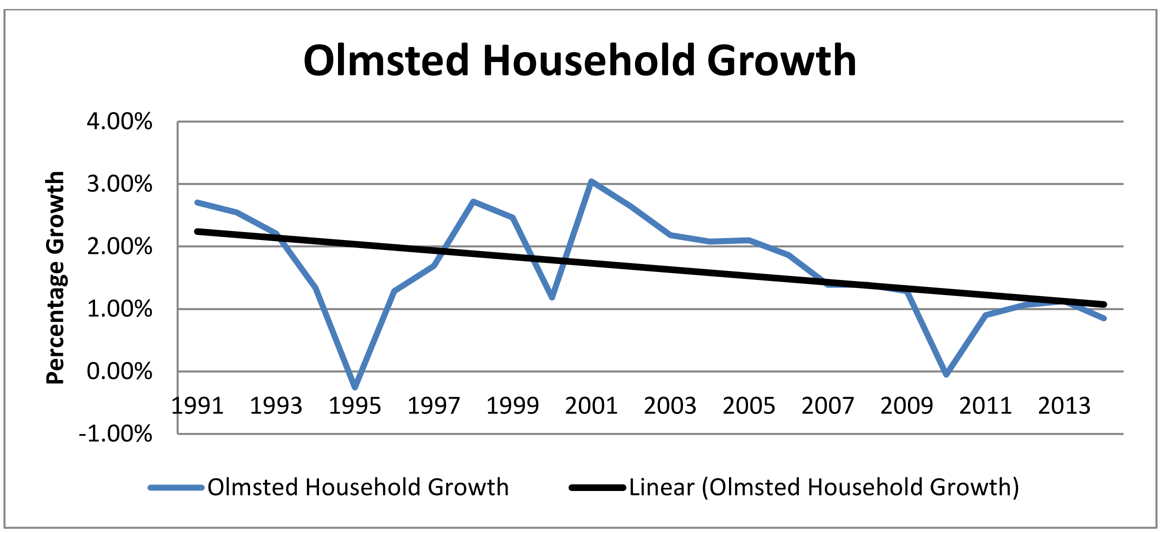
- MERC's estimated sales forecast growth rate;
- MERC's use of its sales forecast growth rate as the Design Day growth rate; and
- MERC's 2015/2016 Design Day capacity amount.

Department Concern 1 - MERC's Projected Sales Growth Rate

The Department stated that MERC used its sales forecast to estimate its customer count growth and use-per-customer. MERC's forecast suggested that its customer count would increase over its forecasted period; its Rochester forecast assumed an annual residential customer growth rate of 2.26 percent.

The Department tested the reliability of the population growth data by comparing the results of MERC's residential customer count forecast to historical household data, using 1970 to 2010 data. The Department believed utility customer counts were analogous to the number of area households. The Department compared the historical household counts to historical population numbers to determine whether a consistent relationship existed in the Rochester area. Further, the Department compared annual historical household growth in Olmsted County to MERC's forecasted average annual customer count growth. [53]

Graph 1: Olmsted County Household growth (1990-2014)[54]

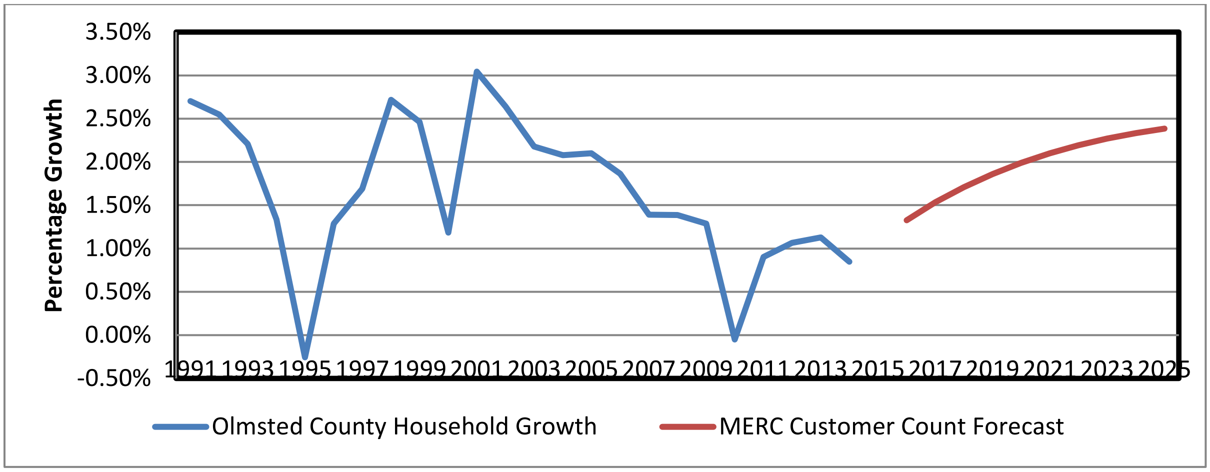


The Department estimated the average annual household growth rate in the Rochester area after 1990 was approximately 1.65 percent, but noted a downward trend in the household growth rate

[52] Department Direct Testimony, Heinen, p. 13, Hearing Ex. 405.
[53] Department Direct Testimony, Heinen, p. 16, AJH-11, Hearing Ex. 405.
[54] See the Department Direct Testimony, Heinen, p. 17, Graph 2.

over the period.[55] [56] The Department concluded that MERC's average residential growth rate from its forecast was comparable to 1990's Rochester household growth, but that MERC's residential growth rate was higher than the household growth over the past 10 years.[57]

Graph 2: Olmsted County Household growth (1990-2014) compared to MERC's Residential Growth[58]



The Department concluded that it was reasonable for MERC to compare the Rochester Olmstead County Government (ROCG) population growth estimates to MERC's residential customer count forecast.

In response, MERC stated its forecasted growth rate was reasonable considering the potential impact of the Mayo Clinic expansion.[59] MERC further stated that additional factors could influence its sales forecast, such as Rochester Public Utilities' (RPU's) intent to construct new gas-fired electric generation.

The Department believed that if the DMC does not happens or if the project turns out differently from what MERC's expects the actual Rochester customer growth will likely be lower than MERC's forecasted amount. The Department concluded that MERC's estimates represented the higher range of expected Rochester Area growth.

Department Concern 2 - MERC's Sales Forecast Growth Rate used as its Design Day Growth Rate

The Department stated that MERC's assumption to use its forecasted 1.5 percent growth rate as its Design Day estimates caused concern. The Department noted that MERC failed to provide support in this docket for its use of the same growth rate in each year.

55 Ibid, p. 17, Hearing Ex. 405
56 The Department further concluded that average household size remained relatively constant at approximately 2.5 individuals per household since 1970. Department Direct Testimony, Heinen, p. 10, AJH-18, Hearing Ex. 405.
57 Department Direct Testimony, Heinen, p. 18, AJH-11, Hearing Ex. 405.
58 Department Direct Testimony, Heinen, p. 19, Graph 2, Hearing Ex. 405.
59 MERC Rebuttal Testimony, Clabots, p. 6, Hearing Ex. 10.

The Department reviewed prior demand entitlement filings to validate MERC's 1.50 percent growth rate. The Department reviewed MERC's 2012 and 2015 demand entitlement petitions and noted that these petitions reflected some variability. The Department stated it was unclear whether MERC's 1.5 percent growth rate was reasonable. Based on the recent Design Day growth trends, it appeared that an appropriate growth rate was closer to 1.0 percent.[60]

The Department concluded that MERC failed to provide evidence establishing the reasonableness of its Design Day growth figure. The Department was unable to conclude if MERC's reserve margin analysis was representative of expected conditions during the forecasting period.[61]

The Department concluded that a 1.0 percent growth rate would be more reasonable given the recent growth trends in MERC's demand entitlement petitions.

Department Concern 3 – MERC's 2015/2016 Design Day Requirements

The Department noted the MERC 2015/2016 demand entitlement filing's Design Day amount (one-year forecast) and this docket's Design Day amount for the same time-period (multiple year forecast) were different. The Department investigated 2015/2016 Design Day amount differences.[62]

The Department first compared the two Demand Day forecasts. The Department determined this docket's Design Day was lower than the 2015/2016 demand entitlement filing.[63] This comparison resulted in the Department determining that the 15-895 docket Design Day forecasted need was not over-sized.[64] To further test the Design Day reasonableness, the Department conducted its own independent analysis.[65] The Department used OLS regression analysis to conduct its Design Day review using historical data, from January 2007 to February 2015. The Department calculated the monthly maximum daily quantities adjusted for heating degree-day to estimate the maximum Design Day load for the Rochester area (adjusted to remove non-firm usage).[66]

The Department then compared its Design Day amount to MERC's amount and concluded that the amounts were comparable. The Department concluded that MERC's Design Day requirements were reasonable.[67] [68]

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[60] Department Direct Testimony, Heinen, p. 22, Hearing Ex. 405.

[61] Department Direct Testimony, Heinen, p. 22, Hearing Ex. 405

[62] Department Direct Testimony, Heinen, pp. 23-25, AJH-6, Hearing Ex. 405; MERC Direct Testimony, Mead, p. 11, 21, Hearing Ex. 12 (discussing 2015/2016 design day amount).

[63] Department Direct Testimony, Heinen, pp. 23-24, AJH-6, AJH-7, Hearing Ex. 405

[64] Department Direct Testimony, Heinen, p. 23, Hearing Ex. 405.

[65] The Department used OLS regression to conduct a peak demand analysis using data over the period from January 2007 to February 2015. The Department's analysis was partly based on the maximum daily quantities adjusted for heating degree-day for each month to estimate the maximum daily peak load for all of the TBSs in the Rochester area. The regression analysis results estimated the peak load on a peak day, adjusted to remove non-firm usage.

[66] Department Direct Testimony, Heinen, pp. 24-25, AJH-13, Hearing Ex. 405

[67] Department Direct Testimony, Heinen, p. 25, AJH-13, Hearing Ex. 405.

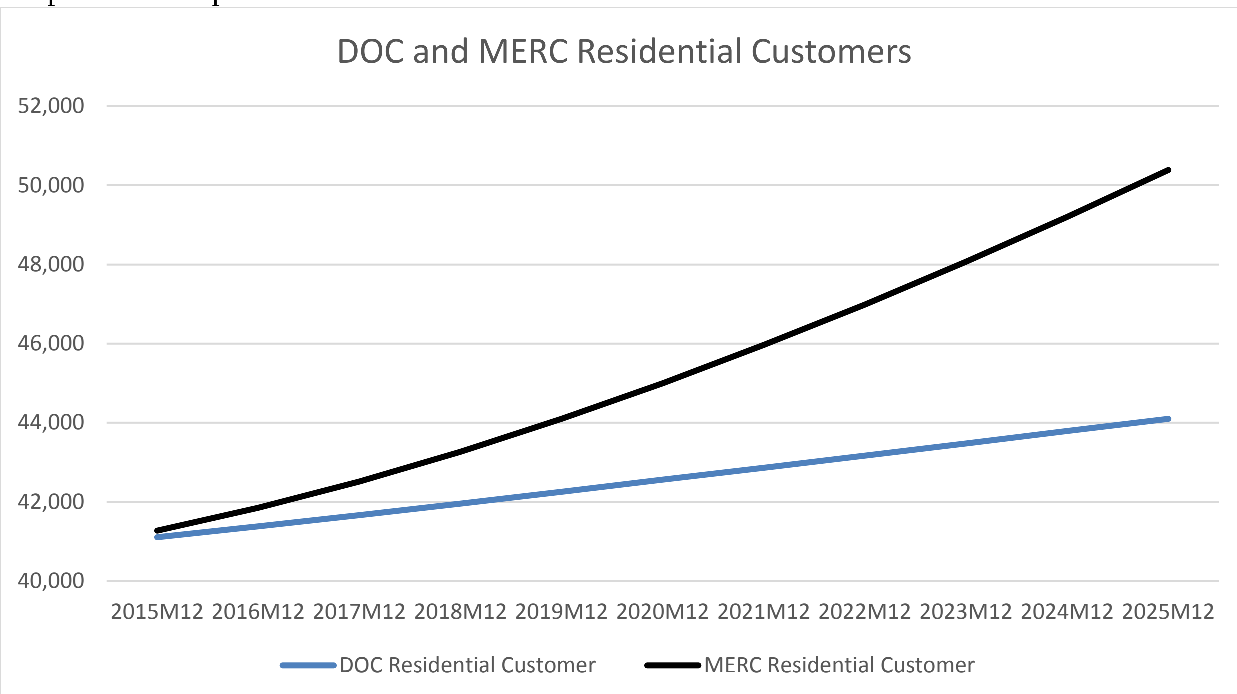
[68] Department Direct Testimony, Heinen, p. 25, Hearing Ex. 405.

In response, MERC explained that it used two Design Day forecasts for different purposes, one for its demand entitlement petition (forecasted one-year) and one for long-term forecasting (forecasted for many years). MERC stated that no issue exists for using two forecasts for different time-periods.[69]

Department's Alternative Growth Rate Forecast

The Department prepared its own alternative analysis to determine the reasonableness of MERC's 1.5 percent growth rate and its 1.0 percent growth rate. Based on historical data from the January 2007 to July 2015 time-period with an autoregressive term to forecast Rochester area customer counts from August 2015 through December 2025, the Department calculated a residential customer count growth of approximately 0.75 percent per year.[70] For a comparison of the Department's customer count increase to MERC's customer count increase, see the following graph.[71] [72]

Graph 3: The Department and MERC Residential Customers



To develop its projected sales forecast, the Department applied its customer count results to MERC's use-per-customer data to estimate its future sales forecast by customer class. The Department used these results to estimate firm demand growth over the forecast period.[73] The

[69] MERC Rebuttal Testimony, Clabots, p. 7, Hearing Ex. 10.
[70] Department Direct Testimony, Heinen, p. 25, AJH-14, Hearing Ex. 405; ALJ Report, pp. 20-21, Findings 113, Graph 4.
[71] Department Direct Testimony, Heinen, pp. 26-29, AJH-14, Hearing Ex. 405.
[72] The Department stated that its forecast differ from MERC forecast because the Department developed its forecast on historical MERC data, with a single autoregressive term. MERC's forecast included several different autoregressive terms and a trend factor.
[73] Department Direct Testimony, Heinen, pp. 28-29, Hearing Ex. 405.

Department reviewed MERC's proposed reserve margin calculations.[74] The Department used its estimated 1.0 percent growth rate (see Attachment A, p. 2).

In response, MERC agreed that the Department's forecast would be the "status quo" forecast or the low-end of possible growth outcomes. MERC disagreed that its forecast was the high-end of the range of possibilities, but accepted that its underlying forecast assumptions were more optimistic.[75]

MERC further stated its forecasted growth rate was reasonable considering the potential impact of the Mayo Clinic expansion (*a priori information*).[76] MERC noted that additional factors could influence its sales forecast, such as Rochester Public Utilities' (RPU's) intent to construct new gas-fired electric generation.

Both the Department and MERC estimated customer counts did not include a growth factor for the DMC expansion.[77]

The Department concluded that its customer growth rate or MERC's growth rate were potentially acceptable, but the Department estimated slower growth than MERC. The Department believed that if DMC implementation happens on schedule, MERC's projected growth rate could occur. However, if the Mayo Clinic delays the DMC project or it does not materialize, the Department's growth rate is more likely to occur.

The Department concluded that its 1.0 percent growth rate would represent the "status quo" forecast and MERC's 1.5 percent growth rate was more "optimistic" and could represent the "upper-limit" forecast.[78] The Department stated that MERC failed to support its use of the same growth rate in each year (1.5 percent each year). Further, it concluded that MERC failed to provide evidence establishing the reasonableness of its 1.5 percent Design Day growth rate.

Department Witness Heinen stated that because his "status quo" scenario showed excess capacity in the forecasting period, MERC could implement a smaller project to satisfy its growth requirements. Department Witness Heinen cautioned that if growth in the Rochester Area is closer to MERC's forecasted 1.5 percent, or if MERC's current demand entitlement filing are more representative of peak demand; or if, RPU or other electric utility requests additional supply, then MERC would be required to purchase additional capacity. That this would result in additional MERC investment in the Rochester Area.[79]

The Department concluded that the Rochester Project size was reasonable and represented the best option for MERC to meet its current and expected demand.[80]

[74] Department Direct Testimony, Heinen, p. 28, Hearing Ex. 405.
[75] MERC Rebuttal Testimony, Clabots, p. 4, Hearing Ex. 10.
[76] MERC Rebuttal Testimony, Clabots, p. 6, Hearing Ex. 10.
[77] Department Direct Testimony, Heinen, p. 27, Hearing Ex. 405.
[78] Ibid, p. 28; Hearing Ex. 405.
[79] Department Direct Testimony, pp. 34-35, Hearing Ex. 405.
[80] Department's Initial Brief, p. 44 (October 11, 2016); Department Direct Testimony, Heinen, pp. 58-59, Hearing Ex. 405.

Department Recommendations

The Department recommended that the Commission find the Rochester Area is constrained and that the size of the project, as proposed by MERC, is reasonable and represents the best means of meeting current and expected Rochester Area need.[81] The Department recommended that the Commission find that MERC's need projections are not unreasonable and likely represent an acceptable estimate of expected need for the Rochester Area.[82]

Office of the Attorney General (OAG)

The OAG noted that MERC relied on its forecast to justify the size of the Rochester project, making this forecast important in determining the need and reasonableness of the project. The OAG reviewed MERC's petition and developed the following concerns:

- MERC's unsupported growth rate;
- MERC's customer count model was not reasonable;
- MERC unreasonably assumed that Residential use-per-customer would remain constant for the entire time-period;
- MERC used a priori information to create its forecast; and
- MERC assumed that it was reasonable to apply an estimated sales growth rate to its future Design Day estimates – as a peak-day measure.

OAG Concern 1 - MERC's Unsupported Growth Rate

The OAG noted that MERC's forecasted Design Day requirements grew every year by 1.50 percent from 2015-2042, while its actual 2007-2015 historical sales only grew at an average rate of 0.46% per year.[83]

The OAG believed that MERC's forecasted 1.5 percent growth rate was unsupported or over-stated and that this could lead to over-building the Rochester distribution facilities and the supporting NNG facilities. This could also lead to existing customers paying for unnecessary facilities. The OAG compared MERC's historical growth rate to MERC's projected 1.5 percent growth rate and found that the 0.46 percent rate was one-third of MERC's projected growth rate for 2015-2042, see Table 2.

[81] Department Direct Testimony, Heinen, pp. 58-59, Hearing Ex. 405.
[82] Department Direct Testimony, Heinen, p. 26, Hearing Ex. 405; Department Rebuttal Testimony, Heinen, pp. 1-3, Hearing Ex. 406; Department Surrebuttal Testimony, Heinen, p. 6, Hearing Ex. 407.
[83] OAG Amended and Corrected Direct Testimony, Urban, pp. 29-30; OAG Initial Brief, p. 20-21 (October 11, 2016)

Table 2: MERC's Weather Normalized Sales Data (Therms)[84]

Calendar Year	Total Firm Sales Quantities	Percentage Change
2007	49,255,929	
2008	50,419,220	2.36%
2009	51,538,739	2.22%
2010	49,188,919	-4.56%
2011	52,069,673	5.86%
2012	52,780,006	1.36%
2013	53,587,946	1.53%
2014	57,685,764	7.65%
2015	50,318,139	-12.77%
Average Annual Change		**0.46%**

The OAG stated that it was unreasonable for MERC to estimate its growth rate at 1.50 percent when the average 2007-2015 sales growth rate was 0.46%. The OAG raised concerns over MERC's regression analysis period only reflecting historical data from 2007-2015, and further asserted that MERC's weather normalization calculation might not be correct.[85]

In response, MERC stated that it stopped using Aquila data (prior to 2007) due to OAG concerns in MERC's 2011 rate case about the data quality. MERC believed that seven-and-one-half-years of historical data to prepare a ten-year forecast (2016-2026) was adequate. MERC argued that Aquila data constraints should not prevent approval of its project.[86]

MERC disagreed with the OAG comments regarding the possibility of weather normalization errors. MERC explained it used actual sales, not weather normalized sales, in its regression models and used an independent weather variable in the models to help explain the Rochester sales variations.[87] MERC Witness David Clabots explained that there were challenges associated with weather normalized historical sales when the review period includes extreme weather, such as 2014 Polar Vortex and 2015 El Niño. Witness Clabots believed that weather normalization models with extreme events tend to under-correct.

To illustrate these challenges, MERC believed that extreme weather conditions influenced its calculated average compounded growth rates during the 2007-2015 time-period see Table 3: [88]

[84] Source: OAG Data Request #155, Question 2.
[85] OAG Amended and Corrected Direct Testimony, Urban, pp. 28-29.
[86] MERC Rebuttal Testimony, Clabots, p. 12, Hearing Ex. 10.
[87] MERC Rebuttal Testimony, Clabots, p. 13, Hearing Ex. 10; MERC Surrebuttal Testimony, Clabots, p. 7, Hearing Ex. 11.
[88] MERC Surrebuttal Testimony, Clabots, pp. 6-7, Hearing Ex. 11.

Table 3: MERC's Average Compounded Growth Rates Based on Historical Data:

Calendar Year	Total Firm Sales Quantities	Percentage Change Year to Year
2007	49,255,929	
2008	50,419,220	2.36%
2009	51,538,739	2.22%
2010	49,188,919	-4.56%
2011	52,069,673	5.86%
2012	52,780,006	1.36%
2013	53,587,946	1.53%
2014	57,685,764	7.65%
2015	50,318,139	-12.77%
Average Compound Growth Rate	2007-2013	**1.41%**
Average Compound Growth Rate	2007-2014	**2.28%**
Average Compound Growth Rate	2007-2015	**0.27%**

In response, the Department agreed with the OAG's observation that there was considerable fluctuation in the annual percentage change in firm demand since 2007, (see Table 3), but believed the fluctuation helped support the Rochester project need. The Department stated it is critical for MERC to have the ability to provide natural gas service during fluctuation periods, such as the 2014 Polar Vortex.[89]

OAG Concern 2 - MERC's Residential Customer Count

The OAG agreed with the Department that MERC's projected 2.26% increase to residential customers was unsupported by this docket's record, historical data, and the population estimates from the RCOG. The OAG believed that MERC 2.26% growth rate was optimistic and supported the Department's customer growth rate of 0.75%.[90]

OAG Concern 3 – MERC's Residential Use-Per-Customer Estimate

The OAG disagreed with MERC and the Department regarding their use a constant (or flat) use-per-customer within the forecast projections. The OAG asserted that this assumption was unreasonable because the historical residential use-per-customer had been trending downward because of a number of factors, such as including increased efficiency in heating and cooling, and insulation improvements.[91] The OAG requested studies from MERC that included a time trend variable in the regression analysis, which resulted in lower residential sales.

The OAG stated that if MERC used a time trend variable, the Design Day growth rate would be lower than both the Department's (1.0 percent) and MERC's (1.5 percent) growth rates. Therefore, the OAG believed MERC's constant (flat) residential use-per-customer assumption was unreasonable.

[89] Department Surrebuttal Testimony, Heinen, p. 3, Hearing Ex. 407; Heinen Opening Statement, p. 2, Hearing Ex. 410.

[90] OAG Amended and Corrected Rebuttal Testimony, Urban, pp. 4-5, Hearing Ex. 307.

[91] OAG Initial Brief, Urban, pp. 26-27; OAG Urban Opening Statement, p. 2, Hearing Ex. 314.

In response, MERC disagreed that a time trend variable was necessary in its regression analysis; MERC maintained that its residential use-per-customer model was statistically significant. MERC believed that it would be inappropriate to add a time trend variable in isolation without reviewing all variables included in the model. MERC Witness Clabots noted that the variables in the forecast model work together and that the addition or modification of particular variables without corresponding adjustments to other variables in the model could yield inconsistent and unsound results.

MERC witness Clabots noted that trend time lines were valuable visual aid tools, but the variable was less reliable for purpose of forecasting outside the historical range of the data. He further stated that most time series do not behave as straight lines, rather, levels and trends undergo evolution. Therefore, a linear trend model does not always produce a good forecast over the long-term.[92]

MERC Witness Clabots further noted that a decreasing line trend for residential use-per-customer was not realistic over the long term, as usage cannot decrease forever. MERC believed that forward-looking independent variables or *a priori information* provided benefits for long-term forecasting. Instead of using the OAG's time trend variable, MERC believed that an economic trend variable, such as Real Personal Income (RPI), would be appropriate. [93]

MERC re-calculated its regression analysis using the RPI as a trend variable, as opposed to a generic time trend variable. The result produced a 1.59 percent growth rate - compared to MERC's original 1.87 percent growth rate, as opposed to the OAG time trend variable result of 1.34 percent growth rate. The RPI trend variable produced a zero percent p-value in MERC's regression analysis. MERC believed that the time trend variable impact was not as significant as the OAG believed.[94]

OAG Concern 4 – MERC's Use of *A Priori Information*

The OAG raised concerns with MERC's decision to incorporate the Mayo Clinic and DMC expansion in calculating the anticipated growth in its regression analysis models. OAG Witness Urban stated that MERC's residential and small C&I models reflected *a priori information*, where the models included both historical growth and future expected growth.[95]

In response, MERC clarified that its regression models did not include expected growth for the Mayo Clinic or the DMC project. Instead, MERC used the DMC initiative as a gauge in determining the reasonableness of the regression output.[96]

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[92] MERC Rebuttal Testimony, Clabots, p. 14, Hearing Ex. 10; MERC Surrebuttal Testimony, Clabots, p. 13, Hearing Ex. 11; Clabots Opening Statement, p. 2, Hearing Ex. 26.

[93] MERC Rebuttal Testimony, Clabots, p. 14, Hearing Ex. 10; Clabots Opening Statement, pp. 2-3, Hearing Ex. 26; Transcript Vol. 1, pp. 2-3 (Clabots) and p. 185 (Urban).

[94] MERC Rebuttal Testimony, Clabots, p. 14, Hearing Ex. 10; OAG Amended and Corrected Direct Testimony, Urban, JAU-15, Hearing Ex. 304 (Urban Direct Schedules) (MERC's response to OAG IR 155.7).

[95] OAG Amended and Corrected Direct Testimony, Urban, pp. 31-32, Hearing Ex. 300; MERC Rebuttal Testimony, Clabots, p. 15, Hearing Ex. 10.

[96] MERC Rebuttal Testimony, Clabots, p. 15, Hearing Ex. 10.

In response, OAG Witness Urban did not believe MERC's response addressed her concerns, she continued to believe that MERC's use of *a priori information* was not reasonable. OAG Witness Urban stated that the Mayo Clinic expansion was speculative and continued to believe MERC's 1.5 percent average annual growth was too high. OAG Witness Urban believed that MERC overestimated residential growth and the use-per-customer and that MERC's proposal would result in over-building the facilities and NNG interstate pipeline capacity.

MERC continued to disagree with the OAG's assertions, that *a priori information* use in forecasting is usual in long-term forecasting. MERC Witness Clabots stated that expert opinion or the forecaster's judgement for selecting the variables included in the regression analysis model could be beneficial. MERC believed that it was reasonable to consider the Mayo Clinic's expansion and the DMC incentive plan in determining the reasonableness of the Rochester project forecast.

OAG Concern 5 – MERC's Design Day Growth Rate

As mentioned above, MERC's regression analysis resulted in a 1.5 percent growth rate. MERC applied its 1.5 percent growth rate to its 2015/2016 winter heating period's Design Day amounts to project its future Design Day requirements. The OAG believed that MERC did not demonstrate that it was reasonable to make this assumption. Instead, the OAG recommended that the Commission consider the lack of evidentiary support when determining the reasonableness of MERC's forecasted requirements.

The OAG requested MERC to re-calculate its sales forecast with the following changes:

- Use Rochester-specific weather data;
- Use the Department's customer count growth forecast; and
- Incorporate the time trend variable in the Residential use-per-customer model.

In response, MERC prepared the OAG requested study; resulted in a 10-year average growth rate of a ***negative*** 0.092 percent.[97] MERC claimed that changing a single variable in isolation, risks inconsistent and potentially skewed results.[98] To prove its point, MERC prepared a revised study reflecting its initial petition forecast updated to include 2015 weather normalized actual sales; this resulted in a growth rate of a ***positive*** 1.1 percent.

MERC believed that the OAG's study results were problematic and continued supporting its initial sales forecast as the reasonable alternative for the Rochester area customers.[99]

The Department also believed the OAG's conclusions were without merit because the OAG incorrectly focused its analysis only on the Rochester area, despite the fact that MERC's Precedent Agreement allows for NNG contracted capacity to serve secondary delivery points. Additionally, the OAG's baseline premise that any reserve margin in excess of five percent is de facto unreasonable, regardless of the facts and circumstances would be untenable. The Department believed that MERC demonstrated that its Rochester Project was reasonable and prudent.

[97] OAG Amended Surrebuttal Testimony, Urban, p. 3, Hearing Ex. 311; MERC Surrebuttal Testimony, Clabots, p. 13, DWC-S2, Hearing Ex. 11.
[98] MERC Surrebuttal Testimony, Clabots, pp. 13-14, DWC-S2, Hearing Ex. 11.
[99] Ibid.

In response, the OAG continued to disagree with MERC's conclusions and results. The OAG maintained that MERC's forecast overestimates the growth in the Rochester area peak demand. The OAG continued to believe that MERC's forecast model was flawed and MERC's decision to select the Rochester project size was based exclusively on its forecast is unreasonable.[100]

OAG Recommendations

The OAG concluded that MERC had failed to demonstrate that the Rochester Project was reasonable, prudent, and necessary.[101] The OAG identified a number of issues (concerns):

- MERC's sales forecast;
- the RFP process; and
- how MERC analyzed the alternatives.[102] The OAG believed that MERC's Rochester Project proposal is larger than necessary.[103]

The OAG recommended that MERC take a more phased-in approach in meeting its existing and future capacity requirements in the Rochester area. In the alternative, if the Commission finds the project is reasonable, the OAG recommended that MERC defer project cost recovery for the unused capacity until MERC needs the capacity to serve customers.[104]

Administrative Law Judge (ALJ) Analysis

(ALJ Report, pp. 13-33, Findings 67-179.)

The ALJ is of the opinion that all parties agree that MERC has an immediate capacity need in the Rochester area to meet its existing peak demand.[105] The parties did not agree on how much future capacity the Rochester area requires to meet its future peak demand, Design Day.[106] [107]

ALJ concluded that this docket's record supported the Department's growth estimate of 1.0 percent as the "status quo" (base) case for Design Day projected growth and MERC's growth estimate of 1.5 percent as the high-case Design Day growth projection.[108] Further, the ALJ believed that the OAG's projected growth estimate of ***negative*** 0.092 percent was unreasonable for a low-growth estimate of future Design Day growth.[109]

[100] OAG Amended Surrebuttal Testimony, Urban, p. 24, Hearing Ex. 311.
[101] OAG Initial Brief, pp. 6-8 and 76 (October 11, 2016).
[102] Ibid, pp, 8 and 76.
[103] Ibid, pp. 76-77.
[104] OAG Amended Surrebuttal Testimony, pp. 24-25, Hearing Ex. 311.
[105] MERC Direct Testimony, Mead, p. 21, Hearing Ex. 12; Department Direct Testimony, Heinen, p. 58, Hearing Ex. 405; OAG Amended and Corrected Direct Testimony, Urban, pp. 34-35, Hearing Ex. 300
[106] Department Direct Testimony, Heinen, pp. 6, 58, Hearing Ex. 405; Transcript Vol. 1, p. 24 (Lee).
[107] In similar types of proceedings where long-term forecasts are used to make infrastructure decisions such as in Integrated Resource Plans (IRP) (electric utilities) or Certificate of Need filings, the forecast or need analysis includes; low growth, base growth, and high growth scenarios.
[108] MERC Direct Testimony, Mead, p. 21, Hearing Ex. 12; Department Direct Testimony, Heinen, pp. 29-30, Hearing Ex. 405;
[109] OAG Amended Surrebuttal Testimony, Urban, p. 3, Hearing Ex. 311.

The ALJ justified her conclusion that the Department's 1.0 percent growth rate was reasonable by stating the Department used actual (historical) Design Day data as well as its sales forecast.[110] The Design Day data shows MERC's Design Day for the NNG PGA area has grown 1.33 percent on average from 2006/2007 to 2015/2016. In addition, the Department estimated firm sales growth to be approximately 0.77 percent based on historical information. Together these data points support the Department's 1.0 percent Design Day growth rate, as being reasonable (the "status quo" case).[111]

The ALJ justified her conclusion that MERC's estimated 1.5 percent growth rate was a reasonable high-growth rate scenario considering the Mayo Clinic's (DMC) expansion plans, by stating:

- MERC's historical Design Day growth has averaged 1.33 percent from 2006/2007 to 2015/2016 and that this growth does not take into consideration Mayo Clinic's (DMC) expansion plans.

- There is evidence that the Mayo's Clinic expansion will likely result in additional Rochester growth. The Rochester-Olmsted Council of Governments (ROCG) projected annual increases in the population of Olmsted County of approximately 1.50 percent from 2010-2020, 1.52 percent from 2020-2030, and 1.01 percent from 2030-2040. The ALJ believed that consideration of *a priori information* is appropriate.

- Historical sales data supports MERC's forecast 1.5 percent Design Day growth as an upper-bound projection. MERC's weather normalized sales data show that the average compound growth rate in firm sales in the Rochester area was 1.41 percent per year from 2007-2013. The ALJ believed MERC Witness Clabots statements that weather normalized data is difficult to estimate during times of extreme weather event.

The ALJ believed that the OAG focused on the average growth rate for 2007-2015 to argue that MERC's forecast was too high. She believed that the OAG recommended ***negative*** 0.092 percent growth rate failed to recognize the 2014 Polar Vortex and the 2015 El Nino weather events. Further, the ALJ believed MERC Witness Clabots explanation that it is difficult to weather normalize historical sales when extreme weather events exist, see Witness Clabots' average compound growth rate calculations in Table 3.

ALJ Findings

> 170. In this case, the Administrative Law Judge concludes that the record supports the Department's estimate of 1.0 percent as a base growth projection in Design Day growth and MERC's forecast of 1.5 percent as a high-growth projection in Design Day growth. The OAG's projection that sales growth will be negative 0.092 percent is not reasonable for use as a low-growth estimate of future Design Day growth.

[110] Department Direct Testimony, Heinen, pp. 26-29, AJH-12, p. 2, Hearing Exhibit Ex. 405
[111] Ibid.

176. For these reasons, the Administrative Law Judge concludes that the record supports MERC's estimate of 1.5 percent growth in the Design Day as a high-growth estimate for planning purposes.

179. In summary, the Administrative Law Judge concludes that MERC's estimate that the Design Day will grow by 1.5 percent per year is a reasonable upper-bound estimate of its forecasted need, and the Department's estimate that the Design Day will grow by 1.0 percent per year is a reasonable lower-bound estimate of MERC's forecasted need.

Office of Attorney General (OAG) Exceptions

The OAG filed Exceptions to the ALJ Report on December 20, 2016 addressing only issues where it thought specific comment was necessary, especially where the ALJ Report neglected to address fundamental parts of the OAG's position. The fact that the OAG does not address an issue in these Exceptions does not indicate a waiver; the OAG continues to support all of the positions as recommended in its *Initial Brief* and *Reply Brief*.

The OAG took exception to ALJ Report sections regarding the sales forecast, the RFP process, the reasonableness of the Precedent Agreement ("PA") and Phase II portions of the project, and on the ALJ Report's overall analysis of reasonableness.

MERC's Forecasted Need

ALJ Findings 67 through 80 describe the process that MERC used in its long-term demand forecast. The OAG believed that the ALJ Findings are generally accurate; it noted that the ALJ Report omitted important, relevant facts that were included in this docket's record. The OAG believed that the Commission should incorporated the following into the ALJ Report to provide further clarification:

Modification to ALJ Finding 74:

> 74a. MERC also stated that the forecast for firm sales included the Large C&I Customer Forecast Model which included a GSP variable or Gross State Product variable.[112] The Company's sales forecaster stated that the forecast relied on economic and demographic variables produced by Moody's Analytics. In response to OAG information requests, MERC stated that the Moody's forecasts "presumably reflect some assumption about the impact of the DMC plan" but the Company "cannot determine the degree of that impact for any particular variable."[113]

Department's Alternative Need Forecast

Modification to ALJ Finding 111:

> 111. Because of its concerns regarding the accuracy of MERC's forecast, the Department conducted an alternative need forecast.[114] Mr. Heinen testified that the

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[112] MERC Initial Petition, Attachment C10, the LCI Customer Forecast Model, Hearing Ex. 1.

[113] OAG Amended Surrebuttal Testimony, Urban, Schedule JAU-SR-1, MERC's Response to OAG IR 116.

[114] Department Direct Testimony, Heinen, p. 25, Hearing Ex. 405.

ROCG (Rochester-Olmsted Council of Governments) forecast data did not anticipate growth at the level projected by the Company."[115] MERC's forecasted annual growth rate for Residential customer count of 2.26 percent is significantly greater than the highest average annual population growth rate of approximately 1.5 percent assumed by the ROCG for Olmsted County. The Department's forecast included its own alternative customer count forecast.[116]

Modification to ALJ Finding 113:

113. The Department's forecast results suggested an increase in retail customer counts of approximately 0.75 percent per year during the forecasting period. According to the Department, its customer count forecast is approximately ~~1.14 percent less~~ 60 percent less than the Company's projections of 1.89 percent. The difference between the two forecasts was illustrated in Graph 4 in Mr. Heinen's Direct Testimony and is displayed below:[117]

Historical Sales Growth (OAG Concern 1)

ALJ Findings 125 through 127 describe the OAG's concerns with MERC's forecast compared to its historical sales growth. The OAG's concluded that it may not be reasonable to assume an annual growth rate of 1.5 percent for the next 25 years when historical data demonstrates a 0.46 percent growth rate. In Findings 128 through 134, the ALJ Findings explain the counter-arguments of MERC and the Department to this historical sales data. The ALJ Findings do not include the OAG's response to MERC and the Department comments. In particular, the ALJ Findings explain MERC's argument that historical data should exclude years that were warmer than average. The OAG believed that doing so would produce a historical data set with a higher growth rate, but the ALJ did not include the OAG's rebuttal to MERC's argument.

Modifications to ALJ Finding 133:

133a. The OAG responded to MERC's concern by questioning the validity of the Company's proposal to ignore some years when considering historical data. While the Company argued that 2014 and 2015 should not be included because of unusual weather events, the OAG argued that it would not make sense to exclude extreme weather data because the entire data set has been weather normalized.[118]

133b. The OAG also suggested that MERC's method for measuring annual growth rates was not the most reasonable. To calculate its "average compound growth rate," MERC used only two figures: the sales from the first year in the time-period, and the sales from the last year in the time-period. The OAG suggested that relying on only two data points could be somewhat arbitrary. Instead, the OAG recommended that it would be more useful to rely upon "average annual percentage change," which would use the annual change in each year of a time series to produce an average result. For the 2007 to 2015 time series, for example, MERC's

[115] Department Direct Testimony, Heinen, p. 15, Hearing Ex. 405.
[116] Department Direct Testimony, Heinen, p. 25, AJH-14, Hearing Ex. 405.
[117] Department Direct Testimony, Heinen, p. 27, Hearing Ex. 405
[118] OAG Reply Brief pp. 13–14 (Oct. 25, 2016).

method would use only two data points (2007 and 2015), while the OAG's method would use nine data points (each year from 2007 to 2015). Because its method used more data points, the OAG suggested that it was less prone to arbitrarily choosing specific years, and as a result was less volatile.

MERC's Residential Use-Per-Customer Use (OAG Concern 2)

ALJ Findings 137 through 143 provided a description of the OAG's concerns regarding MERC assumptions in its Residential Use-Per-Customer model. ALJ Findings 144 through 148 describe MERC's response to these concerns but include the OAG's rebuttal of MERC's argument.

Modifications to ALJ Finding 148:

148a. In response to MERC's argument, the OAG noted that the Company's arguments against a Residential time trend variable were inconsistent with the Company's decision to include a time-trend variable for its Small Commercial & Industrial class.

148b. The OAG also responded to the Company's argument that it would not be reasonable to add a time-trend variable in isolation without making other changes to the model. The OAG pointed out that while the Company had presented this argument several times, it had never identified any changes that should be made along with a time trend variable.[119] The OAG also noted that its expert, Dr. Urban, did not blindly recommend including a time trend variable but did so only after reviewing the model in its entirety.[120]

Use of *A Priori Information* (OAG Concern 4)

ALJ Findings 149 through 156 describe the OAG's concerns regarding the use of *a priori information* in MERC's sales forecast, and the Company's response, but the ALJ Findings did not provide a fully accurate description of the OAG's position regarding *a priori information*. The OAG recommends that the Commission insert the following Findings.

Modifications to ALJ Finding 151:

151a. In its Initial Brief, the OAG clarified the reason that it was concerned about the use of *a priori* information in the sales forecast. The OAG stated that the use of *a priori* information is significant because it represents a departure from historic growth based on the judgment of the sales forecaster. The OAG pointed out that it is essential to understand the *a priori* information used, where it came from, and what impact it had on the forecast in order to determine whether the analyst's judgment was reasonable. The OAG stated that MERC's discussion regarding the *a priori* information had changed throughout the case and had not been transparent.

151b. In particular, the OAG noted that the Company's Initial Filing stated that the assumptions for the Residential and Small Commercial & Industrial forecast were

[119] OAG Reply Brief at 15 (Oct. 25, 2016).
[120] Urban Opening Statement, p. 2, Hearing Ex. 314.

"primarily based on the Mayo Clinic expansion, and the economic growth in the Rochester area,"[121] but the Company had later argued that it did not use *a priori* information in the forecast except to check its reasonableness. In light of this inconsistency, the OAG concluded that MERC's discussion regarding *a priori* information was not sufficiently transparent, and that it was not possible to determine what information had been used, how it was used, or whether it was reasonable to do so based on the evidence that MERC produced.[122]

Design Day Growth Rate (OAG Concern 5)

ALJ Findings 157 through 166 explain the OAG's request that MERC re-run its forecast with several changes, the results of that forecast, and the Company's objections to the results. The OAG believes that there were several concerns with these Findings.

First, modify ALJ Finding 163 to provide a more accurate description of how MERC handled several changes the OAG requested to the sales forecast.

Modification to ALJ Finding 163:

163. To address its concern, MERC also made the modifications specified by the OAG with some changes ~~while also updating the forecast tables to include 2015 weather normalized actual sales (rather than forecasted 2015),~~ Specifically, MERC replaced the forecasted value for 2015 with weather normalized actual sales for 2015. When using the forecasted values, the annual growth rate from 2015 to 2016 was -0.6 percent; when MERC removed the forecasted values and used the 2015 weather normalized actuals, the annual growth rate from 2015 to 2016 was 11.6 percent. Overall, the change proposed by MERC, ~~which~~ resulted in a 10-year average total retail sales growth of positive 1.1 percent.[123] MERC explained that it also rant the scenario with 2015 weather normalized sales to further demonstrate the significant impacts that changing forecast model variables in isolation can have.[124]

Second, as with many other areas in the Report, the Findings describe the OAG's rebuttal to MERC's arguments. To ensure providing the Commission with a complete record and a fair accounting of the arguments from all parties, the OAG recommends the following modifications to ALJ Finding 166:

166a. The OAG disagreed with MERC's suggestion that the forecast tables should be modified to include 2015 actual sales. The OAG pointed out that MERC was *not* suggesting that the forecast should be re-run with the benefit of additional data from 2015. Instead, the Company was suggesting that the results of a forecast should be removed and replaced with actuals. The OAG argued that replacing one value in a forecasted time series with historical data would be unreasonable and inconsistent. The OAG pointed out that the purpose of the analysis was to

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[121] MERC's Initial Petition, p. 77, Hearing Ex. 1.
[122] OAG Initial Brief at 26–29.
[123] Ex. 11 at 13, DWC-S2 (Clabots Surrebuttal).
[124] *Id.* at 13.

determine an average annual growth in a forecasted time series, and that replacing some forecasted values with actuals would not produce useful information because it would instead be a conglomeration of an actual and forecasted numbers. The OAG suggested that MERC's proposal was not consistent with standard forecasting practice.[125]

166b. The OAG also disagreed with MERC's suggestion that including a time trend variable would be changing a single variable in isolation. Dr. Urban testified that she did not blindly recommend a time trend variable in isolation, but only did so after reviewing the model in its entirety.[126] The OAG also pointed out that despite its concern that changing one variable in isolation would be unreasonable, MERC was recommending changing a single value in the forecast results that would also cause a different change in the average annual growth rates.

166c. The OAG also noted that even making the change that MERC suggested would produce a forecast significantly lower than MERC's initial forecast. If the forecasted results are removed and replaced with actuals as the Company suggests, the forecast produces an annual growth rate estimate of 1.1 percent—nearly thirty percent lower than what the Company used to justify its proposal.[127]

166d. The OAG did not suggest that the modified forecast results should be used. Instead, the OAG noted that the more important point is that there are significant concerns with MERC's forecast, and that when those concerns are addressed the resulting forecast is somewhere between 50 and 100 percent lower.[128] The OAG argued that this information demonstrated the magnitude of the problems with MERC's forecast, and suggested that it was evidence that the forecast was not a reasonable justification for the Company's proposed capital expenditures.

ALJ's Conclusions regarding MERC's Forecast of its Future Capacity Needs

The OAG took exception to the ALJ's conclusions regarding MERC's forecast. The OAG stated that the ALJ incorrectly applies low-, medium-, and high-growth scenario labels to the parties' growth projection recommendations – the parties did not represent their projections in this manner. It appears that the ALJ did so because multiple projections are typically included in other proceedings involving long-term forecasts. MERC did not produce multiple forecasts and instead it provided a single forecast. The OAG believes that MERC has the burden of proof that its forecast is reasonable.[129]

MERC attempted to present an unprecedented, or at least exceedingly rare, growth forecast in this proceeding to justify a massive system integrity project as well as a long-term interstate natural gas capacity contract. Using the normal procedures for long-term forecasting may have required the Company to produce multiple forecasts, instead of producing just one forecast for consideration. The OAG believed that due to its concerns and the Department concerns, that no basis for the

[125] OAG Initial Brief at 33 (Oct. 11, 2016) (eDocket No. 201610-125583-01).
[126] Ex. 314 at 2 (Urban Opening Statement).
[127] OAG Initial Brief at 34 (Oct. 11, 2016) (eDocket No. 201610-125583-01).
[128] OAG Initial Brief at 34 (Oct. 11, 2016) (eDocket No. 201610-125583-01).
[129] ALJ's Report, p. 30.

ALJ's forecasting conclusions exist. The OAG recommended to the Commission that it remove the ALJ Findings 169 through 179 and replace with the following Findings.

- Modifications to ALJ Finding 179 – Option1:

179a. Both the OAG and the Department have raised serious concerns regarding the forecast that MERC uses to justify the Rochester Project.

179b. First, the OAG and the Department agreed that MERC's customer count model was not reasonable and should be changed. In isolation, this change as calculated by the Department reduces MERC's forecast annual growth rate by one-third, from 1.5 percent to 1.0 percent.

179c. Second, the OAG identified that MERC's Residential Use-Per-Customer model assumed that residential use would be constant every year for the next 25 years or more. It is well known that the consumption of natural gas has been declining for decades. In light of this fact, it is not reasonable to assume that residential use-per-customer will remain constant for the next two or three decades.

179d. Third, the OAG questioned MERC's use of *a priori* information. While it may have been reasonable to use *a priori* information to inform or check the forecast in light of the context in the region, MERC was not transparent about what information it used, the source of that information, or the impact that the information had on the results of its forecast. Because it did not produce evidence of this nature, the Company did not demonstrate that its use of *a priori* information was reasonable.

179e. Fourth, the OAG and the Department both questioned whether it was reasonable for MERC to apply the results of a sales forecast, which measures total sales, to its Design Day, which measures peak demand rather than total sales. The Company did not provide any effective response to this concern.

179f. Fifth, there is some concern that the Company's proposed 1.5 percent growth rate is not consistent with historical growth rates. In particular, the historical growth rate in the Rochester area has been 0.46 percent since 2007. This concern is magnified by the relative lack of historical data, since MERC only has access to nine years of historical data. While MERC may have a reasonable explanation for the lack of historical data, the Company's reasoning does not change the fact that a forecast based on more historical data would likely be more reliable.

179g. The evidence in the record demonstrates that MERC's forecast is not reasonable. While no party disputes that MERC must obtain additional capacity to meet existing need, MERC's forecast does not provide a reasonable basis to estimate the amount of need that will exist in the future.

If the Commission would prefer to modify them to provide a more accurate statement of the law, the OAG provided the following suggestions:

- Modifications to ALJ Findings 169 and 170 – Option 2:

169. In similar types of proceedings where long-term forecasts are used to make infrastructure decisions such as in Integrated Resource Plans or Certificate of Need filings, the forecast or need analysis typically includes: low growth, base growth, and high growth scenarios.[130] It should also be noted, however, that the Commission has considered and declined to adopt natural gas resource plans that would require a long-term planning horizon to be approved by the Commission.[131] As such, there is no affirmative requirement here to fit the different proposed growth scenarios into specific low-, medium-, or high-growth scenarios nor is there Commission precedent that would encourage the type of long term forecasting for natural gas demand that the Company has provided in this case. The question here is whether the Company's proposed 1.5 percent annual growth rate is a reasonable basis upon which to rely for a $100 million investment by MERC's ratepayers.

170. In this case, the Administrative Law Judge concludes that the record does not supports ~~the Department's estimate of 1.0 percent as a base growth projection in Design Day growth and~~ MERC's forecast of 1.5 percent. ~~as a high-growth projection in Design Day growth.~~ The OAG's projection of a more reasonable growth rate and its well-founded criticism of MERC's forecast demonstrates that the Company's forecast cannot be reasonably relied upon to project future growth 25 years into the future. Moreover, it was unreasonable, given the concerns raised by the OAG, for the Company to rely upon its flawed growth forecast when it designed the parameters of its RFP based on the results of the forecast. ~~that sales growth will be negative 0.092 percent is not reasonable for use as a low-growth estimate of future Design Day growth.~~

If the Commission chooses to modify ALJ Finding 169 and 170, the OAG believes the ALJ finding 175, 177, and 178 should be deleted. ALJ Finding 175 unreasonably suggested that it would be reasonable to exclude one year from the historical sales data because of the 2015 El Nino event, it is simply not reasonable to pick and choose the data to be included. In this docket, the historical data was already challenging because MERC has conducted a 25+-year forecast based on only 9-years of historical data.

Further, delete ALJ Findings 177 and 178 on the basis that the ALJ conclusions do not represent the OAG purpose for requesting MERC to modify and produce an additional forecast.

- First, the OAG stated that MERC's initial forecast reflects problematic concerns. The OAG does not suggest that the Rochester area will see negative growth in the future. Instead, the forecast conclusions highlight parts of MERC's initial forecast that produce different, and in this example lower results. The ALJ Findings miss this conclusion, but instead attempt to place the OAG's modified forecast results into a low-, medium-, and high-forecast framework.

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[130] Ex. 407 at 6 (Heinen Direct).
[131] Ex. 311 at 10 (Urban Amended and Corrected Surrebuttal).

- Second, the ALJ unreasonably accepts MERC's suggestion that, after preparing its forecast, to replace one-year of forecasted data from a time series with actual data rather than the forecasted results was inappropriate for forecasting.

- Third, the ALJ relies on the growth rate for the entire MERC-NNG PGA area to support the reasonableness of MERC's Rochester forecast. In this docket, there is no evidence that suggests that it is reasonable to justify the results of a forecast for one region with the results of a different, much larger region. In fact, MERC's decision to base its forecast on Rochester-specific data an indication that the analysis should be focused on the Rochester area, rather than the entire MERC-NNG PGA area.

Department of Commerce (Department) Reply to Exceptions

On January 29, 2016, the Department filed its response to the OAG exceptions.

The Department had concerns with the OAG proposed modifications to ALJ Findings 111, 113, 169, 170, and 179. [132]

OAG modification to ALJ Finding 111, the Department believed that the OAG's modifications (added two sentences) does not fairly reflect the record regarding the Rochester-Olmsted Council of Governments (ROCG). The OAG modification appeared to imply that the ROCG conducted a customer count forecast. The ROCG's forecast looked at population growth, not customer growth. Further, the second proposed sentence concerning a record citation was unsupported by a record. The Department believed the statement could imply that its forecasted need analysis relied on the ROCG assessment. The Department stated that its analysis did not rely on the ROCG assessment.

OAG modification to ALJ Finding 113, the Department believed that a Department witness did not support the proposed new language "60 percent less". The Department stated this statement was inaccurate, as the statement was unsupported by Department (or any other party's) witness.

OAG modifications to ALJ Findings 169 and 170, the Department believed the ALJ Findings were not forcing its analysis into scenarios used in IRP process. That the ALJ Report appears to have distilled the Department's analysis into various analogous outcomes, low, base, and high scenarios.

OAG modifications to ALJ Finding 179, the Department believed the OAG proposed Findings 179a and 179g were unsupported by a citation from the evidentiary record – no Department witness made the statements as set forth in the OAG proposed Findings. The Department believed its testimony was unsupportive of OAG's proposed Finding 179c, but instead was consistent regarding the assumption that residential use-per-customer will remain constant for the next two or three decades. Further, that OAG's proposed Finding 179e did not accurately characterize the Department's testimony.

[132] OAG Exceptions, pp. 10-11.

Minnesota Energy Resources Corporation (MERC) Reply to Exceptions

On December 30, 2016, MERC filed its response to the OAG's Exceptions. MERC believed that the OAG was attempting to repeat its arguments that were unsupported and erroneous positions supported by its testimony and briefs. MERCs position was that the ALJ simply did not agree with the OAG or accept any of its positions.

MERC believes the ALJ fully considered the record evidence and positions of the parties upon weighing the evidence and law in recommending rejection of the OAG's positions. MERC stated that it had demonstrated by a preponderance of the evidence that the Rochester Project was necessary, reasonable, and prudent.[133] [134]

MERC's Reply highlighted a few areas of significance that support the ALJ's conclusions and support rejection of the OAG's Exceptions. The Commission's role was to weigh the policy considerations in its issue determination that the ALJ Report reflects a meticulous balancing of relevant policy considerations in light of the applicable law and presented record evidence. Nothing raised in the OAG's Exceptions supports its position that the ALJ's Conclusions and Recommendations should be disregarded.

MERC stated that it was transparent that the OAG objects to the ALJ Report, not because the Report is incomplete or inadequate, but because the ALJ concluded that the OAG's positions and arguments were without merit.[135]

The Record Supports the Need for the Rochester Project**.**
MERC stated that the OAG took exception to the ALJ's Findings and Conclusions regarding the need for the Rochester Project. The OAG argued that the ALJ Report did not provide a complete record of its responses to MERC and the Department's positions, that the ALJ Report omits relevant facts. Further, the ALJ incorrectly applied low, medium, and high-growth scenario labels to the parties' recommendations, resulting in a "misapplication of legal standards.[136] MERC stated that the ALJ Report fully considers the OAG's arguments. The ALJ rejected the arguments based on record evidence.

With respect to the OAG's proposed Finding 74a:

> 74a. MERC also stated that the forecast for firm sales included the Large C&I Customer Forecast Model which included a GSP variable or Gross State Product variable.[137] The Company's sales forecaster stated that the forecast relied on economic and demographic variables produced by Moody's Analytics. In response to OAG information requests, MERC stated that the Moody's forecasts "presumably reflect some assumption about the impact of the DMC plan" but the

[133] MERC Reply to OAG exceptions, pp. 1-2.
[134] ALJ Report, p. 92, Conclusion 9.
[135] MERC Reply to OAG exceptions, p. 3
[136] OAG Exception, p. 10; also OAG exceptions, pp. 3-13.
[137] MERC Initial Petition, Attachment C10, the LCI Customer Forecast Model, Hearing Ex. 1.

> Company "cannot determine the degree of that impact for any particular variable."[138]

MERC believed that the OAG proposed finding 74a is not necessary. The proposed finding does not accurately reflect this record, MERC stated that its forecasted need was not impacted by the Large C&I customer model. As MERC stated in its Reply Brief:

> *The OAG also alleges that MERC's use of Moody's Analytics data incorporates impacts related to the DMC and, therefore, is inconsistent with the Company's statements that a priori information was used as a check on the reasonableness of its models. But MERC's Initial Petition was also clear about its use of data from Moody's Analytics. As shown on pages 77-78 of MERC's Initial Petition, only the Large C&I customer count model used an economic variable from Moody's (Gross Metro Product ("GMP")). The Residential and Small C&I models did not use any Moody variables, so no DMC impact was modeled. Since the Large C&I sales model is a total sales model, the Large C&I customer count model did not play a role in determining the growth rate of 1.5 percent.[139] Thus, the Moody's data did not influenced MERC's projected growth rate.[140]*

With respect to the OAG's modification to Finding 113:

> The Department's forecast results suggested an increase in retail customer counts of approximately 0.75 percent per year during the forecasting period. According to the Department, its customer count forecast is approximately ~~1.14 percent less~~ 60 percent less than the Company's projections of 1.89 percent. The difference between the two forecasts were illustrated in Graph 4 in Mr. Heinen's Direct Testimony and is displayed below:[141] (see Graph 3, above)

MERC stated that given this finding, discussing the testimony and evidence "according to the Department," is nonsensical because the OAG proposes modifications to language directly quoted from the Department's testimony.[142] MERC believes that the OAG's additional and proposed modification should also be rejected that the Commission. Examples include the following:

- OAG Exceptions for the Rochester Project Need:

> *"[w]hile the Company argued that 2014 and 2015 should not be included because of unusual weather events, the OAG argued that it would not make sense to exclude*

[138] OAG Amended Surrebuttal Testimony, Urban, Schedule JAU-SR-1, MERC's Response to OAG IR 116.
[139] MERC Initial Petition, pp. 77-78. Further, the Interruptible and Transport models used GMP, but these customers are not firm, so these models did not influence the 1.5% growth rate.
[140] MERC Reply Brief, pp. 11-12.
[141] Department Direct Testimony, Heinen, p. 27, Hearing Ex. 405
[142] Ibid. ("My forecast results suggested an increase in retail customer counts of approximately 0.75 percent per year in the forecasting period, which was approximately 1.14 percent less than the Company's projections of 1.89 percent.") (1.89 percent – 0.75 percent = 1.14 percent).

> *data as a result of unusual data because the entire data set has been weather normalized*."[143]

MERC stated that it did not take the position that 2014 and 2015 should be excluded because of unusual weather events, but instead provided additional data points to illustrate the weather normalizing challenges of historical data. MERC believed that the ALJ fully addressed both its and the OAG's positions regarding historic data in Findings 125 to 134.[144] MERC stated that the Commission should reject OAG's modifications based on its consideration of the relevant facts see Finding 175.[145]

- OAG Exceptions for Residential Use-Per-Customer, use of *a priori information*, Design Day growth rate:

The OAG argued that the ALJ Report did adequately address these issues. MERC stated that these claims were without merit because the ALJ Report considered the OAG's arguments and positions, and then rejected the positions based on the docket's record.

- OAG's proposed additional Finding 133b:[146]

MERC stated that the OAG did not include a citation to the record and should be rejected.

- OAG's alternative forecast:[147]

MERC believed the ALJ Report adequately reviewed the OAG's alternative forecast and that the forecasted should be rejected in light of the record's evidence. The ALJ correctly recognized that the OAG's forecasted *negative* 0.092 growth rate lacked credibility and was unreliable.[148]

- Growth Scenario Labels:

The OAG asserted "the ALJ incorrectly applied low-, medium-, and higher-growth scenario labels to the parties' recommendations . . . when none of the parties presented their projections in such a fashion," was simply wrong.[149] MERC stated that the ALJ Report accurately reflected how both MERC and Department discussed forecasted need in terms of low-, base-, and high growth scenarios.[150] Further, Department Witness Heinen's Surrebuttal Testimony clearly stated;

> *In integrated resource plans (IRP) and certificate of need (CON) filings, the forecast or need analyses typically include low-growth, base-growth, and high-*

[143] OAG Exceptions, pp. 5-8.
[144] ALJ Report, pp. 23-25.
[145] Ibid, p. 32.
[146] OAG Exceptions. P. 5
[147] Ibid, p. 8.
[148] ALJ Report, pp. 32-33, Findings 177 and 178.
[149] OAG Exceptions, p. 9.
[150] ALJ Report, pp. 31-33.

> *growth scenarios. Generally, any of these forecasts, or results in between, are considered acceptable with the base case being the most likely scenario.*[151]

The parties to this proceeding, including the OAG, agreed that the Certificate of Need rules provide a useful framework for evaluating MERC's petition.[152]

MERC believes the OAG's Exceptions did not support the OAG modifications to the ALJ Report's Findings or Conclusions with respect to the need for the Rochester Project. The ALJ Report fully and accurately reflects the facts and analysis on the record and the arguments and positions of the parties with respect to need. [153] The ALJ reasonably concluded:

> *the record supports the Department's estimate of 1.0 percent as a base growth projection in Design Day growth and MERC's forecast of 1.5 percent as a high-growth projection in Design Day growth.*[154] *The OAG's projection that sales growth will be negative 0.092 percent is not reasonable for use as a low-growth estimate of future Design Day growth.*[155]

PUC Staff Analysis

Staff believes the Commission needs to consider whether it should approve MERC's proposed 1.5 percent growth rate, used to forecast its Design Day requirements. Or in the alternative, approve the Department's recommended 1.0 percent growth rate as the "status quo" and MERC's recommended 1.5 percent as the optimistic growth rate. Or in the alternative, approve the OAG's recommended ***negative*** 0.0092% growth rate, or approve the OAG's plan to defer recovery plant costs until used and useful. Further, the Commission may wish to consider its own growth rate.

MERC receives its natural gas supply from Northern Natural Gas (NNG), an interstate pipeline, the lone natural gas transportation provider in the Rochester area. MERC holds NNG transportation contracts to deliver natural gas into its distribution system. NNG is operating at full capacity at its Rochester delivery points; further natural gas supply would require the construction of additional facilities by both MERC and NNG.

MERC has contracted for NNG transportation capacity of 55,169 Dth/day, the total amount available at the Rochester receipt points. MERC estimated its future natural gas requirements at 100,000 Dth/day, by using its proposed 1.5 percent growth rate.[156] In support of its initial petition

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[151] Department Surrebuttal Testimony, Heinen, p. 6, Hearing Ex. 407.

[152] MERC Initial Post-Hearing Brief at 24 (citing Evidentiary Hearing Transcript, Vol. 1 at 170:12-21 (Urban) (acknowledging that the certificate of need procedures are analogous to the current proceeding and provide "useful guidance" on how to implement the NGEP Statute)); OAG Amended and Corrected Direct Testimony, Urban, p. 6, Hearing Ex. 300 ("While MERC does not need to obtain a CN for the Rochester Project, the CN process can still provide useful guidance on what analysis will be useful in this case.").

[153] MERC Reply to OAG Exceptions, pp. 9-10.

[154] Department Direct Testimony, Heinen, pp. 29-30, Hearing Ex. 407; MERC Direct Testimony, Mead, p. 21, Hearing Ex. 12.

[155] ALJ Report, p. 31, Finding 170.

[156] MERC further stated that its 2015-2016 winter heating period Rochester Design Day was 60,929 Dth/day, which results in a *negative* reserve margin of 5,760 Dth/day. [Staff Comment: If MERC had experienced an extreme weather event in the 2015/2016 winter heating season, firm customer curtailments could have resulted. Staff does not

Design Day requirement of 100,000 Dth/day, MERC stated the Rochester area and southeastern Minnesota have experienced recent population growth. Further, the Mayo Clinic announced its $6 billion plan to become a destination medical center ("DMC"), with anticipated new area jobs ranging from 35,000 to 45,000 over twenty-year period.[157] MERC proposed its Rochester expansion project for Commission approval.[158]

To accommodate its future growth, MERC evaluated a number of options that included: 1) take no action; 2) conservation; 3) distribution system options; and 4) adding interstate pipeline capacity.[159] MERC chose the additional interstate pipeline capacity option, and further, decided to upgrade its distribution system.[160]

All parties agree that the Rochester area requires additional supply because MERC existing customers have inadequate supply available for Design Day conditions and that future Rochester growth will require further supply to meet future firm obligations.[161]

The record reflects a number of possible demand growth scenarios; from a ***negative*** 0.0092 percent growth rate (the OAG's recommendation) to 2.26 percent (MERC projected residential customer count growth). In calculating its future Design Day obligation of 100,000 Dth/day, MERC used a 1.5 percent annual growth rate in its analysis (See Attachment A, p. 1).

MERC's growth rate assumptions are as follows:

- MERC estimated its Rochester residential customer count projections for the 2016-2025 time-period, where it estimated an increase of approximately 20 percent.[162] MERC adjusted its forecast using Rochester-specific weather, in determining its average annual growth rate of 1.5 percent (includes Residential, Small C&I, and Large C&I customers).[163] MERC believed that its 1.5 growth rate was reasonable considering the anticipated Rochester growth from the Mayo Clinic's projected growth (considered *a priori information*).

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understand why MERC continues to add firm sales customers, when the sufficient NNG pipeline capacity did not exist too reliably serve these customers. Design Day requirements include all firm sales customers from residential, small C&I, Large C&I customer classes. MERC does not have a firm transportation service. The Commission may wish to inquire from MERC why its 2015/2016 Rochester Design Day requirements exceeded its available NNG capacity at the Oral Arguments Hearing for this docket. MERC has argued that its Design Day estimates for 2015/2016 can be different depending on whether the estimate is part of its short-term forecast or part of a long-term forecast as the forecast appears in this docket. Docket Nos. G-011/M-16-650, 16-651, and 16-652 however, are pending.]

157 MERC Initial Petition, pp. 19-20, Hearing Ex. 1.

158 MERC will construct, own, and operate the Rochester project's distribution infrastructure to meet the additional growth.

159 MERC Initial Petition, pp. 26-28, Hearing Ex. 1; MERC Direct Testimony, Mead, pp. 8-9, Hearing Ex. 12; MERC also considered peak shaving as an alternative, but not in the same level of detail as the other alternatives. MERC Rebuttal Testimony, Lyle, pp. 7-9, Hearing Ex. 8; Hearing Transcripts Vol. 1, pp. 63-64 (Lyle).

160 MERC Initial Petition, pp. 1-2, Hearing Ex. 1; MERC Direct Testimony, Mead, pp. 8-9, Hearing Ex. 12; MERC Direct Testimony, Sexton, pp. 9-10, Hearing Ex. 40.

161 OAG Correct and Amended Direct Testimony, Urban, p. 35; Hearing Ex. 35.

162 Over the next 10-years, from 2016 to 2025; MERC Initial Petition, p. 20, Hearing Ex. 1; MERC Direct Testimony, Clabots, p. 3, Hearing Ex. 9.

163 MERC Direct Testimony, Clabots, pp. 7-8, Hearing Ex. 9.

- MERC assumed that its annual Design Day growth rate would equal its 1.5 percent annual growth rate.[164] MERC determined its Rochester capacity requirements by using the 1.5 percent Design Day growth rate. By applying the Design Day 1.5 percent growth rate to the 2015/2016 Rochester Design Day of 60,929 Dth/day, MERC calculated its projected 2042/2043 Design Day requirements of 100,000 Dth/day (includes a 5 percent reserve margin), see Attachment A, p. 1.

The Department's growth rate analysis:

To determine the reasonableness of MERC 1.5 percent growth rate, the Department compared MERC's estimated customer growth rate to historical data.

- The Department tested whether MERC's 2.26 percent residential growth rate was reasonable. The Department evaluated the population forecasts from the Rochester-Olmsted Council of Governments (ROCG).[165] The ROCG population forecast projected a lower population growth rate of 1 percent to 1.50 percent.[166]

- The Department compared the historical household counts to historical population numbers to determine whether a consistent relationship existed in the Rochester area. Further, it compared annual historical household growth in Olmsted County to MERC's forecasted average annual customer count growth. [167] The Department concluded that it was reasonable for MERC to compare the ROCG population growth estimates to MERC's residential customer count forecast.

- The Department compared MERC's Design Day amount from the 2012 and 2015 demand entitlements to MERC's Design Day amount used in the petition. The Department concluded that MERC's Design Day requirement of 60,929 Dth/day was reasonable.[168]

- In its attempt to validate MERC's 1.5 percent growth rate, the Department reviewed MERC's 2012 and 2015 demand entitlement filings. From its review, the Department was unclear if MERC's 1.5 percent growth rate was reasonable. Based on the recent Design Day growth trends from MERC demand entitlements filings, it appeared that a 1.0 percent growth rate was more appropriate.[169]

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[164] MERC Direct Testimony, Mead, p. 21, Hearing Ex. 12; Department Direct Testimony, Heinen, p. 6, Hearing Ex 405.
[165] MERC Direct Testimony, Clabots, DWC-2, p. 7, Hearing Ex. 9; Department Direct Testimony, Heinen, p. 15, AJH-9, Hearing Ex. 405.
[166] The Department further noted the population growth estimates and customer count estimates are not entirely comparable. Population looks at the number of people in an area, while customer counts look at the number of utility meters in an area. Department Direct Testimony, Heinen, pp. 14-15, Hearing Ex. 405.
[167] Department Direct Testimony, Heinen, p. 16, AJH-11, Hearing Ex. 405.
[168] Department Direct Testimony, Heinen, p. 25, AJH-13, Hearing Ex. 405.
[169] Department Direct Testimony, Heinen, pp. 22, 29-31, AJH-12, Hearing Ex. 405.

- The Department reviewed MERC's Reserve Margin calculations, but was unable to conclude if MERC's reserve margin analysis was representative of expected conditions during the forecasting period (see Attachment A pp. 1 and 2).[170]

The Department concluded that its 1.0 percent growth rate should represent the "status quo" forecast and MERC's 1.5 percent growth rate was more "optimistic" and could represent the "upper-limit" forecast.[171] The Department prepared its own alternative analysis to determine the reasonableness of MERC's 1.5 percent growth rate and its 1.0 percent growth rate. Based on historical data from the January 2007 to July 2015 time-period with an autoregressive term to forecast Rochester area customer counts from August 2015 through December 2025, the Department calculated a residential customer count growth of approximately 0.75 percent per year.[172]

The Department concluded that either growth rate could be reasonable. The Department stated that if the DMC expansion remains on schedule, MERC's 1.5 growth rate could be reasonable, but if the expansion schedule develops slowly or does not happen, its 1.0 percent growth rate could be more reasonable.

The OAG growth rate analysis:

- The OAG believed that MERC's forecasted 1.5 percent growth rate was unsupported or over-stated and that this could lead to over-building the Rochester distribution facilities and the supporting NNG facilities. This could lead to existing customers paying for unnecessary facilities. The OAG compared MERC's historical sales quantities growth rate to MERC's projected 1.5 percent growth rate, see Table 2. The OAG believed that it was unreasonable for MERC to use its 1.5 percent growth rate when the historical growth rate was 0.46%.

- The OAG agreed with the Department that MERC's projected 2.26% increase to residential customers was unsupported by this docket's record, historical data, and the population estimates from the RCOG. The OAG believed that MERC 2.26% growth rate was optimistic and supported the Department's customer growth rate of 0.75%.[173]

- The OAG disagreed with MERC and the Department regarding their use a constant (or flat) use-per-customer within the forecast projections. The OAG asserted that this assumption was unreasonable because the historical residential use-per-customer had been trending downward because of a number of factors, such as including increased efficiency in heating and cooling, and insulation improvements.[174]

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[170] Department Direct Testimony, Heinen, p. 22, Hearing Ex. 405
[171] Ibid, p. 28; Hearing Ex. 405.
[172] Department Direct Testimony, Heinen, p. 25, AJH-14, Hearing Ex. 405; ALJ Report, pp. 20-21, Findings 113, Graph 4.
[173] OAG Amended and Corrected Rebuttal Testimony, Urban, pp. 4-5, Hearing Ex. 307.
[174] OAG Initial Brief, Urban, pp. 26-27; OAG Urban Opening Statement, p. 2, Hearing Ex. 314.

- The OAG suggested that MERC include a time trend variable for its residential class regression analysis to investigate downward trends in the use-per-customer.[175]

- The OAG raised concerns with MERC's decision to use models incorporating the Mayo Clinic and DMC expansion in calculating the anticipated growth. OAG Witness Urban stated that MERC's residential and small C&I models reflected *a priori information*, where the models included both historical growth and future expected growth.[176]

- MERC's regression analysis resulted in a 1.5 percent growth rate. MERC applied its 1.5 percent growth rate to its 2015/2016 winter heating period's Design Day amounts to project its future Design Day requirements. The OAG believed that MERC did not demonstrate in this docket's record that it was reasonable to make this assumption. Instead, the OAG recommended that the Commission consider the lack of evidentiary support when determining the reasonableness of MERC's forecasted requirements.

The OAG concluded that MERC had failed to demonstrate that the Rochester Project as proposed was reasonable, prudent, and necessary.[177] The OAG believed that MERC's Rochester Project proposal was larger than necessary.[178] The OAG recommended that MERC take a more phased-in approach in meeting its existing and future capacity requirements in the Rochester area. In the alternative, if the Commission finds the project reasonable, the OAG recommended that MERC defer project cost recovery for the unused capacity until MERC needs the capacity to serve customers.[179]

The ALJ's growth rate analysis:

The ALJ concluded that MERC's estimated 1.5 percent growth rate was a reasonable high-growth rate scenario considering the Mayo Clinic's (DMC) expansion plans, by stating:

- MERC's historical Design Day growth has averaged 1.33 percent from 2006/2007 to 2015/2016 and that this growth does not take into consideration Mayo Clinic's (DMC) expansion plans.

- There is evidence that the Mayo's Clinic expansion will likely result in additional Rochester growth. The ALJ believed that consideration of *a priori information* is appropriate.

- Historical sales data supports MERC's forecast 1.5 percent Design Day growth as an upper-bound projection. MERC's weather normalized sales data show that the average compound growth rate in firm sales in the Rochester area was 1.41 percent per year from 2007-2013. The ALJ believed MERC Witness Clabots statements that weather normalized data is difficult to estimate during times of extreme weather event.

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[175] OAG Transcript Volume 1, p. 193 (Urban).
[176] OAG Amended and Corrected Direct Testimony, Urban, pp. 31-32, Hearing Ex. 300; MERC Rebuttal Testimony, Clabots, p. 15, Hearing Ex. 10.
[177] OAG Initial Brief, pp. 6-8 and 76 (October 11, 2016).
[178] Ibid, pp. 76-77.
[179] OAG Amended Surrebuttal Testimony, pp. 24-25, Hearing Ex. 311.

Staff agrees with the parties that MERC currently requires additional NNG transportation capacity to meet its Rochester Design Day obligations. However, at - What cost to MERC's existing customers?

After adjusting for Rochester-specific weather data, MERC developed its 1.5 percent growth rate by using a series of regression analyzes (includes Residential, Small C&I, and Large C&I customers). MERC believed that its 1.5 growth rate was reasonable considering the anticipated Rochester growth from the Mayo Clinic's projected growth (considered *a priori information*).

The Department and the OAG reviewed MERC's regression analysis and was able to replicate the results, but had differences in study assumptions. The Department compared MERC's results using available tools and determined that its 1.0 percent growth rate would be the "status quo" scenario and that MERC's 1.5 growth rate represented a more optimistic estimate. The OAG used a different set of assumptions to develop its growth rate, see the above discussion.

From staff's review of MERC's initial petition, it appears that NNG will complete construction in two phases. Staff believes that NNG will complete Phase I in 2018 and will be in-service for the 2018/2019 winter heating period and NNG will completed Phase II in 2019 and will be in-service for the 2019/2020 winter heating season. [180]

NNG provided MERC with multiple design alternatives and MERC decided on the proposed NNG facilities upgrades, proposal 3.0. MERC and NNG propose to enter into a Precedent Agreement (PA) that depicts the terms and conditions of a proposed transportation contract with MERC purchasing all of 100,000 Dth/day available at its Rochester receipt points (contract is unexecuted). MERC believes that this proposal is the best and most cost effective alternative that NNG presented to MERC.

The record clearly demonstrates multiple growth rates are available for Commission approval. Staff believes that the Commission will have to exercise caution in making its decision on MERC's future Design Day obligation. Staff believes that a 100 percent correct growth rate does not exist, but the Commission's decision basis will be on assumptions they believe to be reasonable – What is most reasonable? See staff summary in Table 4.

Table 4: Staff Summary of Parties Growth Rate Positions

Party Positions	Proposed Growth Rate	Alternative Position
MERC position	1.5 percent	none
Department position [181]	1.0 percent	1.5 percent if optimistic
OAG position	(0.0092 percent)	Defer recovery until facilities become used and useful

[180] MERC Initial Petition, pp. 14-15, Figure 2, Hearing Ex. 1.

[181] The Department believed at the growth rate would be dependent the Mayo Clinic expansion project. If the project remains on schedule, the 1.5 percent growth could be applicable. If the expansion project's construction schedule slips or if the project is cancelled, the more appropriate growth rate would be 1.0%.

To help determine the reasonableness of the various growth rates, staff produced the project's Reserve Margins for the Rochester area with MERC's 1.5 percent growth rate, the Department's 0.75 percent and the 1.0 percent growth rates, MERC's historical growth rate of 0.46 percent, and the OAG's ***negative*** 0.0092 percent growth rate.[182] Staff summarized the results in Table 5:

Table 5: Staff's Calculated Reserve Margins for the Rochester Area at Various Growth Rates

Winter Heating Season	MERC's Reserve Margin @ 1.5 percent	Department Reserve Margin @ 1.0 percent	Department Reserve Margin @ 0.75 percent	MERC's Historical Growth Rate @ 0.46 percent	OAG Reserve Margin @ negative 0.0092 percent	No Growth Rate
2015/2016	(9.5%)	(9.5%)	(9.5%)	(9.5%)	(9.5%)	(9.5%)
2025/2026	41.7%	48.8%	52.6%	57.0%	64.6%	64.4%
2035/2036	22.1%	34.7%	41.6%	50.0%	64.7%	64.4%
2042/2043	10.0%	25.7%	34.4%	45.2%	64.8%	64.4%

At the end of the first 10-years (2025/2026), the different growth rates resulted a substantial Reserve Margin ranging from 41.7 percent to 64.6 percent. MERC's current NNG PGA area reserve margin is 2.06%.[183] Typically, the Department has recommended a reserve Margin ranging from 5 percent to 7 percent in previous MERC's demand entitlement petitions.

Both the Department and the OAG commented on the Reserve Margins; that MERC reserve margins seems high. The Commission may wish to consider approving a different growth rate from MERC's 1.5 percent growth rate. The Department's alternative analysis and its review of demand entitlement analyzes concluded that a 1.0 percent rate might be appropriate.

Staff realizes that the Department's 5 percent to 7 percent Reserve Margin is just a guideline, but believes that a better than 50 percent Reserve Margin creates a situation where MERC's existing customers could possibly pay for unneeded facilities. Staff believe these customers should receive protections from this occurrence. If the Commission decides on a different growth rate for the Rochester project, MERC's and NNG's facilities configurations would probably need revision.

Staff realizes that typically natural gas interstate pipelines will not construct facilities on an annual basis in order for the LDC to construct annual facilities to keep pace with its grow demand. NNG provided its construction proposal increasing its Rochester delivery capacity from 55,169 Dth/day to 100,000 Dth/day. Federal Energy Regulatory Commission (FERC) regulates NNG and operates under different circumstances than MERC at the MN state level. NNG designed its system upgrades to meet MERC's current Design Day obligations as well as the future Design Day obligations.

The FERC Certificate Convenience and Necessity process will not approve a pipeline project unless the pipeline has sold significant amount of the additional capacity to firm end-users, unless

[182] See staff's Attachment A for the calculations of each rate.

[183] Approved in Docket No. 14-660, the Department stated in previous dockets that a reasonable Reserve Margin range is between 5% - 7%.

the pipeline is willing to go at risk for the construction costs. The Local Distribution Company (LDC) capacity requirements will not match to the interstate pipeline's capacity. NNG will not construct facilities on an as needed basis.[184]

Instead, LDC capacity expansions require capacity purchases that might exceed customer growth for several years. Although it may take time to grow into the added capacity, the expected economies of scale from larger projects offset this concern.[185] Further, it may be cost effective to build a larger facility to accommodate for future growth than adding future capacity additions to keep pace with current demand. As a result, there are larger capacity reserve margins in the years directly after the capacity addition. MERC believes the negotiated capacity addition was the best and least-cost option, given the higher short-term capacity reserve margins relative to a smaller or phased approach.[186]

MERC responded by stating that its PA provides MERC with the ability move 20 percent of its Rochester capacity to different receipt points on its system. MERC further stated that it planned to use capacity release contracts with other parties. MERC believes that both of these solutions will help mitigate the excess capacity. [187]

Staff concerns are not alleviate by MERC's statements regarding the proposed reserve margins. MERC's NNG contracts specifically state primary receipt and delivery points (how the natural gas flows). If MERC moves its contract's primary receipt and delivery points to other points on NNG's system, the natural gas transports on a secondary basis, which means the contracts are subject to NNG interruptions.

MERC may receive some benefit during the non-heating season. However, during the heating season, MERC might not be able shift from primary points to secondary points during the most heavy use periods because of NNG system constraints on other parts of its system. Staff believes that NNG's system constraints are located at Farmington, Carlton, and Chisago, MN.

Since the project's PA is providing this switching right to MERC, it appears that MERC currently does not have the ability to switch its primary points to secondary points. Staff is of the opinion that if MERC did not previously have this switching ability, this is further evidence the NNG's system fully subscribed and NNG does not have the ability to allow switching to secondary points – another way of saying NNG system has constraints.

MERC stated that it plans to release its excess capacity in the capacity release market. On the surface, this sounds like a benefit for MERC's ratepayers, but in reality during the non-heating season, this capacity will have little to no value. MERC will receive pennies on the dollar for released capacity. During the winter heating season, MERC may receive fair compensation for the released capacity, but a release would be subject to NNG system constraints. In other words, NNG may not be able to deliver the natural gas to other points on its system.

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[184] MERC Direct Testimony, Lee, p. 32, Hearing Ex. 5; MERC Direct Testimony, Mead, p. 26, Hearing Ex. 12.
[185] MERC Direct Testimony, Mead, p. 26, Hearing Ex. 12.
[186] MERC Direct Testimony, Mead, p. 27, Hearing Ex. 12.
[187] Mead Opening Statement, p. 2, Hearing Ex. 27.

Further, complicating the growth decision process, neither the City of Rochester nor the Mayo Clinic have filed comments in this proceeding. MERC mentions that Rochester Public Utilities ("RPU") may construct additional Rochester electric generation facilities, but the City of Rochester has not submitted any documentation indicating whether the proposed facility would take firm or interruption service. RPU noted that, "[t]he Rochester area has seen robust growth and is forecast to continue growing in the coming years. RPU anticipates the need for additional electric generating capacity and steam to meet its increasing electric demand. . . . [U]se of natural gas for electric generation and production of steam remains an important part of RPU's portfolio and will remain so for the foreseeable future."[188]

The Mayo Clinic has not stated its plan for the proposed DMC expansion, whether it will take firm or interruptible service. Because of this lack of information, predicting the accuracy of the MERC proposed 1.5 percent growth rate is difficult, if not impossible.

MERC is only required to build facilities for its firm customers, if either the City of Rochester or the Mayo Clinic subscribe to interruptible service; over-building may result. This would result in MERC's firm ratepayers paying for un-needed facilities. In addition, MERC's anticipated growth from firm residential customers may not occur at a reasonable pace, resulting in further over-building. Further, the Mayo Clinic described the DMC public funding as funding for the construction the necessary facilities and the necessary infrastructure to support those facilities. MERC has applied for DMC funding, but the DMC denied MERC's request because the proposed facilities were not within the DMCC underlined boundaries.

If all must be within the proposed DMCC boundaries, why should MERC construct facilities to serve to Mayo Clinic? MERC must construct facilities outside the DMCC boundaries in order to get natural gas to the DMCC boundaries. Staff believes that this policy is inconsistent with MERC planned construction. If the Mayo Clinic constructs its DMC expansion, MERC should require a Contribution In Aid of Construction from the Mayo Clinic to offset its construction costs to transport the natural gas into the DMCC boundaries. The Commission may wish to require MERC to access a CIAC from the DMCC for the constructed facilities that are necessary to provide service. This would reduce the obligation required from MERC's firm customers.

Staff shares the OAG's concern that MERC unreasonably assumed a constant residential use-per-customer growth rate for the entire forecast period. By reviewing the historical growth sales illustrated in Table 2, above, there is not a consistent pattern to MERC's historical growth. In other words, MERC's historical growth varies from year to year. It seems inconsistent for MERC to assume the same annual residential use-per-customer rate for its forecasted time-period. Further, the new firm residential growth from this project will result from new housing development, which should result in energy efficient homes compared to older houses. It appear to staff that the residential use-per-customer should decline over the forecasted period.

According to MERC and the Department, their regression analysis it did not use *a priori* information. However, MERC did use *a priori* information to test the reasonableness of its regression analysis results. The OAG stated that MERC should not use this information in

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[188] Public Comment, Walter D. Schlink, Chief Energy Supply Officer, Direct of Power Resources, Rochester Public Utilities (July 27, 2016).

developing it regression analysis. Staff believes that MERC appropriately use *a priori* information in determining the reasonableness of its project.

Because of the excessive Reserve Margins discussed by staff, the Commission may wish to accept the OAG's alternative recommendation that would require MERC and NNG to construct facilities using a phase-in approach to improve the management of its facilities and customer requirements. This approach may provide MERC with a more reasonable Reserve Margin going-forward and could prevent MERC's customers from paying for unneeded facilities.

Because of these concerns, Staff questions whether MERC's proposal is the best solution for the Rochester project due to excess capacity reflected when calculating the project's Reserve Margin, which translates to MERC's ratepayers paying for facilities that have little to no current value.

Staff is of the opinion that the Commission may wish to exercise caution in approving MERC's 1.5 percent growth rate. Staff realizes that the Rochester project is different from other MERC construction projects, in that the project is looking ahead, attempting to predict the impact of future growth. Staff is not recommending that the Commission determine the project is unreasonable, but that the Commission be cautious because it decision could have implications to existing customers, if approved. The existing customers may end up paying for facilities that may or may not be fully used.

Staff believes that the Commission will need to balance MERC's future growth, its Reserve Margins, and facilities configuration to achieve the best solution for MERC's customers while maintaining the economics of scale.

In the alternative the Commission may wish to consider the OAG's recommendation that MERC's proposed Rochester project is unreasonable and direct MERC to re-size its project reflecting a lower growth rate. Further, the Commission may wish to consider the OAG's alternative that would require MERC to defer cost recovery of any portion of the Rochester project considered to unused or not useful until such time the project is used and useful.

Regardless of what the Commission decides, staff recommends the Commission not adopt the OAG's exceptions to ALJ findings adding Findings 74a, 133a-b, 148a-b, 151a-b, 166a-d, and 179a-g, modifying Findings 111, 113, 163, 169, and 170 because they mischaracterize the ALJ's recommendations. The Commission can either accept or reject the ALJ's findings and recommendations. However, when the ALJ's Findings recommend her conclusions, the Commission is not in a position to say she recommended something else.

Decision Alternatives

See the next section (Reasonableness of the Rochester Project) for Decision Alternatives for the Sales Forecast Growth Rate.

Reasonableness of the Rochester Project

MERC Position

MERC determined the Rochester project's size by forecasting its projected future needs. MERC believes that its project parameters are reasonable and this docket's record reflects the justification for the project's size. MERC supported the reasonableness of its Rochester project with the following Reserve Margin analysis.

MERC Witness Mead testimony reflected the new NNG capacity added to TBSs 1B, 1D, and MERC's proposed new TBS. The testimony also reflected MERC's calculated Reserve Margin from 2015/2016 through 2039/2040 based on MERC's Design Day forecast (see the summary Table 6, below or see Attachment A, p. 1).[189]

Table 6: Summary of MERC's Forecasted Reserve Margin (Dth/day)

Winter Period	Rochester Design Day	Capacity 1D	Capacity at 1B	Capacity at new TBS	Total Capacity	Reserve Margin
2015/2016	60,929	36,707	18,462	0	55,169	-9.50%
2018/2019	63,712	47,207	18,462	0	65,669	3.10%
2025/2026	70,710	40,707	0	59,462	100,169	41.70%
2039/2040	87,097	40,707	0	59,462	100,169	15.00%

MERC further recalculated its Reserve Margin assuming that it is able to use 20 percent of its Rochester capacity at secondary points throughout its NNG PGA area (see the summary Table 7, below).

Table 7: Summary of MERC's Forecasted Reserve Margin Adjusted for 20 Percent of Rochester Capacity Used at Secondary Points on its NNG PGA area (Dth/day)

Winter Period	Rochester Design Day	Capacity at 1D	Capacity at 1B	Capacity at new TBS	20 percent Secondary Points	Total Capacity	Reserve Margin
2015/2016	60,929	36,707	18,462	0		55,169	-9.50%
2018/2019	63,712	47,207	18,462	0	(13,134)	52,535	-17.50%
2025/2026	70,710	40,707	0	59,462	(20,034)	80,135	13.30%
2039/2040	87,097	40,707	0	59,462	(20,034)	80,135	-8.00%

MERC supported its 100,169 Dth/day Design Day forecast by stating:

- No additional Rochester capacity is currently available and eventually the Reserve Margins will decrease over time because of its forecasted Rochester growth.[190]
- Construction lead-time of three years or more to obtain the necessary approvals to support facility expansions, capacity is generally not available on an as needed basis. Rather, LDCs

[189] MERC Direct Testimony, Mead, p. 21, Table 1, Hearing Ex. 12.
[190] MERC Direct Testimony, Lee, p. 31, Hearing Ex. 5.

and interstate pipelines typically plan expansion projects years in advance, which typically results in reserve margins in excess of 5 percent after the in-service date.[191]

- Larger expansion projects achieve economies of scale that smaller expansion projects cannot provide.[192]

MERC believed that pipeline capacity is not available to meet long-term growth, the pipeline construction would result in its Reserve Margin exceeding the traditional 5% margin typically approved by the Commission. Caused by the construction of interstate pipeline facilities that exceed the LDC's current growth, but the pipeline will construct these additional facilities for future LDC growth. MERC believed that the Rochester project would not only help the Rochester area, but also provided additional reliability for its entire NNG PGA area. See the following Table 8 reflecting MERC NNG PGA area's system-wide reserve margin with future growth assumptions.

Table 8: MERC's System-wide Reserve Margin for its NNG PGA Area (Dth/day)[193]

Winter Period	Rochester Capacity	Additional Capacity	Total Available Capacity	MERC's Design Day	Excess/ Deficient Capacity	Reserve Margin
2015/2016	252,127	0	252,127	245,263	6,864	2.80%
2018/2019	252,127	15,939	268,066	256,466	11,600	4.52%
2025/2026	252,127	53,032	305,159	284,638	20,521	7.21%
2039/2040	252,127	53,032	305,159	350,604	(45,445)	-12.96%

MERC also believed that it needed additional capacity at other TBSs and that these TBSs would benefit from any Rochester excess capacity. MERC further stated that if the excess capacity was unneeded, MERC would release the capacity in the interstate pipeline's capacity release market through NNG's electronic bulletin board.[194]

The Department Position

The Department's analysis included developing its own forecasted growth and Reserve Margins to access the impact that the Department's lower growth rate (1.0 percent) on the Rochester area. The Department compared its Reserve Margin with MERC's calculations. The Department's calculations represent the entire NNG PGA area, not just the Rochester area and further assumes that MERC can redirect 20 percent of its unneeded Rochester capacity to other areas, see Table 9.[195]

[191] MERC Direct Testimony, Lee, p. 31, Hearing Ex. 5; MERC Direct Testimony, Sexton, p. 12, Hearing Ex. 17.
[192] MERC Direct Testimony, Sexton, p. 13, Hearing Ex. 17.
[193] MERC Direct Testimony, Mead, pp. 24-25, Table 3, Hearing Ex. 12.
[194] Ibid, pp. 28-29.
[195] Department Direct Testimony, Heinen, pp. 29-30; Hearing Ex. 405.

Table 9: Comparison of MERC's and Department's Excess Capacity Calculations (Dth/day)

Year	MERC's Excess Capacity	DOC Excess Capacity
2019	29,017	30,886
2020	44,874	49,965
2021	40,970	47,413
2022	37,007	44,836
2023	32,985	42,233
2024	28,902	39,604
2025	24,759	36,948
2026	20,553	34,266
2027	16,284	31,557
2028	11,950	28,821
2029	7,552	26,058
2030	3,088	23,267
2031	856	20,448
2032		17,601
2033		14,725
2034		11,821
2035		8,771
2036		8,013
2037		7,249
2038		6,479
2039		5,703
2040		4,921

The Department noted that based on MERC calculations its reserve margin would be absorbed by 2030. However, the Department calculated that MERC would still have excess capacity in Year 2040.

The Department estimated the costs associated with this excess capacity. Using the estimated annual capacity costs provided in MERC's initial filing,[196] the Department calculated the costs of excess capacity on an annual and total basis. Department Witness Heinen estimated the excess capacity cost to be approximately $30 million greater than MERC's calculation, see Table 10.[197]

[196] MERC Initial Petition, p. 102, Hearing Exhibit 1.
[197] Department Direct Testimony, Heinen, p. 32, Hearing Ex. 405 ($64,782,983 - $35,922,103 = $28,860,880).

Table 10: Summary of MERC's and the Department Excess Capacity and Related Costs

Tables 1 and 2: from Department Witness Heinen Direct Testimony						
Year	MERC Excess Capacity Dth/day	Department Excess Capacity Dth/day	Difference	MERC Cost of Excess Capacity	Department Cost of Excess Capacity	Difference
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Dth	Dth	Dth	$	$	$
			(3) - (2)			(6) - (5)
2019	29,017	30,886	1,869	2,192,622	2,333,898	141,276
2020	44,874	49,965	5,091	5,783,419	6,439,545	656,126
2021	40,970	47,413	6,443	5,250,738	6,076,514	825,776
2022	37,007	44,836	7,829	4,696,232	5,689,694	993,462
2023	32,985	42,233	9,248	4,144,245	5,306,131	1,161,886
2024	28,902	39,604	10,702	3,579,281	4,904,504	1,325,223
2025	24,759	36,948	12,189	3,046,498	4,546,377	1,499,879
2026	20,553	34,266	13,713	2,501,582	4,170,707	1,669,125
2027	16,284	31,557	15,273	1,960,861	3,800,089	1,839,228
2028	11,950	28,821	16,871	1,417,554	3,418,740	2,001,186
2029	7,552	26,058	18,506	889,595	3,069,372	2,179,777
2030	3,088	23,267	20,179	359,757	2,710,459	2,350,702
2031	856	20,448	19,592	99,719	2,382,066	2,282,347
2032	0	17,601	17,601	0	2,050,388	2,050,388
2033	0	14,725	14,725	0	1,715,394	1,715,394
2034	0	11,821	11,821	0	1,377,050	1,377,050
2035	0	8,771	8,771	0	1,021,813	1,021,813
2036	0	8,013	8,013	0	933,472	933,472
2037	0	7,249	7,249	0	844,449	844,449
2038	0	6,479	6,479	0	754,740	754,740
2039	0	5,703	5,703	0	664,339	664,339
2040	0	4,921	4,921	0	573,242	573,242
Total				35,922,103	64,782,983	28,860,880

[Staff Note: Staff was unable to replicate the Department's calculations reflected in the above table.]

The Department observed that because of the projected excess capacity costs, it considered whether a smaller project would better meet future Design Day requirements. The Department Witness Heinen concluded that a smaller project could potentially satisfy MERC's need, but noted the construction of a smaller project includes the risk of future expansions and greater costs.[198]

[198] Department Direct Testimony, Heinen, pp. 32-35, Hearing Ex. 405.

Witness Heinen further stated that a smaller project could put MERC's customers at risk for future additional costs. He explained that the construction of a smaller project included the risk that the actual growth could be higher than his "status quo" growth estimate, resulting in MERC's customers paying higher costs for future capacity expansions.

The Department believed that this could lead to higher investment costs than MERC projected in this docket, Phase II costs of $44 million. The Department further noted that in response to its informational requests, MERC stated that if capacity were limited to 30,000 Dth/day instead of the requested 45,000 Dth/day, the NPV of the project would be $1 million greater.[199]

The Department concluded that it was reasonable to assume that having to pursue a future upgrade to serve Rochester Area customers would result in additional costs to MERC ratepayers.[200] Based on its reserve margin analysis and its analysis of incremental capacity alternatives, the Department concluded that MERC's proposed Rochester Project size was reasonable.[201]

Although smaller alternatives might be available to meet Rochester Area need, that outcome would only be possible if growth in the Rochester Area and on the MERC s system as a whole, remained relatively constant. If the growth rate increased (from the DMC), there is a tangible risk that ratepayers would be required to pay higher rates than proposed by MERC in this docket. Further, the Department believed that any excess costs associated with this docket would be small on an annual basis compared to costs from additional future expansion costs.[202]

Witness Heinen noted that the construction of a smaller project included the risk that growth would be higher than the Department's "low growth" scenario, in which case future expansions of capacity would likely be required. To address this possibility, Mr. Heinen conducted two reserve margin analyses that assumed the addition of 25,000 or 35,000 Dth/day of incremental Rochester capacity see the following tables.

Table 11: Comparison of MERC's Excess Capacity to the Department, the 25,000 Dth/day Case

Year	MERC's Excess Capacity	DOC Excess Capacity
2019	19,654	17,752
2020	13,931	19,931
2021	11,823	11,379
2022	10,619	8,802
2023	9,410	6,199
2024	8,196	3,570
2025	6,976	941
2026	5,752	0
2027	4,523	0
2028	3,289	0
2029	2,050	0
2030	806	0

199 Department Direct Testimony, Heinen, AJH-19, Hearing Ex. 405; MERC Supplemental Response to Department Information Request (IR) No. 37.
200 Department Direct Testimony, Heinen, p. 35, Hearing Ex. 405.
201 Department Direct Testimony, Heinen, p. 36, Hearing Ex. 405; Department Rebuttal Testimony, Heinen, pp. 1-3, Hearing Ex. 406.
202 Comparable to insurance against the potential future system upgrade costs.

Table 12: Comparison of MERC's Excess Capacity to the Department, 35,000 Dth/day Case

Year	MERC's Excess Capacity	DOC Excess Capacity
2019	19,654	17,752
2020	21,931	21,931
2021	19,379	19,379
2022	16,802	16,802
2023	14,199	14,199
2024	11,570	11,570
2025	8,914	8,914
2026	6,232	7,340
2027	4,523	6,633
2028	3,289	5,920
2029	2,050	5,201
2030	806	4,477
2031		3,747
2032		3,012
2033		2,271
2034		1,524
2035		771
2036		13
2037		0

Witness Heinen concluded that these incremental capacity additions would result in smaller amounts of excess capacity, but he noted that these incremental alternatives were only viable under the Department's lower growth estimate (1.0 percent growth rate). He cautioned that if MERC growth rate is closer to its projected 1.5 percent or if the City of Rochester constructs electric generation facilities, MERC might be required to purchase additional NNG capacity at a higher cost.[203]

The Department further noted that MERC Witness Sexton estimated that limiting expansion capacity to 30,000 Dth/day (instead of the proposed 45,000 Dth/day) would cost $1 million more on an NPV basis than the cost of MERC's proposed PA. Mr. Sexton based his analysis on a good faith estimate of the potential costs associated with an incremental expansion approach.[204]

[203] Department Direct Testimony, Heinen, pp. 34-35, AJH-17, AJH-18, Hearing Ex. 405.
[204] Department Direct Testimony, Heinen, p. 35, AJH-19, Hearing Ex. 405 (MERC response to the Department's IR No. 37).

Further, Witness Heinen stated that the excess capacity costs appear large at $65 million over a 22 years period, or approximately $3 million per year. But, when compared to MERC NNG PGA total gas purchases of approximately $144 million (includes both demand and commodity gas costs), the excess costs only represent less than 3% of MERC's NNG PGA total costs.[205] The Department further compared the annual costs that MERC's NNG customers pay for Bison/NBPL contracts of approximately $38 per year to the Rochester project's capacity of approximately $32 per year.[206]

The Department concluded that the Rochester project's size is reasonable based on its reserve margin analysis and its analysis of incremental capacity alternatives.[207] Further, that the total cost associated with an incremental approach to adding capacity, or future capacity upgrades, would likely result in higher total costs to ratepayers than the Project as proposed. [208] As another way to used unneeded capacity, the Department suggested that MERC try to mitigate its costs by converting interruptible customers to firm service.[209]

Department Witness Heinen reaffirmed his Rochester reasonableness conclusion in its Surrebuttal Testimony. He provided updated excess capacity and related cost information, by including the RPU electric generation facilities in the estimates. RPU would subscribe to interruptible transportation services, but would compensate MERC for its excess Rochester capacity usage. Additionally, RPU may use Rochester excess capacity to serve its existing Cascade Creek facility, which MERC curtails several times each winter. The Department use RPU facilities reduce the amount Rochester excess capacity. Using his initial study's assumptions, analysis, and an estimated average daily consumption for each RPU generation facility identified in Dr. Urban's Rebuttal Schedules, the Department provided the following updated excess cost results. [210]

[205] Department Direct Testimony, Heinen, pp. 35-36, Hearing Ex. 405.
[206] Ibid, AJH-21.
[207] Department Direct Testimony, Heinen, p. 36, Hearing Ex. 405; Department Rebuttal Testimony, Heinen, pp. 1-3, Hearing Ex. 406.
[208] Department Direct Testimony, Heinen, p. 35, Hearing Ex. 405.
[209] Department Direct Testimony, Heinen, pp. 59-60, Hearing Ex. 405; Department Opening Statement, Heinen, Hearing Ex. 410.
[210] Department Surrebuttal Testimony, Heinen, pp. 16-18, Hearing Ex. 407.

Table 13: Update to Summary for Both MERC and Department Excess Capacity and Related Costs

Tables S-3 from Department Witness Heinen Surrebuttal Testimony			
Updated Cost Comparison of Excess Capacity			
Year	MERC Cost of Excess Capacity	Department Cost of Excess Capacity	Difference
(1)	(2)	(3)	(4)
	$	$	$
			(3) - (2)
2019	2,192,622	2,333,898	141,276
2020	5,644,228	6,300,355	656,127
2021	5,112,325	5,938,101	825,776
2022	4,559,180	5,552,642	993,462
2023	4,008,553	5,170,440	1,161,887
2024	3,445,534	4,770,757	1,325,223
2025	2,913,606	4,413,485	1,499,879
2026	1,639,832	3,308,958	1,669,126
2027	1,108,287	2,947,515	1,839,228
2028	577,725	2,578,910	2,001,185
2029	55,628	2,235,404	2,179,776
2030	0	1,885,667	1,885,667
2031	0	1,013,593	1,013,593
2032	0	767,585	767,585
2033	0	518,920	518,920
2034	0	267,571	267,571
2035	0	0	0
2036	0	0	0
2037	0	0	0
2038	0	0	0
2039	0	0	0
2040	0	0	0
Total	31,257,520	50,003,801	18,746,281

The Department believed that the updated data further supported its Rochester reasonableness recommendation.[211]

The OAG Position

The OAG argued that MERC Rochester project's forecasted 45,000 Dth/day capacity increase is larger than needed to serve the Rochester area. That the unused capacity could be excessive for any years into the future and that the Rochester capacity construction is earlier than necessary.

[211] Department Surrebuttal Testimony, Heinen, p. 4, Hearing Ex. 407.

The OAG provided its calculations for excess capacity and estimated Reserve Margins see staff Attachment A, p. 5.

The OAG noted that it would expect "lumpy" excess capacity because of MERC's Rochester project. However, OAG Witness Urban argued that MERC will have a Reserve Margin in excess of 16 percent in 2040 (according to MERC's calculations), and that MERC ratepayers will be paying of MERC's excess capacity without receiving any benefits as result of its system over-build.[212]

The OAG disagreed with MERC's analysis for determining its 45,000 Dth/day need, by stating:

- That MERC's analysis illustrated in the ALJ Report[213] improperly assumed that would be that the 20,000 Dth/day would be available at secondary points every day. The OAG believed that during periods of high use by NNGs other customers, the secondary points would not be available;
- That MERC's system-wide analysis[214] should receive minimal weight because the focus of this proceeding is on the need in the Rochester area.
- That MERC's believe that RPU's consumption be used in determining projects' need. The OAG noted that the Project intend is to meet Design Day needs of firm customers, and RPU has indicated that it intends to take interruptible transportation service, not firm service, to meet its future electric generation needs.[215]
- That the Department comparison of the Bison contract costs to the Rochester costs does not justify the Rochester project cost, but instead, highlights the concerns that can develop because of pipeline contracts.

OAG Alternatives to MERCs proposed 45,000 Dth/day proposal:

- The OAG noted that a smaller capacity addition would produce more reasonable Reserve Margins. The OAG Highlighted several NNG phase-in proposals that MERC could add incrementally. The OAG focused on NNG 4.2 proposal that would incrementally add 17,669 Dth/day and later increased by another 27,331 Dth/day. The OAG believed this would minimize the risk of over-building the project.[216] OAG Witness Urban asserted that this proposal was less costly than NNG 3.0 proposal (chosen by MERC) and MERC could cancel the second incremental capacity layer if needed.[217]

  The OAG believed a phase-in approach built enough capacity for MERC's immediate needs and for the next years at less cost than proposed in MERC PA. This approach would allow MERC to build additional capacity, if needed. Further, that this approach would more closely allow the costs to matched-up with the new customers (cost causation). The

[212] OAG Amended and Corrected Direct Testimony, Urban, pp. 36-37; Hearing Ex. 300.
[213] See the ALJ Report, p. 44-45, paragraph 233, Table 2.
[214] See the ALJ Report, p. 46-47, paragraph 240, Table 3.
[215] OAG Initial Brief, pp. 69-71, (October 11, 2016).
[216] OAG Amended and Corrected Direct Testimony, Urban, pp. 24, 43, 49; Hearing Ex. 300.
[217] OAG Amended and Corrected Rebuttal Testimony, Urban, pp. 39-40, JAU-5; Hearing Ex. 306; Transcript Vol. 1, p. 175 (discussing Proposal 4.2 and noting that the cost of the second phase is not fixed but would be based on actual cost at the time).

OAG concluded that it would be "much more prudent for MERC to take a more incremental approach such as the phase in proposal similar to Proposal 4.2.[218]

- The OAG further stated that MERC should have given additional consideration to conservation proposals[219] and to peak-shaving facilities.[220] Peak-shaving facilities are systems that allow natural gas utilities to minimize the impact of unpredictable shifts in daily or hourly consumptions, as well as other unexpected supply constraints, by augmenting natural gas fuel supply during times of high demand.[221] The OAG emphasized that, over 20 percent of MN gas utilities' meet Design Day requirements with peak-shaving facilities. OAG Witness Urban recognized that she did not have the information or expertise to allow for the analysis that would lead to a recommendation that MERC add a peak-shaving facility, and reiterated that her main criticism is MERC's approach to its analysis of alternatives.[222]

- OAG Witness Urban further expressed concern regarding the MERC distribution upgrades, arguing that MERC appears to be constructing facilities in a margin for growth error that MERC has not demonstrated to be reasonable.[223]

The OAG concluded MERC's proposed Rochester project (includes the PA and Phase II construction) exceeds capacity needs for many years beyond 2040. The OAG argued that MERC had not demonstrated that its Rochester project was the reasonable way to meet future demand in the Rochester area. The OAG recommended that the Commission order MERC to find an alternate solution, such as a phased-in proposal similar to the proposal offered by NNG, such as NNG proposal 4.2.[224]

MERC Response

MERC disagreed with the OAG's analysis and conclusions on the following concerns.

- *Excess Capacity* – MERC asserted that it was more appropriate to consider the Reserve Margin of its entire NNG PGA area. MERC stated that the Department and the Commission have always reviewed demand entitlements, design day requirements, and reserve margins on a PGA area basis because of the ability to transport natural gas to secondary points on NNG system. MERC noted that it would have the ability to use up to 20 percent of the total Rochester existing and expansion entitlement and 100 percent of the Southeastern Minnesota expansion entitlement (nearly 53 percent of the total expansion volume) to secondary locations throughout MERC's NNG PGA area. MERC noted that its

[218] OAG Amended and Corrected Rebuttal Testimony, Urban, pp. 9-10, 15; Hearing Ex. 307; OAG Initial Brief, pp. 51-52 (October 11, 2016).
[219] MERC Initial Petition, p. 27; Hearing Ex. 1.
[220] OAG Amended and Corrected Direct Testimony, Urban, pp. 50-54; Hearing Ex. 300; OAG Initial Brief, p. 64 (October 11, 2016).
[221] OAG Amended and Corrected Direct Testimony, Urban, p. 53; Hearing Ex. 300; MERC Opening Statement, Lyle, pp. 2-3.
[222] OAG Amended and Corrected Direct Testimony, Urban, p. 53, 55, Hearing Ex. 300.
[223] Ibid, pp. 43-44.
[224] Ibid. p. 44, 57.

NNG PGA area Reserve Margin would be 17 percent in 2019/2020 and less than 6 percent by 2026/2027, taking into consideration MERC entire NNG PAG area and MERC ability to transport 20 percent of its Rochester capacity to secondary points.[225]

- *Alternatives to MERC's proposal* - MERC asserted that the OAG's conclusions regarding the selection a smaller project or a phased-in proposal to meet its future demand growth would subject its customers to undue risk and increased costs.[226] MERC believed that it longer-term projects provided the following benefits over a series of smaller projects:[227]

    a. Long-term design efficiencies resulting in lower overall project costs;
    b. Cost savings with the economies of scale;
    c. Support the introduction of potential competitive alternatives;
    d. Provide long-term growth capacity; and
    e. Support ongoing economic development and/or unforeseen demand growth.

    MERC further noted that its reviewed and analyzed all of NNG's proposal and provided specific discussion describing the deficiencies associated with the proposals.[228]

    MERC argued that a small phase-in project would subject its customers too:

- Increased costs if MERC used a phased-in approach and later constructed additional capacity placing additional risk on its customers;[229]
- Not meeting current or future needs;[230]
- Significant risk that Design Day growth would outpace the available additional capacity, resulting in the need for even more expensive additional incremental capacity later;[231]
- Additional costs if RPU constructs additional electric generation facilities;[232]
- Additional disruption in the community;[233]

Both MERC and the Department concluded it was unreasonable not to consider the risks, which would likely represent a significant increase in costs for MERC's ratepayers, given the expectation that MERC provide reliable service.[234]

- *Conservation* – MERC stated that it discussed conservation in the initial petition and concluded that conservation was not a viable option.[235] MERC asserted that reliance on conservation to meet peak demand is not reasonable for a gas utility with an obligation to ensure adequate and reliable natural gas service to its firm customers during the coldest

[225] MERC Opening Statement, Mead, p. 2, Hearing Ex. 27; MERC Initial Brief, pp. 36-37 (October 11, 2016).
[226] MERC Opening Statement, Mead, p. 2, Hearing Ex. 27.
[227] MERC Direct Testimony, Sexton, p. 15, Hearing Ex. 17.
[228] MERC Rebuttal Testimony, Sexton, pp. 13-15, Hearing Ex. 19; MERC Rebuttal Testimony, Mead, pp. 11-12, Hearing Ex. 13.
[229] MERC Opening Statement, Sexton, p. 3, Hearing Ex. 28.
[230] MERC Initial Brief, pp. 32-36 (October 11, 2016).
[231] MERC Rebuttal Testimony, Mead, pp. 8-9, Hearing Ex. 13.
[232] MERC Surrebuttal Testimony, Mead, pp. 5-6, Hearing Ex. 16.
[233] Ibid.
[234] MERC Initial Brief, pp. 36-27 (October 11, 2016).
[235] Ibid, p. 26.

days because conservation efforts have a minimal impact on the demand on the coldest days during the year.[236]

- *Peak Shaving Facilities* - MERC stated that it did consider peak shaving early in the planning process as an alternative to meet peak demand and determined that such facilities would not solve MERC's capacity need in the Rochester area.[237]

Pursuant to the Commission January 8, 2016, Notice and Order for Hearing, MERC reviewed the Mayor of Rochester proclamation that "Rochester will use 100% renewable energy by 2031." MERC determined that the Rochester City Council did not formally ratify the Mayor's proclamation.[238]

MERC stated that the City's most recent energy plan includes a goal of 25 percent renewable energy by 2025. It also recognizes that additional natural gas resources were and in future needed to serve the Rochester area. No party to this proceeding asserted that the City of Rochester's plans to increase its use of renewable energy would reduce the need for the Rochester Project. In summary, there is no evidence in the record that the City of Rochester's renewable energy plans will limit the need for the Project or affect the size of the Project.[239]

ALJ Analysis

(ALJ Report, pp. 41-67, Findings 226-328.)

The ALJ concluded that MERC's Rochester project is necessary to fulfill current and future needs; that MERC's proposal is reasonable and prudent to provide retail natural gas service into the Rochester area. The ALJ supported her conclusions by stating:

- Phase II construction and the negotiated PA address existing interstate pipeline and MERC distribution system constraints in the Rochester area. The PA provides additional interstate pipeline capacity to meet MERC's current and future needs.[240]
- The PA further assist with providing additional reliability on MERC's entire NNG PGA area, by allowing MERC to use up to 20 percent of its Rochester capacity at secondary receipt points.[241]
- MERC's future Reserve Margins on a total NNG PGA area in 2026/2027 project to be 5.63 percent, within the Department's 5 to 7 percent margin range.[242] The ALJ stated that it is appropriate to consider the resulting reserve margins on a total NNG PGA area basis because NNG interstate pipelines serve a substantial portion of MERC's operations.[243]

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[236] Department Surrebuttal Testimony, Heinen, pp. 5-6, Hearing Ex. 407.
[237] MERC Rebuttal Testimony, Lyle, pp. 6-9, Hearing Ex. 8; MERC Opening Statement, Lyle, p. 1, Hearing Ex. 25; Transcript Vol. 1, pp. 63-64 (Lyle); MERC Direct Testimony, Lyle, p. 1, Hearing Ex. 7.
[238]OAG Amended and Corrected Direct Testimony, Urban, JAU-33, Hearing Ex. 300 (Correspondence from Mark Kotschevar, General Manager of Rochester Public Utilities, to Ryan P. Barlow, Assistant Attorney General).
[239] Public Comment filed by Ardell Brede, City of Rochester (July 26, 2015).
[240] MERC Direct Testimony, Mead, pp. 20-23, Hearing Ex. 12, ALJ Report, Findings 315 and 316, p. 65.
[241] Ibid, p. 22; ALJ Report, Finding 317, p. 65.
[242] Ibid, Table 3 (System Wide Reserve Margin); ALJ Report, Finding 318, p. 65.
[243] Ibid, p. 23; Transcript Vol. 1, p. 104 (Mead); ALJ Report, Finding 318, p. 65.

- The ALJ concluded that the reserve margins were reasonable because of the DMC's initiative.[244]
- MERC has the ability to use NNG capacity release market to sell excess capacity to other users. The ALJ believed that MERC should have strong demand for any excess capacity.[245]
- The ALJ believed that MERC's Design Day expected to grow in Rochester and on the NNG system as a whole, the ALJ agreed with the Department and MERC that a phased project or smaller project would expose MERC's customers to a significant risk of higher future expansion costs.[246]
- Other phase-in proposals reflected operational issues.[247]
- The record demonstrates that conservation and peak shaving facilities are not viable alternatives to capacity.[248]
- MERC needs the Phase II distribution system upgrades to address operational and efficiency issues on MERC's distribution system in the Rochester area.[249]

ALJ Finding 314 and 328

> 314. The Administrative Law Judge finds that the record demonstrates that the Rochester Project is necessary, reasonable, and prudent to provide service to MERC's customers in the Rochester area.[250]
>
> 328. In summary, the Administrative Law Judge concludes that MERC has demonstrated that the Rochester Project is prudent, reasonable, and necessary to provide reliable service to MERC's Rochester service area, subject to the conditions set forth in the Recommendations section below.[251]

The OAG Exceptions

Alternatives to Increased Capacity

The OAG stated that the ALJ Report is generally accurate, but added general reference citations supporting its recommendations. The OAG added:

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[244] MERC Direct Testimony, Mead, p. 26, Hearing Ex. 12; MERC Direct Testimony, Sexton, pp. 13-14, 37-38, Hearing Ex. 17; ALJ Report, Finding 320, p. 66.
[245] Department Direct Testimony, Heinen, p. 47, Hearing Ex. 405; Department Surrebuttal Testimony, Heinen, p. 13, Hearing Ex. 407; ALJ Report, Finding 321 p. 66.
[246] Department Direct Testimony, Heinen, pp. 34-37, Hearing Ex. 405; Department Surrebuttal Testimony, Heinen, pp. 5-6, Hearing Ex. 407; MERC Rebuttal Testimony, Mead, pp. 14-21, Hearing Ex. 13; MERC Opening Statement, Sexton, pp. 2-3, Hearing Ex. 28; ALJ Report, Findings 322 and 323, p. 66.
[247] Department Direct Testimony, Heinen, p. 35, AJH-19, Hearing Ex. 405; MERC Rebuttal Testimony, Mead, pp. 7-8, Hearing Ex. 13; MERC Opening Statement, Sexton, p. 3, Hearing Ex. 28; ALJ Report, Finding 324, p. 66.
[248] While MERC's testimony and evidence regarding these issues was sufficient, the Administrative Law Judge recommends that MERC provide additional detail about such options in its initial filing if it requests approval of another project under the NGEP statute in the future; ALJ Report, Finding 325, p. 67.
[249] Department Direct Testimony, Heinen, Hearing Ex. 405; MERC Direct Testimony, Lee, p. 10, Hearing Ex. 5; MERC Direct Testimony, Lyle, pp. 3-5, Hearing Ex. 7; ALJ Report, Findings 326 and 327, p. 67.
[250] ALJ Report, p. 65.
[251] ALJ Report, p. 67.

- Phased Proposals (OAG Proposed Findings at 29–31; OAG Initial Brief at 49–55; OAG Reply Brief at 19–21, 24–28; Urban Amended and Corrected Direct at 22–24, 47–49; Urban Amended and Corrected Rebuttal at 8–16; Urban Amended and Corrected Surrebuttal at 8–11);

- Peak Shaving and Conservation (OAG Proposed Findings at 35–36; OAG Initial Brief at 64–67; OAG Reply Brief at 18–19; Urban Amended and Corrected Direct at 52–56; Urban Amended and Corrected Surrebuttal at 12–16).

The OAG believed the reference citations would provide further support for its decision.

OAG Rebuttal to MERC's response

The OAG recommended the following ALJ Report modifications.

Add ALJ Finding 290a.

> 290a. The OAG responded by noting that MERC had not presented its Initial Petition in terms of the entire NNG PGA, but had focused only on the Rochester area reserve margins. In fact, the OAG noted that the Initial Petition does not include any references to the reserve margins for the entire NNG PGA.[252] The OAG also noted that the Commission's Notice of and Order for Hearing specifically referred to the Rochester service area, rather than the entire NNG PGA.[253] Based on these facts, the OAG concluded that the true purpose of the Rochester Project was to increase natural gas capacity in the Rochester area, and that as a result the project should be evaluated on that basis rather than as compared to the entire NNG system.

Add ALJ Finding 295a.

> 295a. In response to MERC's argument regarding the need for fixed prices, the OAG noted that MERC's position was inconsistent. The Company had disagreed with portions of the Department's request for cost caps because its own cost estimates were not a "firm or fixed price."[254] The OAG noted that it was not reasonable for MERC to discard some options from NNG because they did not have fixed prices when MERC was not offering fixed prices to ratepayers for its own costs.[255] In addition, the OAG noted that while the lack of price certainty may be one factor in deciding which project is best for ratepayers, it should not be the only reason to discard some options. The OAG also pointed out that MERC would have the opportunity and responsibility to

[252] Ex. 1, at 24–25 (Petition).
[253] Notice of and Order for Hearing, at 5.
[254] Ex. 8, at 3 (Lyle Rebuttal).
[255] OAG Initial Brief at 60 (Oct. 11, 2016) (eDocket No. 201610-125583-01).

review cost estimates from NNG and determine whether they are reasonable.

Add ALJ Finding 297a.

> 297a. The OAG disagreed with MERC's analysis that a smaller project would cost more. The OAG pointed out that, rather than relying on the estimated cost of a smaller project produced by MERC, there was a better source of information in the record: the results of the competitive bidding process. The OAG correctly noted that several of the competitive bids would have produced phased or incremental proposals at significantly lower cost than the estimate created by MERC.[256]

Add ALJ Finding 302a.

> 302a. In response to these concerns from the Department and MERC, the OAG noted that the phased proposals produced by NNG would have actually provided MERC with the opportunity to obtain the full 100,000 Dth/day produced by its long term demand forecast. Because the phased proposals provided this option, the OAG argued that it did not fail to consider the risk of increased growth as suggested by the other parties. The phased options provided the additional benefit of not requiring ratepayers to pay for the full capacity additions in the event that they were not necessary.

The OAG takes exception to the ALJ's conclusions regarding the need and reasonableness for the Rochester Project contained in Findings 314 through 328.

The ALJ discounts the risk that growth will not materialize as the Company hopes. MERC faces no risk under its Rochester proposal. If the Commission approves the project as filed, MERC proposal places all of the risk on its ratepayers pay (not MERC's shareholders) regardless of whether the growth occurs. The OAG believes that MERC's ratepayers have no protection under the proposal, if the projected growth does not materialize as MERC predicts. The OAG urges the Commission to consider the policy implications as it determines the prudency and reasonableness of the Rochester Project, as proposed.

As the ALJ noted, there is record support that a phased approach is more reasonable than the all-in approach embodied in MERC's PA. MERC requested assurance from regulators that the Project is reasonable, but the record simply does not support such a conclusion, especially when the important policy considerations raised by the ALJ are considered. The evidence actually in the record establishes that several phased proposals were cost-comparative to the PA that MERC negotiated. These proposals would have been less expensive in the short-term, and would not have

[256] Ex. 22, at 17 (Sexton Rebuttal Schedules HSTS).

been more expensive in the long-term as suggested by the ALJ.[257] The OAG recommends the following modifications to the ALJ Report.

> 314. The Administrative Law Judge finds that the record does not support a finding ~~demonstrates~~ that the Rochester Project is necessary, reasonable, and prudent to provide service to MERC's customers in the Rochester area.
>
> 315. [delete]
>
> 316. [delete]
>
> 317. [delete]
>
> 318. ~~While~~ ~~t~~The reserve margins resulting from the PA are ~~relatively~~ large when looking at the Rochester area alone, up to 54.9 percent, and will persist at high levels until at least 2040, when they are estimated to be at 15 percent using the Company's sales forecast.[258] They are even larger when using the forecast provided by the Department or the after modifications recommended by the OAG. ~~the reserve margins for MERC's system as a whole are much smaller~~
>
> 319. [delete]
>
> 320. ~~Given~~ Despite the uneven nature of capacity additions and the time it takes to plan for new capacity additions, ~~the Administrative Law Judge concludes that~~ the reserve margins resulting from the PA are not reasonable, even under the circumstances ~~especially given the DMC initiative~~ wherein the Rochester area experiences significant load growth over the next two to three decades.
>
> 321. In addition, to the extent excess capacity exists in the near term, MERC stated that it can seek to sell excess capacity on the capacity release market. Given that NNG currently has no excess capacity on its system in the Rochester area, MERC argued that it should have strong demand for any excess capacity. But the Department noted that revenue generated by capacity release sales is "typically small compared to the original purchase price of the capacity."[259] The OAG also suggested that the basic theories of supply and demand indicate that the cost on the capacity release market are likely to drop in light of the excessive supply that would result from the Rochester Project, further reducing the Company's ability to recoup costs.[260] As such, it is not likely that the company would be able to fully recoup the costs associated with the

[257] See OAG Highly Sensitive Trade Secret Direct Testimony, Urban; OAG Initial Brief, pp. 49-63.
[258] Ex. 12 at 21 (Mead Direct).
[259] Ex. 405 at 47 (Heinen Direct).
[260] OAG Initial Brief at 108 (Oct. 11, 2016) (eDocket No. 201610-125583-01).

unused, excess capacity, which are costs that will be borne by MERC's ratepayers.

323. [delete] and replace with 323a.

323a. The facts in the record demonstrate that MERC was provided several phased proposals that could have provided the Company with the option to obtain the full amount of capacity it seeks if growth materializes as it projects, while also protecting ratepayers from excess costs if growth does not materialize. The phased proposals would also have improved intergenerational inequity, and reduced the excess reserve margins that would lead to intra-class inequity with interruptible and transportation customers.

324. ~~In addition, many of the phased proposals had operational issues as discussed above. Also, a~~ MERC argued that a smaller project in the range of 30,000 Dth/day would likely cost more than the PA because MERC would not be able to generate bids for a project that size from suppliers other than NNG. But this argument also assumes that the demand would eventually increase by 30,000 Dth/day, thus potentially requiring additional upgrades to accommodate a higher supply from an interstate gas pipeline. Even under the Company's sales forecast, a 30,000 Dth/day increase to the Design Day demand would not occur until the late-2030s.[261]

325. ~~The Administrative Law Judge finds that t~~The record demonstrates that MERC did not sufficiently consider conservation and peak shaving ~~are not viable~~ as alternatives to the PA ~~for addressing the current and future capacity needs in the Rochester area~~. While it is likely that neither conservation nor peak shaving could completely resolve all future demand in the Rochester area, either or both alternative may have been able to reduce the amount of demand in a cost-effective manner. MERC did not provide sufficient testimony or evidence to demonstrate that it considered the possibility to control the size of the project using these alternatives, and MERC should provide additional detail about such options in future relevant filings.

326. ~~For these reasons, the Administrative Law Judge concludes that record demonstrates~~ MERC did not meet its burden of proof to show that the PA is necessary, reasonable, and prudent by a preponderance of the evidence. ~~provided that MERC actively and aggressively seeks to sell any excess capacity on the capacity release market.~~ This is the first case under the new NGEP statute and it is reasonable for the Commission to conclude that policy considerations such as protecting ratepayers from forecasting

[261] Ex. 12 at 21 (Mead Direct). From the table provided in Ms. Mead's testimony, if one assumes that 30,000 Dth/day is added to the existing total Rochester area capacity of 55,169, it would equal roughly 85,000 Dth/day, which is the forecasted Design Day for 2038/2039. *Id.*

risk and promoting generational equity are important, and MERC's argument that a phased project would have resulted in increased long term costs is not supported by the facts in the record. The record thus supports a conclusion that a phased approach is more reasonable than the PA.

327. In addition, given the link between the proposed size of the Project and the engineering of the Phase II system upgrades, the record ~~also~~ does not support~~s~~ the need and reasonableness of the Phase II distribution upgrades. While the record does support additional capacity in the Rochester area and distribution-level solutions to meet the increased capacity, the current proposal for Phase II upgrades is inextricably tied to the unreasonably high growth estimate and the unreasonably long term horizon upon which that estimate is applied. As such, the Company should design future engineering upgrades to allow it to deliver safe and reliable natural gas now and into the future at a more reasonable level than its Rochester Project envisions. If, as the Company argues, the same type of distribution enhancements would be required under either the PA or a phased approach, then the Company must produce evidence to provide its claim. ~~The Phase II distribution system upgrades are needed to address operational and efficiency issues on MERC's distribution system in the Rochester area. Phase II involves reconstruction of the TBSs that serve Rochester and construction of transmission infrastructure necessary to move additional capacity into the Rochester area.~~

328. In summary, ~~the Administrative Law Judge concludes that~~ MERC has not demonstrated that the Rochester Project is prudent, reasonable, and necessary to provide reliable service to MERC's Rochester service area ~~subject to the conditions set forth in the Recommendations section below~~.

The Department's Reply to the OAG Exceptions

The Department concluded that the Commission adopt the ALJ Report as recommended by the ALJ. In support of its conclusions, the Department stated that:

The OAG Exceptions at pp. 18-19 notes certain policies described in the ALJ Report, Footnote 429 that the ALJ Report did not recommend, but which the Commission could conceivably choose to consider with respect to cost recovery. The OAG Exceptions urge the Commission to consider these policies and their implications when determining the reasonableness of the Rochester Project. The Department believes these statements reflect a fundamental change in the Commission's cost recovery policy. The Department urges that, if the Commission wishes to defer some recovery until later in the Rochester Project's life, it should exercise care in making any such fundamental change in cost recovery policy.[262]

[262] Department Reply to the OAG Exceptions, p. 3.

The Department further disagreed with OAG Exceptions pp. 20-21, which misleadingly suggests that the Department's testimony, (that revenue generated by capacity release sales is "typically small compared to the original purchase price of the capacity") constituted support for OAG Exceptions proposed modification to the ALJ Report, Finding 321. The Department testimony quoted on pp. 20-21 pertains solely to the standard capacity releases and not the type of long-term capacity releases that the Department Witness Heinen discussed extensively in pre-filed testimony, which testimony directly contradicts the proposed modification to ALJ Report Finding 321.[263]

Further, the OAG Exceptions pp. 20-22 proposed amendments to ALJ Report Findings 314-328 that appear to confuse how reserve margins enter into the analysis of cost recovery. In particular, the OAG Exceptions proposed amendments to Findings 318-323 that would make significant the reserve margins in the Rochester area while making insignificant the system-wide reserve margins. The Commission should not adopt these suggested amendments. The Commission has always accounted for reserve margins on a system-wide level, not a micro level. [264]

MERC Reply to the OAG Exceptions

The OAG claimed that the ALJ Report does not reflect a fair accounting of all of its arguments regarding the relative costs and benefits of alternatives are also without merit.[265] MERC stated the ALJ Report reflected a thorough and detailed consideration and ultimately a rejection of all of the arguments the OAG listed in its Exceptions, where the OAG claimed the ALJ did not adequately consider.[266]

Alternatives to Increased Capacity

The OAG acknowledged that the ALJ's description of the OAG's arguments with respect to other alternatives of capacity was generally accurate, but complained that the ALJ Findings did not reflect all of its analysis. MERC stated that the ALJ Report's purpose is not to restate the docket's record in its entirety; rather the ALJ Report summarizes the docket's facts, party positions, and makes reasonable judgements on those facts and positions.[267] MERC believed that the OAG added nothing new to the docket's record.

MERC stated that the OAG's claim that several competitive bids would have produced phase-in or incremental proposals at significantly lower cost than MERC's Rochester proposal was fully "debunked" in the ALJ Report, see ALJ Finding 252 – Mr. Sexton's analysis of NNG's proposed 30,000 Dth/day project, where he determined a NPV of $1 million more than MERC proposal. MERC believes that paying money for less capacity is not in the best interest of MERC's customers.[268]

MERC believed that the record was quite clear. MERC's advantage over NNG was that NNG carried the risk that a competing bidder could supplant its entire Rochester capacity. That

[263] Ibid.
[264] Ibid, pp. 3-4.
[265] Compare OAG Exceptions p. 14, with the ALJ Report pp. 41-67.
[266] MERC Reply to the OAG Exceptions, p. 12.
[267] Ibid, pp. 12-13.
[268] Ibid, p. 13.

Advantage resulted in a better deal than MERC could have negotiated if it had accepted a smaller or incremental proposal. MERC believed that costs of a later incremental capacity expansion negotiated in a non-competitive environment with NNG would result in higher costs than will be paid for this growth capacity in the current transaction.[269]

MERC believed that the ALJ weighed the record evidence and party positions concluded that the record demonstrates the PA with NNG and the Phase II distribution upgrades were necessary, reasonable, and prudent. The ALJ determined that neither a smaller project or a phase-in project would not be more reasonable than MERC's proposal.

In reaching this conclusion, upon weighing the evidence, relevant policy considerations, and arguments of the parties, the ALJ determined neither a phased option nor a smaller project would be more reasonable. The ALJ states:

> *[A] phased-in project or smaller project would expose MERC's customers to a significant risk that they would pay much more for capacity over the next 25 years than under the PA.*[270]

Additionally, the ALJ concluded:

> *"the record demonstrates that conservation and peak shaving are not viable alternatives to the PA for addressing the current and future capacity needs in the Rochester Area."*[271]

The ALJ's Policy Recommendation Was Correct

MERC disagreed with OAG's support for its conclusions that resulted OAG Exceptions that referenced an ALJ footnote that stated:

> *Given that this is the first case under the new NGEP statute, the Administrative Law Judge recognizes that the Commission may conclude that policy considerations such as keeping rates lower in the short term or promoting generational equity should be given greater weight than long run costs. Under such an analysis, the record could support the conclusion that a phased approach may be more reasonable than the PA.*[272]

MERC believed that this docket's record clear that taking a smaller or phased-in approach for the Rochester project would result in higher costs and unacceptable ratepayer risk. MERC agreed with the ALJ that it is the Commission's role to make policy decisions based on the record. In addressing the policy issues raised by this proceeding, the Commission should be guided by the thorough record that was developed here, including the evidence that a smaller or phased approach would have cost more and would expose ratepayers to unacceptable risk. MERC suggested that the ALJ Report reflected a careful balancing of the relevant policy considerations in light of the applicable law and the record evidence presented.[273]

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[269] ALJ Report, p. 67, Findings 326-327.
[270] Ibid, p. 66, Finding 323.
[271] Ibid, p. 67, Finding 325.
[272] OAG Exceptions, pp. 18-19; ALJ Report, p. 67, footnote 429.
[273] MERC Reply to the OAG Exceptions, pp. 15-16 (December 30, 2016).

Safe, Adequate, and Reliable Service is Needed in Rochester Now

MERC believes that if the Commission denies its proposal and requires MERC to file an alternative proposal reflecting a smaller load or a phased-in approach that MERC may not able to service its current Rochester load on Design-Day. Further, denial would expose MERC's ratepayers to additional risks and higher NNG costs than its current proposal.[274]

PUC Staff Analysis

Staff does not necessarily disagree with the ALJ, but staff is providing additional comment for Commission consideration. Staff believes that the Commission will need to determine which version of the Rochester project produces the most reasonable and prudent result. The Commission's evaluation and determination in this proceeding should be guided by Minn. Stat. §§ 216B.01 and 216B.03, which require every public utility to provide "safe, adequate, efficient, and reasonable service," at just and reasonable rates.[275] Under Minn. Stat. § 216B.04, a public utility must provide service within 90 days of a request for service. The Commission recognizes that in order for a natural gas distribution utility to do this, "they must be able to deliver gas to their customers when needed, especially on the coldest day of the year."[276]

MERC believes that its 3.0 proposal will provide the most reasonable results for its entire NNG-PGA area customer base. The OAG believes that MERC's 3.0 proposal will result in an over-build of Rochester project facilities, thus, resulting in MERC's customers absorbing and paying for excessive project facilities costs. Staff realizes that MERC currently needs additional Rochester area capacity, but at what level. Because of the facilities configuration between NNG and MERC, no additional capacity exist, which will require NNG to construct additional facilities in order for it to deliver additional natural gas supply to MERC. In addition, MERC wants to construct distribution facilities that will enhance its operations and reliability.

Staff realize that NNG will not construct facilities to provide MERC with additional capacity on an annual basis, that FERC will not permit this type of construct because it is inefficient to do so. The capacity from pipeline facilities will not match up to the LDCs capacity request. MERC to grow into its capacity requested from NNG. As illustrated by staff's Attachment A, the different growth rates result in different Reserve Margins over the same period. MERC calculated its NNG capacity request for an additional 45,000 Dth/day based on its constant 1.5 percent growth rate for every year (Attachment A, pg.1).

The Department concluded that MERC's 1.5 percent growth was reasonable for the project's "high case" and its 1.0 percent growth rate was reasonable for the 'status quo" case. The OAG believe its ***negative*** 0.0092 percent was reasonable. All of these growth rate assumptions result in different Reserve Margins for the Commission to consider. However, no party discussed the resulting changes to NNG's or MERC's facilities configuration if the Commission selects a different growth rate assumption. Staff believes that MERC assumption of a constant 1.5 percent annual growth rate may be inappropriate, as supported by the OAG; based MERC's historical

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[274] Ibid, pp. 17-19.
[275] Minn. Stat. § 216B.01;
[276] In re Request by N. Minn. Utils. and Peoples Nat. Gas for Approval of a Change in Demand Related Costs on the N. Pipeline Sys., Docket No. G007/M-01-1631, G011/M-01-1633, ORDER APPROVING COMPANIES' REQUESTS AND REQUIRING ADDITIONAL FILINGS (July 17, 2002).

0.75 percent residential customer count growth rate, as provided by the Department. Staff is of the opinion that MERC's proposed 1.5 percent growth rate could result in over-building of the Rochester project, thus leading to MERC's customers over-paying in the short-term. MERC will have a resulting Reserve Margin in excessive of 15 percent for the 2038/2039 winter heating season (Attachment A, p. 1, Line 24).

The parties' commented on the costs of under-building or over-building the Rochester project. Both the Department and MERC noted that if the Commission adjusts the growth rate downward and less facilities are constructed or if MERC or NNG constructs the project's facilities on an incremental basis it might result in additional costs (higher than if constructed now) to MERC's customers if future construction is required. The OAG believes that MERC's and NNG's current facilities configuration will result in over-building the project, costing MERC customers for facilities that are not used and useful. Staff believes that the Commission may wish to exercise caution in determining the Rochester project's growth rate, as the rate results in the necessary facilities required to provide MERC its Rochester capacity (for different growth rate assumptions, see Attachment A).

As previously discussed, staff do not agree with MERC's impact on the Reserve Margin caused by the ability to use 20 percent of its Rochester capacity at secondary points on its NNG-PGA system. Because MERC will not be able to use secondary points during most of the winter heating season due to NNG system constraints. Secondary points are subject to NNG having the ability to complete the transportation shift on its system. Therefore, staff believes that the 20 percent secondary points shift will not influence the Reserve Margin, as reflected by MERC in Table 7, above.

Further, complicating the Commission's decision is that Rochester Public Utilities (RPU) or Mayo Clinic (the DMC expansion project) have not committed to firm service on MERC. RPU has indicated that it may construct additional natural gas electric generating facilities in Rochester, but indicated it will probably use MERC's interruptible services to transport its natural gas requirements. Staff believes that MERC's construction of the Rochester facilities support its firm service customers and not its interruptible customers. Further, the Mayo Clinic has not committed to take firm service for any of its natural gas requirements. Without firm commitments from RPU and Mayo Clinic, these potential customers should not be considered in the Commission decision making process, unless these entities are will pay to make a contribution to the construction costs (CIAC) or some other payment arrangement compensating MERC for its facilities use.

In the alternative, the Commission may wish to consider the OAG plan if it decides to approve the Rochester project that would allow MERC cost recovery only on the portion of facilities that are used and useful and defer cost recovery on the remaining facilities costs until the facilities become used and useful.

Regardless of what the Commission decides, staff recommends the Commission not adopt the OAG's exceptions to ALJ findings adding Findings 290a, 295a, 297a, 302a, and 323a, modifying Findings 314-321 and 323-328 because they mischaracterize the ALJ's recommendations. The Commission can either accept or reject the ALJ's findings and recommendations. However, when the ALJ's Findings recommend her conclusions, the Commission is not in a position to say she recommended something else.

Decision Alternatives

Sales Forecast – Proposed Growth Rate for the Rochester Project
(Please see staff briefing papers, pp. 4-44.)

1. Adopt the ALJ recommendation that

    a. MERC's assumption that its regression analysis growth rate equals the growth rate for MERC's Design Day calculation, and

    b. MERC's proposed Design Day 1.5 percent growth rate is reasonable and prudent as the "high case" scenario, and

    c. The Department's proposed Design Day 1.0 percent growth rate is reasonable and prudent as the "status quo" scenario. or

2. Adopt the OAG's proposed negative 0.0092 percent growth rate as reasonable and prudent. or

3. Adopt MERC's historical annual average 0.46 percent growth rate as reasonable and prudent. or

4. Adopt MERC's historical annual average Design Day 0.75 percent growth rate as reasonable and prudent. or

5. Approve some other growth rate as reasonable and prudent.

6. If the Commission chooses a growth rate different from MERC's proposed 1.5 percent, direct MERC to make a compliance filing within 10 days of the Order detailing the needed facilities to support the Commission's growth rate for both MERC and NNG.

7. If the Commission chooses a growth rate different from MERC's proposed 1.5 percent, direct the Commission staff to issue a notice for a comment period for parties to submit their comments after MERC submits its compliance filing. Delegate authority to the Commission's Executive Secretary to develop the questions for this notice and to vary time-periods and procedures as necessary for the duration of this proceeding.

8. If the Commission grants its approval of MERC's Rochester project and both Rochester Public Utilities (RPU) and the Mayo Clinic (DMC Expansion) take interruptible (or firm) service, require MERC to request a Contribution in Aid of Construction (CIAC) to offset a portion of MERC's cost for the excess capacity from the Rochester Project.

Project Approval
(Please see staff briefing papers, pp. 45-67.)

9. Adopt the ALJ recommendation that the Rochester Project is reasonable and prudent as proposed by MERC, <u>or</u>

10. Do not adopt the ALJ recommendation that the Rochester Project is reasonable and prudent as proposed by MERC.

11. Approve MERC's requested pre-determination for Rochester Project cost recovery for Phase II costs ($44 million) through a combination of the NGEP Rider Statute and through MERC's future general rate cases, <u>or</u>

12. Do not approve MERC's requested pre-determination for Rochester Project cost recovery for Phase II costs ($44 million) through a combination of the NGEP Rider Statute and through MERC's future general rate cases.

13. Approve MERC's requested pre-determination for the Rochester Project cost recovery for NNG upgrades ($55 to $60 million) through its MERC-NNG-PGA, <u>or</u>

14. Do not approve MERC's requested pre-determination for the Rochester Project cost recovery for NNG upgrades ($55 to $60 million) through its MERC-NNG-PGA.

Reasonableness of MERC's RFP Process

On January 5, 2015, MERC issued its Request for Proposals (RFP) to obtain bids for additional interstate pipeline capacity to meet its forecasted Rochester need of 100,000 Dth/day. MERC requested various proposals from parties submitting bids so that it could properly evaluate and select a proposal satisfying its future requirements. MERC received responses from three pipeline companies.[277] [278] NNG is currently the only interstate pipeline providing services in the Rochester area.

For another interstate pipeline to enter into the Rochester market, considerable facilities would be required to deliver natural gas (in other word, no other interstate pipeline has facilities close to the Rochester area). Any competing pipeline would need to build at least 80 miles of pipeline, requiring a major capital expenditure amortized over the life of the investment. Because of these economic disincentives, effectively makes MERC a captive customer of NNG.[279] MERC's current NNG contracts will expire on October 31, 2017.

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[277] MERC issued the RFP to all of the active pipeline companies operating in the general vicinity of Rochester, Minnesota. MERC Direct Testimony, Sexton, pp. 38, 41; Hearing Ex. 17.
[278] Bids were received from NNG, NBPL (Northern Border Pipeline Co.), and Twin Eagle.
[279] MERC Direct Testimony, Mead, p. 22, Hearing Ex. 12; MERC Rebuttal Testimony, p. 5, Hearing Ex. 12.

MERC Position

MERC issued its Request For Proposals (RFP) in November 2015, requesting competitive bids from five different interstate pipeline companies and posted the RFP on its website, MERC requested expansion scenarios that included:

- Bids that would provide for 100,000 Dth/day, through a new pipeline.
- Bids that would provide an incremental capacity of 45,000 Dth/day.

MERC received bids from, NNG who provided multiple proposals, NBPL who provided a single proposal, and Twin Eagle who provided two proposals.[280] NNG provided the least cost proposal compared to the other companies' proposals, which cost at least $50 million more than the NNG proposal.[281] NNG provided one proposal (Proposal 3.0) that complied with the terms requested in the RFP; MERC stated that NNG provided several additional proposals that it determined deviated from the RFP parameters. [282]

MERC entered into negotiations with NNG and eventually entered into a PA that states the proposed terms and conditions of a transportation contract (staff understands this contract is unsigned). MERC evaluated the proposals and concluded that NNG's 3.0 proposal produced the best results at the least cost. NNG agreed to provide an incremental 10,500 Dth/day in 2018 and 34,500 Dth/day in 2019. MERC was able to negotiate a number of favorable terms for a 25-year term.[283]

MERC's negotiations achieved:

- An incremental contract with NNG for 45,000 Dth/day (in two phases), for total Rochester capacity of 100.169 Dth/day.[284]
- NNG construction will cost approximately $55 to $60 million.[285]
- The right to cancel the PA if MERC does not receive regulatory approval from the Commission.[286]
- MERC established a fixed NNG entitlement costs for the Rochester NNG entitlement, even if NNG files for a general rate increase at FERC.[287]
- The negotiated PA provides an incremental 5,439 Dth/day at nine delivery points commencing at Rochester project's NNG Phase I start date. Further, an incremental 2,593 Dth/day delivery to 21 MERC delivery points at Rochester project NNG Phase II start date.[288]
- Flexibility to use 20 percent of its total Rochester capacity on a secondary point basis.[289]

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280 MERC Direct Testimony, Sexton, p. 41; Hearing Ex. 17.
281 MERC Opening Statement, Mead, p. 2, Hearing Ex. 27.
282 MERC Direct Testimony, Sexton, pp. 41-42; Hearing Ex. 17.
283 MERC Direct Testimony, Sexton, pp. 46-47; Hearing Ex. 17.
284 MERC Direct Testimony, Mead, p. 12, Hearing Ex. 12.
285 MERC Direct Testimony, Lee, p. 20, Hearing Ex. 5.
286 Ibid.
287 MERC Direct Testimony, Sexton, pp. 47-48, Hearing Ex. 17.
288 Ibid.
289 Ibid.

- Additional increments of capacity 2,000 Dth/day on each odd-numbered year (for example 2017).[290]
- MERC has a one-time option to extend the 25-year term by an additional 5-years at the current NNG rates.[291]

For assistance, MERC hired an independent consultant, MERC Witness Sexton, who evaluated MERC's RFP process, NNG selection, and the PA's final terms. MERC did not share its internal evaluation with Mr. Sexton, but instead, Mr. Sexton prepared his own analysis, including his own cost analysis.[292]

MERC Witness Sexton arrived at the same conclusion regarding the other proposals submitted by NBPL and Twin Eagle, that the costs were simply too high. He concluded that MERC's RFP process allowed it to "exert considerable leverage to obtain more favorable terms from NNG."[293]

MERC requested Commission approval of its Initial Petition.

The Department Position

The Department evaluated MERC's RFP process:[294]

- To assess whether it was inclusive of potential parties and if participating parties were held to a fair process; and
- To determine if MERC selected the lowest cost option and ensured there were reasonable provisions to protect ratepayers.

The Department concluded that MERC reasonably addressed the issue of whether its RFP appropriately included all possible project bidders.[295]

According to the Department, MERC RFP process provided:[296]

- Sufficient guidance and data for companies to adequately respond to MERC's needs.
- Allowed respondents adequate time to respond.
- MERC with multiple responses to the RFP.
- Responses within the requested timeframe.
- Multiple bid options.

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[290] Ibid, p. 50.
[291] Ibid.
[292] MERC Direct Testimony, Sexton, pp. 45-46; Hearing Ex. 17; MERC Opening Statement, Sexton, p. 1; Hearing Ex. 28.
[293] MERC Rebuttal Testimony, Sexton, p. 5; Hearing Ex. 19.
[294] Department Direct Testimony, Ryan, p. 6; Hearing Ex. 402.
[295] The Department noted that MERC did not included Alliance interstate pipeline, which travels through southern Minnesota, but concluded that Alliance was a "wet pipeline" and that a processing plant would be needed to process the "wet" natural gas to make the gas suitable for MERC's customer consumption. The cost of this processing plant made the project uneconomical.
[296] Department Direct Testimony, Ryan, pp. 8-10; Hearing Ex. 402.

- The information and weights MERC assigned to each category in its comparative evaluation of the competitive bids appeared reasonable. The driving component was cost and the summary data confirms the decision made by MERC.

The Department concluded that MERC Witness Sexton's analysis reflected comparable results to MERC's analysis that the NNG proposal 3.0 was the most competitive bid received.[297]

The Department concluded "that MERC's RFP process was fair and reasonable, and that MERC negotiated reasonable provisions for ratepayers not only in Rochester, but in other areas of MERC's system as well."[298]

Further, Department Witness Ryan stated:

> *I believe that the RFP process was a comprehensive gauge of the market and the potential alternatives for interstate pipeline services to the Rochester TBSs. While other pipelines may have difficulty serving Rochester, MERC made reasonable efforts to address this issue through the timing of the process and allowing other bidders the opportunity to provide competitive bids on the Project*.[299]

The OAG Position

The OAG raised several concerns with MERC's RFP process:[300]

- MERC's RFP relies on forecasting that is flawed;
- MERC's RFP is designed to obtain significant capacity before it will be useful to serve customers;
- MERC's RFP was limited to bids that satisfied its forecasted demand out to 25 years, and did not consider more moderate or phased proposals;
- MERC did not solicit range of alternatives to its Design Day estimate of 100,000 Dth/day.
- MERC appears to have a preference for proposals that required the Company to construct a new TBS, which is a significant capital investment on which the Company will charge ratepayers a rate of return, but did not provide any analysis about the benefit of the new TBS to customers; and,
- MERC's testimony about the options available to it are inconsistent with the information contained in the RFP responses, which the Company declined to produce until it was demanded in discovery.
- MERC's selection of NNG proposal 3.0 and not proposal 4.2, which scored better on MERC's evaluation system. NNG proposal 4.2 reflected a two-phased construction plan.

[297] Ibid., p. 11.
[298] Ibid, p. 14.
[299] Ibid, pp. 14-15.
[300] OAG Amended and Corrected Direct Testimony, Urban, p. 44; Hearing Ex. 300.

According to the OAG, MERC was unreasonable to limit its RFP process to consider only proposals that add an incremental 45,000 Dth/day.[301]

OAG Witness Dr. Urban testified:[302]

> *… I do not believe that MERC has demonstrated that it acted prudently in regard to either the design of the RFP or its consideration of the responses. The larger point I wish to make is that MERC's RFP should have been structured in such a way that the Company received bids for a more moderate project that would result in a more reasonable level of reserve margin. In particular, it appears that MERC rejected several alternate proposals suggested by NNG that would have been more moderate and would not have carried such significant risk for ratepayers.*

ALJ Analysis

(ALJ Report, pp. 33-41, Findings 180-225.)

The ALJ addresses the reasonableness of MERC's RFP process in Findings 180-225. She concluded that MERC's RFP process was fair and reasonable by the preponderance of the evidence in this docket. In support for her recommendation, the ALJ stated:

- The record supports MERC's decision to determine the size of the capacity requested in its RFP based on its projected need over 25 years. By requesting bids for 100,000 Dth/day. The results show that the 100,000 Dth/day capacity size put pressure on NNG to provide a competitive bid. She believed that if MERC had issued an RFP for more incremental capacity to meet only near-term demand requirements, as suggested by the OAG. The quantity would not have been sufficient to make it economic for any company other than NNG to submit a bid given the significant barrier to entry created by the 80-mile pipeline construction requirement for new entrants. [303]
- The record supports MERC's decision to negotiate a Precedent Agreement with NNG. NNG's bid was the lowest priced. Therefore, it was fair and reasonable for MERC to proceed with negotiations with NNG.[304]
- The OAG's concern that NNG should have picked NNG Proposal 4.2 rather than Proposal 3.0 for purposes of negotiating with NNG, the Administrative Law Judge believes this concern is misplaced. (See the project reasonableness section, below).[305]
- The OAG's suggestion that MERC should have issued an RFP for a smaller project (i.e. less than 45,000 Dth/day of new capacity) raises the question of whether a smaller project is a better alternative than the PA selection proposal (See the project reasonableness section, below).[306]

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[301] Ibid, p. 45.
[302] Ibid, p. 50.
[303] ALJ Report Findings 221 and 222, pp. 40-41.
[304] Ibid, Findings 223, p. 41.
[305] Ibid, Findings 224, p. 41.
[306] Ibid, Finding 225, p. 41.

ALJ Report Findings:

> 220. The Administrative Law Judge finds that a preponderance of the evidence shows MERC's RFP process was fair and reasonable.

The OAG Exceptions

The OAG filed exceptions to the ALJ's Report on this issue.[307] First, to ensure the Commission is provided with a complete record and a fair accounting of the arguments from all parties, the OAG recommended the following additions:[308]

After Finding 215 add:

> 215a. In response to the argument that the size of the RFP ensured competition and negotiating power, which was made for the first time in MERC's Rebuttal Testimony, the OAG argued that the resulting competing bids were "decidedly non-competitive" and that the mere presence of bids from multiple entities does not necessarily result in a competitive process.[309] In addition, the OAG suggested that an open-ended RFP, which would have accepted bids up to 100,000 Dth/day, would have allowed the Company to inject competition into the process while also allowing for bids for smaller or phased-in projects.[310] The OAG also noted that it was questionable that MERC did not provide this justification in its initial Petition and only raised it after criticisms were raised regarding the appropriateness of the RFP.[311]

After Finding 219 add:

> 219a. In response to the assertion by MERC that it did consider the relative costs and benefits of an incremental approach and that a series of smaller projects would likely have been more expensive than the cost of the PA, the OAG responded by noting that a smaller project, such as one providing 17,500 Dth/day that was proposed by NNG, would provide a reserve margin in the area above 4 percent to the year 2026.[312] In addition, the OAG took issue with the Company's claim that a renegotiation of the PA would be difficult, arguing that the risk borne by ratepayers outweighed any speculative difficulty the Company might have in renegotiating the agreement should the Commission deny the Project as-proposed.[313]

Second, the OAG took exception to the ALJ's conclusions regarding the RFP process and recommended the following changes to Findings 220-225:

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307 OAG Exceptions at pp. 14-16.
308 Id at p. 14.
309 OAG Initial Brief at 38 (Oct. 11, 2016) (eDocket No. 201610-125583-01).
310 *Id.* at 38–39.
311 Ex. 19 at 6 (Sexton Rebuttal); Ex. 14 at 12 (Mead Rebuttal).
312 Ex. 311 at 23 (Urban Amended and Corrected Surrebuttal (Public)).
313 Ex. 311 at 23 (Urban Amended and Corrected Surrebuttal (Public)).

220. The Administrative Law Judge finds that ~~a preponderance of the evidence shows~~ MERC~~'s~~ failed to demonstrate, by a preponderance of the evidence, that its RFP process was fair and reasonable.

221. First, the record does not support~~s~~ MERC's decision to determine the size of the capacity requested in its RFP based on its projected need over 25 years. The OAG correctly pointed out that there is a significant amount of risk in any forecast, and that it was not reasonable for MERC to only request bids that satisfied its full long term demand forecast. In response, MERC argued that it was necessary to ~~By~~ request~~ing~~ bids for 100,000 Dth/day, ~~the project was designed to meet MERC's forecasted Design Day needs to 2042 and was large enough to~~ in order to entice companies other than NNG to provide bids. While two other companies provided bids that would have necessitated the construction of a brand-new, 80-mile pipeline, the record does not support a finding that these bids created a competitive environment or that ~~The results show that~~ the 100,000 Dth/day capacity size put pressure on NNG to provide a competitive bid.

222. If MERC had issued an RFP that allowed for more incremental capacity to meet MERC's projected Rochester area demand well into the 2020s, ~~only near term demand requirements~~ as suggested by the OAG, it would have been possible for MERC to receive bids for smaller or phased projects that it would have otherwise dismissed as non-conforming. Given ~~the quantity would not have been sufficient to make it economic for any company other than NNG to submit a bid given~~ the significant barrier to entry created by the 80-mile pipeline construction requirement for new entrants, however, it is unclear just how much competition any competing bid could have fostered.

223. Second, ~~the record supports MERC's decision to negotiate a contract with NNG. NNG's bid was the lowest priced.26 Therefore it was fair and reasonable for MERC to proceed with negotiations with NNG.~~ while the OAG did not directly question whether MERC should have chosen to negotiate with NNG as opposed to other companies, the record the OAG produced demonstrates that the problems with the design of MERC's RFP should bear on the reasonableness of the Company's negotiation with NNG.

224. [delete]

225. [delete]

The Department Reply to OAG Exceptions

The Department recommended that the Commission adopt the ALJ Report as recommended by the ALJ.

MERC's Reply to OAG Exceptions

MERC stated "there is nothing new in the OAG's Exceptions, as they amount only to a rehash of the same arguments that the ALJ found unpersuasive."[314] Specifically, with respect to the OAG's Exceptions to the ALJ Report on the reasonableness of the RFP process, MERC stated:

> *[C]ontrary to the OAG's assertions, the ALJ Report fully reflects the OAG's arguments and responses and rejects them based on the record evidence taken as a whole. The OAG's Exceptions raise no relevant facts or arguments not already addressed in the ALJ Report or that would support a rejection of the ALJ's thorough and well-supported Findings, Conclusions, and Recommendations with respect to MERC's RFP process.*

MERC stated "*the ALJ Report already fully reflects the OAG's positions regarding the competitiveness of MERC's RFP process*." MERC further stated that the "*ALJ Report reflects consideration and rejection of the arguments urged by the OAG in its Exceptions with respect to the size of the RFP[,]*" and MERC quoted ALJ Findings 221 and 222. MERC also noted ALJ Finding 225.

Finally, MERC stated that the OAG's claim that "MERC's position that the size of the RFP ensured competition and negotiating power should be given little or no weight because, according to the OAG, it was raised "for the first time in MERC's Rebuttal Testimony"[,] … is irrelevant. In any event, MERC provided a detailed discussion of the RFP process and the need to create a competitive bidding environment in the Direct Testimony of MERC witnesses Timothy Sexton and Sarah Mead."

PUC Staff Analysis

Staff generally agrees with the ALJ recommendation that MERC's RFP process is fair and reasonable, but provides the following discussion for Commission consideration. Based on the geographic location of Rochester, MERC is effectively a captive NNG customer. As MERC indicated the closest "dry" natural gas interstate pipeline is over 80 miles away from Rochester. The cost of constructing an 80-mile pipeline prices any other project alternative out-of-the-market when it comes to competitive bidding. MERC's RFP directive did produce a competitive bidding process because the process included bids from alternative pipelines. Staff understands the OAG's RFP concerns, but staff believes that MERC had limited alternative opportunities from other sources**.**

Further, staff believes that the Alliance pipeline is not a viable alternative because the pipeline carries "wet" natural gas, which MERC cannot use unless someone constructs a processing facility to remove the hydrocarbons (propane, etc.) from the gas stream. Alliance is closer to Rochester, but the added processing plant costs eliminates Alliance from consideration. Thus, MERC's selection of NNG seems to be fair and reasonable based on the geographic location of Rochester. Staff further believes that MERC's RFP process did place competitive pressure on NNG resulting in MERC negotiating favorable PA terms.

[314] MERC's Reply to Exceptions at p. 2.

MERC selected NNG proposal 3.0 as its option to meet its forecasted Design Day requirements (as discussed above) based on the proposal being the least cost option. The OAG commented that MERC did not provide its analysis of all the NNG proposals, including NNG proposals that provided a phase-in approach to construction. Previously, the OAG commented that it believed that MERC's Design Day forecast was flawed because of the excess Reserve Margins that exist 10-year after the project is completed. Further, the OAG commented that it believed that MERC forecasted sales growth was over-stated which could lead to excess over-build of the Rochester project, costing customer's additional money for a project that is not used and useful.

Staff agrees with the OAG that MERC could have provided its analysis on other NNG proposals, reflecting the "phase-in" construction approach. This analysis would provide the OAG and staff with valuable insight to the construction costs, which would lead to better Rochester project analysis. Staff believes that all parties except MERC believe that if the Mayo Clinic alters the DMC project schedule or if the project does not happen, MERC forecast growth might be over-stated. If this scenario occurs, the Rochester project might be over-built, causing MERC's customers to pay for facilities that are not used and useful.

Regardless of what the Commission decides, staff recommends the Commission not adopt the OAG's exceptions to ALJ findings adding Findings 215a and 219a, modifying Findings 220-225 because they mischaracterize the ALJ's recommendations. The Commission can either accept or reject the ALJ's findings and recommendations. However, when the ALJ's Findings recommend her conclusions, the Commission is not in a position to say she recommended something else.

Decision Alternatives

Reasonableness of MERC's RFP Process

(Please see staff briefing papers, pp. 68-76.)

15. Adopt ALJ Finding 220; find that MERC's RFP process was fair and reasonable. <u>or</u>

16. Take no action

The OAG's Used and Useful Recommendation

The OAG Position

The OAG's recommendation concluded that MERC's proposed Rochester project was not necessary, reasonable, or prudent. In the alternative, if the Commission finds that the Rochester project is reasonable or prudent, OAG recommended that the Commission find that MERC can only recover the project's portion that is used and useful.

> *"that part that is necessary to serve existing demand plus a reasonable reserve margin in 2025, such as 5 percent."*

The OAG stated that its findings purpose would be to allow MERC to proceed with its Rochester project.

> *"to allow MERC to move forward with the Project, but protect ratepayers from overbuilding capacity until such time as that capacity becomes necessary, or used and useful."*[315]

In response, MERC disagreed with the OAG's alternative recommendation and stated that the alternative recommendation was inconsistent with established ratemaking concepts and with Natural Gas Expansion Project (NGEP) statute. MERC argued that neither general ratemaking principles nor the NGEP Rider statute supported a finding of partial approval/prudence and that the Commission should not adopt the alternative recommendation. If the Commission approves the Rochester project, MERC interrupted the approval as meaning that it can recover the project's costs.[316]

MERC further disagreed with the OAG's comments that the Rochester Project is larger than necessary, given specific project factors, such as the growth estimates in Rochester caused by DMC expansion. MERC stated that if the Commission disapproves the Project or only partially approves cost recovery MERC will not proceed with Rochester Phase II construction or the NNG PA. MERC maintained if the Commission disapproves the project; it would not be able to provide safe reliable service its existing Rochester area firm customers during a Design Day event.[317]

ALJ Analysis

(ALJ Report, pp. 67-68, Findings 329-338.)

The ALJ believed that the Commission's review of the Rochester project should be considered under the NGEP Rider Statute, Minn. Stat. § 216B.1638 and not under Minn. Stat. § 216B.16, the statute governing rate cases. Minn. Stat. § 216B.16, Subd. 6 states that a utility can recover the cost of property that is used and useful in rendering service to the public.

The NGEP Rider Statute standard is whether the project costs incurred were "reasonable and prudent" to provide service to unserved or inadequately served areas.[318] The ALJ believed that there is no requirement that capacity be limited to a given area for a limited time as suggested by the OAG.

The ALJ recommended that the Commission not adopt the OAG's alternative recommendation on the basis that Minn. Stat. § 216B.1638 did not include such language.

<u>ALJ Findings</u>

> 338. Because the OAG's recommendation would impose a standard not found in the plain language of the NGEP statute, the Administrative Law Judge recommends that the Commission not adopt the OAG's alternative recommendation.

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[315] OAG Amended and Corrected Direct Testimony, Urban, pp. 57-58, Hearing Ex. 300.
[316] MERC Rebuttal Testimony, Lee, p. 35, Hearing Ex. 6.
[317] Ibid, pp. 35-36.
[318] Minn. Stat. § 216B.1638, Subd. 3.

OAG Exceptions

The OAG took exception to the ALJ's Findings recommending that Commission not adopt its alternative recommendation. The OAG believed the ALJ concluded its alternative recommendation was not supported by the law because the used and useful language is included in the general rate case statute, Minn. Stat. § 216B.16 and not in the NGEP Rider Statute, Minn. Stat. § 216B.1638. The OAG believed that such a distinction was not legally sound. The OAG is of the opinion that all costs recovered through the NGEP Rider Statute are subject to the Commission's used and useful rules, that the costs must be reasonable and prudently incurred. Further, that if MERC requests some costs from a rider rather than through base rates that should not remove intended protections that assure ratepayers pay only for costs that are necessary for the provision of utility service.

OAG exception recommended the following changes to the ALJ report; delete ALJ Findings 335 through 338, because the findings are inaccurate description of the law.[319] The ALJ interpretation is not a correct statement of Minnesota law and should not be included in the Commission's decision in this case.[320]

OAG Exceptions:

> 335. [deleted]
> 336. [deleted]
> 337. [deleted]
> 338. [deleted]
> 338a. In general, ratepayers should not be required to pay for utility investments that are not used and useful. The fact that some costs are recovered through a rider, rather than base rates, does not change this fundamental aspect of utility regulation in Minnesota. If the Commission determines that the Rochester Project must go forward to meet short-term demands, but is also concerned that the Project may be unreasonably large, the OAG's alternative recommendation may provide an appropriate solution.

Department of Commerce (Department) Reply to Exceptions

The Department did not file a reply to OAG exceptions for this issue

Minnesota Energy Resources Corporation (MERC) Reply to Exceptions

MERC disagreed with the OAG's exceptions by stating:

[319] Including them in a Commission order, even by reference, could lead other utilities to request recovery of costs that are not used and useful merely because they are recovered through a rider rather than base rates.
[320] OAG Exceptions, pp. 23-24.

> *As evidenced by Commission precedent and the language of Section 216B.16, the used and useful standard does not apply here as the OAG suggests. The used and useful standard is applied to determine whether a utility's property should be included in rate base, not in a proceeding to determine the prudence of a capacity addition. The relevant standard for the Commission's consideration is whether the Project is reasonable and prudent, and the record in this case demonstrates that it is.*[321]

MERC stated that the ALJ Report reflects full consideration and rejection of the OAG's arguments regarding interpretation of the NGEP Statute and application to the Rochester Project. The OAG's initial conclusion that the NGEP statutory definition of unserved or inadequately served area was ambiguous and required application of a National Regulatory Research Institute ("NRRI") definition - which was contradicted by the NGEP Statute plain language. MERC believed that ALJ Finding 362 supported its position.

> 362. The legislature defined the applicable terms. The term "natural gas extension project" means "the construction of new infrastructure or upgrades to existing natural gas facilities necessary to serve currently unserved or inadequately served areas." Further, the legislature expressly provided that "unserved or inadequately served area" means "an area in this state lacking adequate natural gas pipeline infrastructure to meet the demand of existing or potential end-use customers.[322]

If the legislature had intended to define "unserved or inadequately served area" consistent with the NRRI language, as the OAG suggests, it could have done so. Instead, the legislature adopted a clear and broad definition of the term "unserved or inadequately served area," which goes well beyond the OAG definition.

PUC Staff Analysis

Staff believes that MERC designed the Rochester project to provide service to both unserved and inadequately served area. Further, that the NGEP Rider Statute clearly provides language that the cost is eligible for NGEP cost recovery if the project meets the unserved and inadequately area standard. However, staff is of the opinion that the Commission should decide whether MERC's Rochester costs are reasonable and prudently incurred.[323] Thus, the Commission should decide in this docket whether the Rochester costs are reasonable and prudently incurred, regardless of what the NGEP Rider Statue language suggest.

Minn. Stat. § § 216B.01 and 216B.03 state that a utilities rates are to be reasonable and just. Minn. Stat. § 216B.03 specifically states:

> ***Every rate*** *made, demanded, or received by any public utility, or by any two or more public utilities jointly, shall be just and reasonable. Rates shall not be unreasonably preferential,*

[321] See In the Matter of the Application of Peoples Nat. Gas Co. for Auth. to Increase Rates for Gas Util. Serv. in Minn., Docket No. G011/GR-82-65, FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER at 23 (Jan. 29, 1983) ("The used and useful standard comes from M.S. § 216B.16, subd. 6, and clearly relates to the determination of the rate base and overall revenue requirements.").

[322] ALJ Report, p. 72.

[323] Staff believes that all costs recovered by a utility should reasonable and prudent.

> *unreasonably prejudicial, or discriminatory, but shall be sufficient, equitable, and consistent in application to a class of consumers.* [Emphasis added]

Staff believes that to have reasonable and just rates, the OAG is correct with its assumption of analyzing underlying costs to determine if the costs are reasonable to permit recovery. The NGEP rate would be subject to this review.

Minn. Stat. § 216B.16, Subd. 6 states that a utility can recover property that is used and useful in rendering service to the public in a general rate case. Staff concern is regarding MERC's next general rate case or any other subsequent general rate cases. Does Commission approval in this docket automatically give MERC the right to recover costs in a general rate case when the project's utilization percentage is less than 50 percent of its total capacity?

If MERC were to file general rate case with rates effective in 2020, should the Commission adhere to Minn. Stat. § 216B.16, Subd. 6, that the plant in service needs to be used and useful in order to gain cost recovery of its Rochester project costs. Staff believes that the Commission should address whether the Rochester costs are reasonable and prudent in this docket. The Commission's reasonableness and prudence decision should address this used and useful circumstance to prevent confusion when MERC files it next general case.

Further, staff believes that the OAG's alternative recommendation does have merit and the Commission may wish to consider this recommendation when rendering this docket's decision.

Regardless of what the Commission decides, staff recommends the Commission not adopt the OAG's exceptions to ALJ Finding 338a, and modifying Findings 335-338 because they mischaracterize the ALJ's recommendations. The Commission can either accept or reject the ALJ's findings and recommendations. However, the Commission is not in a position to say she recommended something else.

Decision Alternatives

OAG's Used and Useful Recommendation

(Please see staff briefing papers, pp. 76-80.)

If the Commission finds that the Rochester project is reasonable and prudent:

17. Allow Rochester cost recovery only for facilities that are used and useful and defer the remaining facilities' cost recovery until the facilities become used and useful. (OAG alternative), or

18. Do not adopt the OAG's alternative recommendation and allow total Rochester project cost recovery.

Cost Recovery

MERC proposed its Rochester project in two phases, Phase 1 – approved in MERC last general case ($5.6 million), Docket No. 15-736 and in Phase II. MERC estimated its Phase II distribution upgrades would cost $44 million (see Table 14) and NNG estimated its system upgrades would cost from $55 to $60 million (see Table 15). MERC proposed to recover the Phase II project costs through two different cost recovery mechanisms: base rates (in general rate cases) and the NGEP Rider Statute.[324] Minn. Stat. § 216B.1638, permits Phase II cost recovery of up to 33 percent of the project's total Phase II costs through the NGEP Rider Statute. MERC proposed to recover the Phase II costs from all MERC customers, including interruptible customers and transportation customers.[325]

MERC further proposed to recovery the NNG facilities upgrades costs of $55 to $60 million through its NNG PGA area, as demand entitlement costs recovered through MERC's NNG PGA as commodity costs over the proposed 25-year contract term.[326]

The OAG and Department have raised issues regarding MERC's cost recovery proposals. These issues include NGEP rider eligibility, a soft cap on Phase II costs, Phase II rate design; and NNG cost recovery.

Because of the magnitude of investment (approximately $100 million), MERC requested Commission pre-determination and approval of its Rochester project.[327]

[324] MERC Direct Testimony, Lee, p. 17, Hearing Ex. 5.
[325] MERC Initial Petition, p. 4, Hearing Ex. 1.
[326] MERC Direct Testimony, Lee, pp. 4, 17, Hearing Ex. 5.
[327] MERC Direct Testimony, Lee, pp. 8-9, Hearing Ex. 5; ("Because of the magnitude of this investment, MERC believes it is important to seek and obtain regulatory confirmation that the Project is justified and reasonable."); Evidentiary Hearing Transcript, Vol. 1 at 34 (Lee) ("Certainly we want regulatory certainty before we invest these capital dollars, that's correct.").

Table 14: Phase II Rochester Construction Costs – MERC's Responsibility[328] [329]

Construction Year	Costs	Activities
2014	$127,000	Initial Environmental Review and Consultant Contract
2015	$237,000	Regulatory Review (NEGP Rider and Route Permit)
2016	$636,000	Engineering & Design for TBS 1D 5 miles of pipe to New TBS, route surveys
2017	$6,019,383	Surveys, easement acquisition, construction of TBS 1D, engineering and design
2018	$11,252,457	Survey, engineering and design, construction of pipe from TBS 1D to New TBS
2019	$5,475,520	Survey, engineering and design, construction of new TBS
2020	$6,950,442	Survey, engineering and design, construction of first segment of pipe from New TBS to New DRS
2021	$6,423,642	Survey, engineering and design, construction of second segment of pipe from New TBS to New DRS
2022	$6,833,562	Survey, engineering and design, construction of third (last) segment of pipe from New TBS to New DRS
2023	$51,600	Project close-outs
Total	$44,006,607	

Table 15: NNG Estimated Construction Costs[330]

Activities	Costs
15,000 HP compressor	$27,000,000
Rochester branch line MAOP Regulator	$646,000
Modify LaCrosse take-off setting	$376,000
Uprate LaCrosse branch line	$1,765,000
Rochester 1D unregulated delivery station	$755,000
12 miles/12 inch pipe to New Rochester TBS	$21,573,000
New Rochester TBS	$755,000
Total	$52,870,000

[328] MERC Initial Petition, p. 18, Table 2.

[329] Phase II construction includes upgrading its Rochester town border station ("TBS") system, the point where MERC receives its natural gas supply from NNG. MERC's distributes its natural gas supply throughout its system at a reduced pressure for Rochester area delivery.[329] Further, MERC will construct a new 13-mile high-pressure pipeline that interconnects the rebuilt TBS with a new TBS ("New TBS") and new high-pressure DRS ("New DRS"), which joins the northern and southern portions of its existing TBS system. MERC stated that this upgrade would enable it to manage the increased natural gas supply delivered to its distribution system to meet customer demand. The Commission will determine the final pipeline route in Docket No. 15-858.

[330] MERC response to OAG informational request No. 148.

The Federal Energy Regulatory Commission (FERC) regulates NNG (an interstate pipeline). NNG will file its application for FERC approval, once MERC signs the NNG contract (Precedent Agreement (PA)) subscribing to the additional capacity created by NNG's project.

MERC proposed the following cost recovery mechanisms:

- For Phase II cost recovery, MERC seeks to recover of up to 33 percent of MERC's distribution system upgrade costs ($44 million) through an NGEP Rider from all MERC customers, including transportation customers. MERC would recover the remainder of the Phase II costs through future general rate cases from all customers (Staff assumes that super large interruptible receiving a flex transportation rate would not receive any of this increase).

- For NNG cost recovery, MERC seeks to recover the NNG transportation costs incurred under the PA ($55 million NPV) for additional capacity through the commodity portion of the NNG-PGA area from all of MERC's firm and interruptible system sales customers. Transportation customers would not pay for any of the additional NNG costs.

ALJ Report, pp. 68-69, Findings 339-343.

NGEP Rider Eligibility

In 2015, the Minnesota Legislature enacted Minn. Stat. § 216B.1638, the NGEP Rider Statute. This allowed public utilities to petition the Commission outside of a general rate case for a Natural Gas Extension Project Rider (NGEP Rider Statute). The NGEP Rider allows a utility to collect a portion of its natural gas extension project's revenue deficiency from all of the utility's customers, including transport customers. Thus, making natural gas extension projects more economical for the utility and its potential customers to serve these previously un-served or inadequately areas.

In this docket, MERC petitioned the Commission for approval of its NGEP Rider Statute - to recover costs to extend natural gas service to the City of Rochester and surrounding area. MERC's initial petition requested cost recovery through the NGEP Rider.[331] MERC will recover the remaining Phase II project costs covered through its next general rate case and subsequent general rate cases.

The NGEP statute provides that the Commission "shall approve a public utility's petition for a rider to recover the costs of a natural gas extension project if it determines that: (1) the project is designed to extend natural gas service to an unserved or inadequately served area; and (2) project costs are reasonable and prudently incurred."[332]

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[331] The actual percentage MERC requested to recover through the NGEP Rider is less than 33%, but has been marked as *Trade Secret*. See MERC's *Initial Petition*, p.1.

[332] Minn. Stat. § 216B.1638, subd. 3(b).

The NGEP statute defines the term “natural gas extension project” as “the construction of new infrastructure or upgrades to existing natural gas facilities necessary to serve currently unserved or inadequately served areas.”[333]

The phrase "unserved or inadequately served area" is defined in the statute to mean “an area in this state lacking adequate natural gas pipeline infrastructure to meet the demand of existing or potential end-use customers.”[334]

MERC Position

MERC stated that its Rochester project meets the NGEP Rider Statue criteria because the project involves the construction of new facilities or upgrade of existing facilities to serve inadequately served areas of Rochester and the surrounding area.

The Department Position

The Department agreed with MERC’s statements that its proposed Rochester project was to serve an inadequately served market. The Department concluded that MERC’s Rochester project was eligible for NGEP Rider Statute cost recovery.

The OAG Position

The OAG disagreed with MERC and the Department that the Rochester area is an “inadequately served area” within the meaning of the NGEP statute.

The OAG argued that the phase “unserved or inadequately served area” is ambiguous for two reasons.[335]

- The OAG argued that Minnesota law instructs that the Legislature intends technical terms, like “unserved” and “inadequately served” areas, to be read as terms of art. The OAG maintained that these are technical terms with special meanings, and pointed to a publication entitled Line Extensions for Natural Gas: Regulatory Considerations, published by the National Regulatory Research Institute (NRRI). The OAG stated that this publication specifies that “unserved areas” means “areas remote from the nearest utility’s gas system.”

- The OAG stated that the NGEP statute is ambiguous because accepting MERC’s proposed interpretation would lead to an absurd and unreasonable result. According to the OAG, if the Rochester Project were deemed to be eligible for recovery under the NGEP rider statute, then the effect of the law would be so broad as to include the vast majority of natural gas utilities’ projects, rendering them eligible for non-rate case recovery via the

[333] Minn. Stat. § 216B.1638, subd. 1(e).
[334] Minn. Stat. § 216B.1638, subd. 1(i).
[335] OAG Initial Brief, pp. 80-83 (October 11, 2016).

> NGEP rider. The OAG maintained that such an outcome would present an unprecedented change to the utility regulatory process in Minnesota.

The OAG further review the statute's legislative history to determine the legislature's intent as to the scope of the phrase "unserved or inadequately served area." The OAG maintained that the legislative history indicates that the legislature intended the NGEP rider to be used "to promote the expansion of natural gas service in Minnesota to communities where it otherwise is uneconomical to extend service." The OAG argued that the legislative history shows that the NGEP statute was intended to encourage extension of gas service to new customers, not for infrastructure to serve existing customers.[336]

Minnesota Representative Pat Garofalo

In his October 25, 2016 Letter Supporting MERC Expansion Projects (includes the Rochester project), Minnesota Representative Pat Garofalo stated his support for the Balaton project (Docket No. 16-654), Esko project (Docket No. 16-655), Rochester project (Docket No. 15-895). Representative Garofalo stated the following with respect to MERC's use of the NGEP Rider Statute in the cost recovery of these projects:

> *…..The NGEP rider bill was intended to give utilities an additional tool to use, in combination with the New Area Surcharge mechanism, to make system extensions and expansions affordable where they previously would not have been. In passing the NGEP legislation, the Legislature discussed the need for an additional tool to supplement the New Area Surcharge mechanism in order to make extensions to more new areas possible.* [Emphasis Added]

ALJ Analysis

(ALJ Report, pp. 69-73, Findings 344-369.)

The ALJ concluded that the Rochester project is eligible for NGEP Rider cost recovery. She believed that the NGEP Rider Statute language was clear and unambiguous. Further, she believed that the Rochester project's purpose fell within the definition stated above. The Rochester area is an "inadequately served area" because the area lacks "adequate natural gas pipeline infrastructure to meet the demand of existing or potential end-use customers."[337] [338]

The ALJ stated that the OAG does not support its claim that the term "inadequately served" is a technical term with a special meaning. The NRRI publication cited by the OAG does not include the phase "inadequately served" area. While the article does provide a definition of "underserved"

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[336] Ibid, pp. 82-86.

[337] MERC Direct Testimony, Lee, pp. 10-11, 18, Hearing Ex. 5; Department Direct Testimony, Heinen, pp. 38 and 50; Hearing Ex. 405.

[338] Because the legislature defined these terms and the language is clear as applied to this situation, there is no need to resort to canons of statutory construction or the legislative history.

area, the term "underserved" area is not synonymous with "inadequately served" as the definition provided by the legislature demonstrates.[339]

Moreover, the OAG suggestion that the NGEP statute only applies to infrastructure designed to extend service to new customers is contrary to the legislature's express intent. The legislature specifically provided that an "inadequately served area" includes "an area lacking adequate natural gas pipeline infrastructure to meet the demand of existing or potential end-use customers."[340] Thus, the legislature expressly included projects, like the Rochester Project, that provide infrastructure to meet the demand of existing customers, as well as future customers.[341]

The OAG Exceptions

The OAG takes exception to the ALJ's recommendations regarding NGEP rider eligibility of the Rochester Project based on the following reasons:

- The OAG provided extensive analysis in its brief regarding the ambiguity of the statutory terms "unserved or inadequately served areas" and their definitions. In particular, these terms are ambiguous because, as technical terms of art, they are required to be interpreted under their special meaning. The technical meaning of these terms refers to areas that are not currently served by natural gas or an area where many households and businesses consume other forms of energy, even if gas mains are nearby.[342] MERC, the Department, and the ALJ apply this definition too broadly, which could lead to unintended consequences.

- The OAG' provided a discussion of the unintended, absurd results that could occur under other parties' application of the statute, results that could cause serious harm to the public interest if utilities began to seek NGEP rider recovery for system integrity projects.[343]

- The OAG analyzed the NGEP rider statute and the related legislative history under the eight criteria provided by the Legislature to determine legislative intent.[344]

The OAG recommended the following modifications to the ALJ's Report.

Modification to ALJ Finding 359:

> 359. Based on its view that the NGEP statute is ambiguous, the OAG looked to the statute's legislative history, <u>policy goals, and the statute's structure</u> to determine the

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[339] OAG Initial Brief, pp. 81-82 (October 11, 2016) (citing Ken Costello, Nat'l Regulatory Research Inst., Line Extensions for Natural Gas: Regulatory Considerations 3 (Feb. 2013)).
[340] Minn. Stat. § 216B.1638, subd. 1(i).
[341] While there is no need to consult the legislative history for the reasons discussed above, to the extent the Commission disagrees, the ALJ notes that there is a letter in the record from Rep. Garofalo dated October 17, 2016, discussing his recollection of the legislature's intent. Rep. Garofalo has a different view of the legislative history than the OAG. *See* Letter from Rep. Pat Garofalo (Oct. 25, 2016) (eDocket No. 201610-125988-02).
[342] OAG Initial Brief, pp. 80-82 (October 11, 2016).
[343] Ibid, pp. 82-84.
[344] Ibid. pp. 85-99.

legislature's intent as to the applicability of the Rochester Project to the NGEP statute. The OAG maintained that the legislative history indicates that the legislature intended the NGEP rider to be used "to promote the expansion of natural gas service in Minnesota to communities where it otherwise is uneconomical to extend service." The OAG argued that the legislative history shows that the NGEP statute was intended to encourage extension of gas service to new customers, not for infrastructure to serve existing customers.

Addition of ALJ Finding 359a.

359a. The OAG argued that the NGEP rider statute fits into the state's broader policy goal to encourage the expansion of natural gas service to areas where it had been uneconomical to serve. The OAG provided figures that demonstrated the impact that two policies —the new area surcharge and the NGEP rider statute—had on increasing the pool of potential natural gas customers. Through this analysis the OAG argued that the NGEP rider statute fits in with decades of public policy designed to promote the extension of natural gas service and that the propane shortage and frigid winter of 2013–14 prompted action to incrementally increase the pool of potential natural gas customers.

Addition of ALJ finding 359b.

359b. The OAG argued that the legislative history, which included testimony from a representative of MERC and a statement from a sponsor of the bill, demonstrated that the discussion amongst lawmakers and experts at the time was confined to a very specific scenario in search of a very specific outcome. That scenario arose when propane dependent communities sought the extension of natural gas service via a new area surcharge, but the revenue associated with that mechanism was not enough to cover the revenue deficiency caused by the project cost. A MERC representative testified that the Company had fielded calls from 25 towns and townships, but did not mention the Rochester area.

Addition of ALJ Finding 359c.

359c. The OAG argued that the structure of the NGEP statute supports the narrower interpretation of the statute it favored. In particular, the statute's 33 percent cap on the amount that is able to be recovered from all ratepayers reflects the amount that a potential new area "falls short" of being economical, even with a new area surcharge. The OAG argued that, by allowing all ratepayers to pay up to 33 percent of an extension project's costs, the Legislature balanced the obligation of the new area to pay its share of project costs (via the new area surcharge) with its desire to promote the extension of natural gas service to a wider range of potential customers

The OAG further took exception to ALJ Findings regarding the proper interpretation of the statutory language not supported by the record. In addition, the Findings do not describe the absurd policy implications of approving MERC's proposed interpretation of the NGEP rider statute.

Modifications to ALJ Findings:

360. In analyzing whether the Rochester Project is eligible under the NGEP statute, the starting place is the plain language of the statute. When the words of a statute are clear in their application to a particular case, the plain meaning of the law must not be disregarded. "Technical words and phrases . . . are construed according to such special meaning or their definition."

361. Here, the statutory language ~~is clear and unambiguous~~ has a technical meaning and a broad interpretation of the phrase "unserved or inadequately served area" leads to an absurd result.

362. The legislature defined the applicable terms. The term "natural gas extension project" means "the construction of new infrastructure or upgrades to existing natural gas facilities necessary to serve currently unserved or inadequately served areas." Further, the legislature expressly provided that "unserved or inadequately served area" means "an area in this state lacking adequate natural gas pipeline infrastructure to meet the demand of existing or potential end-use customers." The OAG demonstrated that, using the technical terms common to the natural gas industry, "existing or potential end-use customers" does not include customers in areas that are predominately served by natural gas, such as the Rochester area, but rather such areas where the *extension* of natural gas service was previously uneconomical, even with a new area surcharge. Hence, the meaning of the term "unserved or underserved" in the Natural Gas Extension Project statute should be understood in the context of natural gas extension policy, not a broad, plain language interpretation of the statutory language.

363. Under this interpretation, t~~T~~he Rochester Project ~~clearly fits~~ does not align with~~in~~ these definitions.

364. ~~The Rochester area is an "inadequately served area" because the area lacks "adequate natural gas pipeline infrastructure to meet the demand of existing or potential end-use customers." Currently, "in situations of very high demand, MERC's existing low-pressure distribution system in Rochester cannot distribute all of the gas supply available in the southern portion of the system to the northern portion of the system where it is needed."~~ Although MERC's distribution system is constrained, the area has been served by MERC and its predecessors for over 80 years. The Rochester Project is thus a "system integrity and reliability project," which "can be considered similar to other infrastructure projects included in rate base and recovered through base rates." As a system integrity project and not an extension project, the Rochester Project is not eligible for recovery under the NGEP statute. ~~and cannot reliably serve existing and future customers in the Rochester area.~~

~~365. In addition, the Project meets the definition of a "natural gas extension project" because the Project will undertake construction of "upgrades to existing natural gas facilities necessary to serve" this "inadequately served area[]."~~

366. ~~Because~~ Although the legislature defined these terms ~~and the language is clear as applied to this situation~~, their technical meaning and the context under which they are applied—that is, to natural gas extension policy—requires an analysis under the ~~there is no need to resort to~~ canons of statutory construction in order to understand the intent of the Legislature ~~or the legislative history~~.

367. ~~In addition, even if it were appropriate to consider canons of statutory construction, t~~The publication referenced by the OAG does ~~not~~ support the OAG's claim that the term "inadequately served" is a technical term with a special meaning. In fact, while the NRRI publication cited by the OAG does not include the phase "inadequately served" area, ~~. While~~ the article does provide a definition of "underserved" area, ~~the term "underserved" area~~ which is ~~not~~ synonymous with "inadequately served" as the definition provided by the legislature demonstrates.

368. Moreover, the OAG's suggestion that the NGEP statute only applies to infrastructure designed to extend service to new customers ~~is contrary~~ comports with ~~to~~ the legislature's express intent and to statements made by legislators and a representative of the Company during a hearing on the bill. The legislature specifically provided that an "inadequately served area" includes "an area lacking adequate natural gas pipeline infrastructure to meet the demand of *existing* or potential end-use customers." Thus, the legislature expressly included projects~~, like the Rochester Project,~~ that provide infrastructure to meet the demand of existing customers, as well as future customers under scenarios where there may be a small number of existing customers, but where many other households and businesses consume other forms of energy.

368a. In addition, the OAG raised reasonable concerns regarding the policy implication of approving MERC's interpretation of the NGEP statute. MERC stated in the record that the Rochester Project is comparable to other, standard system integrity projects. The OAG argued that allowing the Rochester Project to be recovered through the NGEP Rider would set a precedent allowing all system integrity projects from all natural gas utilities to flow through the rider. The OAG argued that such an interpretation would be a dramatic regulatory change in Minnesota that the legislature did not intend.

369. For these reasons, the Administrative Law Judge concludes the Rochester Project is not a natural gas extension project ~~which is~~ and is thus not eligible for recovery of costs through a NGEP rider.

The Department's Reply to the OAG Exceptions

The Department did not reply to the OAG's Exceptions.

MERC's Reply to the OAG Exceptions

MERC believed that the OAG arguments are without merit. The ALJ Report reflects a full consideration and rejection of the OAG's arguments regarding interpretation of the NGEP Statute and application to the Rochester Project. Further, the OAG definition of "unserved or inadequately served area" contradicts the plain language of the NGEP Rider Statute.[345]

The OAG further made reference that the Minn. Stat. § 216.1638 language was unclear and ambiguous and that "unserved or inadequately served area" should defined as stated in NRRI language. MERC believes that the statute language is clear and further consideration of the legislature intent would be unreasonable and inappropriate.

Under Minn. Stat. § 645.16, "[w]hen the words of a law in their application to an existing situation are clear and free from all ambiguity, the letter of the law shall not be disregarded under the pretext of pursuing the spirit." "The statutory interpretation objective was to ascertain and effectuate the Legislature's intent. If the Legislature's intent was clear from the statute's plain and unambiguous language, then [a court] interpret[s] the statute according to its plain meaning without resorting to the canons of statutory construction."[346] "Because the legislature defined these terms and the language is clear as applied to this situation, there is no need to resort to canons of statutory construction or the legislative history."[347]

MERC stated that considering the plain statutory meaning of the defined term "unserved or inadequately served area," as a factual matter, the ALJ correctly concluded that MERC demonstrated that the Rochester area was an area in this state lacking adequate natural gas pipeline infrastructure to meet the demand of existing or potential end use customers.

PUC Staff Analysis

From its review of this docket's record and Minn. Stat. § 216.1638 language (see above), staff believes that the statute language is clear and unambiguous. Further, Minnesota Representative Garofalo (co-author of the statute) letter stated:

> *…..the statute covers both construction of new infrastructure and upgrades to existing infrastructure in order to ensure adequate natural gas service to meet the demand of both existing and future end-use customers.*

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345 ALJ Report, pp. 72-73.

346 State v. Rick, 835 N.W.2d 478, 482 (Minn. 2013) (citation omitted) (emphasis added).

347 ALJ Report at 72 (Finding 366) (citing Minn. Stat. § 645.16 ("When the words of a law in their application to an existing situation are clear and free from all ambiguity, the letter of the law shall not be disregarded under the pretext of pursuing the spirit.")).

Further:

> *The statute was intentionally broadly drafted to cover a variety of circumstances in order serve broad legislative goals of enhancing natural gas service to both unserved and inadequately served areas.*

Representative Garofalo further provided definitions of "Natural Gas Extension Project" and "unserved and inadequately served areas"; these are the same as the definitions listed above. Staff is of the opinion that the OAG arguments are without merit. Further, the Rochester area is an "inadequately served area" because the area lacks "adequate natural gas pipeline infrastructure to meet the demand of existing or potential end-use customers. This statement is further supported by the fact MERC currently has a negative reserve margin (see the above sales forecast discussion). If MERC had experienced an extreme winter event during 2015/2016 winter heating season, it is possible that MERC could have curtailed firm sales customers.

Staff agrees with the ALJ conclusion that the Rochester project is eligible for NGEP Rider Statute cost recovery.

Regardless of what the Commission decides, staff recommends the Commission not adopt the OAG's exceptions to ALJ findings adding Findings 359a-c and 368a, and modifying Findings 359-369 because they mischaracterize the ALJ's recommendations. The Commission can either accept or reject the ALJ's findings and recommendations. However, when the ALJ's Findings recommend her conclusions, the Commission is not in a position to say she recommended something else.

Decision Alternatives

NGEP Rider Eligibility

(Please see staff briefing papers, pp. 80-91.)

19. Adopt the ALJ recommendation that the Rochester project is eligible for NGEP Rider cost recovery. (MERC, Department, ALJ, and Staff) <u>or</u>

20. Adopt the OAG recommendation that the Rochester project is not eligible for NGEP Rider cost recovery and adopt the OAG's alternative recommendations. (OAG) <u>or</u>

21. Take no action.

Cap on Phase II Cost Recovery

The Department Position

The Department stated that the Commission should require a cap on construction cost to ensure that MERC has an incentive to control the project's costs. The Department recommended that the Commission establish a soft cap of $44,006,607 for project's Phase II costs, the amount MERC's initial petition stated as Phase II costs.[348] The Department believed that MERC would need to explain and support the reasonableness of any amount above the cap.[349]

The Department noted that the implementation of a soft cap would be consistent with prior Commission decisions.[350] The Department noted that MERC's $44,006,607 Phase II estimate included a contingency of $7,343,321 (MERC believes this estimate to be reasonable). The Department believed that MERC would have the burden of proof in future rider filings and general rate cases explaining that Phase II cost are just and reasonable.[351]

MERC's Position

MERC responded by disagreeing with the Department review of its Phase II Rochester costs. MERC believes that the Commission will determine if the Phase II costs are reasonable and prudent in this proceeding. If the Commission agrees that the Project is reasonable and prudent, then the Commission's order "should include a finding that implementing the Project for approximately $44 million is reasonable and prudent.[352]

MERC opposed a hard cap, but did not oppose a $44 million soft cap, the Department's recommendation. MERC believed that the $44 million Phase II costs should set a baseline to compare the actual project costs.[353]

In its Initial Brief, MERC accepted the Department's recommendation that the $44 million estimate for Phase II costs would represent a soft cap and that MERC has the burden of proving that costs in excess of the estimated $44 million are reasonable.[354]

The OAG Position

In its Initial Brief, the OAG agreed with the Department's recommendation that the Commission should establish a soft cap if the Rochester Project is approved.[355]

ALJ Analysis

(ALJ Report, pp. 73-75, Findings 370-384.)

The ALJ concluded it is reasonable for the Commission to establish a $44 million soft cap on MERC's Phase II costs as a MERC incentive to control costs. MERC would have the burden of proof if actual costs exceed MERC's $44 million estimate.

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[348] MERC Direct Testimony, Lee, p. 16, Hearing Ex. 5.
[349] Department Direct Testimony, Heinen, pp. 40-43, Hearing Ex. 405.
[350] Department Surrebuttal Testimony, Heinen, p. 8, Hearing Ex. 407 (citing *In re Request of Minn. Power for a Certificate of Need for the Great Northern Transmission Line*, MPUC Docket No. E015/CN-12-1163, ORDER GRANTING CERTIFICATE OF NEED WITH CONDITIONS (June 30, 2015)).
[351] Department Direct Testimony, Heinen, pp. 40-43, Hearing Ex. 405.
[352] MERC Rebuttal Testimony, Lee, pp. 27-28, Hearing Ex. 6.
[353] MERC Rebuttal Testimony, Lee, pp. 27-28, Hearing Ex. 6; Transcript Vol. 1, p. 44 (Lee).
[354] MERC Initial Brief, p. 42 (Oct. 11, 2016).
[355] OAG Initial Brief, p. 110 (Oct. 11, 2016).

ALJ Finding 384:

> 384. The Administrative Law Judge concludes that it is reasonable to apply a soft cap of $44,006,607 to Phase II of the Rochester Project. A soft cap, based on MERC's estimate of its Phase II costs, will provide an incentive for MERC to control its costs. A soft cap will also help ensure that ratepayers do not pay any more than is reasonably necessary for Phase II, either through the NGEP Rider or in base rates, because MERC will have the burden to prove that any excess amounts are prudent and reasonable.

The OAG did not file exceptions to the ALJ findings on this issue.

PUC Staff Analysis

Staff is in agreement with the ALJ Report Finding 384, placing a soft cap of $44 million on MERC's Phase II costs. Staff believes that a soft cap provides an incentive to MERC to control costs during its Phase II construction. Further, it puts MERC on notice that it will have to explain any cost overruns that incurred during the Phase II construction. However, staff does offer the following discussion to assist the Commission in its decision making process.

Instead of implementing a $44 million soft cap on MERC's Phase II costs, the Commission does have the alternative of applying a hard cap on MERC Phase II costs. The Commission would select the hard cap option that would set the construction costs at a specified dollar amount; any cost overruns would not be recoverable from MERC ratepayers.

Alternatively, the Commission could set a soft cap of $44 million on Phase II costs and establish a sharing mechanism on any cost overruns. The Commission could establish the sharing mechanism in many different ways, for example, for any cost overruns up to an established dollar level, let us say $50 million, MERC would recover the overruns from MERC's existing customers. MERC's shareholders would absorb any cost overruns over the $50 million cap. In this example, the $50 million represents a hard cap. Staff believes that this type of sharing mechanism would establish an additional incentive for MERC to control costs.

Decision Alternatives

Cap on Phase II Cost Recovery

(Please see staff briefing papers, pp. 91-93.)

22. Adopt the ALJ's recommendation and place a soft cap of $44 million on the Rochester Phase II project cost recovery. Place the burden of proof for cost recovery on MERC if actual costs exceed MERC's $44 million estimate. (MERC, Department, OAG, ALJ), <u>or</u>

23. In the alternative, the Commission could place a soft cap of $44 million on the Rochester Phase II cost recovery and establish a sharing mechanism for cost overruns. MERC's customers would absorb cost overruns (assuming MERC is reasonably able to explain the overruns) up to a certain dollar limit. MERC's shareholders would absorb cost overruns exceeding the dollar limit. (This alternative places an additional incentive on MERC to control costs and assumes no cost underruns.)

24. Do not adopt the ALJ's recommendation and do not place a soft cap on MERC's cost recovery.

NGEP Rider Rate Design

Minn. Stat. § 216B.1638 Subd. 2(a) states

> *A public utility may petition the Commission outside of a general rate case for a rider that shall include all of the utility's customers, including transport customers, to recover the revenue deficiency from a natural gas extension project*. [Emphasis Added]

Minn. Stat. § 216B.1638 Subd. 3(c) states

> *The Commission must not approve a rider under this section that allows a utility to recover more than 33 percent of the costs of a natural gas extension project.* [Emphasis Added]

Minn. Stat. § 216B.1638 Subd. 3(d) states

> *The revenue deficiency from a natural gas extension project recoverable through a rider under this section must include the currently authorized rate of return, incremental income taxes, incremental property taxes, incremental depreciation expenses, and any incremental operation and maintenance costs.* [Emphasis Added]

MERC Position

MERC proposed to recover Phase II Rochester project costs through the NGEP Rider Statute <u>and</u> through future general rate cases (base rates). MERC seeks to recover up to one-third of its Phase II Rochester project costs based on a specific revenue deficiency calculation. The NGEP Rider rate would apply to all of MERC's PGA areas (firm, interruptible, and transportation customers). MERC would calculate the NGEP Rider rate, which includes an annual true-up calculation to correct any previous over- or under-recovery of the Project's annual rider-eligible revenue deficiency. [356]

MERC provided the residential customer bill impact for two different billing assumptions.

[356] MERC Direct Testimony, Lee, p. 17, Hearing Ex. 5; MERC proposed to file, by October 1 of each year, the projected rider-eligible revenue deficiency for the upcoming year. MERC's filing would include a flat per-therm rider rate to be effective January 1st of the following year.

- MERC estimated the residential customer increase for 2017 and 2023 assuming that MERC charges the NGEP Rider rate to all customers, in all MERC PGA areas.

Table 16: Estimated Annual and Monthly Bill Increase for 2017 and 2023 for all MERC Residential Customers

Year	Annual Increase	Monthly Increase
2017	$0.08	$0.007
2023	$1.56	$0.130

- MERC estimated the residential customer bill increases for 2017 and 2023 assuming that MERC NGEP rider charges only the Rochester customers, Rochester is located in MERC's NNG-PGA area.

Table 17: Estimated Annual and Monthly Residential Bill Increase for 2017 and 2023 for Rochester Customers Only

Year	Annual Increase	Monthly Increase
2017	$0.55	$0.045
2023	$10.18	$0.850

MERC stated that it would allocate Phase II costs across all MERC customers using a flat per therm rate. MERC believed that its approach was reasonable and consistent with the NGEP Rider Statute, Minn. Stat. § 216B.1638.[357] The NGEP statute specifically required that any NGEP rider recovery "shall include all of the utility's customers, including transport customers."[358]

The Department Position

The Department did not object to NGEP recovery of up to 33 percent of Rochester Project Phase II costs though a rider on a flat per therm basis. The Department disagreed with MERC's proposal to recover the Phase II costs equally from all of its customers. The Department recommended that MERC allocate the NGEP rider revenue deficiency between all Rochester area customers and all other MERC customers. The Department believed that MERC should allocate at least 50 percent of the NGEP revenue deficiency to all Rochester area customers, with the remaining amounts recovered from all ratepayers outside of Rochester.[359]

MERC would calculate a separate NGEP Rider flat per therm rate for all of its Rochester customers and calculate a separate NGEP Rider flat per therm charge for the non-Rochester customers. Department Witness Peirce noted that MERC would allocate the revenue deficiency based on her 50/50 sharing mechanism after MERC's assignment of costs to RPU, if RPU constructs one or multiple future natural gas electricity generators as mentioned in Department Witness Heinen testimony. The Department supported its recommendation by stating that MERC's Rochester customers would most directly benefit by improving reliability and allowing for

[357] MERC Direct Testimony, Lee, p. 26, Hearing Ex. 5.
[358] Minn. Stat. § 216B.1638, subd. 2; MERC Direct Testimony, Lee, p. 25, Hearing Ex. 5.
[359] Department Direct Testimony, Pierce, p. 3, Hearing Ex. 400.

additional growth anticipated with the Mayo Clinic's DMC expansion plan. The other MERC customers would receive benefits, but not to the extent of the Rochester customers. [360]

The Department believed that the 50/50 allocation would balance cost recovery without over burdening either set of customers. The Department further stated its 50/50 allocation was unsupported by cost causation principles, but based on the Department's judgement.[361]

See the following tables for the Department's average monthly bill comparisons to MERC's calculations for Year 2017 and Year 2020 (for all customer classes).[362]

Table 18: Summary of 2017 Average Monthly Bill Impacts

Customer Class	MERC Proposal	Department's Proposal-Rochester	Department's Proposal-Non Rochester	Difference Dept. Proposal to MERC Rochester	Difference Dept. Proposal to MERC non-Rochester
(1)	(2)	(3)	(4)	(5)	(6)
				(3) – (2)	(4) – (2)
Residential	$0.007	$0.023	$0.004	$0.016	($0.003)
Small C&I	$0.008	$0.027	$0.004	$0.019	($0.004)
Large C&I	$0.060	$0.230	$0.040	$0.170	($0.020)
Sm Vol Interrupt Sales	$0.400	$1.420	$0.230	$1.020	($0.170)
Sm Vol Joint Sales	$0.410	$1.440	$0.240	$1.030	($0.170)
Sm Vol Interrupt Trans.	$0.980	$3.450	$0.570	$2.470	($0.410)
Sm Vol Joint Transport	$0.710	$2.500	$0.410	$1.790	($0.300)
Transport for Resale	$1.980	$7.020	$1.150	$5.040	($0.830)
Lg. Vol Interrupt Sales	$1.700	$6.020	$0.990	$4.320	($0.710)
Lg. Vol Interrupt Transp.	$12.350	$43.730	$7.190	$31.380	($5.160)
Lg. Vol Joint Transp.	$9.990	$35.380	$5.810	$25.390	($4.180)
Super Lg. Vol Interrupt Transp.	$116.790	$413.740	$67.990	$296.95	($48.800)
Super Lg. Vol Joint Transp.	$43.400	$153.740	$25.260	$110.34	($18.140)

360 Ibid, p.4.
361 Transcript Vol. 1, p. 206 (Pierce).
362 Department Surrebuttal Testimony, pp. 7-8; Hearing Ex. 401.

Table 19: Summary of 2020 Average Monthly Bill Impacts

Customer Class	MERC Proposal	Department's Proposal-Rochester	Department's Proposal-Non Rochester	Difference Dept. Proposal to MERC Rochester	Difference Dept. Proposal to MERC non-Rochester
(1)	(2)	(3)	(4)	(5)	(6)
				(3) – (2)	(4) – (2)
Residential	$0.090	$0.310	$0.050	$0.220	($0.040)
Small C&I	$0.107	$0.360	$0.060	$0.250	($0.047)
Large C&I	$0.910	$3.100	$0.530	$2.190	($0.380)
Sm Vol Interrupt Sales	$5.63	$19.18	$3.30	$13.55	($2.33)
Sm Vol Joint Sales	$5.74	$19.44	$3.35	$13.73	($2.39)
Sm Vol Interrupt Trans.	$13.74	$46.77	$8.05	$33.03	($5.69)
Sm Vol Joint Transport	$9.95	$33.87	$5.83	$23.92	($4.12)
Transport for Resale	$27.95	$95.14	$16.38	$67.19	($11.57)
Lg. Vol Interrupt Sales	$23.96	$81.56	$14.04	$57.60	($9.92)
Lg. Vol Interrupt Transp.	$173.98	$592.36	$101.97	$418.38	($72.01)
Lg. Vol Joint Transp.	$140.74	$479.18	$82.48	$338.44	($58.26)
Super Lg. Vol Interrupt Transp.	$1,645.96	$5,603.94	$964.65	$3,957.98	($681.31)
Super Lg. Vol Joint Transp.	$611.61	$2,082.33	$358.45	$1,470.72	($253.16)

MERC's Response

In response, MERC disagreed with the Department's recommended 50/50 allocation of Phase II cost recovery for its NGEP Rider revenue deficiency. MERC recommended its initial proposal – that all of MERC's customers the same NGEP Rider flat rate for the Rochester project.

MERC's reasoning:[363]

- Believed that its initial proposal was consistent with Commission precedent – that spreads system upgrade costs across the entire rate base regardless of the location of the specific project or the customers directly served by the project;

[363] MERC Rebuttal Testimony, Lee, pp. 10-17, Hearing Ex. 6; MERC Opening Statement, Lee, Hearing Ex. 24.

- Spreading costs equally across all customers is consistent with the underlying the NGEP statute policy;
- All MERC customers benefit from the Project;
- The Department's proposed 50/50 allocation would result in different rate zones in its NNG PGA area - inconsistent with MERC's consolidation efforts in its operating companies and PGA areas;
- Allocating 50 percent of project costs to Rochester area customers imposes a potentially excessive cost burden on those customers;
- Having a higher rider rate for Rochester customers than other customers would require MERC to maintain two separate tariffs and two separate sets of accounting books; and
- The terms and conditions of its tariff will be same for all customers.

Department's Surrebuttal

The Department disagreed with MERC's statements and continued supporting its 50/50 position. Further, reiterated that Rochester area customers would benefit most directly from the Rochester Project – making it reasonable that those customers pay a greater portion of the costs.[364]

The Department noted that the NGEP statute requires recovery of NGEP costs from all customers of the utility, but the statute does not require that the rates be the same for all customers. Rather, the statute contemplates that a utility could propose to apportion the revenue deficiency among its customer classes on a basis of its choosing. The Department believed that its proposal would create temporary rate zones in the NNG PGA area (similar to the Albert Lea area PGA area), but that zone consolidation could occur in MERC's next rate case.[365]

The OAG Position

The OAG stated that it did not oppose MERC's allocation proposal for Phase II costs - across all customers, but was open to discussion of alternative solutions. The OAG recommended that if the Commission approves the Project, the Commission should approve MERC's Phase II cost recovery proposal.[366] The OAG noted that MERC's proposal is consistent with the general policy in Minnesota to spread system upgrade costs among all customers.[367]

ALJ Analysis

(ALJ Report, pp. 75-80, Findings 385-406.)

The ALJ concluded that MERC's proposed rate design was the most reasonable approach for Phase II cost recovery. In supporting her conclusion, the ALJ stated that:[368]

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[364] Department Surrebuttal Testimony, Pierce, pp. 2-3, Hearing Ex. 401 (citing Minn. Stat. § 216B.1638, subd. 2(a)).
[365] Department Surrebuttal Testimony, Pierce, pp. 3-4, Hearing Ex. 401
[366] OAG Amended and Correct Direct Testimony, Urban, p. 60, Hearing Ex. 300.
[367] OAG Initial Brief, pp. 100-101, 112 (October 11, 2016).
[368] ALJ Report, p. 80.

- The Department's 50/50 approach for Phase II cost recovery was not consistent with past Commission practice.
- The Department's 50/50 approach for Phase II cost recovery could lead to multiple location-specific rates across MERC's territory if additional NGEP projects occur in the future.
- A wide variation in rates for the same class customers based on location alone could cause customer confusion, increase billing costs, and have other unintended consequences.

ALJ Findings 402:

> 402. The Administrative Law Judge concludes that MERC's proposed rate design for the NGEP rider is the most reasonable approach.

OAG Exceptions

The OAG did not file exceptions to this issue.

PUC Staff Analysis

Staff does not necessarily disagree with the ALJ recommendation, but offers the following comment for Commission consideration. Minn. Stat. § 216B.1638 states:

> *A public utility may petition the Commission outside of a general rate case for a rider that shall include all of the utility's customers, including transport customers, to recover the revenue deficiency from a natural gas extension project*.[369] [Emphasis Added]
>
> *The Commission must not approve a rider under this section that allows a utility to recover more than 33 percent of the costs of a natural gas extension project.*[370] [Emphasis Added]

Staff is of the opinion that multiple cost recovery alternatives are available for Commission consideration. Staff believes that both MERC's and Department's proposals meet the above statute criteria and that the Commission could approve either. The ALJ stated her reasons for dismissing the Department's proposal. Further, supporting the Department's position is Tables 18 and 19 that illustrates the potential saving to non-Rochester customers if the Commission decides to weight Phase II cost recovery towards the Rochester customers, who will receive the majority of this project's benefits. The Department recommended a 50/50 sharing mechanism.

Staff believes that the Department's proposal has merit, considering staff's sales forecast discussion regarding MERC's secondary transportation rights and its proposed capacity release proposals. Staff believes that these proposals have little or no value to the other customers outside of Rochester. The Rochester area customers will receive the majority of benefits from Phase II of the Rochester project. The Commission may wish consider the Department proposal or in the alternative a different sharing mechanism to allocate a higher percentage of Phase II costs to the Rochester area customers. Staff points out that Rochester project provides MERC

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[369] Minn. Stat. § 216.1638 Subd. 2(a).
[370] Minn. Stat. § 216.1638 Subd. 3(c).

with the ability to shift 20 percent of its Rochester capacity to other secondary points (a benefit to those areas), and believes that the Commission could consider a sharing mechanism of 80/20 if it chooses.

The Commission may also want to consider approving a higher NGEP factor or even a higher base rate to the Rochester customers because of this proceeding. Staff believes that the Commission may wish to consider matching the Phase II cost recovery to the customers receiving the majority of the benefits (cost causation).

Another option available for Commission consideration is MERC's New Area Surcharge (NAS) tariff. MERC currently has multiple NAS factors operational in its PGA areas. This option could potentially avoid ALJ's concern of customer confusion caused by multiple MERC NGEP rates. The NAS factor would recover Phase II costs from the Rochester customers who sign up for the service or possibly the entire Rochester customer base since these customers will enjoy the majority of the economic benefits from the Rochester project.

The Commission's February 8, 2016 Notice of and Order for Hearing in this docket deferred any decision on the accuracy of MERC's revenue-deficiency calculation until the Company seeks approval of an NGEP rider to recover that revenue deficiency. MERC has not made an additional filing seeking recovery of a NGEP Rider factor updated for actual cost or updated cost projections. Staff believes that the Commission has the option of making its cost recovery decision in this docket or it could defer its decision until MERC files its request for NGEP cost recovery with updated cost information.

Decision Alternatives

NGEP Rider Rate Design

(Please see staff briefing papers, pp. 94-100.)

25. Adopt the ALJ's recommendation and approve MERC's proposed Phase II cost recovery through its NGEP Rider petition from all MERC customers, which includes the NNG, Consolidated, and Albert Lea PGA customers. (MERC, SLGI, ALJ) or

26. Adopt the Department's recommendation allocating Phase II cost recovery on 50/50 basis recovering 50 percent of the Phase II costs from Rochester area customers and the remaining 50 percent of Phase II costs from all other non-Rochester area customers. (DOC), or

27. Adopt another sharing mechanism allocating Phase II cost recovery to Rochester area customers and to non-Rochester customers (80/20 or some other amount). or

28. Take no action in this docket, and defer Commission decision until such time MERC makes its NGEP Rider petition with updated cost information.

Recovery of NNG Capacity Costs

MERC estimated NNG system upgrades would cost from $55 to $60 million (see Table 20).

Table 20: NNG Estimated Construction Costs[371]

Activities	Costs
15,000 HP compressor	$27,000,000
Rochester branch line MAOP Regulator	$646,000
Modify LaCrosse take-off setting	$376,000
Uprate LaCrosse branch line	$1,765,000
Rochester 1D unregulated delivery station	$755,000
12 miles/12 inch pipe to New Rochester TBS	$21,573,000
New Rochester TBS	$755,000
Total	$52,870,000

The Federal Energy Regulatory Commission (FERC) regulates NNG (an interstate pipeline). NNG will file its application for FERC approval, once MERC signs Precedent Agreement (PA) subscribing to the additional Rochester capacity created by NNG's project.

MERC proposed the following cost recovery mechanism:

- MERC seeks to recover the NNG transportation costs incurred under the PA ($55 million NPV) for additional Rochester capacity through the commodity portion of the NNG-PGA area rate collected from all MERC firm and interruptible system sales customers. Transportation customers would not pay for any of the additional NNG costs.

MERC's Proposal

MERC has entered into a Precedent Agreement (PA) with NNG to increase interstate pipeline capacity to address capacity issues in the Rochester area.[372] Under the PA, MERC pays NNG's costs to provide the additional pipeline capacity through its monthly capacity payments over a 25-year period. There is a one-time option to extend the capacity contract for an additional five years at a significantly discounted rate per Dekatherm.[373]

MERC has proposed to recover approximately $60 million in additional capacity costs from all of its customers subscribed to the NNG PGA,[374] not just the Rochester area. Under MERC's proposal, MERC would recover the capacity costs through the commodity portion of the PGA,

[371] MERC response to OAG informational request No. 148.
[372] Ex. 5 at 12-13 (Lee Direct).
[373] Ibid, p. 17.
[374] Ex. 5 at 16 (Lee Direct); Ex. 6 at 19-20 (Lee Rebuttal).

which is paid by both firm sales customers (Residential, Small C&I, and Large C&I) and interruptible sales customers, but not transportation customers.[375]

MERC did not propose any recovery from its transportation customers because these customers do not purchase gas or interstate pipeline transportation services from MERC. MERC's transportation customers arrange for their own interstate gas transportation services[376] and purchase only local distribution transportation services from MERC.[377] MERC noted that these customers would pay for their share of improvements on MERC's distribution system, from which they directly benefit.[378]

MERC argued that it is reasonable for all non-transportation customers in the NNG PGA area to pay for the additional interstate capacity because the terms of the PA provide benefits to all MERG customers in the NNG PGA area. MERC's PA allows MERC to use the additional capacity not only in the Rochester area but also in 21 neighboring communities.[379] Further, MERC can move 20 percent of Rochester capacity to secondary points, providing all of MERC NNG PGA area customers with benefits from its Rochester proposal. All customers would benefit from access to future capacity expansions at competitive rates, increased operability and reliability of service and the ability of future load growth in a timely manner.[380]

MERC argued that collecting the NNG capacity costs from only Rochester customers would place an undue burden on Rochester customers and result in Rochester customers' subsidizing other customers in the NNG PGA area. These customers' also benefit from the increased capacity.[381] MERC stated that its proposed treatment is appropriate and consistent with prior practice where an interstate capacity contract has system-wide benefits.[382]

MERC estimated the annual PGA cost recovery impact on MERC's customers based on two scenarios: PGA cost recovered from all NNG PGA area firm and interruptible sales customers; and PGA cost recovered from just Rochester area customers, see Table 21:

Table 21: Annual PGA Impact on MERC's Customers

Residential	2017	2020	Would Stabilize Between
Impact on all Customers in NNG PGA area[383]	$2.48	$28.42	$27.17 and $28.25
Impact on Just Rochester Customers[384]	$10.99	$124.96	$114.70 and $120.92

[375] Ex. 6 at 24 (Lee Rebuttal); Ex. 24 at 2 (Lee Opening Statement).
[376] Ex. 5 at 30 (Lee Direct); Ex. 6 at 18-20 (Lee Rebuttal).
[377] See Ex. 5 at 30 (Lee Direct).
[378] Ibid.
[379] Ibid, p. 28.
[380] Ibid, p. 29.
[381] Ex. 5 at 34 (Lee Direct).
[382] Ibid. pp. 27, 29.
[383] Ex. 304, JAU-30 at 3 (Urban Direct Schedules) (MERC response to OAG IR No. 171).
[384] Ibid.

The Department Position

The Department supported recovery of the increased NNG capacity costs through MERC's NNG PGA from both firm and interruptible customers across the entire NNG PGA.[385] The Department agreed that both firm and interruptible sales customers should pay for the costs of the additional capacity on the NNG system because expansion of NNG's capacity affects all of MERC ratepayers. The Department noted that while firm customers benefit more from the increased capacity, interruptible customers also benefit because expansion of the NNG system makes it less likely MERC will curtail these interruptible customers.[386]

With respect to transportation customers, the Department recognized that these customers do not purchase gas or interstate transport service from MERC and therefore the Department did not believe that transportation customers would incur MERC's capacity costs passed on through the NNG PGA.[387] The Department noted that transportation customers would pay for the Rochester Project to the extent that they purchase released capacity on the NNG system when MERC releases excess capacity on the capacity release market.[388]

The Department noted that MERC currently provides information on capacity release in its Annual Automatic Adjustment (AAA) filings generally, reported on a system-wide basis.[389] To ensure that MERC's firm and interruptible customers receive appropriate benefit from capacity release to transportation customers, the Department recommended that MERC provide specific data for capacity releases associated with the Rochester area in future AAA filings, and in the annual rider recovery filing.[390] MERC stated it agreed to this recommendation at the evidentiary hearing.[391]

The OAG Position

The OAG agreed with MERC and the Department that MERC recover NNG upgrades costs across the entire NNG PGA area rather than only the Rochester customers.[392] The OAG recognized that the PA provided capacity benefits not just for Rochester but also for MERC's customers throughout southeastern Minnesota. In addition, the OAG agreed that allocating costs solely to Rochester customers would be significant and burdensome.[393]

The OAG agreed with the Department that MERC recover the increased NNG capacity costs from both firm and interruptible sales customers.[394] However, the OAG disagreed that cost

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[385] Ex. 401 at 9 (Peirce Surrebuttal); Ex. 407 at 10 (Heinen Surrebuttal).
[386] Ex. 405 at 50 (Heinen Direct).
[387] Ex. 407 at 10 (Heinen Surrebuttal). As noted above, the Department did recommend that all customers, including transport customers, be responsible for Phase II costs recovered through the NGEP rider.
[388] Ibid, p. 13.
[389] Ibid, pp. 13-14.
[390] Ibid.
[391] Tr. Vol. 1 at 20 (Lee).
[392] Ex. 300 at 61 (Urban Amended and Corrected Direct).
[393] Ibid, pp. 61-62.
[394] Ex. 300 at 63 (Urban Amended and Corrected Direct); Ex. 308 at 19 (Urban Amended and Corrected Rebuttal).

recovery should be limited to firm and interruptible customers because transportation customers will also benefit indirectly from the increased capacity.[395]

The OAG argued that transportation customers would receive benefits from the additional NNG capacity, if MERC builds the Rochester Project, even though they do not purchase gas or capacity on the NNG system from MERC.[396] The new NNG capacity will represent capacity that is available to transportation customers on the capacity release market on days that MERC is not utilizing all of the available capacity. The increased capacity may also make it easier for transportation customers to negotiate more favorable contract terms for capacity.[397] According to the OAG, the amount of excess supply on the system may reduce prices in the capacity market.[398]

The OAG raised concerns about transportation customers sharing in the benefits of the new capacity but not sharing in the costs, except to the extent they purchase excess capacity on the secondary capacity market.[399] The OAG recommended that transportation customers be allocated a portion of the NNG PA costs in addition to firm and interruptible customers, but did not provide a specific recommendation. Instead, the OAG recommended that if the Commission approves the Project; require MERC to work with the parties to ensure the burden does not fall unfairly on MERC's firm customers.[400]

SLGI's Position

SLGI agreed with MERC's proposal to recover the NNG costs from firm and interruptible customers through MERC's PGA.[401] SGLI maintained that it would be unreasonable for MERC to charge its transportation customers for the NNG capacity upgrades because transportation customers do not purchase either natural gas commodity or interstate pipeline capacity from MERC. SLGI also asserted that if MERC directly charges transportation customers for the NNG capacity upgrade, those customers would be charged twice for capacity.[402]

SLGI emphasized that transportation customers will not have access to the additional capacity purchased by MERC from NNG except through possible future capacity releases.[403] SLGI noted that very large transportation customers would bear a significant portion of the Phase II costs if MERC's proposal to impose a NGEP Rider per therm charge were approved because those customers consume a significant portion of MERC's total distribution throughput.[404] As a result, SLGI maintained that very large transportation customers would pay their fair share of costs from the Project.[405]

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[395] Ex. 300 at 63 (Urban Amended and Corrected Direct); Ex. 308 at 19 (Urban Amended and Corrected Rebuttal).
[396] OAG Initial Br. at 106-07 (Oct. 11, 2016) (eDocket No. 201610-125583-01).
[397] Ibid, p. 106; Ex. 405 at 47 (Heinen Direct); Ex. 5 at 28 (Lee Direct).
[398] OAG Initial Br. at 107-08 (Oct. 11, 2016) (eDocket No. 201610-125583-01).
[399] Ibid, p. 108.
[400] Ex. 300 at 63 (Urban Direct); Ex. 307 at 19 (Urban Rebuttal); OAG Initial Br. at 109 (Oct. 11, 2016) (eDocket No. 201610-125583-01).
[401] SLGI Initial Br. at 3 (Oct. 11, 2016) (eDocket No. 201610-125592-02).
[402] Ibid, pp. 3-4.
[403] Ibid, p. 3.
[404] Ibid, p. 4.
[405] Ibid, p. 4.

ALJ Analysis

(ALJ Report, pp. 81-85, Findings 407-431.)

The ALJ found that MERC's proposal to recover the costs of the NNG upgrades from both firm and interruptible system sales customers through the commodity portion of the NNG PGA was reasonable and supported by the record. She concluded that transportation customers would pay for the NNG upgrade costs to the extent that they purchase capacity on the NNG system when MERC sells capacity on the capacity release market. The ALJ found it would be unreasonable to charge transportation customers for the NNG capacity acquired through the PA.

The ALJ recognized the OAG's concerns regarding transportation customers benefiting from the additional capacity. She recommended that the Commission require MERC to actively seek long-term buyers for near term excess capacity and also require MERC to actively sell short-term excess capacity on the capacity release market, as recommended by the Department, to address some of these concerns.[406] Further, it was reasonable to require MERC to provide specific data for each capacity release associated with the Rochester area in future AAA filings, and in its annual NGEP Rider recovery filing.

ALJ Findings:

> 427. The Administrative Law Judge finds that MERC's proposal to recover the costs of the NNG upgrades from both firm and interruptible system sales customers through the commodity portion of the NNG PGA is reasonable and supported by the record.
>
> 428. The Administrative Law Judge concludes that transportation customers will pay for the NNG upgrade costs to the extent that they purchase capacity on the NNG system when MERC sells capacity on the capacity release market.
>
> 431. The Administrative Law Judge finds that it is reasonable to require MERC to provide specific data for each capacity release associated with the Rochester area in future AAA filings, and in the annual rider recovery filing in this docket.

OAG Exceptions

The OAG did not file exceptions to this issue.

PUC Staff Analysis

Staff generally agrees with the ALJ recommendations that NNG upgrade costs be borne by MERC's firm and interruptible sales customers in the NNG PGA area. Staff agrees with the ALJ recommendation that the Commission require MERC to provide specific data for its capacity release program in both future AAA filings and in its annual NGEP Rider recovery filing. On

[406] While the Commission could require the parties to have further discussions about this issue as recommended by the OAG, the OAG has not provided any specific proposals for further recovery of NNG costs from transportation customers.

the ALJ's conclusion that MERC's transportation customers pay for the NNG upgrade costs when they purchase MERC's capacity release on NNG's system, staff is providing additional comment for Commission consideration.

It is true, MERC's transportation customer can purchase released capacity on NNG system; the customers are paying someone for the capacity rights. Generally, a transportation customer in the market to purchase capacity release will purchase the least cost transportation option available on NNG system. MERC can set the terms of a transaction, but there is no guarantee that someone will purchase the released capacity at that established price. When MERC releases capacity, generally, the releasing party is looking at NNG's electronic bulletin broad trying to establish a price and usually that price is set lower than other available NNG capacity. The releasing party is trying to recover some of the cost and rarely will they recover any price close to the actual cost (for short-term transactions). However, if MERC releases capacity for a whole season or year or if it is a permanent release, MERC may receive full price.

Staff believes that the Commission should carefully consider the releasing parties recovery issue, before denying the OAG suggestion that the transportation customer should pay some portion of the NNG upgrades cost. The OAG makes a valid point that the transportation customer generally pays pennies on the dollar for capacity release. SLGI's statements are correct; these customers do not purchase natural gas or use any other MERC services other than transportation services on MERC. These customers also purchase their own transportation capacity on NNG. The Commission could allocate a portion of the NNG upgrade costs directly to these customers in MERC's next general rate case. With the amount of excess capacity that would be available in the short-term, staff believes that MERC's transportation customers are receiving benefits from the NNG upgrades.

Decision Alternatives

Recovery of NNG Capacity Costs

(Please see staff briefing papers, pp. 101-106.)

29. Adopt ALJ findings 427 through 431, which state that:

> 427. The Administrative Law Judges finds that MERC's proposal to recover the costs of the NNG upgrades from both firm and interruptible system sales customers through the commodity portion of the NNG PGA is reasonable and supported by the record.
>
> 428. The Administrative Law Judge concludes that transportation customers will pay for the NNG upgrade costs to the extent that they purchase capacity on the NNG system when MERC sells capacity on the capacity release market.
>
> 429. Because transportation customers will not have the right to use any of the additional capacity on the NNG system acquired by MERC, except to the extent purchased on the capacity release market, the Administrative Law Judge finds it would be unreasonable to directly charge transportation customers for the NNG capacity acquired through the PA.

430. The Administrative Law Judge recognizes the OAG's concerns regarding transportation customers benefiting from the additional capacity. Requiring MERC to actively seek long-term buyers for near term excess capacity and also requiring MERC to actively sell short-term excess capacity on the capacity release market, as recommended by the Department, will address some of these concerns.

431. The Administrative Law Judge finds that it is reasonable to require MERC to provide specific data for each capacity release associated with the Rochester area in future AAA filings, and in the annual rider recovery filing in this docket. (MERC, Department, OAG, SLGI, or

30. Take no action in this docket, and defer Commission decision until such time MERC makes its NGEP Rider petition with updated cost information.

Adjustments to Interruptible Rates and Transportation Rates

This issue's discussion is contingent on MERC receiving Commission approval for its proposed Rochester project. If MERC does not receive Commission approval, this issue becomes irrelevant.

The Department Position

If the Rochester project receives Commission approval, the Department became concerned about MERC's firm customer viewing the possible excess capacity as an opportunity to convert its service from firm to interruptible service. Department Witness Heinen stated:

> "*interruptible customers receive the benefit of lower non- gas margins knowing that they will be interrupted if load must be curtailed to maintain system integrity*"[407]

MERC's current tariff illustrates the Department's concern where firm small and large C&I customer pay a higher distribution rate than interruptible customers, see Table 22:

Table 22: Comparison of MERC Firm and Interruptible Distribution Rates (per Dth)

Service Type	Distribution Rate[408]
Small C&I	$1.8116
Large C&I	$1.6579
Small Volume Interruptible	$0.8490
Large Volume Interruptible	$0.4553

[407] Department Direct Testimony, Heinen, p. 9, Hearing Ex. 405.
[408] OAG Initial Brief, p. 104 citing MERC tariff, 4th Revised Sheet No. 5.21.

As the table illustrates, the Interruptible customers receive a substantial discount for their cooperation to curtail (stop) gas takes when ordered to do so by MERC. Because the possibility that excess capacity will exist if the Rochester project is approved, the Department believed this occurrence would tempt existing firm customers to switch service to interruptible, if qualified.

The OAG Position

The OAG raised concerns over the reasonableness of MERC's current interruptible rates (discount received) given for Rochester capacity. The OAG believed that the excess capacity would signal to the interruptible customers that the risk of curtailment would disappear.[409] As a result, the OAG questioned whether interruptible customers should continue to receive the same discount.

The OAG requested that MERC provide information about recalculating the interruptible discount if the Commission approves the project.[410] MERC declined to provide a detailed discussion, but did agree to review its interruptible tariffs.[411]

Both the Department and the OAG recommended to the Commission that it require MERC to address its interruptible rates in its next general rate case. To provide a detailed analysis of the reasonableness of MERC's current interruptible and transportation rates, as well as a discussion of "whether the rate structures and design for these classes are appropriate given the Rochester project's impacts.

In response, MERC acknowledged that the Rochester Project would make curtailment less likely in the near-term. MERC noted that the Project would not eliminate the risk of interruption because of force majeure events, distribution constraints, or gas supply constraints.[412]

At the evidentiary hearing, MERC agreed to provide an analysis of its interruptible rates and transportation rates in its next general rate case. Further, MERC agreed to address whether the rate structures and design for these classes are appropriate given impacts associated with the Rochester project.[413]

ALJ Analysis

(ALJ Report, pp. 85-87, Findings 432-442.)

The ALJ concluded that the Commission may wish require MERC to examine the current interruptible and transportation rate structure in its next general rate case given the excess Rochester capacity and reduced risk of curtailment.

[409] OAG Amended and Corrected Direct Testimony, Urban, p. 63, Hearing Ex. 300.
[410] Ibid.
[411] MERC Rebuttal Testimony, Lee, p. 44, Hearing Ex. 6.
[412] MERC Rebuttal Testimony, Lee, p. 40, Hearing Ex. 6.
[413] MERC Opening Statement, Lee, p. 3, Hearing Ex. 24; Transcript Vol. 1, p. 20 (Lee).

ALJ Finding 442:

> 442. The Administrative Law Judge concludes the current interruptible and transportation rates should be reexamined if the Project is approved to ensure that the rates are appropriate, given the reduced risk of curtailment that is likely to result from the Project.

PUC Staff Analysis

Staff agrees with the ALJ's recommendation that the Commission should require MERC to re-examine its interruptible and transportation rate structure, including all cost allocations, in MERC's next general rate case. Further, staff believes that the Commission required a detailed review, including providing examples of how MERCs current firm small and large C&I customers are responding to the excess capacity from the Rochester project.

Decision Alternatives

Adjustments to Interruptible Rates and Transportation Rates

(Please see staff briefing papers, pp. 107-109.)

31. Adopt the ALJ's recommendation and require MERC to provide a discussion and analysis of its current interruptible and transportation rate structure, including cost allocation methodologies in its next general rate case explaining the impact of excess Rochester capacity. (MERC, Department, OAG, ALJ, and Staff), or

32. Do not accept the ALJ's recommendation nor require MERC to provide a discussion and analysis of this issue in its next general rate case.

Other Potential Funding Sources

The NGEP Rider Statute requires the utility to include a description of efforts made by the utility to offset the revenue deficiency for projects through contributions in aid of construction. [414] Further, in its Notice and Order for Hearing, the Commission requested that the scope of the hearing include an examination of what other funds may be available to cover the project costs.[415]

Staff reviewed the Commission's policy on service line and main extensions. Previous Commission decisions and MERC's existing tariff which states that a service line and main extension must be economical at tariffed rates; existing customers cannot subsidize the new service line extension customer(s). This docket's record demonstrates that both projects are uneconomical at MERC's existing tariff rates.[416]

[414] Minn. Stat. § 216B.1638, subd. 2(b)(4).
[415] NOTICE AND ORDER FOR HEARING p. 5.
[416] The project revenue collected offset the project cost, the project does not result in a revenue deficiency.

Contribution In Aid of Construction (CIAC)

CIAC is defined as meaning any amount of money or other property contributed to a regulated public utility for that utility to provide for the expansion, improvement, or replacement of the utility facilities. Staff reviewed the Commission's policy on service line and main extensions. Previous Commission decisions and MERC's existing tariff state that a service line and main extension must be economical at tariffed rates; existing customers must not unduly subsidize the new service line extension customer(s).[417] This docket's record demonstrates the Rochester project is uneconomical at MERC's existing tariff rates.

For larger natural gas facility extensions, into unserved market areas, the Commission approved MERC's New Area Surcharge (NAS) tariff. The utility is able to extend service into an uneconomical new area by collecting a NAS surcharge in addition to its tariffed rates. The NAS feasibility model determines the CIAC amount to include in the NAS so that project revenue offset project costs, MERC recovers the NAS from new customers subscribing to the new service. MERC Witness Lee stated that the Rochester Project is a system integrity project rather than project designed to extend service to specific new customers; MERC does not anticipate receiving any CIAC revenues to offset any portion of the Rochester Project costs.[418]

MERC believes that the Rochester project construction is serving existing and future customers in a previously served area and not for a new area, MERC will not use its NAS tariff.

The OAG commented that MERC is extremely unlikely to require new customers to contribute (CIAC) towards constructing the new capacity, because MERC proposes to acquire the Rochester capacity before any potential new customer requests it. The OAG believed this supports its position that the Rochester project unreasonable.

Destination Medical Center Corporation Funding

In 2013, the Mayo Clinic announced its plan to become a Destination Medical Center. The Minnesota Legislature enacted Minn. Stat. §§ 469.40-.47 to aid in the DMC development and created state and local funding to facilitate its implementation. Pursuant to Minn. Stat. § 469.41, the Mayo Clinic establish the Destination Medical Center Corporation (DMCC). Its purpose is to prepare and implement the DMC plan and review proposed projects for possible government funding.

Pursuant to Minn. Stat. § 469.47, state infrastructure aid (funds) become available once the private investment exceeds $200 million and the City of Rochester enters into an agreement with the state concerning its funding level. The DMCC has been accepting project proposals from various entities.

Minn. Stat. § 469.40 defines "public infrastructure project" as a project financed in part or in whole with public money in order to support the medical business entity's development plans, as identified in the DMCC development plan. Under the statute, a public infrastructure project may...

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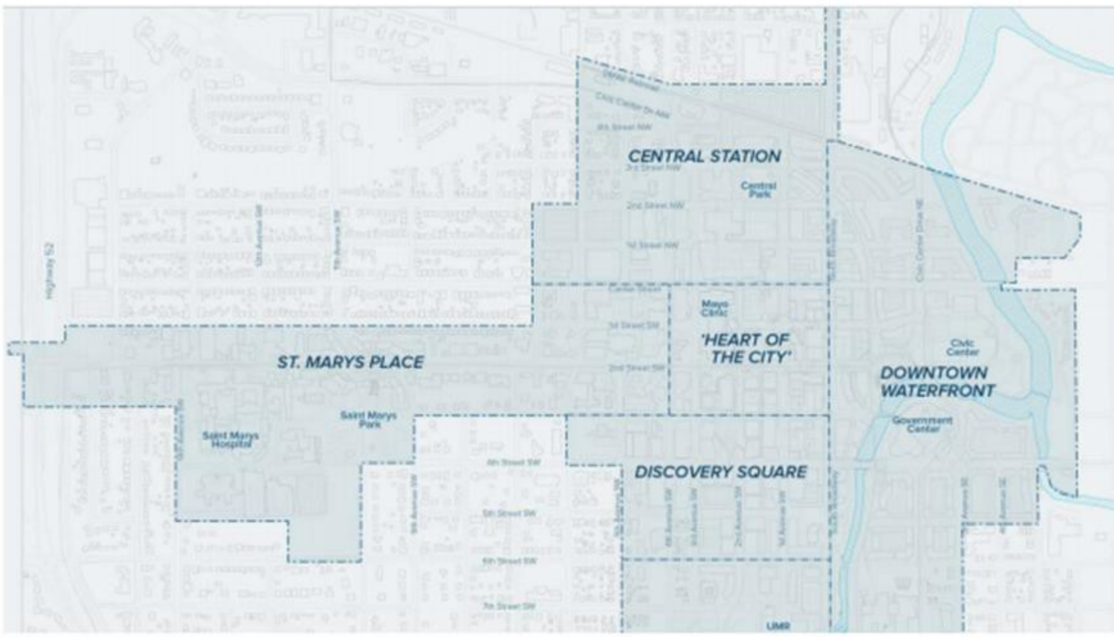
[417] The projects revenues collected offset the project costs; the project does not create a revenue deficiency.
[418] MERC Direct Testimony, Lee, pp. 20-21, 24, 35, Hearing Ex. 5

install, construct, or reconstruct elements of public infrastructure required to support the overall development of the destination medical center development district including, but not limited to,... utilities systems and related facilities [and] utility relocations and replacements. Further, the statute specifies that the DMC development district is a geographic area in Rochester identified in the DMCC development plan and available funds must be used within the boundaries.[419]

See the below map illustrating the DMCC boundaries, includes the Rochester downtown area and around the Mayo Clinic.[420]

Graph 4: The Proposed DMCC Boundaries Eligible for DMC Recovery



MERC submitted its application for $5 million in available funds on April 15, 2016 to help in offsetting the Rochester project costs. DMC Economic Development Agency and the City of Rochester notified MERC that it was not eligible for DMC funds because its project was outside the DMCC boundaries. [421]

The Department agreed that the Rochester project construction was outside the DMCC boundaries and not eligible for funding. The Department recommended that if MERC undertakes additional projects within DMC boundaries, that MERC petition the DMC for funding. Further, the Department recommended that MERC, in its annual NGEP rider filing, include a discussion and supporting data detailing of all utility work done throughout the previous year within the DMC boundaries including the number of applications made to the DMCC; and the amount of state aid received.[422]

[419] Minn. Stat. § 469.40, subd. 11(a)(4); subd. 5
[420] Department Direct Testimony, pp. 54-55, Hearing Ex. 405.
[421] MERC Rebuttal Testimony, p. 33, ASL-R3, Hearing Ex. 6.
[422] Department Direct Testimony, Heinen, p. 57, Hearing Ex. 405.

The OAG stated its concern that MERC had not taken all the steps it could have to try to secure DMC funding.[423] The OAG noted that there are provisions in the DMC Plan that would allow the DMCC to amend the Development District boundaries to include a new area.[424] The OAG commented that if MERC believed that the Rochester Project was necessary for the success of the DMC development plan, MERC should have provided a thorough and detailed request for amendment to the DMC governing organizations.[425] The OAG further argued that if MERC had engaged earlier with the DMC organizations, different DMC boundaries might have resulted.[426] The OAG commented that MERC could have a financial interest in not obtaining alternate funding because such funding could influence MERC's future rate of return.[427]

Other Funding Sources

No party proposed any other non-traditional funding source for the Rochester Project.

ALJ Analysis

(ALJ Report, pp. 87-91, Findings 446-467.)

The ALJ concluded additional DMCC funding from outside the regulatory environment does not appear to exist at this time.

ALJ Report Finding:

> 466. At this time, there do not appear to be any funding sources other than base rates, the NGEP rider, and the PGA to cover the costs of the Rochester Project. MERC should be encouraged to continue to seek funding from the DMCC in the future.

PUC Staff Analysis

Staff agrees with the ALJ's conclusion that additional DMCC funding from outside the regulatory environment does not appear to exist at this time. Staff agree with the Department's additional recommendations requiring MERC to:

- Petition the DMC for funding if MERC undertakes additional projects within DMC boundaries; and
- Include a discussion and supporting data detailing all utility work done throughout the previous year within the DMC boundaries including the number of applications made to the DMCC; and the amount of state aid received – completed MERC's annual NGEP filing.

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[423] OAG Reply Brief, pp. 29-31, (October 25, 2016).
[424] OAG Amended and Corrected Direct Testimony, Urban, p. 68, Hearing Ex. 300.
[425] OAG Reply Brief, pp. 29-30, (October 25, 2016).
[426] Ibid, pp. 30-31.
[427] OAG Amended and Corrected Direct Testimony, Urban, p. 68, Hearing Ex. 300.

Decision Alternatives

Other Potential Funding Sources

(Please see staff briefing papers, pp. 109-112.)

33. Accept the ALJ's conclusion that additional DMCC funding is not available to MERC. (MERC, Department, ALJ, and Staff), and

34. Require MERC

    a. to petition the DMCC for funding if MERC undertakes projects within the established DMC boundaries. (Department and Staff), and

    b. in its annual NGEP petition to provide a discussion and supporting data explaining all work performed within the DMC boundaries, with the amount of DMCC funding applied for and received. (Department and Staff), or

35. Reject the ALJ's conclusion and do not require MERC to discuss its annual activity within the DMCC boundaries in its annual NGEP Rider petition.

Decision Alternatives

Sales Forecast – Proposed Growth Rate for the Rochester Project

(Please see staff briefing papers, pp. 4-44.)

1. Adopt the ALJ recommendation that

    a. MERC's assumption that its regression analysis growth rate equals the growth rate for MERC's Design Day calculation, <u>and</u>

    b. MERC's proposed Design Day 1.5 percent growth rate is reasonable and prudent as the "high case" scenario, <u>and</u>

    c. The Department's proposed Design Day 1.0 percent growth rate is reasonable and prudent as the "status quo" scenario. <u>or</u>

2. Adopt the OAG's proposed negative 0.0092 percent growth rate as reasonable and prudent. <u>or</u>

3. Adopt MERC's historical annual average 0.46 percent growth rate as reasonable and prudent. <u>or</u>

4. Adopt MERC's historical annual average Design Day 0.75 percent growth rate as reasonable and prudent. <u>or</u>

5. Approve some other growth rate as reasonable and prudent.

6. If the Commission chooses a growth rate different from MERC's proposed 1.5 percent, direct MERC to make a compliance filing within 10 days of the Order detailing the needed facilities to support the Commission's growth rate for both MERC and NNG.

7. If the Commission chooses a growth rate different from MERC's proposed 1.5 percent, direct the Commission staff to issue a notice for a comment period for parties to submit their comments after MERC submits its compliance filing. Delegate authority to the Commission's Executive Secretary to develop the questions for this notice and to vary time-periods and procedures as necessary for the duration of this proceeding.

8. If the Commission grants its approval of MERC's Rochester project and both Rochester Public Utilities (RPU) and the Mayo Clinic (DMC Expansion) take interruptible (or firm) service, require MERC to request a Contribution in Aid of Construction (CIAC) to offset a portion of MERC's cost for the excess capacity from the Rochester Project.

Project Approval

(Please see staff briefing papers, pp. 45-67.)

9. Adopt the ALJ recommendation that the Rochester Project is reasonable and prudent as proposed by MERC, <u>or</u>

10. Do not adopt the ALJ recommendation that the Rochester Project is reasonable and prudent as proposed by MERC.

11. Approve MERC's requested pre-determination for Rochester Project cost recovery for Phase II costs ($44 million) through a combination of the NGEP Rider Statute and through MERC's future general rate cases, <u>or</u>

12. Do not approve MERC's requested pre-determination for Rochester Project cost recovery for Phase II costs ($44 million) through a combination of the NGEP Rider Statute and through MERC's future general rate cases.

13. Approve MERC's requested pre-determination for the Rochester Project cost recovery for NNG upgrades ($55 to $60 million) through its MERC-NNG-PGA, <u>or</u>

14. Do not approve MERC's requested pre-determination for the Rochester Project cost recovery for NNG upgrades ($55 to $60 million) through its MERC-NNG-PGA.

Reasonableness of MERC's RFP Process

(Please see staff briefing papers, pp. 68-76.)

15. Adopt ALJ Finding 220; find that MERC's RFP process was fair and reasonable. <u>or</u>

16. Take no action.

OAG's Used and Useful Recommendation

(Please see staff briefing papers, pp. 76-80.)

If the Commission finds that the Rochester project is reasonable and prudent:

17. Allow Rochester cost recovery only for facilities that are used and useful and defer the remaining facilities' cost recovery until the facilities become used and useful. (OAG alternative), <u>or</u>

18. Do not adopt the OAG's alternative recommendation and allow total Rochester project cost recovery.

NGEP Rider Eligibility

(Please see staff briefing papers, pp. 80-91.)

19. Adopt the ALJ recommendation that the Rochester project is eligible for NGEP Rider cost recovery. (MERC, Department, ALJ, and Staff) or

20. Adopt the OAG recommendation that the Rochester project is not eligible for NGEP Rider cost recovery and adopt the OAG's alternative recommendations. (OAG) or

21. Take no action.

Cap on Phase II Cost Recovery

(Please see staff briefing papers, pp. 91-93.)

22. Adopt the ALJ's recommendation and place a soft cap of $44 million on the Rochester Phase II project cost recovery. Place the burden of proof for cost recovery on MERC if actual costs exceed MERC's $44 million estimate. (MERC, Department, OAG, ALJ), or

23. In the alternative, the Commission could place a soft cap of $44 million on the Rochester Phase II cost recovery and establish a sharing mechanism for cost overruns. MERC's customers would absorb cost overruns (assuming MERC is reasonably able to explain the overruns) up to a certain dollar limit. MERC's shareholders would absorb cost overruns exceeding the dollar limit. (This alternative places an additional incentive on MERC to control costs and assumes no cost underruns.) or

24. Do not adopt the ALJ's recommendation and do not place a soft cap on MERC's cost recovery.

NGEP Rider Rate Design

(Please see staff briefing papers, pp. 94-100.)

25. Adopt the ALJ's recommendation and approve MERC's proposed Phase II cost recovery through its NGEP Rider petition from all MERC customers which includes the NNG, Consolidated, and Albert Lea PGA customers. (MERC, SLGI, ALJ) or

26. Adopt the Department's recommendation allocating Phase II cost recovery on 50/50 basis recovering 50 percent of the Phase II costs from Rochester area customers and the remaining 50 percent of Phase II costs from all other non-Rochester area customers. (DOC), or

27. Adopt another sharing mechanism allocating Phase II cost recovery to Rochester area customers and to non-Rochester customers (80/20 or some other amount). or

28. Take no action in this docket, and defer Commission decision until such time MERC makes its NGEP Rider petition with updated cost information.

Recovery of NNG Capacity Costs

(Please see staff briefing papers, pp. 101-106.)

29. Adopt ALJ findings 427 through 431, which state that:

> 427. The Administrative Law Judges finds that MERC's proposal to recover the costs of the NNG upgrades from both firm and interruptible system sales customers through the commodity portion of the NNG PGA is reasonable and supported by the record.
>
> 428. The Administrative Law Judge concludes that transportation customers will pay for the NNG upgrade costs to the extent that they purchase capacity on the NNG system when MERC sells capacity on the capacity release market.
>
> 429. Because transportation customers will not have the right to use any of the additional capacity on the NNG system acquired by MERC, except to the extent purchased on the capacity release market, the Administrative Law Judge finds it would be unreasonable to directly charge transportation customers for the NNG capacity acquired through the PA.
>
> 430. The Administrative Law Judge recognizes the OAG's concerns regarding transportation customers benefiting from the additional capacity. Requiring MERC to actively seek long-term buyers for near term excess capacity and also requiring MERC to actively sell short-term excess capacity on the capacity release market, as recommended by the Department, will address some of these concerns.
>
> 431. The Administrative Law Judge finds that it is reasonable to require MERC to provide specific data for each capacity release associated with the Rochester area in future AAA filings, and in the annual rider recovery filing in this docket. (MERC, Department, OAG, SLGI, <u>or</u>

30. Adopt the OAG's recommendation to recover the NNG upgrade costs from transportation customers.

Adjustments to Interruptible Rates and Transportation Rates

(Please see staff briefing papers, pp. 107-109.)

31. Adopt the ALJ's recommendation and require MERC to provide a discussion and analysis of its current interruptible and transportation rate structure, including cost allocation methodologies in its next general rate case explaining the impact of excess Rochester capacity. (MERC, Department, OAG, ALJ, and Staff), <u>or</u>

32. Do not accept the ALJ's recommendation nor require MERC to provide a discussion and analysis of this issue in its next general rate case.

Other Potential Funding Sources

(Please see staff briefing papers, pp. 109-112.)

33. Accept the ALJ's conclusion that additional DMCC funding is not available to MERC. (MERC, Department, ALJ, and Staff), and

34. Require MERC

    a. to petition the DMCC for funding if MERC undertakes projects within the established DMC boundaries. (Department and Staff), and

    b. in its annual NGEP petition and in future AAA filings to provide a discussion and supporting data explaining all work performed within the DMC boundaries, with the amount of DMCC funding applied for and received. (Department and Staff), or

35. Reject the ALJ's conclusion and do not require MERC to discuss its annual activity within the DMCC boundaries in its annual NGEP Rider petition.

Other Recommendations

36. Require MERC to pursue mitigation of costs for sales customers including, but not limited to: making every effort to obtain the best available terms for long-term and short-term release of excess capacity; encouraging the movement of customers to firm service; and utilizing excess capacity to avoid purchasing other more expensive capacity to serve other parts of the MERC-NNG PGA. Require MERC to report on its efforts in subsequent annual NGEP Rider petitions.

Decision Alternatives for the ALJ Report

37. Adopt the ALJ's Findings of Fact, Conclusions of Law and Recommendation (ALJ Report) in its entirety, or

38. Adopt the ALJ's Findings of Fact, Conclusions of Law and Recommendation (ALJ Report) to the extent the ALJ Report is consistent with the decisions made by the Commission at this meeting.

39. Move that the written order memorializing these decisions may amend the ALJ's findings as necessary to be consistent with the Commission's decision and may rearrange, reorganize, or renumber the items included as necessary for clarity; standardize or correct abbreviations, phraseology, punctuation, and format; and correct errors as necessary for consistency with the Commission's decision.

40. Direct Commission staff to draft an order consistent with the Commission's decisions with such changes necessary for organization, consistency, and clarity.

Minnesota Energy Resources Corporation

Docket Nos. 15-895/16-315
Source of Data: MERC Direct Testimony, Mead, p. 21, Hearing Ex. 12
Estimated Design Day Based MERC's Growth Rate

MERC Annual Design Day Growth Rate 1.5%

Line No.	Winter Period	Rochester Design Day	Capacity TBS 1D	Capacity TBS 1B	New Capacity TBS 1B	Receipt Capacity Available through NNG	MERC Reserve Margin	Percentage
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Dth/day	Dth/day	Dth/day	Dth/day	Dth/day	Dth/day	Dth/day
1	2015/2016	60,929	36,707	18,462	0	55,169	(5,760)	-9.5%
2	2016/2017	61,843	36,707	18,462	0	55,169	(6,674)	-10.8%
3	2017/2018	62,771	36,707	18,462	0	55,169	(7,602)	-12.1%
4	2018/2019 1/	63,713	47,207	18,462	0	65,669	1,956	3.1%
5	2019/2020 2/	64,669	40,707	18,462	41,000	100,169	35,500	54.9%
6	2020/2021	65,639	40,707	18,462	41,000	100,169	34,530	52.6%
7	2021/2022	66,624	40,707	18,462	41,000	100,169	33,545	50.4%
8	2022/2023	67,623	40,707	18,462	41,000	100,169	32,546	48.1%
9	2023/2024	68,637	40,707	18,462	41,000	100,169	31,532	45.9%
10	2024/2025	69,667	40,707	18,462	41,000	100,169	30,502	43.8%
11	2025/2026	70,712	40,707	0	59,462	100,169	29,457	41.7%
12	2026/2027	71,773	40,707	0	59,462	100,169	28,396	39.6%
13	2027/2028	72,850	40,707	0	59,462	100,169	27,319	37.5%
14	2028/2029	73,943	40,707	0	59,462	100,169	26,226	35.5%
15	2029/2030	75,052	40,707	0	59,462	100,169	25,117	33.5%
16	2030/2031	76,178	40,707	0	59,462	100,169	23,991	31.5%
17	2031/2032	77,321	40,707	0	59,462	100,169	22,848	29.6%
18	2032/2033	78,481	40,707	0	59,462	100,169	21,688	27.6%
19	2033/2034	79,658	40,707	0	59,462	100,169	20,511	25.8%
20	2034/2035	80,853	40,707	0	59,462	100,169	19,316	23.9%
21	2035/2036	82,066	40,707	0	59,462	100,169	18,103	22.1%
22	2036/2037	83,297	40,707	0	59,462	100,169	16,872	20.3%
23	2037/2038	84,546	40,707	0	59,462	100,169	15,623	18.5%
24	2038/2039	85,814	40,707	0	59,462	100,169	14,355	16.7%
25	2039/2040	87,101	40,707	0	59,462	100,169	13,068	15.0%
26	2040/2041	88,408	40,707	0	59,462	100,169	11,761	13.3%
27	2041/2042	89,734	40,707	0	59,462	100,169	10,435	11.6%
28	2042/2043	91,080	40,707	0	59,462	100,169	9,089	10.0%

1/ Increase in Receipt Capacity is caused by NNG Phase I construction in Docket No. 15-895.
2/ Increase in Receipt Capacity is caused by NNG Phase II construction in Docket No. 15-895.

Minnesota Energy Resources Corporation

Docket Nos. 15-895/16-315
Source of Data - Department Direct Testimony, Heinen
Estimated Design Day Based Department's Growth Rate

Department Annaul Design Day Growth Rate 1.0%

Line No.	Winter Period (1)	Rochester Design Day (2) Dth/day	Capacity TBS 1D (3) Dth/day	Capacity TBS 1B (4) Dth/day	New Capacity TBS 1B (5) Dth/day	Receipt Capacity Available through NNG (6) Dth/day	MERC Reserve Margin (7) Dth/day	Percentage (8) Dth/day
1	2015/2016	60,929	36,707	18,462	0	55,169	(5,760)	-9.5%
2	2016/2017	61,538	36,707	18,462	0	55,169	(6,369)	-10.4%
3	2017/2018	62,153	36,707	18,462	0	55,169	(6,984)	-11.2%
4	2018/2019	62,775	47,207	18,462	0	65,669	2,894	4.6%
5	2019/2020	63,403	40,707	18,462	41,000	100,169	36,766	58.0%
6	2020/2021	64,037	40,707	18,462	41,000	100,169	36,132	56.4%
7	2021/2022	64,677	40,707	18,462	41,000	100,169	35,492	54.9%
8	2022/2023	65,324	40,707	18,462	41,000	100,169	34,845	53.3%
9	2023/2024	65,977	40,707	18,462	41,000	100,169	34,192	51.8%
10	2024/2025	66,637	40,707	18,462	41,000	100,169	33,532	50.3%
11	2025/2026	67,303	40,707	0	59,462	100,169	32,866	48.8%
12	2026/2027	67,976	40,707	0	59,462	100,169	32,193	47.4%
13	2027/2028	68,656	40,707	0	59,462	100,169	31,513	45.9%
14	2028/2029	69,343	40,707	0	59,462	100,169	30,826	44.5%
15	2029/2030	70,036	40,707	0	59,462	100,169	30,133	43.0%
16	2030/2031	70,736	40,707	0	59,462	100,169	29,433	41.6%
17	2031/2032	71,443	40,707	0	59,462	100,169	28,726	40.2%
18	2032/2033	72,157	40,707	0	59,462	100,169	28,012	38.8%
19	2033/2034	72,879	40,707	0	59,462	100,169	27,290	37.5%
20	2034/2035	73,608	40,707	0	59,462	100,169	26,561	36.1%
21	2035/2036	74,344	40,707	0	59,462	100,169	25,825	34.7%
22	2036/2037	75,087	40,707	0	59,462	100,169	25,082	33.4%
23	2037/2038	75,838	40,707	0	59,462	100,169	24,331	32.1%
24	2038/2039	76,596	40,707	0	59,462	100,169	23,573	30.8%
25	2039/2040	77,362	40,707	0	59,462	100,169	22,807	29.5%
26	2040/2041	78,136	40,707	0	59,462	100,169	22,033	28.2%
27	2041/2042	78,917	40,707	0	59,462	100,169	21,252	26.9%
28	2042/2043	79,706	40,707	0	59,462	100,169	20,463	25.7%

1/ Increase in Receipt Capacity is caused by Phase I construction in Docket No. 15-895.
2/ Increase in Receipt Capacity is caused by Phase II construction in Docket No. 15-895.

Minnesota Energy Resources Corporation

Docket Nos. 15-895/16-315
Source of Data: Department's Direct Testimony, Heinen
Estimated Design Day Based Department's Growth Rate

Department's Residential Customer Count Growth Rate 0.75%

Line No.	Winter Period	Rochester Design Day	Capacity TBS 1D	Capacity TBS 1B	New Capacity TBS 1B	Receipt Capacity Available through NNG	MERC Reserve Margin	Percentage
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Dth/day	Dth/day	Dth/day	Dth/day	Dth/day	Dth/day	Dth/day
1	2015/2016	60,929	36,707	18,462	0	55,169	(5,760)	-9.5%
2	2016/2017	61,386	36,707	18,462	0	55,169	(6,217)	-10.1%
3	2017/2018	61,846	36,707	18,462	0	55,169	(6,677)	-10.8%
4	2018/2019	62,310	47,207	18,462	0	65,669	3,359	5.4%
5	2019/2020	62,777	40,707	18,462	41,000	100,169	37,392	59.6%
6	2020/2021	63,248	40,707	18,462	41,000	100,169	36,921	58.4%
7	2021/2022	63,722	40,707	18,462	41,000	100,169	36,447	57.2%
8	2022/2023	64,200	40,707	18,462	41,000	100,169	35,969	56.0%
9	2023/2024	64,682	40,707	18,462	41,000	100,169	35,487	54.9%
10	2024/2025	65,167	40,707	18,462	41,000	100,169	35,002	53.7%
11	2025/2026	65,656	40,707	0	59,462	100,169	34,513	52.6%
12	2026/2027	66,148	40,707	0	59,462	100,169	34,021	51.4%
13	2027/2028	66,644	40,707	0	59,462	100,169	33,525	50.3%
14	2028/2029	67,144	40,707	0	59,462	100,169	33,025	49.2%
15	2029/2030	67,648	40,707	0	59,462	100,169	32,521	48.1%
16	2030/2031	68,155	40,707	0	59,462	100,169	32,014	47.0%
17	2031/2032	68,666	40,707	0	59,462	100,169	31,503	45.9%
18	2032/2033	69,181	40,707	0	59,462	100,169	30,988	44.8%
19	2033/2034	69,700	40,707	0	59,462	100,169	30,469	43.7%
20	2034/2035	70,223	40,707	0	59,462	100,169	29,946	42.6%
21	2035/2036	70,750	40,707	0	59,462	100,169	29,419	41.6%
22	2036/2037	71,281	40,707	0	59,462	100,169	28,888	40.5%
23	2037/2038	71,816	40,707	0	59,462	100,169	28,353	39.5%
24	2038/2039	72,355	40,707	0	59,462	100,169	27,814	38.4%
25	2039/2040	72,898	40,707	0	59,462	100,169	27,271	37.4%
26	2040/2041	73,445	40,707	0	59,462	100,169	26,724	36.4%
27	2041/2042	73,996	40,707	0	59,462	100,169	26,173	35.4%
28	2042/2043	74,551	40,707	0	59,462	100,169	25,618	34.4%

1/ Increase in Receipt Capacity is caused by Phase I construction in Docket No. 15-895.
2/ Increase in Receipt Capacity is caused by Phase II construction in Docket No. 15-895.

Minnesota Energy Resources Corporation

Docket Nos. 15-895/16-315
Source of Data: MERC provided in Rebuttal
Estimated Design Day Based Department's Growth Rate

MERC's Historical Growth Rate 0.46%

Line No.	Winter Period	Rochester Design Day	Capacity TBS 1D	Capacity TBS 1B	New Capacity TBS 1B	Receipt Capacity Available through NNG	MERC Reserve Margin	Percentage
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Dth/day	Dth/day	Dth/day	Dth/day	Dth/day	Dth/day	Dth/day
1	2015/2016	60,929	36,707	18,462	0	55,169	(5,760)	-9.5%
2	2016/2017	61,209	36,707	18,462	0	55,169	(6,040)	-9.9%
3	2017/2018	61,491	36,707	18,462	0	55,169	(6,322)	-10.3%
4	2018/2019	61,774	47,207	18,462	0	65,669	3,895	6.3%
5	2019/2020	62,058	40,707	18,462	41,000	100,169	38,111	61.4%
6	2020/2021	62,343	40,707	18,462	41,000	100,169	37,826	60.7%
7	2021/2022	62,630	40,707	18,462	41,000	100,169	37,539	59.9%
8	2022/2023	62,918	40,707	18,462	41,000	100,169	37,251	59.2%
9	2023/2024	63,207	40,707	18,462	41,000	100,169	36,962	58.5%
10	2024/2025	63,498	40,707	18,462	41,000	100,169	36,671	57.8%
11	2025/2026	63,790	40,707	0	59,462	100,169	36,379	57.0%
12	2026/2027	64,083	40,707	0	59,462	100,169	36,086	56.3%
13	2027/2028	64,378	40,707	0	59,462	100,169	35,791	55.6%
14	2028/2029	64,674	40,707	0	59,462	100,169	35,495	54.9%
15	2029/2030	64,972	40,707	0	59,462	100,169	35,197	54.2%
16	2030/2031	65,271	40,707	0	59,462	100,169	34,898	53.5%
17	2031/2032	65,571	40,707	0	59,462	100,169	34,598	52.8%
18	2032/2033	65,873	40,707	0	59,462	100,169	34,296	52.1%
19	2033/2034	66,176	40,707	0	59,462	100,169	33,993	51.4%
20	2034/2035	66,480	40,707	0	59,462	100,169	33,689	50.7%
21	2035/2036	66,786	40,707	0	59,462	100,169	33,383	50.0%
22	2036/2037	67,093	40,707	0	59,462	100,169	33,076	49.3%
23	2037/2038	67,402	40,707	0	59,462	100,169	32,767	48.6%
24	2038/2039	67,712	40,707	0	59,462	100,169	32,457	47.9%
25	2039/2040	68,023	40,707	0	59,462	100,169	32,146	47.3%
26	2040/2041	68,336	40,707	0	59,462	100,169	31,833	46.6%
27	2041/2042	68,650	40,707	0	59,462	100,169	31,519	45.9%
28	2042/2043	68,966	40,707	0	59,462	100,169	31,203	45.2%

1/ Increase in Receipt Capacity is caused by Phase I construction in Docket No. 15-895.
2/ Increase in Receipt Capacity is caused by Phase II construction in Docket No. 15-895.

Minnesota Energy Resources Corporation

Docket Nos. 15-895/16-315
Source of Data: OAG Amended and Corrected Direct Testimony, Urban
Estimated Design Day Based Department's Growth Rate

OAG's Recommendated Growth Rate -0.0092%

Line No.	Winter Period	Rochester Design Day	Capacity TBS 1D	Capacity TBS 1B	New Capacity TBS 1B	Receipt Capacity Available through NNG	MERC Reserve Margin	Percentage
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Dth/day	Dth/day	Dth/day	Dth/day	Dth/day	Dth/day	Dth/day
1	2015/2016	60,929	36,707	18,462	0	55,169	(5,760)	-9.5%
2	2016/2017	60,923	36,707	18,462	0	55,169	(5,754)	-9.4%
3	2017/2018	60,917	36,707	18,462	0	55,169	(5,748)	-9.4%
4	2018/2019	60,911	47,207	18,462	0	65,669	4,758	7.8%
5	2019/2020	60,905	40,707	18,462	41,000	100,169	39,264	64.5%
6	2020/2021	60,899	40,707	18,462	41,000	100,169	39,270	64.5%
7	2021/2022	60,893	40,707	18,462	41,000	100,169	39,276	64.5%
8	2022/2023	60,887	40,707	18,462	41,000	100,169	39,282	64.5%
9	2023/2024	60,881	40,707	18,462	41,000	100,169	39,288	64.5%
10	2024/2025	60,875	40,707	18,462	41,000	100,169	39,294	64.6%
11	2025/2026	60,869	40,707	0	59,462	100,169	39,300	64.6%
12	2026/2027	60,863	40,707	0	59,462	100,169	39,306	64.6%
13	2027/2028	60,857	40,707	0	59,462	100,169	39,312	64.6%
14	2028/2029	60,851	40,707	0	59,462	100,169	39,318	64.6%
15	2029/2030	60,845	40,707	0	59,462	100,169	39,324	64.6%
16	2030/2031	60,839	40,707	0	59,462	100,169	39,330	64.7%
17	2031/2032	60,833	40,707	0	59,462	100,169	39,336	64.7%
18	2032/2033	60,827	40,707	0	59,462	100,169	39,342	64.7%
19	2033/2034	60,821	40,707	0	59,462	100,169	39,348	64.7%
20	2034/2035	60,815	40,707	0	59,462	100,169	39,354	64.7%
21	2035/2036	60,809	40,707	0	59,462	100,169	39,360	64.7%
22	2036/2037	60,803	40,707	0	59,462	100,169	39,366	64.7%
23	2037/2038	60,797	40,707	0	59,462	100,169	39,372	64.8%
24	2038/2039	60,791	40,707	0	59,462	100,169	39,378	64.8%
25	2039/2040	60,785	40,707	0	59,462	100,169	39,384	64.8%
26	2040/2041	60,779	40,707	0	59,462	100,169	39,390	64.8%
27	2041/2042	60,773	40,707	0	59,462	100,169	39,396	64.8%
28	2042/2043	60,767	40,707	0	59,462	100,169	39,402	64.8%

1/ Increase in Receipt Capacity is caused by Phase I construction in Docket No. 15-895.
2/ Increase in Receipt Capacity is caused by Phase II construction in Docket No. 15-895.

Minnesota Energy Resources Corporation

Docket Nos. 15-895/16-315

Estimated Design Day Based Department's Growth Rate

MERC Growth Rate - pursuant to Department IR# 15 1.5000%

Line No.	Winter Period	Rochester Design Day	Capacity TBS 1D	Capacity TBS 1B	New Capacity TBS 1B	Receipt Capacity Available through NNG	MERC Reserve Margin	Percentage
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Dth/day	Dth/day	Dth/day	Dth/day	Dth/day	Dth/day	Dth/day
1	2015/2016	59,969	36,707	18,462	0	55,169	(4,800)	-8.0%
2	2016/2017	60,869	36,707	18,462	0	55,169	(5,700)	-9.4%
3	2017/2018	61,782	36,707	18,462	0	55,169	(6,613)	-10.7%
4	2018/2019	62,709	47,207	18,462	0	65,669	2,960	4.7%
5	2019/2020	63,650	40,707	18,462	41,000	100,169	36,519	57.4%
6	2020/2021	64,605	40,707	18,462	41,000	100,169	35,564	55.1%
7	2021/2022	65,574	40,707	18,462	41,000	100,169	34,595	52.8%
8	2022/2023	66,558	40,707	18,462	41,000	100,169	33,611	50.5%
9	2023/2024	67,556	40,707	18,462	41,000	100,169	32,613	48.3%
10	2024/2025	68,569	40,707	18,462	59,462	118,631	50,062	73.0%
11	2025/2026	69,598	40,707	0	59,462	100,169	30,571	43.9%
12	2026/2027	70,642	40,707	0	59,462	100,169	29,527	41.8%
13	2027/2028	71,702	40,707	0	59,462	100,169	28,467	39.7%
14	2028/2029	72,778	40,707	0	59,462	100,169	27,391	37.6%
15	2029/2030	73,870	40,707	0	59,462	100,169	26,299	35.6%
16	2030/2031	74,978	40,707	0	59,462	100,169	25,191	33.6%
17	2031/2032	76,103	40,707	0	59,462	100,169	24,066	31.6%
18	2032/2033	77,245	40,707	0	59,462	100,169	22,924	29.7%
19	2033/2034	78,404	40,707	0	59,462	100,169	21,765	27.8%
20	2034/2035	79,580	40,707	0	59,462	100,169	20,589	25.9%
21	2035/2036	80,774	40,707	0	59,462	100,169	19,395	24.0%
22	2036/2037	81,986	40,707	0	59,462	100,169	18,183	22.2%
23	2037/2038	83,216	40,707	0	59,462	100,169	16,953	20.4%
24	2038/2039	84,464	40,707	0	59,462	100,169	15,705	18.6%
25	2039/2040	85,731	40,707	0	59,462	100,169	14,438	16.8%
26	2040/2041	87,017	40,707	0	59,462	100,169	13,152	15.1%
27	2041/2042	88,322	40,707	0	59,462	100,169	11,847	13.4%
28	2042/2043	89,647	40,707	0	59,462	100,169	10,522	11.7%

1/ Increase in Receipt Capacity is caused by Phase I construction in Docket No. 15-895.
2/ Increase in Receipt Capacity is caused by Phase II construction in Docket No. 15-895.