Direct Testimony and Schedules
Jared J. Peccarelli

Before the Minnesota Public Utilities Commission
State of Minnesota

In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota

Docket No. G011/GR-22-504

Exhibit _____ (JJP-D)

Sales Forecast, Fixed Charge Forecast, and Weather Normalization of Sales

November 1, 2022

TABLE OF CONTENTS

Page

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jared J. Peccarelli. My business address is 231 W. Michigan Street, Milwaukee, WI 53203.

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am employed by WEC Business Services LLC, a wholly-owned subsidiary of WEC Energy Group, Inc. ("WEC"), in the role of Manager – Sales Forecasting in the Finance department supporting Minnesota Energy Resources Corporation ("MERC") and other regulated wholly-owned utility subsidiaries of WEC.

Q. FOR WHOM ARE YOU PROVIDING TESTIMONY?

A. I am providing testimony on behalf of MERC.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL, PROFESSIONAL, AND UTILITY BACKGROUND.

A. I received both a Bachelor of Science degree in Computer Science and a Master of Business Administration degree with a finance concentration from the University of Wisconsin – Milwaukee. In addition, I have completed all coursework required for a Master of Science degree in Applied Economics from Marquette University in Milwaukee, Wisconsin. I was hired by Wisconsin Electric (a subsidiary of WEC) in November 2002 and worked in various roles in several departments prior to my current position. I joined the Sales Forecasting team in

Finance as a Principal Analyst in 2014 and have developed or assisted in the development of long-term electric and natural gas sales forecasts for all of the WEC utility subsidiaries since then. I am currently responsible for overseeing the development of the long-term sales forecasts for all of the electric, natural gas, and steam utility subsidiaries of WEC, including MERC.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY AGENCY?

A. Yes. I submitted testimony concerning sales forecasting in general rate proceedings on behalf of Wisconsin Electric, Wisconsin Gas, and Wisconsin Public Service Corporation before the Public Service Commission of Wisconsin in dockets 05-UR-110, 05-UR-109, 6690-UR-127, and 6690-UR-126. I have also submitted natural gas sales forecasting testimony on behalf of Michigan Gas Utilities Corporation in general rate case proceedings and gas cost recovery filings before the Michigan Public Service Commission and on behalf of North Shore Gas Company in general rate case proceedings before the Illinois Commerce Commission. Additionally, I submitted testimony pertaining to the electric sales and peak demand forecast methodology on behalf of Upper Michigan Energy Resources Corporation with respect to its Integrated Resource Planning filing before the Michigan Public Service Commission in Case No. U-21081.

Q: ARE YOU SPONSORING ANY EXHIBITS IN CONNECTION WITH YOUR TESTIMONY IN THIS PROCEEDING?

A. Yes, I am sponsoring Exhibit ___ (JJP-D), Schedules 1 through 4 which consists of the following:

- Schedule 1 provides the 2021 Historic Year, the 2022 Projected Year, and the 2023 Proposed Test Year, including weather normalization, growth, and monthly schedules for sales;
- Schedule 2 shows the 2021 Historic Year, the 2022 Projected Year, and the 2023 Proposed Test Year annual fixed charge counts, monthly average fixed charge counts, and year-end fixed charge counts;
- Schedule 3 shows the 2021 Historic Year, the 2022 Projected Year, and the 2023 Proposed Test Year Firm Sales for Firm/Interruptible[1] Customers; and
- Schedule 4 links the sales data between the revenue deficiency calculation, Class Cost of Service Study ("CCOSS"), and the rate design model.

Exhibit ___ (JJP-D), Schedules 1 through 3 include the forecast and historical data for each customer class by MERC's two Purchased Gas Adjustment ("PGA") areas: MERC-NNG and MERC-Consolidated.

[1] Customers taking service on the Firm/Interruptible rate schedules have the ability to nominate a portion of their load as firm with the remainder of their load served as interruptible. Schedule 3 shows the firm sales forecasted for the customers on the Firm/Interruptible rate schedules. The Firm/Interruptible rate schedules for system sales customers are referred to as "Joint" on Schedule 3.

Q. WERE THESE EXHIBITS PREPARED BY YOU OR UNDER YOUR DIRECTION AND SUPERVISION?

A. Yes, they were.

II. PURPOSE OF TESTIMONY AND COMPLIANCE REQUIREMENTS

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my Direct Testimony is to provide an explanation of the methodology used to develop and to support MERC's sales forecast for the 2023 Test Year.

Q. DOES MERC HAVE ANY COMPLIANCE REQUIREMENTS RELATED TO THE SALES FORECAST THAT YOU ADDRESS IN THIS PROCEEDING?

A. Yes, the Minnesota Public Utilities Commission (the "Commission") has issued orders requiring that MERC:

1) Prepare a summary spreadsheet that links together its test year sales and revenue estimates, the class cost of service study ("CCOSS") and its rate design schedules;[2]
2) Provide a spreadsheet that fully links together all raw data to the most detailed information available and in a format that enables the full

[2] *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G007,011/GR-08-835, Order After Reconsideration (September 14, 2009); *In the Matter of a Petition by Minnesota Energy Resources Corporation for Authority to Increase Natural Gas Rates in Minnesota*, Docket No. G011/GR-13-617, Findings of Fact, Conclusions, and Order at 63 (October 28, 2014).

replication of MERC's process that the Company uses to calculate the input data it uses in its test-year sales analysis;[3]

3) Provide a bridging schedule that fully links together old and new billing systems, and demonstrates that there is no difference between the two billing systems, in the event the Company updates, modifies, or changes its billing system;[4]

4) Provide any, and all, data used for its sales forecast 30 days in advance of its next general rate case;[5]

5) Provide detailed information sufficient to allow for replication of any and all Company-derived forecast variables;[6] and

6) Work with the Department of Commerce, Division of Energy Resources (the "Department") to address comments and concerns raised regarding MERC's forecast methodology in Docket No. G011/GR-17-563 ("2017 Rate Case").[7]

---

[3] *In the Matter of a Petition by Minnesota Energy Resources Corporation for Authority to Increase Natural Gas Rates in Minnesota*, Docket No. G011/GR-13-617, Findings of Fact, Conclusions, and Order at 63 (October 28, 2014).

[4] *Id.*

[5] *Id.* In Docket No. G011/GR-15-736, MERC also agreed to confirm in future forecast pre-filings that all relevant data files are provided to the Department.

[6] *Id.*

[7] *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G011/GR-17-563, Findings of Fact, Summary of Public Testimony, Conclusions of Law, and Recommendations at ¶ 502 (Sept. 21, 2018). These findings, which were incorporated into the Commission's final order, provide:

> Beginning at least six months before MERC files its next rate case, MERC and the Department should work on the following forecasting-related issues:
> (1) whether MERC's forecasting models have appropriate signs on the independent variables chosen by MERC;
> (2) use of actual weighted Heating Degree Days;
> (3) avoiding use of predicted residential customer counts as an independent variable in the Small C&I customer count model;
> (4) reducing misallocation or "ad hoc adjustments" of customer classifications between the Small C&I class (a decoupled class) and the Large C&I class (a non-decoupled class);
> (5) implementing improvements to transportation models; and,

In the 2017 Rate Case, the Commission adopted the recommendation of the Administrative Law Judge to remove certain reporting requirements from Docket No. G011/GR-10-977 related to MERC's forecasting, but to continue the requirement that MERC provide a bridging schedule that fully links together old and new billing systems, and demonstrates that there is no difference between the two billing systems, in the event the Company updates, modifies, or changes its billing system.[8]

Q. HAS MERC COMPLIED WITH THESE REQUIREMENTS?

A. Yes. MERC is addressing each of the above compliance requirements in this case as follows:

1) The spreadsheet required in the first requirement above, per Docket Nos. G007,011/GR-08-835 and G011/GR-13-617, is provided as Exhibit __ (JJP-D), Schedule 4 to my Direct Testimony.

2) The second Commission requirement above—a spreadsheet that fully links together all raw data to the most detailed information available and in a format that enables the full replication of MERC's process used to calculate the input data it uses in its test-year sales analysis—was provided with MERC's forecast pre-filing on September 30, 2022 in this docket.

(6) resolving data integrity issues, including those related to the Small C&I and Large C&I customer classes and the unavailability of historical data.

[8] *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G011/GR-17-563, Findings of Fact, Conclusions, and Order at 49, Order Point 19 (Dec. 26, 2018).

3) The third Commission requirement above does not apply in this case because historical data from only one billing system was used to prepare the Test Year forecast.[9]

4) In compliance with item four, MERC filed its test year sales forecast data on September 30, 2022—more than 30 days in advance of this filing.[10]

5) MERC's sales forecast pre-filing submitted in this docket on September 30, 2022 also provides detailed information to allow for replication of all Company-derived forecast variables, in compliance with item five above.

6) In compliance with item six above, MERC had discussions with the Department on March 20, 2019, April 17, 2020, and May 13, 2022,[11] regarding MERC's forecasting methodology as described in Section II of my testimony, below.

[9] As noted above, the requirement to provide a bridging schedule that fully links together old and new billing systems, and demonstrates that there is no difference between the two billing systems applies only in the event the Company updates, modifies, or changes its billing system. *In the Matter of a Petition by Minnesota Energy Resources Corporation for Authority to Increase Natural Gas Rates in Minnesota*, Docket No. G011/GR-13-617, Findings of Fact, Conclusions, and Order at 63 (October 28, 2014). This compliance requirement was addressed in MERC's last rate case, Docket No. G011/GR-17-563, in the Direct Testimony of Mr. Seth DeMerritt, with respect to MERC's implementation of the Improved Customer Experience ("ICE") billing system. In this proceeding, the requirement is not triggered because MERC has not modified its billing systems since its last rate case and historical data from only one billing system was used to prepare the test year forecast.

[10] In accordance with the Commission's Order in Docket No. G011/GR-15-736, MERC confirmed that all relevant data files were provided to the Department through eService, electronic mail, and delivered on a CD.

[11] MERC reached out to the Department in spring 2021 to hold annual discussions. The Department determined that with MERC not filing a rate case in 2021, an annual discussion was not warranted.

Q. CAN YOU SUMMARIZE THE RESULTS OF THE SUMMARY SPREADSHEET COMPARING THE SALES FORECAST TO THE CCOSS AND THE RATE DESIGN?

A. Yes. Exhibit ___ (JJP-D), Schedule 4 compares the MERC Minnesota sales and fixed charge counts between what was generated by the sales forecast to what was used in the CCOSS and the rate design model. Exhibit ___ (JJP-D), Schedule 4 also compares the revenues generated in the rate design model to those used in the CCOSS. In all instances, the values tie. It should be noted that the values on Exhibit ___ (JPP-D), Schedule 4 only identify the units associated with MERC's Minnesota customers, and that the sales forecast was done at a Corporate MERC level. Therefore, the Michigan sales and fixed charge counts are identified in Exhibit ___ (JJP-D), Schedules 1 through 3, but do not flow through to the revenue deficiency calculation.

III. CONSULTATION WITH THE DEPARTMENT

Q. WHAT ITEMS DID YOU DISCUSS WITH THE DEPARTMENT WITH RESPECT TO MERC'S FORECAST?

A. MERC met with the Department to discuss the concerns raised by the Department with respect to MERC's forecast in the 2017 Rate Case and to attempt to reach resolution regarding those issues for purposes of MERC's forecast in this case. MERC also asked for general input and feedback and provided an overview of its anticipated forecast methodology. In particular, MERC and the Department discussed (1) whether MERC's forecasting models

have appropriate signs on the independent variables chosen by MERC; (2) use of actual weighted Heating Degree Days ("HDDs"); (3) avoiding predicted residential customer counts as an independent variable in the Small Commercial and Industrial ("Small C&I") customer count model; (4) reducing misallocation or "ad hoc adjustments" of customer classifications between the Small C&I class (a decoupled class) and the Large Commercial and Industrial ("Large C&I") class (a non-decoupled class); (5) implementing improvements to the transportation models; and (6) resolving data integrity issues, including those related to the Small C&I and Large C&I customer classes and the unavailability of historical data.

Q. WHAT DID MERC AND THE DEPARTMENT DISCUSS WITH RESPECT TO MERC'S FORECASTING MODELS HAVING APPROPRIATE SIGNS ON THE INDEPENDENT VARIABLES CHOSEN?

A. MERC agreed that it would evaluate the signs of the estimated coefficients from the models and, if necessary, be prepared to explain why any coefficient does not have the expected sign.

Q. HAS MERC REVIEWED THE SIGNS OF THE INDEPENDENT VARIABLES USED IN ITS MODELS TO CONFIRM THE COEFFICIENTS HAVE THE EXPECTED SIGN?

A. Yes, MERC reviewed the independent variables for all models to confirm that the signs of the coefficients are consistent with MERC's expectations.

Q. WHAT DID MERC AND THE DEPARTMENT DISCUSS WITH RESPECT TO THE USE OF ACTUAL WEIGHTED HEATING DEGREE DAYS?

A. MERC confirmed with the Department that the Company would only use actual weather data in its regression models. In preparing the 2023 Test Year sales forecast, the historical time series used in the regression models only contained actual sales and actual weighted heating degree days. No weather normalized historical data were used in the regression models.

Q. WHAT DID MERC AND THE DEPARTMENT DISCUSS REGARDING AVOIDANCE OF PREDICTED RESIDENTIAL CUSTOMER COUNTS AS AN INDEPENDENT VARIABLE IN THE SMALL C&I CUSTOMER COUNT MODEL?

A. In the Company's 2017 Rate Case, the Department expressed concern with MERC's use of a predicted residential customer variable as an independent variable in its Small C&I customer class regression model, because the independent variable requires another layer of forecasting. The Department noted that the increase in Small C&I customers may be directly impacted, in general, by the economy as opposed to increases in residential customers.

MERC and the Department discussed the use of alternative independent variables, such as demographic variables, to address the Department's identified concerns. MERC agreed that it would evaluate the use of such demographic variables in place of using residential customer counts as an independent

variable in its Small C&I customer count model. As discussed below, MERC has incorporated a county-level population variable representing the Company's service territory in the C&I customer count model, and is not using a predicted residential customer variable in the C&I model. The demographic variables incorporated into the customer count regression models explain, or are strongly correlated with, the change in historical actual customer counts.

MERC believes that using independent variables that represent the theoretical drivers of customer growth is the best approach and, based on discussion, MERC understands that the Department concurs with this approach. MERC also recognizes that there may be limitations with respect to the actual and forecasted demographic data available, which could lead to unreasonable or less than satisfactory model results. For example, due to the more heterogeneous make-up of the C&I classes (as compared to the Residential class), available demographic variables may not be strongly correlated with historical actual customer counts. While MERC did not encounter issues with the proposed demographic variable included in the customer count models in this filing, limitations of available data may necessitate or support the use of a different variable or modeling approach in the future, including using highly correlated residential customer class customer counts as a substitute. In the event MERC makes such a change in the future, MERC will provide testimony supporting the use of such variable.

Q. WHAT DID MERC AND THE DEPARTMENT DISCUSS REGARDING REDUCTION OF MISALLOCATION OR "AD HOC ADJUSTMENTS" OF CUSTOMER CLASSIFICATIONS BETWEEN THE SMALL C&I AND THE LARGE C&I CLASSES?

A. In the Company's 2017 Rate Case, the Department expressed concern that MERC's C&I customers were not being classified correctly and that their historical usage was not captured in the appropriate class. In discussions with the Department, MERC noted that this issue had been addressed with the establishment of the new C&I classes in MERC's 2017 Rate Case and the elimination of any decoupling associated with C&I customers. MERC also noted that the same billing system was utilized before and after the new rate classes went into effect in mid-2019. The C&I sales and customer count forecasts for classes 1-3 use tariff level billing data to develop allocations to the rate schedule level.

Additionally, as part of the Company's 2017 Rate Case, MERC established an annual review process to ensure customers are assigned to the appropriate rate class or are reassigned based on their actual usage. In particular, MERC's tariff sheet 8.39 provides for an annual review of all firm and interruptible commercial and industrial customer accounts to ensure customer annual usage is within the usage requirements of the specified rate schedule. As discussed in the 2017 Rate Case, the inclusion of a +/- ten percent band in the annual review mitigates against frequent switching for customers on the cusp of two classes. As

described in the Direct Testimony of Company witness Ms. Joylyn Hoffman Malueg, MERC has reported each year on the results of its annual customer reviews, which have resulted in a very small percentage of customers being reassigned based on review of customer usage.

Q. DO MERC'S C&I FORECASTS ACCURATELY REFLECT HOW CUSTOMERS MAY MOVE FROM ONE CLASS TO ANOTHER BASED ON USAGE AND THE APPROVED ANNUAL REVIEW PROCESS?

A. Yes, by using actual tariff level billing data and conducting consistent annual evaluations of customer usage and customer class assignments, the regression models accurately capture customer movement between customer classes based on the results of the annual evaluations.

Q. HAS MERC APPLIED ANY AD HOC ADJUSTMENTS TO THE SALES FORECAST IN THIS CASE?

A. No, there were not any ad hoc adjustments made to the sales and customer count forecasts.

Q. DID MERC AND THE DEPARTMENT DISCUSS ANY OTHER ISSUES OR CONCERNS WITH RESPECT TO ENSURING DATA INTEGRITY?

A. As already discussed above, in MERC's 2017 Rate Case, the Department raised concerns regarding the reassignment of customers in the Small and Large C&I classes. MERC and the Department discussed this issue, as described above.

MERC also worked with revenue accounting to correct any instances of negative sales in the monthly historical data series used to forecast test year sales.

Q. WHAT DID MERC AND THE DEPARTMENT DISCUSS REGARDING IMPLEMENTATION OF IMPROVEMENTS TO THE TRANSPORTATION MODELS?

A. In MERC's 2017 Rate Case, the Department expressed concerns with MERC's transportation forecast under-estimating transportation sales volumes. In discussions with the Department, MERC indicated that the Company was planning to forecast its largest customers individually to address the Department's identified concerns with previous transportation forecasting. The Department also asked about MERC's plans to forecast sales to large transport customers that experienced decreases in historical usage due to temporary idling. As described in greater detail in Section IV of my testimony, MERC considered the impact of any historical periods when idling or production declines were present during the preparation of the 2023 Test Year forecast. This approach ensured that the forecasts accurately reflect projected customer usage in the future absent undue influence from historical temporary production declines or idling.

Q. HOW DO THE CHANGES IMPLEMENTED FOR MERC'S TRANSPORTATION FORECAST ADDRESS THE DEPARTMENT'S PREVIOUS CONCERNS?

A. The 2023 Test Year sales forecast methodology was revised to improve the accuracy and transparency of the transportation customer class sales forecast. Previously, the transportation customer class sales forecast was based on a regression model for the entire class by PGA. The first change consisted of dividing the transportation customer class into two groups: 1) small transportation customers; and 2) large transportation customers. The second step entailed forecasting the small transportation customers in aggregate using a regression model while the large transportation customers, including the taconite mines, were forecasted individually. There are several benefits to using this revised approach. First, the total sales to the transportation customer class are highly concentrated among a relatively small number of large customers. Forecasting the largest customers on an individual basis enabled the inclusion of customer-specific trends and intelligence. Second, the small transportation and large transportation groups have unique usage patterns. For instance, the usage profile of a taconite mine customer (large customer) is likely to be very different from the usage profile of a school (small customer). The revised forecasting methodology enables these two groups of customers to be modeled more accurately based on their usage patterns.

Q. DID MERC AND THE DEPARTMENT DISCUSS ANY ADDITIONAL ITEMS WITH RESPECT TO MERC'S FORECAST?

A. Yes, MERC answered additional general questions from the Department regarding the Company's anticipated sales forecasting methodology and approach and anticipated rate case filing.

Q. WHAT DO YOU CONCLUDE REGARDING THE ISSUES THE DEPARTMENT RAISED IN MERC'S LAST RATE CASE?

A. I conclude that MERC and the Department worked together to address each of the issues and concerns the Department raised with respect to MERC's sales forecast in the Company's last rate case. As described in greater detail below, MERC's sales forecasting methodology for the 2023 Test Year is reasonable, fully supported, and has incorporated feedback from the Department based on various continued discussions over the years since MERC's 2017 Rate Case.

Q. DOES MERC HAVE A POSITION ON THE CONTINUATION OF THE REQUIRED MEETINGS WITH THE DEPARTMENT?

A. Yes, MERC has found the discussions with the Department to be constructive and beneficial with respect to the concerns raised in the 2017 Rate Case and described above. MERC supports continuing these discussions in the future if new issues arise in this or other dockets. Absent any new issues, however, MERC respectfully requests elimination of the requirement for the Company to meet with the department six months in advance of filing a general rate case.

The Company would intend to continue to engage with the Department on any specific issues or concerns that arise in the future.

IV. PROPOSED SALES FORECAST

Q. PLEASE EXPLAIN THE METHODOLOGY USED TO DEVELOP MERC'S 2023 TEST YEAR GAS SALES FORECAST.

A. MERC'S 2023 test year sales forecast was developed using several methods including: 1) Ordinary Least Squares ("OLS") regression models; 2) individual customer forecasts; and 3) rate schedule level forecasts. The details of each of these methodologies are discussed below. The resulting 2023 Test Year sales forecast is attached to my testimony as Exhibit ___ (JJP-D), Schedule 1.

Q. HOW DOES THE FORECASTING METHODOLOGY USED IN THIS FILING COMPARE TO THE METHODOLOGY USED IN MERC'S LAST RATE CASE?

A. MERC used the OLS regression methodology for all of its forecast models in the 2017 Rate Case. Forecasts were conducted based on MERC's three PGA systems at the revenue class level within each PGA, namely, Residential, Small C&I, Large C&I, Joint, Interruptible, Transport, and Company Use. As noted above and discussed in greater detail later in my Direct Testimony, while the Company continued to use OLS regression models for a number of its customer class forecasts, the Company has refined the regression modeling. Additionally, MERC has utilized individual customer forecasts and rate schedule forecasts for some classes. Individual and rate schedule level forecasts allow for customers

and rate schedules less impacted by trend variables to be developed separately. They also ensure that customer-specific information is included within the forecast and that usage anomalies do not impact forecasts.

Q. PLEASE EXPLAIN IN DETAIL THE METHODOLOGY USED TO PREPARE MERC'S 2023 TEST YEAR GAS SALES FORECAST.

A. 1) OLS Regression Models

The OLS regression models were estimated in MetrixND.[12] The forecasts were developed with monthly historical calendar data through May 2022. The normal weather variable, HDDs, was based on a rolling 20 year average (2002 through 2021) for MERC's two PGA areas: MERC-NNG (7,231 HDD) and MERC-Consolidated (8,624 HDD). The historical time series used in the regression models only contained actual weighted HDDs. No weather normalized historical data was used in the regression models. The forecasts developed through OLS methodology were:

- Residential,
- Commercial and Industrial Classes 1-3 ("Firm C&I"),
- Interruptible Classes 2-4,
- Firm/Interruptible[13] ("F/I") Class 2, and
- Transportation Classes 2-4 ("Small Transport").

[12] MetrixND is a statistical software package developed by Itron.
[13] Formerly referred to as "Joint."

Residential sales were forecasted using a combination of average use per customer and customer count models. The results of both models were multiplied together to develop the test year sales forecast. The Residential forecast also includes Residential Farm Tap customers. The historical forecast period used within the Residential regression model was January 2018 through May 2022.

Firm C&I was forecasted using a combination of average use per customer and customer count models. The results of both models were multiplied together to develop the test year sales forecast. The historical forecast period used within the regression model was July 2019 through May 2022. Firm C&I only includes customers that have firm sales (*i.e.*, no interruptible sales) and there are no customers in Firm C&I Classes 4 through 5 in the historical period or the test year.

Interruptible Classes 2 through 4 and F/I Class 2 were forecasted in aggregate using an OLS model projecting sales. The projected sales were then allocated to the individual rate schedules (*i.e.*, Interruptible Classes 2 through 4 and F/I Class 2). The historical forecast period used within the regression model was September 2019 through May 2022. Interruptible Classes 2 through 4 only include interruptible sales (*i.e.*, no firm sales) and F/I Class 2 includes customers that have both firm and interruptible sales. An OLS model was used to forecast customer counts for the Interruptible Classes 2 through 4 in aggregate (however,

the customer count forecast for F/I Class 2 was based on historical actual customer counts as of May 2022 because there were fewer than 10 customers in the class and no changes in customer counts expected in the test year). The projected customer counts were then allocated to individual rate schedules. The historical forecast period used within the regression model was November 2020 through May 2022. There are no customers in Interruptible Classes 1 and 5 or F/I Classes 1 or 3 through 5 in the historical period or test year.

Small Transport was forecasted using sales and customer count models. The historical forecast period used within the regression models was January 2016 through May 2022 for sales and January 2018 through May 2022 for customer counts. Small Transport includes firm and interruptible sales for Transport Classes 2 through 4 excluding Transport Class 2 CIP Exempt, Transport Power Generation, Transport Flex, and Transport Taconite, which were individually forecasted. There are no customers in Transport Class 1 in the historical period or test year forecast.

The inputs to the OLS methodology included economic and demographic variables, weather variables, binary variables, and time trend variables. The forecasting models also incorporated various seasonal and autoregressive components where needed to correct for seasonality[14] and serial correlation[15] in

[14] Characteristic of time series data which data experiences regular and predictable changes that recur every calendar year.

[15] Relationship between a variable's current value given its past values.

the data patterns. The OLS forecast period was from June 2022 through 2027, with 2023 being the test year for this rate case. The estimated average use per customer ("AvgUse") regression specification using the OLS construct is:

$$AvgUse_t = \beta_0 + \beta_1 HDD65_t + \beta_2 X_t + \varepsilon_t$$

Where β_1 and β_2 represent independent variables as described in table below.

MERC		
Customer Group	**Dependent Variable**	**Independent Variables**
Residential	Residential Average Use	Weather – HDD65 Residential NG Furnace Intensity Gas Price Autoregressive – AR(1)[16] Moving Average – MA (1)[17]
Residential	Residential Customers	MN Population (Weighted by County) Autoregressive – AR(1) Moving Average – MA (1)
Commercial and Industrial (Class 1-3)	Commercial and Industrial (Class 1-3) Average Use	Weather – HDD65 Commercial and Industrial Heat Intensity Gas Price Autoregressive – AR(1)
Commercial and Industrial (Class 1-3)	Commercial and Industrial (Class 1-3) Customers	MN Population (Weighted by County) Binary Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov Autoregressive – AR(1) Moving Average – MA (1) Moving Average – MA (2)

[16] Autoregressive model ("AR"): This model relates the dependent variable (for example, sales) to its own historical values. An autoregressive process is one whose behavior is determined by its own past values, plus an unpredictable shock.

[17] Moving Average model ("MA"): This forecasting method is the average of the last "m" observations. It is useful for time series with a slowly changing mean. That is, a moving average model is conceptually a linear regression of the current value of the series against previous (unobserved) white noise error terms or random shocks.

MERC		
Customer Group	**Dependent Variable**	**Independent Variables**
Interruptible (Class 2-4) and F/I Class 2	Interruptible (Class 2-4) and F/I Class 2 Sales	Weather – HDD65 Binary – Bill_Corr_Bin (Dec 2019)
Interruptible (Class 2-4)	Interruptible (Class 2-4) Customers	Binary – Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov Autoregressive – AR(1)
Transportation (Small Transport)	Transportation (Small Transport) Sales	Constant Weather – HDD65 GSP_Manufacturing_Baseline Autoregressive – AR(1)
Transportation (Small Transport)	Transportation (Small Transport) Customers	MN Population (Weighted by County) Binary – Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov Autoregressive – AR(1) Autoregressive – AR(2) Autoregressive – AR(3) Moving Average – MA (1)

The OLS models' results were evaluated through various methods to judge goodness of fit and significance. Within each model, the adjusted R^2 value was used to evaluate the overall goodness of fit of the model. The T-Statistics, F-Statistics, and P-Values were judged for reasonableness and significance on a model-by-model basis. Also, each dependent variables' coefficient was evaluated to verify that the signs are in the correct direction and are reasonably sized. Finally, the Durbin Watson Statistic, which is a test for autocorrelation in a regression model's output, was also verified in each model.

2) Individual Customer Forecasts

The forecasts developed through individual forecast methodology were:

- Commercial and Industrial-IA rate schedule;
- Interruptible Power Generation; and
- Transport Class 5, Transport Class 2 CIP Exempt, Transport Power Generation, Transport Flex, and Transport Taconite ("Large Transport").

The Commercial and Industrial IA and Interruptible Power Generation rate schedule forecasts were prepared at the individual customer level using historical growth rates. The historical growth rates were derived from historical actual sales for the period April 2020 through May 2022. The growth rates were then multiplied by historical actual sales from the most recent 12-month period. MERC believes that for these customer groups, recent history is most representative of projected future use in the test year and the Company does not have any customer-specific intelligence that would indicate otherwise. The customer count forecasts were based on the most recent historical observation (May 2022) and held constant due to no expected change to customer counts in the test year.

The Large Transportation forecast was developed on a customer level basis, taking into account historical usage (January 2019 through June 2022) and customer intelligence. The customer count forecast was held constant based on the most recent historical observation (June 2022), which is consistent with

customer intelligence.[18] There were three unique methods used to forecast the Taconite Mine customers to address the temporary idling or production declines in the second and third quarter of 2020 due to the pandemic and incorporate customer-specific intelligence:

1) The first method was the default method and based on actual sales from January 2021 through May 2022;
2) The second method applied to one customer and was based on actual sales from July 2019 through June 2022; and
3) The third method applied to one customer which was temporarily idled at the time that the forecast was prepared. The 2023 Test Year forecast assumed a restart date based on information available to MERC.

3) Rate Schedule Level Forecasts

The forecasts developed through rate schedule level forecast methodology were:

- Commercial and Industrial – Farm Tap and
- Interruptible – Ag Grain Dryers.

The Commercial and Industrial Farm Tap and Interruptible Ag Grain Dryer rate schedule forecasts were prepared at the individual customer level using historical growth rates. The historical growth rates were derived from historical actual

[18] MERC assumed no changes in the number of Large Transportation customers due to the absence of a projection of customer switching into and out of the transportation rate schedules.

sales for the period April 2020 through May 2022. The growth rates were then multiplied by historical actual sales from the most recent 12-month period. MERC believes that recent history is most representative of projected future use in the test year for these customer classes and does not have any customer-specific intelligence that would indicate otherwise. The customer count forecasts were based on the most recent historical observation (May 2022) and held constant due to no expected changes in the test year. Using actual customer counts as of May 2022 is reasonable because, as discussed in the Direct Testimony of Ms. Joylyn Hoffman Malueg, no new Farm Tap customers are being added to MERC's system, and farm tap service offerings are closed for new customers. Additionally, for the Ag Grain Dryer classes, the assumption of constant customer counts is appropriate because these are small and unique classes of customers that are not affected by the demographic trends driving the customer growth in C&I classes 1–3.

Q. WERE THE 2021 HISTORIC SALES USED IN THIS FILING WEATHER NORMALIZED?

A. Yes, the actual calendar sales for 2021 used in this filing and shown in Exhibit ___ (JJP-D), Schedule 1 are weather normalized based on the methodologies described below.

Q. DID MERC MAKE ANY EXOGENOUS, OR POST REGRESSION, ADJUSTMENT TO THE SALES OR CUSTOMER COUNT MODEL OUTPUTS?

A. No.

V. DEVELOPMENT OF WEATHER DATA

Q. ARE THE WEATHER STATIONS USED TO CALCULATE MERC'S SALES FORECAST IN THIS PROCEEDING THE SAME AS THOSE USED IN MERC'S LAST RATE CASE?

A. Yes, they are the same weather stations used in the 2017 Rate Case.

Q. DID MERC USE THE SAME PROCESS TO DEVELOP THE ACTUAL WEATHER USED IN THE OLS REGRESSION MODELS IN THIS CASE AS THE COMPANY'S 2017 RATE CASE?

A. Yes. MERC utilized the same process to develop the historical actual weather used in the OLS regression models in this case as it did in the Company's 2017 Rate Case. As described below, MERC used a "virtual weather station," which is a composite of multiple weather stations located in or near MERC's service territory. The actual weather for each of these weather stations was weighted based on the number of customers associated with each weather station. The weightings from the 2017 Rate Case, as shown in the table below, were used in the OLS regression models for the 2023 Test Year with respect to historical actual weather. As described below, updated weightings were used to calculate the normal weather in this filing.

Weather Station	Consolidated	NNG	Total
BMJ-Bemidji	37.6%	1.5%	7.1%
COQ-Cloquet	23.7%	9.5%	11.7%
FGO-Fargo	14.1%	0.0%	2.2%
INL-International Falls	24.5%	0.0%	3.8%
MSP-Minneapolis	0.1%	31.0%	26.3%
ROC-Rochester	0.0%	46.6%	39.3%
OTG-Worthington	0.0%	11.4%	9.6%
Total	100%	100%	100%

Q. PLEASE EXPLAIN HOW THE 2023 TEST YEAR NORMAL WEATHER USED IN THE OLS REGRESSION MODELS WAS DEVELOPED.

A. DTN provided the raw weather data for seven regional weather stations (Bemidji, Cloquet, Fargo, International Falls, Minneapolis, Rochester, and Worthington). The data from the individual weather stations was then weighted to create variables for "virtual weather stations" that are representative of the overall weather for MERC's two PGAs: MERC-Consolidated and MERC-NNG. The weather stations used for MERC-Consolidated were Bemidji, Cloquet, Fargo, International Falls, Minneapolis, Rochester, and Worthington. The weather stations used for MERC-NNG were Bemidji, Cloquet, Minneapolis, Rochester, and Worthington.

The weightings were developed by first determining the number of Residential and Commercial and Industrial ("C&I") firm customers MERC had, by zip code, as of January 2022. Each zip code was then assigned to a weather station based on proximity. Once the assignments were made, the weightings were calculated by taking the number of customers assigned to each weather station

divided by the total number of customers. The resulting weightings are reflected in the following table:

Weather Station	Consolidated[19]	NNG	Total
BMJ-Bemidji	38.1%	1.5%	7.1%
COQ-Cloquet	23.1%	9.5%	11.6%
FGO-Fargo	14.8%	0.0%	2.3%
INL-International Falls	23.8%	0.0%	3.6%
MSP-Minneapolis	0.1%	31.7%	26.9%
ROC-Rochester	0.1%	46.5%	39.4%
OTG-Worthington	0.1%	10.8%	9.1%
Total	100%	100%	100%

Actual degree days were calculated by summing the hourly temperatures each day by weather station. Next, the daily average temperature was calculated for each weather station, and the number of HDDs (using 65 °F as the base) was determined. Finally, the weighting factors were applied to the HDD data for each day and weather station.

The normal HDDs were calculated by summing the normal hourly temperatures each day by weather station, based on the 20-year average weather from 2002 through 2021. Next, the normal daily average temperature was calculated for each weather station, and the number of HDDs (using 65 °F as the base) was determined. Finally, the weighting factors were applied to the Normal HDD data for each day and weather station.

[19] The total for Consolidated as reflected in this summary table is equal to 100.1% due to rounding. Actual total weather station weightings for Consolidated equal 100%.

VI. WEATHER NORMALIZATION MODELS AND METHODOLOGY

Q. PLEASE EXPLAIN THE PROCEDURE USED TO DEVELOP THE WEATHER NORMALIZED ADJUSTMENT TO SALES.

A. Normal weather was defined as the average daily temperature over the 20-year period from 2002 through 2021. As discussed earlier, this results in 7,231 HDDs for MERC-NNG and 8,624 HDDs for MERC-Consolidated. The weather normalized sales are based on a mathematical model that multiplies the daily average actual sales of July and August of the previous year by the number of days in the month to determine the total base load sales. The total base load sales are then subtracted from actual monthly sales, resulting in weather sensitive sales. The weather sensitive sales are then divided by actual HDDs to give the weather sensitive use per HDD. The final total weather normalized sales are equal to weather sensitive use per HDD multiplied by the normal HDDs for that month, plus total base load sales. The final weather sensitive sales plus base load sales will equal actual sales if the weather adjustment is zero.

Q. DID MERC USE THIS PROCEDURE IN ITS LAST RATE CASE?

A. Yes, MERC used the same method in the 2017 Rate Case.

VII. CUSTOMER CHARGE COUNTS

Q. PLEASE EXPLAIN THE PROCEDURES USED TO DEVELOP CUSTOMER CHARGE COUNTS FOR THE 2023 TEST YEAR.

A. The customer charge counts are based on the results of the customer count models discussed previously with an exception for one Transport Flex customer. The Transport Flex customer receives three customer charges for one forecasted customer based on its billing and metering configuration, but is only charged one monthly administrative fee.

VIII. FIRM/INTERRUPTIBLE FIRM SALES FORECAST

Q. PLEASE EXPLAIN HOW THE FIRM SALES TO CUSTOMERS TAKING SERVICE ON THE FIRM/INTERRUPTIBLE RATE SCHEDULES WERE DEVELOPED FOR THE TEST YEAR.

A. Customers taking service on the Firm/Interruptible rate schedules have the ability to nominate a portion of their load as firm with the remainder of their load served as interruptible. The 2023 Test Year firm sales for the Firm/Interruptible rate schedules are shown in Exhibit ___ (JJP-D), Schedule 3. The firm sales were estimated using a two-step process. First, total sales for each of the Firm/Interruptible rate schedules was projected or allocated, with total sales defined as the sum of firm and interruptible sales. Second, the total sales were divided into firm and interruptible sales by rate schedule based on the historical relationship between firm and interruptible sales by rate schedule using actual sales from 2021.

IX. FORECAST RESULTS AND CONCLUSIONS

Q. IN YOUR OPINION, DOES THE SALES FORECAST METHODOLOGY THAT YOU FOLLOWED PROVIDE A REASONABLE BASIS FOR ESTABLISHING RATES IN THIS CASE?

A. Yes, the sales forecast methodology presented provides a reasonable estimate of proposed test year sales.

Q. IN YOUR OPINION, DOES THE SALES FORECAST PROVIDE A REASONABLE BASIS FOR ESTABLISHING RATES IN THIS CASE?

A. Yes, the sales forecast is a reasonable estimate of the proposed test year sales based on the information known and available at the time the forecast was prepared and is a reasonable basis for establishing rates in this proceeding.

Q. HOW DOES THE SALES FORECAST FOR MERC'S 2023 TEST YEAR COMPARE TO THE FORECAST APPROVED IN MERC'S LAST RATE CASE?

A. The sales variances shown below are represented as annual compound growth rates ("ACGR"). Residential sales for the 2023 Test Year are projected to be higher than the forecast approved in MERC's last rate case by 0.7%. Commercial and Industrial sales for the 2023 Test Year are projected to be higher than the forecast approved in MERC's last rate case by 3.1%. Combined sales to Interruptible and Firm/Interruptible system sales customers for the 2023 Test Year are projected to be lower than the forecast approved in MERC's last

rate case by 5.7%. Total System sales for the 2023 Test Year are projected to be higher than the forecast approved in MERC's last rate case by 0.9%. Transportation sales for the 2023 Test Year are projected to be higher than the forecast approved in MERC's last rate case by 4.6%. Total throughput for the 2023 Test Year is projected to be higher than the forecast approved in MERC's last rate case by 3.1%.

Q. HOW DOES THE SALES FORECAST FOR MERC'S 2023 TEST YEAR COMPARE TO ACTUAL SALES IN THE HISTORIC YEAR 2021?

A. The sales variances described below are based on sales for the Minnesota jurisdiction only and represented as ACGRs. Residential sales for the 2023 Test Year are 1.7% higher than 2021 weather-normalized sales. Commercial and Industrial sales for the 2023 Test Year are 2.8% higher than 2021 weather-normalized sales. Combined sales to Interruptible and Firm/Interruptible system sales customers for the 2023 Test Year are 4.0% higher than 2021 weather-normalized sales. Total system sales for the 2023 Test Year are 2.3% higher than 2021 weather-normalized sales. Transportation sales for the 2023 Test Year are 0.5% lower than 2021 weather-normalized sales. Total throughput for the 2023 Test Year is projected to be higher than 2021 weather-normalized sales by 0.6%.

Q. DOES THIS CONCLUDE YOUR TESTIMONY ON THE SALES FORECAST?

A. Yes, it does.

PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

Minnesota Energy Resources Corporation
Proposed Test Year Throughput and Adjustments
For the 12 Months Ending, December 31, 2023

Line	Rate Class	2021 Historical Throughput (Therms)	2021 Weather Normalization (Therms)	Historical Adjusted Throughput (Therms)	2022 Growth (Therms)	2022 Forecast Throughput (Therms)	2023 Growth (Therms)	2023 Forecast Throughput (Therms)
	(col. 1)	(col. 2)	(col. 3)	(col. 4)	(col. 5)	(col. 6)	(col. 7)	(col. 8)
1	Residential	177,234,202	6,898,011	184,132,213	22,321,179	206,453,392	(16,033,339)	190,420,054
	C&I General Service Rate							
6	Class 1	7,752,806	184,427	7,937,233	2,921,482	10,858,715	(2,120,091)	8,738,625
	Class 2	92,237,848	2,194,197	94,432,045	15,206,254	109,638,299	(10,118,470)	99,519,830
	Class 3	9,313,620	221,557	9,535,177	863,324	10,398,501	(432,100)	9,966,401
14	Total C&I General Service	109,304,274	2,600,181	111,904,455	18,991,061	130,895,516	(12,670,661)	118,224,855
	Interruptible & Joint							
15	Interruptible	25,114,268		25,114,268	2,230,659	27,344,927	(131,716)	27,213,211
22	Joint	336,111		336,111	(66,724)	269,387	56,733	326,119
23	Total Interruptible & Joint	25,450,379	0	25,450,379	2,163,935	27,614,314	(74,983)	27,539,331
24	Transportation	544,435,241		544,435,241	1,706,789	546,142,030	(6,737,546)	539,404,484
32	Total MERC-Minnesota	856,424,096	9,498,192	865,922,288	45,182,964	911,105,252	(35,516,529)	875,588,723
34	Company Use	297,793				319,938		309,126
37	Gas Loss and Unaccounted For	17,397,089				(38,619,192)		19,301,778
38	Sales Company Use + Lost Gas Total MERC	874,118,977				872,805,999		895,199,627

* Excludes sales data for Michigan taconites

Minnesota Energy Resources Corporation
Proposed Weather Normalized Volumes & Revenues
For the 12 Months Ending, December 31, 2021

Line	Rate Class (col. 1)	2021 Weather Normalized Therms (col. 2)	Distribution Charge (col. 3)	2021 Weather Normalized Revenues (col. 4)
	Residential Rate			
1	Residential-NNG	5,891,885	$ 0.24686	$ 1,454,471
2	Residential-Consolidated	1,006,126	$ 0.24686	$ 248,372
4	Total Residential	6,898,011		$ 1,702,843
	C&I General Service Rate			
	NNG Class 1	138,930	$ 0.22251	$ 30,913
	Consolidated Class 1	45,498	$ 0.22251	$ 10,124
	NNG Class 2	1,707,730	$ 0.16857	$ 287,872
	Consolidated Class 2	486,467	$ 0.16857	$ 82,004
	NNG Class 3	183,094	$ 0.12453	$ 22,801
	Consolidated Class 3	38,463	$ 0.12453	$ 4,790
	Total C&I General Service	2,600,181		$ 438,503
	Interruptible & Joint			
14	Interruptible-NNG			$ -
15	Joint-NNG			$ -
16	Interruptible-Consolidated			$ -
17	Joint-Consolidated			$ -
20	Total Interruptible & Joint	0		$ -
	Transportation			
21	Peak Sales-NNG (Nov-Mar)			$ -
22	Off Peak Sales-NNG (Apr-Oct)			$ -
23	Peak Sales-Consolidated (Nov-Mar)			$ -
24	Off Peak Sales-Consolidated (Apr-Oct)			$ -
27	Total Transportation	0		$ -
	Summary			
28	MERC-NNG Total	7,921,638		1,796,057
29	MERC-Consolidated Total	1,576,554		345,290
31	Total MERC-Minnesota	9,498,192		2,141,346

Minnesota Energy Resources Corporation
Actual Year Calender Sales
For the 12 Months Ending, December 31, 2021

All Units in Therms

Calender	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Total
NNG SALES													
[NNG] General Service Residential	27,324,140	30,659,729	15,784,125	12,947,856	5,352,100	2,679,087	2,738,862	2,570,043	3,016,168	6,273,328	13,553,844	26,513,130	149,412,412
[NNG] Farm Tap Residential	253,311	289,395	124,335	199,809	57,301	52,366	37,796	74,222	69,835	360,564	168,924	283,001	1,970,860
[NNG] General Service Class 1	1,081,137	1,442,587	677,208	434,441	179,791	31,690	75,108	114,391	38,343	207,222	527,465	905,548	5,714,930
[NNG] General Service Class 2	11,552,166	16,170,748	5,925,551	5,375,651	2,423,805	1,440,562	1,895,420	1,725,031	1,961,747	2,810,509	6,315,463	11,479,061	69,075,716
[NNG] General Service Class 3	946,388	1,324,585	504,468	447,581	252,427	175,786	258,679	257,440	298,992	705,557	763,539	1,110,653	7,046,096
[NNG] Farm Tap Class 1	15,739	11,978	8,355	11,796	3,977	2,102	6,990	8,083	1,944	21,483	17,225	15,611	125,283
[NNG] Farm Tap Class 2	152,305	262,766	65,043	86,954	36,976	53,755	18,042	30,868	138,559	888,289	638,189	340,669	2,712,415
[NNG] Farm Tap Class 3	74,153	61,456	43,151	29,769	17,764	12,967	42,833	17,213	154,760	50,725	47,618	98,256	650,667
[NNG] Interruptible Class 2	1,113,370	1,179,402	710,395	414,468	210,400	117,964	140,595	66,141	98,870	297,889	755,982	1,142,693	6,248,167
[NNG] Interruptible Class 3	1,548,821	1,347,636	1,108,853	744,622	655,852	448,216	347,299	353,897	385,369	480,296	1,018,475	1,305,262	9,744,600
[NNG] Agricultural Grain Dryer Class 1	8,510	19,681	5,299	3,607	1,861	4,928	2,654	471	1,070	224,338	333,558	79,763	685,739
[NNG] Agricultural Grain Dryer Class 2	2,592	1,655	1,166	521	299	2,733	32,741	13,114	179,423	1,379,757	1,001,692	271,407	2,887,101
[NNG] Agricultural Grain Dryer Class 3	-	-	-	-	-	-	-	-	-	4,667	1,829	5	6,501
[NNG] Firm/Interruptible Class 2	13,069	19,255	11,754	8,316	3,226	6,292	4,864	1,655	2,260	2,939	3,388	4,524	81,543
[NNG] Electric Generation Class 1	2,285	13,024	7,647	2,973	1,682	17,111	21,046	24,657	985	4,017	950	1,222	97,600
[NNG] Electric Generation Class 2	2,257	2,613	2,314	1,298	-	-	-	-	-	-	-	-	8,482
CONSOLIDATED SALES													
[Cons] General Service Residential	4,653,505	5,439,698	2,760,549	2,373,347	992,716	392,623	283,504	227,334	319,330	879,122	2,555,582	4,973,620	25,850,931
[Cons] General Service Class 1	383,688	407,723	235,215	130,084	64,291	8,432	28,203	51,203	10,983	66,698	200,897	325,177	1,912,593
[Cons] General Service Class 2	3,290,518	4,665,058	1,616,672	1,576,907	785,791	435,619	531,967	444,911	776,007	664,126	2,012,110	3,650,031	20,449,717
[Cons] General Service Class 3	370,273	310,974	156,494	140,658	86,223	48,686	23,940	13,657	21,750	40,005	145,398	258,799	1,616,857
[Cons] Interruptible Class 2	281,338	306,743	196,852	115,892	64,496	15,056	14,811	14,845	26,817	72,486	179,989	352,082	1,641,405
[Cons] Interruptible Class 3	159,926	173,481	224,499	93,450	111,787	48,853	37,227	35,254	77,346	78,060	103,878	170,882	1,314,643
[Cons] Interruptible Class 4	168,151	602,673	113,260	175,605	224,885	42,337	84,081	37,494	57,247	118,312	242,971	354,994	2,222,008
[Cons] Agricultural Grain Dryer Class 1	2,873	2,920	1,962	1,265	293	151	22	8	234	8,315	18,405	5,116	41,563
[Cons] Agricultural Grain Dryer Class 2	-	-	-	1,448	1,475	131	96	428	55,156	124,160	15,099	5,667	203,660
[Cons] Firm/Interruptible Class 2	43,645	36,798	35,416	18,633	20,577	3,261	3,847	1,961	4,054	7,417	27,811	51,148	254,568
[Cons] Electric Generation Class 1	1,704	2,013	1,628	959	645	741	931	389	578	491	917	1,804	12,799
NNG TRANSPORT													
[NNG] Transport Class 2 (Firm)	254,079	239,499	323,401	174,185	127,461	59,416	98,368	41,349	69,961	62,720	123,954	209,704	1,784,098
[NNG] Transport Class 2 (Interruptible)	187,333	166,682	199,956	119,957	98,484	34,858	40,460	23,702	35,052	34,763	82,498	172,163	1,195,909
[NNG] Transport Class 3 (Firm)	728,993	638,400	851,091	537,915	444,570	211,358	409,974	250,533	304,042	257,157	380,401	578,410	5,592,845
[NNG] Transport Class 3 (Interruptible)	1,411,645	1,318,673	1,513,409	1,050,458	985,426	577,344	1,759,464	1,077,434	1,584,414	1,251,938	1,452,995	1,399,433	15,382,633
[NNG] Transport Class 4 (Firm)	169,827	128,247	154,217	115,650	102,358	55,048	124,554	78,885	104,586	88,434	121,505	140,427	1,383,740
[NNG] Transport Class 4 (Interruptible)	749,910	652,286	663,531	588,105	553,457	467,485	1,072,814	798,541	889,549	760,982	1,192,772	788,933	9,178,365
[NNG] Transport Class 5 (Interruptible)	682,557	440,034	492,796	494,834	609,678	322,290	1,473,696	969,533	1,120,396	519,880	1,408,669	716,213	9,250,576
[NNG] Transport Class 5 CIP Exempt (Firm)	689,994	576,886	738,020	462,302	506,200	276,597	754,860	576,602	664,924	552,465	579,775	469,037	6,847,663
[NNG] Transport Class 5 CIP Exempt (Interruptible)	26,071,228	22,592,632	25,637,434	22,595,869	20,685,240	11,126,343	23,868,464	18,637,030	20,318,121	16,963,589	23,223,614	24,501,798	256,221,362
[NNG] Firm/Interruptible Class 2 Transport	24,933	31,490	45,928	35,143	28,837	5,875	10,355	9,905	11,052	13,775	16,641	39,852	273,787
[NNG] Firm/Interruptible Class 3 Transport	705,538	609,813	775,381	524,397	476,629	242,008	531,729	349,676	446,245	340,208	474,357	609,324	6,085,307
[NNG] Firm/Interruptible Class 4 Transport	367,578	355,472	403,225	294,904	251,989	118,457	206,925	153,855	195,641	159,276	264,456	327,779	3,099,556
[NNG] Firm/Interruptible Class 5 Transport	437,996	369,440	369,712	292,615	337,115	202,325	464,674	358,498	443,418	350,207	325,963	400,938	4,352,900
[NNG] Firm/Interruptible Class 5 Transport CIP Exempt	5,494,738	4,418,177	4,597,352	4,553,352	4,261,532	2,870,542	6,948,123	4,634,867	5,707,441	4,263,490	5,614,364	5,476,308	58,840,286
[NNG] Transport Electric Generation Class 2 (Interruptible)	33,393	93,650	42,992	96,336	146,944	88,327	457,856	211,687	302,626	9,997	106,312	17,989	1,608,109
[NNG] Transport Electric Generation Class 2 CIP Exempt (Firm)	5,999,203	4,070,713	3,850,778	3,903,948	6,604,659	3,577,809	2,215,474	6,813,357	6,371,056	3,719,214	10,848,865	6,717,237	64,692,312
[NNG] Transport Electric Generation Class 2 CIP Exempt (Interruptible)	105,493	132,016	93,710	129,417	165,309	146,732	946,628	630,896	426,990	76,380	544,293	199,943	3,597,807
[NNG] Transport Resale	41,869	38,007	51,785	23,849	16,819	4,251	3,418	2,174	2,449	2,665	11,530	29,345	228,161
[NNG] Transport Flex (Cust A)	665,243	570,210	724,330	729,312	593,358	338,497	514,749	470,978	715,655	577,435	934,020	876,479	7,710,267
[NNG] Transport Flex (Cust F)	394,826	336,376	375,487	331,160	298,727	191,473	447,186	255,494	273,882	304,990	381,633	377,695	3,968,929
[NNG] Transport Flex (Cust G)	144,838	134,190	183,451	116,138	99,048	49,786	102,407	46,851	72,753	67,251	96,608	125,835	1,239,156
CONSOLIDATED TRANSPORT													
[Cons] Transport Class 2 (Firm)	226,909	192,871	289,160	167,594	143,638	50,499	82,604	24,029	60,447	58,716	106,881	175,546	1,578,893
[Cons] Transport Class 2 (Interruptible)	77,762	66,188	95,282	50,217	42,042	12,347	11,118	5,004	6,921	7,558	30,549	60,476	465,464
[Cons] Transport Class 2 CIP Exempt (Firm)	-	-	-	-	-	-	-	-	-	-	5,742	4,499	10,241
[Cons] Transport Class 3 (Firm)	641,294	613,288	709,024	455,020	413,366	157,122	255,537	166,221	218,990	195,651	402,251	552,849	4,780,614
[Cons] Transport Class 3 (Interruptible)	418,972	363,932	488,142	255,447	226,724	118,352	296,970	202,202	199,301	179,922	258,707	394,669	3,403,340
[Cons] Transport Class 4 (Firm)	154,150	140,286	179,623	140,586	125,975	64,787	169,032	107,203	136,271	112,878	151,124	141,715	1,623,630
[Cons] Transport Class 4 (Interruptible)	173,617	148,002	205,593	105,825	89,098	12,589	21,309	15,387	21,093	18,155	68,988	128,385	1,008,041
[Cons] Transport Class 5 (Interruptible)	858,888	912,917	926,146	1,018,698	703,534	525,428	1,100,226	662,130	680,518	700,066	890,304	881,586	9,860,441
[Cons] Transport Class 5 CIP Exempt (Firm)	4,580,159	4,170,322	5,257,812	4,137,796	3,904,196	2,214,190	4,907,880	2,978,392	3,483,853	2,992,920	4,127,680	3,772,829	46,528,028
[Cons] Firm/Interruptible Class 3 Transport	170,022	151,654	222,737	113,307	89,035	34,696	33,730	22,015	25,578	27,964	73,175	142,747	1,106,661
[Cons] Firm/Interruptible Class 5 Transport CIP Exempt	1,006,765	993,588	1,278,635	1,122,088	1,040,058	499,384	1,239,568	769,971	969,205	675,240	840,479	1,101,140	11,536,119
Taconite Mines (Michigan)	**[TRADE SECRET DATA BEGINS…**												
Total MERC													**…TRADE SECRET DATA ENDS]**
Company Use Gas	42,506	51,412	43,440	32,055	25,836	15,384	8,639	6,195	9,473	9,522	17,541	35,789	297,793
Gas Lost & Unaccounted For	110,856	(3,111,046)	3,322,400	1,036,971	(736,804)	12,276,723	(9,611,594)	6,382,649	(8,927,681)	16,149,747	(2,918,599)	3,423,469	17,397,089
Total GCR Gas @ Gate Station	**[TRADE SECRET DATA BEGINS…**												
Michigan	**[TRADE SECRET DATA BEGINS…**												**…TRADE SECRET DATA ENDS]**
Minnesota	107,115,614	110,420,534	82,062,353	70,074,332	55,722,146	30,697,662	57,201,711	47,429,114	53,560,260	51,116,656	85,792,305	105,231,409	856,424,096
													…TRADE SECRET DATA ENDS]

Minnesota Energy Resources Corporation
Projected Calender Sales
For the 12 Months Ending, December 31, 2022

All Units in Therms

Calender	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Total
NNG SALES													
[NNG] General Service Residential	34,355,038	30,994,694	21,997,332	16,926,530	6,282,826	1,486,507	694,069	1,152,262	3,894,956	11,432,333	18,159,175	26,311,113	173,686,835
[NNG] Farm Tap Residential	264,074	256,489	230,831	193,969	80,496	17,497	8,170	13,563	45,846	134,565	213,744	309,698	1,768,942
[NNG] General Service Class 1	1,676,138	1,628,828	1,243,830	696,295	207,643	99,830	85,304	111,131	202,503	476,247	701,711	1,020,383	8,149,844
[NNG] General Service Class 2	15,834,352	14,524,006	10,255,939	7,523,417	3,316,542	1,154,512	986,518	1,285,217	2,341,892	5,507,726	8,115,175	11,800,469	82,645,764
[NNG] General Service Class 3	1,490,598	1,259,753	933,669	749,937	354,271	116,088	99,196	129,234	235,489	553,808	815,957	1,186,502	7,924,502
[NNG] Farm Tap Class 1	17,980	25,049	19,832	13,888	6,337	7,424	3,065	3,387	8,068	9,032	13,549	15,870	143,481
[NNG] Farm Tap Class 2	185,118	191,104	130,754	151,129	66,541	17,177	28,585	100,327	613,586	437,276	276,166	167,763	2,365,526
[NNG] Farm Tap Class 3	112,702	49,088	31,694	130,747	31,364	40,780	15,940	112,059	35,039	32,627	79,652	102,136	773,827
[NNG] Interruptible Class 2	1,187,298	964,977	841,092	614,533	262,750	208,513	244,502	244,555	351,611	653,034	813,690	950,762	7,337,317
[NNG] Interruptible Class 3	1,289,589	1,317,404	1,000,584	989,031	426,235	321,612	377,121	377,202	542,326	1,007,243	1,255,040	1,466,459	10,369,846
[NNG] Agricultural Grain Dryer Class 1	38,024	20,202	14,674	4,311	4,556	3,228	2,536	1,659	1,434	193,287	319,169	89,723	692,802
[NNG] Agricultural Grain Dryer Class 2	30,455	36,203	17,731	4,272	8,422	11,368	24,153	19,169	149,145	1,288,005	921,578	287,572	2,798,074
[NNG] Agricultural Grain Dryer Class 3	-	-	-	-	-	-	-	-	-	-	-	-	-
[NNG] Firm/Interruptible Class 2	4,945	3,871	3,863	3,318	2,854	6,130	5,269	4,454	3,293	1,870	2,142	3,468	45,476
[NNG] Electric Generation Class 1	1,606	2,400	2,455	3,512	14,142	17,487	32,934	419	3,392	500	1,961	1,556	82,365
CONSOLIDATED SALES													
[Cons] General Service Residential	6,376,338	5,452,514	4,092,455	3,008,499	1,193,093	145,673	60,688	157,106	422,636	1,598,247	3,452,140	5,038,226	30,997,615
[Cons] General Service Class 1	553,112	486,727	369,220	202,529	71,476	28,332	28,816	26,942	57,623	137,529	265,356	337,727	2,565,390
[Cons] General Service Class 2	4,718,268	4,137,304	3,116,238	2,381,713	1,020,226	297,129	302,209	282,549	604,314	1,442,319	2,782,881	3,541,860	24,627,009
[Cons] General Service Class 3	273,864	270,388	200,566	176,293	85,814	22,261	22,641	21,168	45,275	108,058	208,492	265,354	1,700,172
[Cons] Interruptible Class 2	334,717	282,181	200,512	182,365	66,264	32,116	32,293	59,397	70,643	127,076	184,815	256,945	1,829,325
[Cons] Interruptible Class 3	253,251	167,256	144,424	109,058	71,466	27,368	27,519	50,616	60,199	108,289	157,492	218,958	1,395,897
[Cons] Interruptible Class 4	460,263	371,000	309,245	210,125	91,954	47,651	47,913	88,127	104,812	188,542	274,208	381,227	2,575,067
[Cons] Agricultural Grain Dryer Class 1	13,906	1,569	1,155	4,340	155	673	26	2,795	3,565	4,835	10,097	10,464	53,580
[Cons] Agricultural Grain Dryer Class 2	-	-	-	10	-	155	199	1,037	103,682	67,219	14,421	9,474	196,197
[Cons] Firm/Interruptible Class 2	42,452	32,791	29,908	23,091	11,534	4,916	4,168	5,277	5,906	7,075	17,585	39,209	223,911
[Cons] Electric Generation Class 1	2,118	1,761	1,842	1,038	685	774	590	595	467	871	1,666	2,052	14,458
NNG TRANSPORT													
[NNG] Transport Class 2 (Firm)	324,403	342,252	367,057	185,830	189,069	111,895	103,875	126,523	117,007	132,395	156,927	178,070	2,335,303
[NNG] Transport Class 2 (Interruptible)	209,705	211,414	253,690	143,115	133,934	84,986	92,652	100,308	110,348	126,521	127,549	146,893	1,741,115
[NNG] Transport Class 3 (Firm)	869,930	802,909	968,658	571,402	568,137	368,982	367,860	375,423	395,745	454,210	443,060	522,136	6,708,452
[NNG] Transport Class 3 (Interruptible)	1,747,674	1,601,389	1,982,304	1,226,015	1,178,549	1,126,338	1,243,990	1,250,778	1,433,914	1,640,023	1,803,404	1,892,582	18,126,959
[NNG] Transport Class 4 (Firm)	165,868	143,321	172,468	124,151	125,544	80,908	65,644	69,269	77,447	92,458	107,183	133,051	1,357,312
[NNG] Transport Class 4 (Interruptible)	631,477	523,383	670,315	513,100	528,263	754,371	840,001	854,616	924,059	1,071,071	1,172,590	1,223,347	9,706,594
[NNG] Transport Class 5 (Interruptible)	1,016,447	628,758	749,241	497,394	706,320	862,520	1,170,721	905,777	581,236	879,358	587,267	754,440	9,339,478
[NNG] Transport Class 5 CIP Exempt (Firm)	543,034	502,481	607,384	393,161	486,271	566,423	730,764	705,365	633,367	585,475	478,773	580,098	6,812,596
[NNG] Transport Class 5 CIP Exempt (Interruptible)	28,408,841	22,771,900	27,890,184	21,706,357	20,180,643	16,638,496	17,187,966	16,288,818	16,090,164	17,759,134	20,350,200	21,748,651	247,021,356
[NNG] Firm/Interruptible Class 2 Transport	46,152	46,013	61,217	40,610	42,000	22,058	25,213	25,512	27,687	32,020	36,169	41,650	446,302
[NNG] Firm/Interruptible Class 3 Transport	789,669	720,699	861,528	547,461	579,741	487,391	557,114	563,727	611,779	707,531	799,202	920,307	8,146,149
[NNG] Firm/Interruptible Class 4 Transport	396,566	396,733	473,232	290,186	310,166	249,662	285,377	288,765	313,379	362,427	409,385	471,419	4,247,298
[NNG] Firm/Interruptible Class 5 Transport	457,395	365,043	456,141	343,892	361,133	327,279	349,955	329,608	348,820	335,557	373,966	403,613	4,452,401
[NNG] Firm/Interruptible Class 5 Transport CIP Exempt	6,112,963	4,936,057	5,972,992	4,651,533	5,025,286	4,803,020	4,958,720	5,005,845	4,534,167	4,887,997	4,870,969	5,076,442	60,835,990
[NNG] Transport Electric Generation Class 2 (Interruptible)	8,591	2,274	39,585	369	1,016	191,410	285,400	227,704	58,564	104,876	40,481	23,772	984,043
[NNG] Transport Electric Generation Class 2 CIP Exempt (Firm)	9,213,328	4,494,722	5,655,786	2,500,829	5,074,459	3,452,675	6,540,523	5,282,635	3,628,779	6,336,970	4,967,776	6,777,706	63,926,187
[NNG] Transport Electric Generation Class 2 CIP Exempt (Interruptible)	223,442	14,448	-	25,596	136,058	340,998	626,446	274,733	123,357	326,700	154,719	98,580	2,345,079
[NNG] Transport Resale	48,317	51,405	60,316	31,563	27,444	18,268	20,881	21,129	22,930	26,519	29,955	34,495	393,223
[NNG] Transport Flex (Cust A)	822,218	366,795	414,277	295,446	493,821	384,038	325,552	406,087	443,094	452,104	397,812	413,361	5,214,606
[NNG] Transport Flex (Cust F)	417,189	321,385	405,972	309,476	348,978	321,666	214,189	319,200	334,458	363,557	366,161	363,485	4,085,716
[NNG] Transport Flex (Cust G)	151,019	158,530	191,659	118,419	111,516	67,920	55,916	66,191	68,352	96,661	120,373	135,145	1,341,702
CONSOLIDATED TRANSPORT													
[Cons] Transport Class 2 (Firm)	298,253	253,848	317,963	196,711	186,044	95,102	87,228	73,524	101,095	123,943	135,312	149,064	2,018,086
[Cons] Transport Class 2 (Interruptible)	100,233	93,970	118,529	63,244	63,609	30,103	25,460	21,178	21,789	27,509	47,232	51,599	664,454
[Cons] Transport Class 2 CIP Exempt (Firm)	7,185	4,845	5,255	4,134	4,717	5,015	5,015	5,015	5,015	5,166	4,332	6,348	62,045
[Cons] Transport Class 3 (Firm)	735,731	679,530	815,902	505,822	497,154	274,298	229,287	249,082	285,040	345,573	468,509	499,062	5,584,989
[Cons] Transport Class 3 (Interruptible)	503,436	462,132	577,590	348,465	348,112	230,893	209,966	234,733	180,370	235,695	321,098	533,747	4,186,237
[Cons] Transport Class 4 (Firm)	169,168	158,633	207,642	149,243	135,088	95,222	89,085	94,134	100,911	118,014	133,311	134,272	1,584,722
[Cons] Transport Class 4 (Interruptible)	197,177	191,423	239,000	134,988	133,419	20,314	16,684	16,468	21,911	25,553	67,820	199,079	1,263,837
[Cons] Transport Class 5 (Interruptible)	1,192,946	977,440	922,101	778,278	743,828	373,981	165,773	205,964	242,742	344,730	450,597	471,053	6,869,432
[Cons] Transport Class 5 CIP Exempt (Firm)	5,275,779	4,955,349	6,631,735	4,340,472	4,645,095	3,004,963	2,933,666	3,388,146	3,355,302	3,795,033	3,934,010	4,553,636	50,813,185
[Cons] Firm/Interruptible Class 3 Transport	202,025	191,323	201,239	121,810	126,008	45,018	19,430	24,359	27,142	34,275	40,608	40,154	1,073,389
[Cons] Firm/Interruptible Class 5 Transport CIP Exempt	1,216,602	1,018,502	1,223,417	1,091,553	1,118,845	876,388	983,738	1,002,161	854,226	959,051	1,043,196	1,066,113	12,453,791
Taconite Mines (Michigan)	[TRADE SECRET DATA BEGINS...												
Total MERC													
Company Use Gas	53,312	52,956	44,733	35,572	26,425	14,319	8,745	7,948	8,557	10,824	21,744	34,802	319,938
Gas Lost & Unaccounted For	(14,641,640)	(1,520,563)	(17,285,595)	(2,947,749)	(11,851,135)	902,981	945,728	1,030,874	1,086,892	1,533,548	1,846,978	2,280,490	(38,619,192)
Total GCR Gas @ Gate Station	[TRADE SECRET DATA BEGINS...												
Michigan	[TRADE SECRET DATA BEGINS...											...TRADE SECRET DATA ENDS	
Minnesota	132,018,969	110,866,466	104,704,222	76,554,575	58,287,910	40,427,803	43,948,515	43,053,029	45,981,896	68,305,721	83,497,809	103,458,338	911,105,252
												...TRADE SECRET DATA ENDS	

PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

Minnesota Energy Resources Corporation
Proposed Test Year Calender Weather Normalized Sales
For the 12 Months Ending, December 31, 2023

All Units in Therms

Calender	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Total
NNG SALES													
[NNG] General Service Residential	29,839,286	26,037,704	20,350,734	12,153,500	6,369,388	2,048,233	1,243,589	1,507,429	4,177,649	11,723,267	18,459,359	26,605,530	160,515,667
[NNG] Farm Tap Residential	351,226	306,479	239,540	143,054	74,972	24,109	14,638	17,743	49,173	137,990	217,278	313,163	1,889,366
[NNG] General Service Class 1	1,130,779	1,075,077	829,124	486,517	265,437	133,158	100,867	119,213	206,658	479,819	705,540	1,025,458	6,557,648
[NNG] General Service Class 2	13,077,208	12,433,036	9,588,557	5,626,488	3,069,760	1,539,949	1,166,502	1,378,674	2,389,937	5,549,028	8,159,436	11,859,134	75,837,707
[NNG] General Service Class 3	1,314,916	1,250,129	964,149	565,737	308,674	154,847	117,295	138,632	240,320	557,961	820,408	1,192,401	7,625,468
[NNG] Farm Tap Class 1	25,198	21,870	19,009	16,557	9,639	7,526	3,108	3,434	8,180	9,157	13,736	16,090	153,504
[NNG] Farm Tap Class 2	202,763	161,585	182,398	119,912	92,377	17,380	28,923	101,513	620,834	442,442	279,428	169,744	2,419,298
[NNG] Farm Tap Class 3	51,869	39,007	157,149	56,287	22,192	41,092	16,062	112,916	35,307	32,877	80,261	102,917	747,936
[NNG] Interruptible Class 2	996,958	794,127	766,151	498,738	380,528	314,678	302,157	291,417	390,757	584,078	741,055	897,918	6,958,564
[NNG] Interruptible Class 3	1,537,713	1,224,866	1,181,715	769,256	586,929	485,361	466,048	449,484	602,706	900,884	1,143,007	1,384,953	10,732,921
[NNG] Agricultural Grain Dryer Class 1	19,483	37,542	23,973	7,970	5,020	3,294	2,588	1,693	1,463	197,231	325,682	91,554	717,492
[NNG] Agricultural Grain Dryer Class 2	69,991	61,498	22,870	6,798	25,877	11,600	24,646	19,561	152,188	1,314,290	940,386	293,441	2,943,146
[NNG] Firm/Interruptible Class 2	14,452	13,895	12,552	10,641	6,888	6,255	5,376	4,545	3,360	1,908	2,186	3,539	85,598
[NNG] Electric Generation Class 1	2,680	2,515	3,607	15,030	19,476	17,844	33,606	427	3,462	510	2,001	1,588	102,746
CONSOLIDATED SALES													
[Cons] General Service Residential	5,120,374	4,599,931	3,631,810	2,396,617	1,055,261	200,720	108,736	205,532	453,311	1,638,919	3,509,206	5,094,603	28,015,021
[Cons] General Service Class 1	370,566	237,865	216,459	182,629	116,404	37,372	33,880	28,691	58,707	138,599	266,857	339,443	2,027,473
[Cons] General Service Class 2	3,886,261	2,494,569	2,270,081	1,915,295	1,220,772	391,938	355,316	300,888	615,684	1,453,536	2,798,628	3,559,856	21,262,824
[Cons] General Service Class 3	291,156	186,892	170,073	143,493	91,459	29,364	26,620	22,542	46,127	108,898	209,671	266,702	1,592,997
[Cons] Interruptible Class 2	225,325	270,377	165,535	109,635	97,098	47,794	39,348	70,663	80,068	119,754	175,386	244,877	1,645,860
[Cons] Interruptible Class 3	192,012	230,404	141,062	93,427	82,743	40,728	33,530	60,216	68,231	102,049	149,457	208,674	1,402,534
[Cons] Interruptible Class 4	334,312	401,155	245,603	162,665	144,064	70,911	58,380	104,842	118,797	177,677	260,219	363,321	2,441,944
[Cons] Agricultural Grain Dryer Class 1	9,616	3,548	2,629	3,716	378	687	26	2,852	3,637	4,934	10,303	10,677	53,005
[Cons] Agricultural Grain Dryer Class 2	-	-	-	620	545	158	203	1,059	105,798	68,591	14,715	9,667	201,357
[Cons] Firm/Interruptible Class 2	42,547	36,609	31,984	23,841	19,689	5,016	4,253	5,384	6,027	7,219	17,944	40,010	240,522
[Cons] Electric Generation Class 1	1,966	1,887	1,066	728	839	790	602	608	476	889	1,700	2,093	13,644
NNG TRANSPORT													
[NNG] Transport Class 2 (Firm)	183,349	185,519	161,905	134,602	110,137	120,462	109,763	131,833	120,841	135,984	160,932	182,617	1,737,943
[NNG] Transport Class 2 (Interruptible)	145,298	138,336	121,139	111,500	98,843	91,494	97,904	104,517	113,964	129,950	130,804	150,644	1,434,393
[NNG] Transport Class 3 (Firm)	575,692	531,842	521,160	446,336	378,768	397,234	388,713	391,178	408,712	466,521	454,367	535,468	5,495,990
[NNG] Transport Class 3 (Interruptible)	1,919,961	1,814,697	1,627,442	1,547,418	1,397,353	1,212,578	1,314,506	1,303,268	1,480,898	1,684,475	1,849,428	1,940,909	19,092,932
[NNG] Transport Class 4 (Firm)	150,416	133,863	117,976	98,032	86,138	87,103	69,365	72,175	79,985	94,964	109,919	136,449	1,236,385
[NNG] Transport Class 4 (Interruptible)	1,177,139	1,090,229	952,336	952,271	866,059	812,130	887,617	890,481	954,337	1,100,101	1,202,516	1,254,585	12,139,803
[NNG] Transport Class 5 (Interruptible)	625,171	557,130	599,029	626,415	650,710	903,097	1,201,090	915,030	575,668	952,010	616,858	808,385	9,030,592
[NNG] Transport Class 5 CIP Exempt (Firm)	603,050	586,852	510,160	559,793	501,122	564,318	704,109	659,927	604,740	554,982	482,265	568,240	6,899,557
[NNG] Transport Class 5 CIP Exempt (Interruptible)	21,814,613	19,883,541	21,563,574	21,326,065	19,875,828	19,828,285	19,969,698	18,945,400	18,655,039	20,892,450	23,627,250	25,170,766	251,552,507
[NNG] Firm/Interruptible Class 2 Transport	42,150	38,574	36,096	32,777	29,376	23,747	26,642	26,583	28,594	32,888	37,092	42,713	397,233
[NNG] Firm/Interruptible Class 3 Transport	931,365	852,334	797,586	724,250	649,101	524,709	588,694	587,385	631,825	726,708	819,599	943,806	8,777,361
[NNG] Firm/Interruptible Class 4 Transport	477,084	436,601	408,557	370,991	332,497	268,778	301,554	300,883	323,647	372,250	419,833	483,457	4,496,130
[NNG] Firm/Interruptible Class 5 Transport	392,446	360,099	366,210	343,436	317,672	328,043	354,299	332,514	354,353	331,460	378,502	405,690	4,264,723
[NNG] Firm/Interruptible Class 5 Transport CIP Exempt	5,192,882	4,617,804	5,064,170	4,317,268	4,719,015	4,910,959	5,062,628	5,098,539	4,541,346	4,935,965	4,975,071	5,204,204	58,639,852
[NNG] Transport Electric Generation Class 2 (Interruptible)	66,103	61,625	35,508	63,988	98,722	222,553	313,842	241,445	54,355	94,895	33,740	20,857	1,307,632
[NNG] Transport Electric Generation Class 2 CIP Exempt (Firm)	5,495,609	4,722,305	4,356,318	5,466,740	3,775,840	3,482,959	6,932,682	5,543,720	3,566,481	6,651,442	5,076,185	6,841,564	61,911,844
[NNG] Transport Electric Generation Class 2 CIP Exempt (Interruptible)	71,170	28,712	81,519	109,520	139,130	371,845	654,656	334,667	95,959	333,136	154,454	131,531	2,506,299
[NNG] Transport Resale	34,909	31,947	29,895	27,146	24,329	19,667	22,065	22,016	23,682	27,238	30,720	35,375	328,989
[NNG] Transport Flex (Cust A)	412,563	341,159	344,350	477,137	308,469	384,038	325,552	406,087	443,094	452,104	397,812	413,361	4,705,727
[NNG] Transport Flex (Cust F)	382,844	353,432	352,327	293,911	299,640	312,482	229,309	291,231	324,887	355,621	360,040	367,025	3,922,750
[NNG] Transport Flex (Cust G)	165,152	158,510	130,816	101,495	81,238	69,095	54,600	68,340	71,188	96,158	118,722	134,645	1,249,960
CONSOLIDATED TRANSPORT													
[Cons] Transport Class 2 (Firm)	163,743	149,400	144,763	129,509	124,115	102,384	92,172	76,610	104,408	127,303	138,765	152,871	1,506,042
[Cons] Transport Class 2 (Interruptible)	60,313	54,932	57,725	46,676	42,196	32,407	26,903	22,067	22,503	28,254	48,437	52,917	495,330
[Cons] Transport Class 2 CIP Exempt (Firm)	5,450	4,328	4,818	4,558	5,123	5,015	5,015	5,015	5,015	5,166	4,332	6,348	60,185
[Cons] Transport Class 3 (Firm)	506,435	510,921	434,166	377,554	352,182	295,300	242,285	259,535	294,380	354,940	480,466	511,805	4,619,969
[Cons] Transport Class 3 (Interruptible)	569,838	500,826	524,923	376,296	321,499	248,572	221,868	244,584	186,280	242,084	329,293	547,376	4,313,439
[Cons] Transport Class 4 (Firm)	136,531	146,429	137,412	119,169	106,013	102,513	94,135	98,084	104,217	121,212	136,713	137,700	1,440,128
[Cons] Transport Class 4 (Interruptible)	272,529	247,371	295,079	171,353	139,422	21,869	17,630	17,159	22,629	26,246	69,551	204,162	1,505,000
[Cons] Transport Class 5 (Interruptible)	579,222	648,403	525,688	373,303	293,718	403,708	175,208	214,919	251,176	349,683	455,270	473,431	4,743,731
[Cons] Transport Class 5 CIP Exempt (Firm)	5,065,286	5,014,532	4,762,652	4,127,711	3,324,141	3,083,071	2,912,840	3,407,400	3,355,291	3,753,095	3,796,820	4,498,468	47,101,307
[Cons] Firm/Interruptible Class 3 Transport	51,917	59,673	51,097	36,292	30,799	48,464	20,531	25,381	28,031	35,204	41,644	41,179	470,213
[Cons] Firm/Interruptible Class 5 Transport CIP Exempt	1,202,178	1,154,630	1,265,408	1,070,709	832,120	874,512	936,502	954,407	826,835	883,855	992,077	1,027,302	12,020,535
Taconite Mines (Michigan)	[TRADE SECRET DATA BEGINS... [redacted]												
Total MERC	[redacted]												...TRADE SECRET DATA ENDS]
Company Use Gas	53,095	47,056	43,626	33,613	24,795	14,319	8,745	7,948	8,557	10,824	21,744	34,802	309,126
Gas Lost & Unaccounted For	2,313,721	2,091,896	1,912,008	1,586,319	1,239,145	1,024,602	1,066,341	1,084,080	1,114,957	1,604,195	1,915,729	2,348,784	19,301,778
Total GCR Gas @ Gate Station	[TRADE SECRET DATA BEGINS... [redacted]												
Michigan	[TRADE SECRET DATA BEGINS... [redacted]												...TRADE SECRET DATA ENDS]
Minnesota	108,581,065	97,339,122	87,599,635	70,473,369	54,377,724	45,784,195	48,540,674	46,942,337	49,093,218	72,100,853	87,233,327	107,523,205	875,588,723
													...TRADE SECRET DATA ENDS]

Minnesota Energy Resources Corporation
Proposed Test Year Fixed Charge Counts
For the 12 Months Ending, December 31, 2023

Line	Rate Class (col. 1)	Fixed Charge Counts 2021 Total Annual Per Books (col. 2)	2022 Growth (col. 3)	Fixed Charge Counts 2022 Forecast (col. 4)	2023 Growth (col. 5)	Fixed Charge Counts 2023 Forecast (col. 6)
	Residential Rate					
1	Residential	2,654,038	16,904	2,670,942	6,499	2,677,441
	C&I General Service Rate					
6	Class 1	118,693	1,647	120,340	(830)	119,510
	Class 2	161,540	(658)	160,883	1,508	162,391
13	Class 3	817	(45)	772	31	804
14	Total C&I General Service	281,051	944	281,995	710	282,705
	Interruptible & Joint					
15	Interruptible	5,446	(279)	5,167	(201)	4,966
16	Joint	62	(2)	60	-	60
23	Total Interruptible & Joint	5,509	(282)	5,227	(201)	5,026
	Transportation					
24	Transportation	3,266	(182)	3,084	(87)	2,998
31	Total MERC-Minnesota	2,943,864	17,385	2,961,249	6,921	2,968,170

* Excludes fixed charge counts for Michigan taconites

Minnesota Energy Resources Corporation
Actual Year Fixed Charge Count Including Additional Meters
For the 12 Months Ending, December 31, 2021

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Total	Average
NNG SALES														
[NNG] General Service Residential	189,161	186,313	186,346	187,847	187,353	188,083	189,839	187,803	187,632	188,025	188,138	190,082	2,256,622	188,052
[NNG] Farm Tap Residential	1,279	1,091	1,430	1,259	1,230	1,319	1,283	1,252	1,256	1,264	1,017	1,426	15,106	1,259
[NNG] General Service Class 1	7,535	7,382	7,407	7,550	7,451	7,459	7,470	7,396	7,392	7,486	7,621	7,781	89,929	7,494
[NNG] General Service Class 2	10,243	9,996	10,067	10,127	10,075	10,077	10,178	10,071	10,020	10,031	9,836	10,033	120,754	10,063
[NNG] General Service Class 3	52	49	49	49	51	49	49	53	49	61	52	52	614	51
[NNG] Farm Tap Class 1	106	89	124	105	93	117	103	107	105	118	90	139	1,294	108
[NNG] Farm Tap Class 2	229	214	237	220	226	232	229	221	235	219	194	232	2,687	224
[NNG] Farm Tap Class 3	4	3	5	4	4	3	5	3	5	2	2	2	42	4
[NNG] Interruptible Class 2	182	174	176	174	149	160	148	201	141	183	182	172	2,042	170
[NNG] Interruptible Class 3	49	49	50	50	46	51	39	62	48	44	53	52	593	49
[NNG] Agricultural Grain Dryer Class 1	64	57	58	62	59	56	53	66	59	71	92	86	783	65
[NNG] Agricultural Grain Dryer Class 2	92	82	97	93	80	81	82	99	118	75	68	53	1,020	85
[NNG] Agricultural Grain Dryer Class 3	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Firm/Interruptible Class 2	2	2	2	2	1	2	3	2	1	1	1	1	20	2
[NNG] Electric Generation Class 1	8	10	9	10	9	7	7	12	8	9	10	8	106	9
[NNG] Electric Generation Class 2	1	1	1	1	-	-	-	-	-	-	-	-	4	0.33
CONSOLIDATED SALES														
[Cons] General Service Residential	32,070	31,642	31,461	31,822	31,697	31,871	32,547	31,635	31,704	31,725	31,760	32,376	382,310	31,859
[Cons] General Service Class 1	2,293	2,274	2,292	2,264	2,278	2,277	2,310	2,263	2,275	2,276	2,312	2,356	27,470	2,289
[Cons] General Service Class 2	3,223	3,145	3,155	3,199	3,162	3,168	3,240	3,168	3,166	3,155	3,141	3,177	38,099	3,175
[Cons] General Service Class 3	13	13	13	13	13	13	10	17	15	15	16	10	161	13
[Cons] Interruptible Class 2	46	46	48	46	44	39	39	43	49	44	44	53	541	45
[Cons] Interruptible Class 3	10	9	12	10	10	13	8	9	8	11	6	10	116	10
[Cons] Interruptible Class 4	1	3	1	2	3	1	3	2	2	2	2	2	24	2
[Cons] Agricultural Grain Dryer Class 1	6	6	6	7	6	6	5	7	6	6	8	14	83	7
[Cons] Agricultural Grain Dryer Class 2	9	8	9	9	8	11	9	9	11	9	6	9	108	9
[Cons] Firm/Interruptible Class 2	2	4	3	3	4	2	3	3	4	5	4	5	42	4
[Cons] Electric Generation Class 1	2	2	2	1	1	1	1	1	1	1	1	1	15	1
NNG TRANSPORT														
[NNG] Transport Class 2 (Firm)	33	32	32	32	32	32	32	31	33	32	35	37	393	33
[NNG] Transport Class 2 (Interruptible)	20	21	21	21	21	21	21	21	21	21	16	26	251	21
[NNG] Transport Class 3 (Firm)	28	28	28	28	28	28	28	27	29	28	20	30	330	28
[NNG] Transport Class 3 (Interruptible)	38	39	40	39	38	38	39	40	40	38	39	40	468	39
[NNG] Transport Class 4 (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Class 4 (Interruptible)	7	7	7	7	7	7	7	7	7	7	7	7	84	7
[NNG] Transport Class 5 (Interruptible)	3	3	3	3	3	3	3	3	3	3	3	3	36	3
[NNG] Transport Class 5 CIP Exempt (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Class 5 CIP Exempt (Interruptible)	12	12	12	12	12	12	12	12	12	12	12	12	144	12
[NNG] Firm/Interruptible Class 2 Transport	6	6	6	6	6	6	6	6	6	6	6	6	72	6
[NNG] Firm/Interruptible Class 3 Transport	19	19	19	19	19	19	19	19	19	19	19	19	228	19
[NNG] Firm/Interruptible Class 4 Transport	2	2	2	2	2	2	2	2	2	2	2	2	24	2
[NNG] Firm/Interruptible Class 5 Transport	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Firm/Interruptible Class 5 Transport CIP Exempt	5	5	5	5	5	5	5	5	5	5	5	5	60	5
[NNG] Transport Electric Generation Class 2 (Interruptible)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Electric Generation Class 2 CIP Exempt (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Electric Generation Class 2 CIP Exempt (Interruptible)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Resale	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Flex (Cust A)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Flex (Cust F)	3	3	3	3	3	3	3	3	3	3	3	3	36	3
[NNG] Transport Flex (Cust G)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
CONSOLIDATED TRANSPORT														
[Cons] Transport Class 2 (Firm)	35	34	34	34	34	34	34	34	34	34	35	35	411	34
[Cons] Transport Class 2 (Interruptible)	7	7	7	7	7	7	7	7	7	7	7	7	84	7
[Cons] Transport Class 2 CIP Exempt (Firm)	-	-	-	-	-	-	-	-	-	-	1	1	2	0
[Cons] Transport Class 3 (Firm)	19	19	19	19	19	19	19	19	19	19	18	18	226	19
[Cons] Transport Class 3 (Interruptible)	14	14	14	14	14	14	13	15	14	14	13	14	167	14
[Cons] Transport Class 4 (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[Cons] Transport Class 4 (Interruptible)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[Cons] Transport Class 5 (Interruptible)	2	2	2	2	2	2	2	2	2	2	2	2	24	2
[Cons] Transport Class 5 CIP Exempt (Firm)	5	5	5	5	5	5	5	5	5	5	4	4	58	5
[Cons] Firm/Interruptible Class 3 Transport	2	2	2	2	2	2	2	2	2	2	2	2	24	2
[Cons] Firm/Interruptible Class 5 Transport CIP Exempt	1	1	1	1	1	1	1	1	1	1	1	1	12	1
Taconite Mines (Michigan)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
Total MERC	246,957	242,936	243,335	245,203	244,326	245,370	247,936	244,779	244,588	245,111	244,917	248,418	2,943,876	245,323
Michigan	1	1	1	1	1	1	1	1	1	1	1	1	12	1
Minnesota	246,956	242,935	243,334	245,202	244,325	245,369	247,935	244,778	244,587	245,110	244,916	248,417	2,943,864	245,322

Minnesota Energy Resources Corporation
Projected Fixed Charge Count Including Additional Meters
For the 12 Months Ending, December 31, 2022

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Total	Average
NNG SALES														
[NNG] General Service Residential	191,211	189,074	189,384	189,447	189,676	188,178	188,255	188,336	188,420	188,506	188,594	188,685	2,267,766	188,981
[NNG] Farm Tap Residential	1,073	1,251	1,305	1,240	1,351	1,240	1,240	1,240	1,240	1,240	1,240	1,240	14,900	1,242
[NNG] General Service Class 1	7,866	7,739	7,686	7,720	7,731	7,477	7,461	7,451	7,472	7,521	7,544	7,555	91,224	7,602
[NNG] General Service Class 2	9,995	10,041	9,909	9,928	9,930	10,040	10,018	10,005	10,033	10,099	10,130	10,145	120,273	10,023
[NNG] General Service Class 3	52	34	52	53	53	51	51	51	51	51	52	52	602	50
[NNG] Farm Tap Class 1	94	118	119	106	119	114	114	114	114	114	114	114	1,354	113
[NNG] Farm Tap Class 2	201	211	210	202	218	211	211	211	211	211	211	211	2,519	210
[NNG] Farm Tap Class 3	2	1	1	4	2	2	2	2	2	2	2	2	24	2
[NNG] Interruptible Class 2	166	163	167	157	170	163	162	163	161	160	160	158	1,950	162
[NNG] Interruptible Class 3	45	45	46	43	44	46	46	46	46	45	45	45	542	45
[NNG] Agricultural Grain Dryer Class 1	70	73	85	72	79	76	76	76	76	76	76	76	911	76
[NNG] Agricultural Grain Dryer Class 2	79	67	74	60	72	64	64	64	64	64	64	64	801	67
[NNG] Agricultural Grain Dryer Class 3	1	1	1	1	1	-	1	2	3	4	5	6	26	2
[NNG] Firm/Interruptible Class 2	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Electric Generation Class 1	7	8	10	6	9	9	9	9	9	9	9	9	103	9
[NNG] Electric Generation Class 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CONSOLIDATED SALES														
[Cons] General Service Residential	32,961	32,006	31,989	32,095	32,113	32,402	32,415	32,429	32,444	32,458	32,474	32,489	388,276	32,356
[Cons] General Service Class 1	2,387	2,345	2,299	2,352	2,348	2,284	2,279	2,276	2,282	2,297	2,304	2,308	27,762	2,313
[Cons] General Service Class 2	3,231	3,164	3,144	3,162	3,155	3,168	3,161	3,157	3,166	3,186	3,196	3,201	38,090	3,174
[Cons] General Service Class 3	8	11	11	11	11	13	13	13	13	13	13	14	146	12
[Cons] Interruptible Class 2	41	46	39	44	46	43	42	43	42	42	42	41	510	43
[Cons] Interruptible Class 3	11	9	9	9	9	8	8	8	8	8	8	8	101	8
[Cons] Interruptible Class 4	2	2	2	2	2	2	2	2	2	2	2	2	24	2
[Cons] Agricultural Grain Dryer Class 1	9	9	8	9	8	9	9	9	9	9	9	9	106	9
[Cons] Agricultural Grain Dryer Class 2	4	8	5	8	6	7	7	7	7	7	7	7	81	7
[Cons] Firm/Interruptible Class 2	4	4	4	4	4	4	4	4	4	4	4	4	48	4
[Cons] Electric Generation Class 1	1	1	1	1	1	1	1	1	1	1	1	1	12	1
NNG TRANSPORT														
[NNG] Transport Class 2 (Firm)	37	37	36	35	37	30	30	30	31	31	33	32	400	33
[NNG] Transport Class 2 (Interruptible)	21	21	21	21	21	19	19	19	20	20	21	21	243	20
[NNG] Transport Class 3 (Firm)	26	26	26	26	26	22	21	21	22	22	24	23	286	24
[NNG] Transport Class 3 (Interruptible)	39	40	41	39	40	36	35	35	36	37	39	38	455	38
[NNG] Transport Class 4 (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Class 4 (Interruptible)	7	7	7	7	7	6	6	6	7	7	7	7	81	7
[NNG] Transport Class 5 (Interruptible)	3	3	3	3	3	4	4	4	4	4	4	4	43	4
[NNG] Transport Class 5 CIP Exempt (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Class 5 CIP Exempt (Interruptible)	12	12	12	11	11	6	6	6	6	6	6	6	100	8
[NNG] Firm/Interruptible Class 2 Transport	6	6	6	6	6	6	5	5	6	6	6	6	70	6
[NNG] Firm/Interruptible Class 3 Transport	19	19	19	19	19	17	16	16	17	17	18	18	213	18
[NNG] Firm/Interruptible Class 4 Transport	2	2	2	2	2	2	2	2	2	2	2	2	23	2
[NNG] Firm/Interruptible Class 5 Transport	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Firm/Interruptible Class 5 Transport CIP Exempt	5	5	5	5	5	5	5	5	5	5	5	5	60	5
[NNG] Transport Electric Generation Class 2 (Interruptible)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Electric Generation Class 2 CIP Exempt (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Electric Generation Class 2 CIP Exempt (Interruptible)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Resale	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Flex (Cust A)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Flex (Cust F)	3	3	3	3	3	3	3	3	3	3	3	3	36	3
[NNG] Transport Flex (Cust G)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
CONSOLIDATED TRANSPORT														
[Cons] Transport Class 2 (Firm)	35	35	35	35	35	32	31	31	32	32	34	33	400	33
[Cons] Transport Class 2 (Interruptible)	7	7	7	7	7	6	6	6	7	7	7	7	81	7
[Cons] Transport Class 2 CIP Exempt (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[Cons] Transport Class 3 (Firm)	18	18	18	18	18	16	15	15	16	16	17	16	201	17
[Cons] Transport Class 3 (Interruptible)	15	14	14	14	14	13	13	13	13	13	14	14	163	14
[Cons] Transport Class 4 (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[Cons] Transport Class 4 (Interruptible)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[Cons] Transport Class 5 (Interruptible)	2	2	2	2	2	1	1	1	1	1	1	1	17	1
[Cons] Transport Class 5 CIP Exempt (Firm)	4	4	4	4	4	2	2	2	2	2	2	2	34	3
[Cons] Firm/Interruptible Class 3 Transport	2	2	2	2	2	2	2	2	2	2	2	2	23	2
[Cons] Firm/Interruptible Class 5 Transport CIP Exempt	1	1	1	1	1	1	1	1	1	1	1	1	12	1
Taconite Mines (Michigan)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
Total MERC	249,799	246,711	246,840	247,011	247,434	245,854	245,889	245,955	246,122	246,377	246,567	246,700	2,961,261	246,772
Michigan	1	1	1	1	1	1	1	1	1	1	1	1	12	1
Minnesota	249,798	246,710	246,839	247,010	247,433	245,853	245,888	245,954	246,121	246,376	246,566	246,699	2,961,249	246,771

Minnesota Energy Resources Corporation
Proposed Test Year Fixed Charge Count Including Additional Meters
For the 12 Months Ending, December 31, 2023

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Total	Average
NNG SALES														
[NNG] General Service Residential	188,778	188,868	188,959	189,054	189,148	189,243	189,336	189,430	189,522	189,613	189,703	189,791	2,271,446	189,287
[NNG] Farm Tap Residential	1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240	1,240	14,880	1,240
[NNG] General Service Class 1	7,563	7,558	7,550	7,538	7,525	7,514	7,500	7,491	7,513	7,562	7,586	7,598	90,499	7,542
[NNG] General Service Class 2	10,155	10,149	10,138	10,122	10,104	10,090	10,071	10,059	10,089	10,155	10,186	10,202	121,519	10,127
[NNG] General Service Class 3	52	52	52	51	51	51	51	51	51	52	52	52	618	51
[NNG] Farm Tap Class 1	114	114	114	114	114	114	114	114	114	114	114	114	1,368	114
[NNG] Farm Tap Class 2	211	211	211	211	211	211	211	211	211	211	211	211	2,532	211
[NNG] Farm Tap Class 3	2	2	2	2	2	2	2	2	2	2	2	2	24	2
[NNG] Interruptible Class 2	158	157	156	156	156	155	153	154	152	152	152	150	1,852	154
[NNG] Interruptible Class 3	45	44	44	44	44	44	44	44	43	43	43	43	525	44
[NNG] Agricultural Grain Dryer Class 1	76	76	76	76	76	76	76	76	76	76	76	76	912	76
[NNG] Agricultural Grain Dryer Class 2	64	64	64	64	64	64	64	64	64	64	64	64	768	64
[NNG] Agricultural Grain Dryer Class 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
[NNG] Firm/Interruptible Class 2	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Electric Generation Class 1	9	9	9	9	9	9	9	9	9	9	9	9	108	9
[NNG] Electric Generation Class 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CONSOLIDATED SALES														
[Cons] General Service Residential	32,505	32,521	32,536	32,553	32,569	32,585	32,601	32,618	32,633	32,649	32,664	32,680	391,115	32,593
[Cons] General Service Class 1	2,310	2,309	2,306	2,303	2,299	2,295	2,291	2,288	2,295	2,310	2,317	2,321	27,644	2,304
[Cons] General Service Class 2	3,204	3,202	3,199	3,193	3,188	3,183	3,177	3,174	3,183	3,204	3,214	3,219	38,340	3,195
[Cons] General Service Class 3	14	14	14	13	13	13	13	13	13	14	14	14	162	13
[Cons] Interruptible Class 2	41	41	41	41	41	41	40	40	40	40	40	39	484	40
[Cons] Interruptible Class 3	8	8	8	8	8	7	7	7	7	7	7	7	89	7
[Cons] Interruptible Class 4	2	2	2	2	2	2	2	2	2	2	2	2	24	2
[Cons] Agricultural Grain Dryer Class 1	9	9	9	9	9	9	9	9	9	9	9	9	108	9
[Cons] Agricultural Grain Dryer Class 2	7	7	7	7	7	7	7	7	7	7	7	7	84	7
[Cons] Firm/Interruptible Class 2	4	4	4	4	4	4	4	4	4	4	4	4	48	4
[Cons] Electric Generation Class 1	1	1	1	1	1	1	1	1	1	1	1	1	12	1
NNG TRANSPORT														
[NNG] Transport Class 2 (Firm)	32	32	31	33	32	31	31	31	31	32	34	33	383	32
[NNG] Transport Class 2 (Interruptible)	20	20	20	21	21	20	19	19	20	20	22	21	244	20
[NNG] Transport Class 3 (Firm)	23	23	22	23	23	22	22	22	23	23	24	24	274	23
[NNG] Transport Class 3 (Interruptible)	38	38	37	38	38	37	36	36	37	38	40	39	450	38
[NNG] Transport Class 4 (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Class 4 (Interruptible)	7	7	7	7	7	7	6	6	7	7	7	7	81	7
[NNG] Transport Class 5 (Interruptible)	4	4	4	4	4	4	4	4	4	4	4	4	48	4
[NNG] Transport Class 5 CIP Exempt (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Class 5 CIP Exempt (Interruptible)	6	6	6	6	6	6	6	6	6	6	6	6	72	6
[NNG] Firm/Interruptible Class 2 Transport	6	6	6	6	6	6	6	6	6	6	6	6	70	6
[NNG] Firm/Interruptible Class 3 Transport	17	17	17	18	18	17	17	17	17	17	18	18	208	17
[NNG] Firm/Interruptible Class 4 Transport	2	2	2	2	2	2	2	2	2	2	2	2	23	2
[NNG] Firm/Interruptible Class 5 Transport	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Firm/Interruptible Class 5 Transport CIP Exempt	5	5	5	5	5	5	5	5	5	5	5	5	60	5
[NNG] Transport Electric Generation Class 2 (Interruptible)	1	1	1	1	1	1	1	1	1	1	1	1	12	
[NNG] Transport Electric Generation Class 2 CIP Exempt (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	
[NNG] Transport Electric Generation Class 2 CIP Exempt (Interruptible)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Resale	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Flex (Cust A)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[NNG] Transport Flex (Cust F)	3	3	3	3	3	3	3	3	3	3	3	3	36	3
[NNG] Transport Flex (Cust G)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
CONSOLIDATED TRANSPORT														
[Cons] Transport Class 2 (Firm)	33	33	32	34	34	32	32	32	32	33	35	34	396	33
[Cons] Transport Class 2 (Interruptible)	7	7	7	7	7	7	6	6	7	7	7	7	81	7
[Cons] Transport Class 2 CIP Exempt (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[Cons] Transport Class 3 (Firm)	16	16	16	17	17	16	16	16	16	16	17	17	195	16
[Cons] Transport Class 3 (Interruptible)	14	14	13	14	14	13	13	13	13	14	14	14	162	14
[Cons] Transport Class 4 (Firm)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[Cons] Transport Class 4 (Interruptible)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[Cons] Transport Class 5 (Interruptible)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
[Cons] Transport Class 5 CIP Exempt (Firm)	2	2	2	2	2	2	2	2	2	2	2	2	24	2
[Cons] Firm/Interruptible Class 3 Transport	2	2	2	2	2	2	2	2	2	2	2	2	23	2
[Cons] Firm/Interruptible Class 5 Transport CIP Exempt	1	1	1	1	1	1	1	1	1	1	1	1	12	1
Taconite Mines (Michigan)	1	1	1	1	1	1	1	1	1	1	1	1	12	1
Total MERC	246,824	246,914	246,989	247,071	247,141	247,209	247,268	247,352	247,530	247,791	247,982	248,113	2,968,182	247,347
Michigan	1	1	1	1	1	1	1	1	1	1	1	1	12	1
Minnesota	246,823	246,913	246,988	247,070	247,140	247,208	247,267	247,351	247,529	247,790	247,981	248,112	2,968,170	247,346

Minnesota Energy Resources Corporation
Proposed Test Year Firm Sales for Firm/ Interruptible Customers
For the 12 Months Ending, December 31, 2023

Line	Rate Class (col. 1)	Firm/ Interruptible Firm Sales 2021 Total Annual Per Books (col. 2)	2022 Growth (col. 3)	Firm/ Interruptible Firm Sales 2022 Forecast (col. 4)	2023 Growth (col. 5)	Firm/ Interruptible Firm Sales 2023 Forecast (col. 6)
	Residential Rate					
1	Residential	-	-	-	-	-
	C&I General Service Rate					
6	Class 1	-	-	-	-	-
	Class 2	-	-	-	-	-
13	Class 3	-	-	-	-	-
14	Total C&I General Service	0	0	0	0	0
	Interruptible & Joint					
15	Interruptible	-	-	-	-	-
16	Joint	191,899	(8,202)	183,697	6,723	190,420
23	Total Interruptible & Joint	191,899	(8,202)	183,697	6,723	190,420
	Transportation					
24	Transportation	43,495,892	(379,734)	43,116,158	(9,175)	43,106,983
31	Total MERC-Minnesota	43,687,791	(387,936)	43,299,855	(2,452)	43,297,403

Minnesota Energy Resources Corporation
Actual Year Firm Sales for Firm/ Interruptible Customers
For the 12 Months Ending, December 31, 2021

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Total
NNG SALES													
[NNG] General Service Residential													-
[NNG] Farm Tap Residential													-
[NNG] General Service Class 1													-
[NNG] General Service Class 2													-
[NNG] General Service Class 3													-
[NNG] Farm Tap Class 1													-
[NNG] Farm Tap Class 2													-
[NNG] Farm Tap Class 3													-
[NNG] Interruptible Class 2													-
[NNG] Interruptible Class 3													-
[NNG] Agricultural Grain Dryer Class 1													-
[NNG] Agricultural Grain Dryer Class 2													-
[NNG] Agricultural Grain Dryer Class 3													-
[NNG] Firm/Interruptible Class 2	7,253	9,136	7,252	6,366	2,637	5,352	4,082	2,535	2,284	2,441	2,585	2,906	54,829
[NNG] Electric Generation Class 1													-
[NNG] Electric Generation Class 2													-
CONSOLIDATED SALES													
[Cons] General Service Residential													-
[Cons] General Service Class 1													-
[Cons] General Service Class 2													-
[Cons] General Service Class 3													-
[Cons] Interruptible Class 2													-
[Cons] Interruptible Class 3													-
[Cons] Interruptible Class 4													-
[Cons] Agricultural Grain Dryer Class 1													-
[Cons] Agricultural Grain Dryer Class 2													-
[Cons] Firm/Interruptible Class 2	17,905	17,126	16,563	12,691	13,250	3,657	3,229	3,003	4,221	7,126	14,902	23,396	137,070
[Cons] Electric Generation Class 1													-
NNG TRANSPORT													
[NNG] Transport Class 2 (Firm)													-
[NNG] Transport Class 2 (Interruptible)													-
[NNG] Transport Class 3 (Firm)													-
[NNG] Transport Class 3 (Interruptible)													-
[NNG] Transport Class 4 (Firm)													-
[NNG] Transport Class 4 (Interruptible)													-
[NNG] Transport Class 5 (Interruptible)													-
[NNG] Transport Class 5 CIP Exempt (Firm)													-
[NNG] Transport Class 5 CIP Exempt (Interruptible)													-
[NNG] Firm/Interruptible Class 2 Transport	4,216	4,210	4,210	4,210	4,210	4,210	4,210	4,210	4,210	4,210	4,210	4,210	50,526
[NNG] Firm/Interruptible Class 3 Transport	104,500	104,500	104,500	104,500	104,500	104,500	104,500	104,500	104,500	104,500	104,500	104,500	1,254,000
[NNG] Firm/Interruptible Class 4 Transport	191,500	191,500	191,500	191,500	191,500	191,500	191,500	191,500	191,500	191,500	191,500	191,500	2,298,000
[NNG] Firm/Interruptible Class 5 Transport	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500	186,000
[NNG] Firm/Interruptible Class 5 Transport CIP Exempt	2,118,000	2,118,000	2,118,000	2,118,000	2,118,000	2,118,000	2,118,000	2,118,000	2,118,000	2,118,000	2,118,000	2,118,000	25,416,000
[NNG] Transport Electric Generation Class 2 (Interruptible)													-
[NNG] Transport Electric Generation Class 2 CIP Exempt (Firm)													-
[NNG] Transport Electric Generation Class 2 CIP Exempt (Interruptible)													-
[NNG] Transport Resale													-
[NNG] Transport Flex (Cust A)	429,500	427,135	418,000	481,500	442,000	447,500	368,000	441,000	468,500	468,500	512,000	494,500	5,398,135
[NNG] Transport Flex (Cust F)	254,911	251,974	216,688	218,635	222,526	253,130	319,698	239,232	179,295	247,453	209,199	213,091	2,825,833
[NNG] Transport Flex (Cust G)	93,512	100,519	105,867	76,675	73,782	65,818	73,212	43,869	47,627	54,564	52,958	70,995	859,398
CONSOLIDATED TRANSPORT													
[Cons] Transport Class 2 (Firm)													-
[Cons] Transport Class 2 (Interruptible)													-
[Cons] Transport Class 2 CIP Exempt (Firm)													-
[Cons] Transport Class 3 (Firm)													-
[Cons] Transport Class 3 (Interruptible)													-
[Cons] Transport Class 4 (Firm)													-
[Cons] Transport Class 4 (Interruptible)													-
[Cons] Transport Class 5 (Interruptible)													-
[Cons] Transport Class 5 CIP Exempt (Firm)													-
[Cons] Firm/Interruptible Class 3 Transport	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000	132,000
[Cons] Firm/Interruptible Class 5 Transport CIP Exempt	423,000	423,000	423,000	423,000	423,000	423,000	423,000	423,000	423,000	423,000	423,000	423,000	5,076,000
Taconite Mines (Michigan)													-
Total MERC	3,670,797	3,673,601	3,632,080	3,663,578	3,621,905	3,643,168	3,635,931	3,597,350	3,569,637	3,647,794	3,659,354	3,672,598	43,687,791

Minnesota Energy Resources Corporation
Projected Firm Sales for Firm/ Interruptible Customers
For the 12 Months Ending, December 31, 2022

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Total
NNG SALES													
[NNG] General Service Residential													-
[NNG] Farm Tap Residential													-
[NNG] General Service Class 1													-
[NNG] General Service Class 2													-
[NNG] General Service Class 3													-
[NNG] Farm Tap Class 1													-
[NNG] Farm Tap Class 2													-
[NNG] Farm Tap Class 3													-
[NNG] Interruptible Class 2													-
[NNG] Interruptible Class 3													-
[NNG] Agricultural Grain Dryer Class 1													-
[NNG] Agricultural Grain Dryer Class 2													-
[NNG] Agricultural Grain Dryer Class 3													-
[NNG] Firm/Interruptible Class 2	3,181	2,648	2,767	2,582	2,378	4,649	5,269	4,454	3,196	1,616	1,702	2,389	36,830
[NNG] Electric Generation Class 1													-
[NNG] Electric Generation Class 2													-
CONSOLIDATED SALES													
[Cons] General Service Residential													-
[Cons] General Service Class 1													-
[Cons] General Service Class 2													-
[Cons] General Service Class 3													-
[Cons] Interruptible Class 2													-
[Cons] Interruptible Class 3													-
[Cons] Interruptible Class 4													-
[Cons] Agricultural Grain Dryer Class 1													-
[Cons] Agricultural Grain Dryer Class 2													-
[Cons] Firm/Interruptible Class 2	22,245	15,155	21,653	18,088	13,338	4,916	4,168	5,277	5,906	7,075	9,812	19,236	146,867
[Cons] Electric Generation Class 1													-
NNG TRANSPORT													
[NNG] Transport Class 2 (Firm)													-
[NNG] Transport Class 2 (Interruptible)													-
[NNG] Transport Class 3 (Firm)													-
[NNG] Transport Class 3 (Interruptible)													-
[NNG] Transport Class 4 (Firm)													-
[NNG] Transport Class 4 (Interruptible)													-
[NNG] Transport Class 5 (Interruptible)													-
[NNG] Transport Class 5 CIP Exempt (Firm)													-
[NNG] Transport Class 5 CIP Exempt (Interruptible)													-
[NNG] Firm/Interruptible Class 2 Transport	4,210	4,210	4,210	4,210	4,210	9,015	14,125	10,062	11,397	8,937	10,171	4,569	89,325
[NNG] Firm/Interruptible Class 3 Transport	104,500	104,500	104,500	104,500	104,500	120,033	150,881	156,322	154,805	198,472	195,693	163,909	1,662,616
[NNG] Firm/Interruptible Class 4 Transport	191,500	191,500	191,500	191,500	191,500	230,196	285,377	288,765	313,379	362,427	329,499	379,429	3,146,571
[NNG] Firm/Interruptible Class 5 Transport	15,500	15,500	15,500	15,500	15,500	14,300	16,086	13,223	13,176	13,563	19,765	16,204	183,818
[NNG] Firm/Interruptible Class 5 Transport CIP Exempt	2,118,000	2,118,000	2,118,000	2,118,000	2,118,000	2,021,220	2,017,613	2,036,595	1,925,961	2,179,005	2,013,943	1,929,099	24,713,438
[NNG] Transport Electric Generation Class 2 (Interruptible)													-
[NNG] Transport Electric Generation Class 2 CIP Exempt (Firm)													-
[NNG] Transport Electric Generation Class 2 CIP Exempt (Interruptible)													-
[NNG] Transport Resale													-
[NNG] Transport Flex (Cust A)	460,500	325,500	300,500	314,000	393,000	289,567	320,728	352,824	313,437	334,987	242,382	242,190	3,889,616
[NNG] Transport Flex (Cust F)	254,663	241,183	209,899	216,242	239,160	242,538	211,016	277,333	236,590	269,378	223,097	212,968	2,834,066
[NNG] Transport Flex (Cust G)	142,500	218,500	208,000	186,000	135,500	51,212	55,087	57,509	48,351	71,621	73,342	79,182	1,326,805
CONSOLIDATED TRANSPORT													
[Cons] Transport Class 2 (Firm)													-
[Cons] Transport Class 2 (Interruptible)													-
[Cons] Transport Class 2 CIP Exempt (Firm)													-
[Cons] Transport Class 3 (Firm)													-
[Cons] Transport Class 3 (Interruptible)													-
[Cons] Transport Class 4 (Firm)													-
[Cons] Transport Class 4 (Interruptible)													-
[Cons] Transport Class 5 (Interruptible)													-
[Cons] Transport Class 5 CIP Exempt (Firm)													-
[Cons] Firm/Interruptible Class 3 Transport	11,000	11,000	11,000	11,000	11,000	8,140	8,732	11,294	12,613	12,313	6,785	3,213	118,089
[Cons] Firm/Interruptible Class 5 Transport CIP Exempt	423,000	423,000	423,000	423,000	423,000	423,389	412,128	446,749	413,304	501,374	490,250	349,620	5,151,814
Taconite Mines (Michigan)	-	-	-	-	-	-	-	-	-	-	-	-	-
Total MERC	3,750,828	3,670,725	3,610,559	3,604,654	3,651,119	3,419,209	3,501,245	3,660,444	3,452,151	3,960,807	3,616,480	3,402,050	43,299,855

Minnesota Energy Resources Corporation
Proposed Test Year Firm Sales for Firm/ Interruptible Customers
For the 12 Months Ending, December 31, 2023

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Total
NNG SALES													
[NNG] General Service Residential													-
[NNG] Farm Tap Residential													-
[NNG] General Service Class 1													-
[NNG] General Service Class 2													-
[NNG] General Service Class 3													-
[NNG] Farm Tap Class 1													-
[NNG] Farm Tap Class 2													-
[NNG] Farm Tap Class 3													-
[NNG] Interruptible Class 2													-
[NNG] Interruptible Class 3													-
[NNG] Agricultural Grain Dryer Class 1													-
[NNG] Agricultural Grain Dryer Class 2													-
[NNG] Agricultural Grain Dryer Class 3													-
[NNG] Firm/Interruptible Class 2	8,215	6,897	7,136	6,708	5,326	4,744	5,376	4,545	3,261	1,649	1,737	2,438	58,032
[NNG] Electric Generation Class 1													-
[NNG] Electric Generation Class 2													-
CONSOLIDATED SALES													
[Cons] General Service Residential													-
[Cons] General Service Class 1													-
[Cons] General Service Class 2													-
[Cons] General Service Class 3													-
[Cons] Interruptible Class 2													-
[Cons] Interruptible Class 3													-
[Cons] Interruptible Class 4													-
[Cons] Agricultural Grain Dryer Class 1													-
[Cons] Agricultural Grain Dryer Class 2													-
[Cons] Firm/Interruptible Class 2	11,032	11,032	11,032	11,032	11,032	11,032	11,032	11,032	11,032	11,032	11,032	11,032	132,388
[Cons] Electric Generation Class 1													-
NNG TRANSPORT													
[NNG] Transport Class 2 (Firm)													-
[NNG] Transport Class 2 (Interruptible)													-
[NNG] Transport Class 3 (Firm)													-
[NNG] Transport Class 3 (Interruptible)													-
[NNG] Transport Class 4 (Firm)													-
[NNG] Transport Class 4 (Interruptible)													-
[NNG] Transport Class 5 (Interruptible)													-
[NNG] Transport Class 5 CIP Exempt (Firm)													-
[NNG] Transport Class 5 CIP Exempt (Interruptible)													-
[NNG] Firm/Interruptible Class 2 Transport	7,627	4,593	3,600	3,565	4,084	9,705	14,926	10,484	11,770	9,179	10,430	4,686	94,649
[NNG] Firm/Interruptible Class 3 Transport	147,613	130,092	116,946	131,055	135,507	129,223	159,434	162,882	159,878	203,852	200,687	168,094	1,845,264
[NNG] Firm/Interruptible Class 4 Transport	265,965	209,494	211,097	218,756	240,595	247,821	301,554	300,883	323,647	372,250	337,909	293,324	3,323,294
[NNG] Firm/Interruptible Class 5 Transport	14,861	13,457	16,703	16,519	13,907	14,333	16,286	13,340	13,385	13,397	20,005	16,287	182,482
[NNG] Firm/Interruptible Class 5 Transport CIP Exempt	2,141,891	1,971,703	2,538,253	1,823,523	2,233,184	2,066,643	2,126,667	2,161,902	1,821,033	2,239,319	2,086,085	2,090,232	25,300,436
[NNG] Transport Electric Generation Class 2 (Interruptible)													-
[NNG] Transport Electric Generation Class 2 CIP Exempt (Firm)													-
[NNG] Transport Electric Generation Class 2 CIP Exempt (Interruptible)													-
[NNG] Transport Resale													-
[NNG] Transport Flex (Cust A)	285,025	227,620	216,196	286,044	218,791	289,567	320,728	352,824	313,437	334,987	242,382	242,190	3,329,793
[NNG] Transport Flex (Cust F)	264,493	235,809	221,205	176,200	212,529	235,614	225,912	253,033	229,820	263,498	219,367	215,041	2,752,520
[NNG] Transport Flex (Cust G)	114,098	109,509	90,376	70,119	56,125	47,736	37,721	47,214	49,181	66,432	82,021	93,021	863,553
CONSOLIDATED TRANSPORT													
[Cons] Transport Class 2 (Firm)													-
[Cons] Transport Class 2 (Interruptible)													-
[Cons] Transport Class 2 CIP Exempt (Firm)													-
[Cons] Transport Class 3 (Firm)													-
[Cons] Transport Class 3 (Interruptible)													-
[Cons] Transport Class 4 (Firm)													-
[Cons] Transport Class 4 (Interruptible)													-
[Cons] Transport Class 5 (Interruptible)													-
[Cons] Transport Class 5 CIP Exempt (Firm)													-
[Cons] Firm/Interruptible Class 3 Transport	3,594	3,855	2,745	3,199	3,623	8,764	9,227	11,768	13,026	12,647	6,958	3,295	82,701
[Cons] Firm/Interruptible Class 5 Transport CIP Exempt	540,494	437,824	455,442	366,516	322,242	422,483	440,397	486,520	389,935	505,646	554,966	409,825	5,332,289
Taconite Mines (Michigan)													-
Total MERC	3,804,910	3,361,885	3,890,732	3,113,237	3,456,945	3,487,664	3,669,260	3,816,428	3,339,405	4,033,889	3,773,579	3,549,468	43,297,403

Minnesota Jurisdiction Only

	Forecast Models	CCOSS	Rate Design
Sales (Firm and Interruptible)	875,588,723	875,588,723	875,588,723
Fixed Charge Counts	2,968,170	2,968,170	2,968,170
Revenues on Current Tariffs		$ 406,983,975.35	$ 406,983,975.52

*The Forecast Models are done inclusive of the Michigan Taconite Mines, but the associated values with those customers are excluded from the revenue deficiency.