



85 7TH PLACE EAST, SUITE 500
SAINT PAUL, MINNESOTA 55101-2198
MN.GOV/COMMERCE
651.539.1500 FAX: 651.539.1547
AN EQUAL OPPORTUNITY EMPLOYER

November 17, 2014

Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E015/M-14-577

Dear Dr. Haar,

Attached are the comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

Petition of Minnesota Power for Approval of Investments and Expenditures in the Thomson Project for Recovery through Minnesota Power's Renewable Resources Rider under Minn. Stat. §216B.1645.

The petition was filed on July 3, 2014 by:

Susan Ludwig
Policy Manager
Minnesota Power
30 West Superior Street
Duluth, MN 55802

The Department recommends **approval** of Minnesota Power's petition and is available to answer any questions the Commission may have.

Sincerely

/s/ CHRISTOPHER J. SHAW
Rates Analyst

CJS/ja
Attachment

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

TRADE SECRET COMMENTS OF THE
MINNESOTA DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

DOCKET No. E015/M-14-577

I. BACKGROUND

On July 3, 2014, Minnesota Power (MP or the Company) filed a petition with the Minnesota Public Utilities Commission (Commission) to request approval of investments and expenditures related to the hydroelectric restoration project at MP's Thomson Hydroelectric Development (Thomson or the Project). The Company filed this petition pursuant to Minn. Stat. §216B.1645 and Minn. Rules 7829.1300.

Thomson provides MP with 280,000 MWh of renewable annual energy production and 71 MW of capacity. The record rainfall and severe flooding that occurred in and around Duluth, Minnesota on June 19 and 20, 2012 severely damaged Minnesota Power's St. Louis River hydroelectric system which was forced offline due to the flood.

MP stated that its reconstruction plan was authorized by the Federal Energy Regulatory Commission (FERC) in a letter dated September 19, 2013, allowing the reconstruction of the Thomson forebay to proceed. MP's reconstruction plan was based on the conclusions from the forensics investigation of the forebay failure in the *Root Cause Failure Report* filed with FERC on June 20, 2013 and the *Environmental Analysis Report* filed with FERC on July 17, 2013. The *Root Cause Failure Report* concluded that the extreme flooding conditions caused the loss of control of water into and out of the forebay canal resulting in overtopping, erosion, and failure of the forebay embankment.

MP indicated that it received FERC approval to begin refilling the forebay on October 8, 2014 and a phased refill is in process. Refill reached an elevation to allow generating unit commissioning to begin on October 20, 2014 and one unit was manually synchronized to the transmission system on October 29, 2014. As of November 6, 2014, final commissioning of that unit was ongoing and the unit was anticipated to begin full generation production on November 13, 2014.¹

¹ DOC IR 9 included as Attachment A.

II. DEPARTMENT ANALYSIS

A. GENERAL FRAMEWORK

The analysis of the Minnesota Department of Commerce's (Department or DOC) is provided below. First, the Department examines whether Thomson meets the requirements of Minn. Stat. §216B.1691 (Renewable Energy Objective). This test is required by Minn. Stat. §216B.1645, the statute controlling MP's filing. Second, the Department reviews the Thompson project in the context of MP's last resource plan. Third, the Department analyzes MP's Strategist modeling. Fourth, the Department analyzes the costs and cost recovery process as required by Minn. Stat. §216B.1645. Finally, the Department provides its conclusions and recommendations.

B. THRESHOLD REQUIREMENTS FOR COMMISSION APPROVAL

MP requested Commission approval of its investments and expenditures in Thomson under Minn. Stat. §216B.1645 (Power Purchase Contract or Investment). Minn. Stat. §216B.1645, subd. 1 states:

216B.1645 POWER PURCHASE CONTRACT OR INVESTMENT.

Subdivision 1. **Commission authority.** Upon the petition of a public utility, the Public Utilities Commission shall approve or disapprove power purchase contracts, investments, or expenditures entered into or made by the utility to satisfy the wind and biomass mandates contained in sections 216B.169, 216B.2423, and 216B.2424, and to satisfy the renewable energy objectives and standards set forth in section 216B.1691, including reasonable investments and expenditures made to:

(1) transmit the electricity generated from sources developed under those sections that is ultimately used to provide service to the utility's retail customers, including studies necessary to identify new transmission facilities needed to transmit electricity to Minnesota retail customers from generating facilities constructed to satisfy the renewable energy objectives and standards, provided that the costs of the studies have not been recovered previously under existing tariffs and the utility has filed an application for a certificate of need or for certification as a priority project under section 216B.2425 for the new transmission facilities identified in the studies;

(2) provide storage facilities for renewable energy generation facilities that contribute to the reliability, efficiency, or cost-effectiveness of the renewable facilities; or

(3) develop renewable energy sources from the account required in section 116C.779.

Therefore, given the facts in this proceeding, based on Minn. Stat. §216B.1645, subd. 1, the Commission may approve MP's petition only if it meets the requirements in Minn. Stat. §216B.1691.

Minn. Stat. §216B.1691, subd. 1 defines "eligible energy technology." Under this definition, a hydroelectric facility with a capacity of less than 100 MW is an eligible energy technology. Also, Minn. Stat. §216B.1691, subd. 2a sets the following eligible energy technology standard for utilities not owning nuclear generating facilities:

216B.1691 RENEWABLE ENERGY OBJECTIVES.

Subd. 2a. **Eligible energy technology standard.** (a) Except as provided in paragraph (b), each electric utility shall generate or procure sufficient electricity generated by an eligible energy technology to provide its retail customers in Minnesota, or the retail customers of a distribution utility to which the electric utility provides wholesale electric service, so that at least the following standard percentages of the electric utility's total retail electric sales to retail customers in Minnesota are generated by eligible energy technologies by the end of the year indicated:

- | | | |
|-----|------|-------------|
| (1) | 2012 | 12 percent |
| (2) | 2016 | 17 percent |
| (3) | 2020 | 20 percent |
| (4) | 2025 | 25 percent. |

Figure 10 of MP's petition shows that the Company's current renewable resources produce enough energy to meet 22.2 percent of its projected 2025 sales, and that the restoration of Thomson would raise that percentage to 24.5. Thus, Thomson will assist MP in its effort to meet its renewable energy requirements in 2025.

The Department notes that in Docket No. E002/M-12-50, the Department concluded that costs necessary to repair an Xcel Energy transmission line on the Buffalo Ridge were eligible for rider recovery under Minn. Stat. § 216B.1645. The Department concluded that, unlike transmission projects under Minn. Stat. § 216B.16, subd. 7b, Minn. Stat. § 216B.1645 does not require the project be new to be eligible for cost recovery. The Commission agreed, and found that Xcel Energy's Buffalo Ridge Restoration Project was eligible for rider recovery under Minn. Stat. § 216B.1645.²

² Order Approving 2012 TCR Project Eligibility and Rider, Capping Costs, and Modifying 2011 Tracker Report, Docket No. E002/M-12-50 (February 7, 2014).

C. RESOURCE PLAN

MP's most recent resource plan (Docket No. E015/RP-13-53) analyzed MP's resource needs in detail. The Thomson Hydro Station continued to be a renewable resource that MP relied upon in its resource plan to meet its capacity, energy, and renewable compliance needs.³

D. MODELING REVIEW

The Department used Strategist to review MP's modeling efforts regarding the Thompson Project. The general process followed by the Department when reviewing Strategist modeling is as follows:

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

Below the Department explains the results of this analytical process as applied to MP's modeling of the Project.

In response to Department information requests, the Department obtained from MP the Company's reference case along with the commands necessary to re-create each of the scenarios explored by the Company. Additionally, the Department obtained a spreadsheet from MP that translated the Strategist outputs into the format presented in the petition.⁴

After obtaining MP's Strategist files, the Department re-ran the files and macros necessary to re-create the Strategist scenarios examined by MP in the petition. The Department's outputs matched the outputs in the files provided by MP. This demonstrates that the inputs provided by MP were the inputs that created the modeling outputs. The Department then examined the results for the scenarios presented in MP's petition and concluded that the total costs from the Department's Strategist outputs, after being escalated per MP's spreadsheet, matched the Strategist costs reported in the petition. Since the results

³ See MP's March 1, 2013 Integrated Resource Plan, Appendix C, page 7, Appendix G, page 2 in Docket No. E015/RP-13-53.

⁴ The spreadsheet took the Strategist results and escalated the values from present value in 2009 to present value in 2014.

matched, the Department concluded that it had obtained the proper files from MP and that modeling could proceed.

Next the Department reviewed the inputs and outputs of MP's base case. The Department's initial analysis compared selected inputs used by the Department in the Department's most recent modeling of MP's system⁵ with the inputs used by MP in preparing the petition. The goal was to determine if certain inputs changed significantly. If the inputs did not change significantly, the Department could rely upon prior review of the model inputs rather than attempting a thorough review at this time.

First, the Department compared the load forecast inputs for system energy requirements and system peak demand. The comparison indicated that energy and demand inputs both decreased from the 2013 resource plan model to the 2014 model used for the petition; the forecast still predicted increased requirements, but from a lower beginning value. The Department expected the forecast to have been updated. While the forecast changed significantly for 2014 to 2016, after that the forecasted energy and demand requirements decreased by about 1.5 percent for both energy and capacity.⁶ Such a change in the forecast is reasonable.

Second, the Department compared fuel cost inputs for each of MP's units. The result of the comparison was that the annual fuel prices for MP's coal units were the same as those used in the 2013 resource plan. The Department also compared the base natural gas cost inputs. The natural gas cost decreased substantially, by between 5 and 15 percent most years. Thus, MP's 2014 model makes the natural gas alternative to the Project look better than it would have if the 2013 resource plan model had been used.

Third, the Department compared the capacity and heat rates of MP's units. The capacities were the same except for a small change at one unit. The heat rates were identical in both files. Thus, Department concludes that the capacity and heat rate values are reasonable.

Fourth, the Department compared the costs for MP's alternatives. The wind unit used by MP as an alternative to the Project was the same as the unit available in MP's resource plan model. The combustion turbine and solar alternatives were new units, not available in the prior model and thus a comparison was not possible. After reviewing the inputs for the alternative units the Department determined that the inputs for:

- the wind unit were reasonable;⁷
- the solar unit were reasonable;⁸ and
- the gas CT were reasonable.

⁵ See the Department's May 7, 2012 comments in Docket No. E015/RP-09-1088.

⁶ Also of note is the addition to the Strategist inputs of a separate set of data in the forecast module to represent an air conditioning control program.

⁷ It appears that MP's unit for the wind alternative was priced assuming that the federal incentives expire before the units are added.

⁸ It appears that MP's unit for the solar alternative was priced assuming that the federal incentives expire in 2018; they are available for one solar alternative unit but not the other.

In summary, the Department concludes that the 2014 model generally is similar to MP's 2013 resource plan model. Therefore, the Department reviewed our comments on MP's 2013 resource plan to determine if significant changes were made to MP's base model. The Department's modeling comments discussed two major changes:

- implementing MISO's U-Cap reserve margin rather than MISO's I-Cap, which was used by MP; and
- using the cost of NO_x and SO₂ allowances, which MP did not use in the resource plan.

In this case MP's model continues to use MISO's I-Cap reserve margin. However, MP did include the price of SO₂ allowances and the Commission's NO_x externality value in the 2014 model.

Lastly, the Department reviewed the macro files used to change MP's base case. This review demonstrated that the Department made other, generally technical changes that were not directly discussed in the resource plan comments such as deleting unused units. These changes would not have a significant impact on Strategist results.

The Department notes that, in this case, MP did not allow optional expansion units to be evaluated by Strategist. Instead, MP locked-in the expansion plan and determined how well the Project and the alternatives fit into the pre-determined system. The expansion plan applicable to all of the scenarios includes the following units:

- the addition of the 200 MW (nameplate) Bison 4 wind unit in 2015;
- the addition of a one-year, 50 MW intermediate (accredited) capacity and energy purchase for 2016-2019 (as a bridge to MP's purchase from Manitoba Hydro);
- the addition of a 200 MW (accredited) combined cycle capacity in 2023; and
- the retirement of Taconite Harbor unit 3 in 2015.

Regarding the locked-in expansion plan, in this case the Department is not attempting to determine the least cost expansion plan. Instead, the Department is attempting to determine which alternative best complements the resource-plan-determined expansion plan. Further, MP's expansion plan reflects past Commission orders regarding expansion of MP's system such as the approval of the 250 MW power purchase agreement with Manitoba Hydro⁹ and retirement of Taconite Harbor unit 3.¹⁰

In summary, there remains only one significant issue with MP's Strategist base file, the use of MISO's I-Cap rather than U-Cap. The Department continues to conclude that use of U-Cap is preferred (see the Department's June 3, 2013 comments in Docket No. E015/RP-13-53). However, in this case the change to U-Cap values could not change the Strategist results since the choice of I-Cap or U-Cap should only impact a unit's capacity for purposes of the load and capability chart and not for dispatch or energy production. In this case the load and capability values cannot change; as discussed above the expansion plan is locked-in.

⁹ See Docket No. E015/M-11-938.

¹⁰ See Docket No. E015/RP-13-53.

The Department presents Table 1 below which shows the capacity surplus/(deficit) in Strategist for the initial years of the planning period. Table 1 demonstrates that MP has a capacity need that the Project or the alternatives could address.

Table 1: Strategist Capacity Surplus/(Deficit)¹¹

	2014	2015	2016	2017	2018	2019	2020
Demand Requirement	1,702.5	1,767.4	1,816.6	1,887.2	1,902.8	1,914.8	1,924.4
Supply Accredited	1,736.5	1,746.0	1,848.2	1,841.2	1,841.2	1,843.9	1,891.2
Surplus/(Deficit)	34.0	(21.4)	31.6	(46.0)	(61.6)	(70.9)	(33.2)

While MP modeled the benefits of a dispatchable 71 MW renewable resource, MP noted several benefits of Thomson that were not included. First, MP stated it is now anticipating that repairs and upgrades will improve efficiency at Thomson resulting in an increase in capacity of 6 MW to 8 MW or about a 10 percent increase in energy output potential.¹² Additionally, Thomson is able to provide ancillary services to the Midcontinent Independent System Operator (MISO) market that the available alternatives would not be able to provide. Further, MP indicated that Thomson Unit 6 is MP's black start unit, meaning Thomson 6 can restore a power system to operation without relying on external electric power. Finally, while MP included an estimate of shutdown costs in its analysis, MP stated that a shutdown of Thomson would entail a great deal of uncertainty regarding regulatory obligations to surrender the Company's FERC license, and may not be a feasible option.

Overall, the Department concludes that MP's modeling provides a reasonable basis to determine that the Thomson Restoration Project is a cost-effective resource addition.

E. COST REVIEW

1. Revenue Requirement Calculations

While MP had not yet requested recovery of any specific costs for Thomson, the DOC provides its review of MP's estimated costs for the Project.

In response to information requests, MP provided complete revenue requirement calculations for each of the following subprojects:¹³

¹¹ "Demand Requirement" includes required reserves, "Supply Accredited" excludes the Thomson project and includes all Commission-approved projects (such as the Manitoba Hydro purchase in 2020, see Docket No. E015/M-11-938).

¹² Response to DOC IR 10 included as Attachment B.

¹³ Response to DOC IR 6 included as Attachment C.

Project ID#	Description	Date	Expected In-service
104989	THM Unit 6 Overhaul		5/30/2014
106287	THM Lwr Gate Hse-Rpl Stl & Trsh Rks		4/30/2014
106288	THM Rpl/Rfb Lwr Gate Hse Gates		4/30/2014
106389	THM Upper Gate House Head Gate		4/30/2014
106984	THM Unit 3 Flood Insp/Refurb		6/30/2014
106284	THM Replace #1 Penstock Valve		5/30/2014
106997	THM Unit 2 Flood Insp/Refurb		5/31/2014
107017	THM Basement Flood Proofing		6/30/2014
106156	THM Forebay Embankment Reconstruct		7/31/2014
106282	THM Lower Wye Hse - Replace Valves		9/30/2014
106998	THM Unit 4 Flood Insp/Refurb		9/30/2014
106999	THM Unit 5 Flood Insp/Refurb		9/30/2014
106949	THM Refurbish #4 & #5 Penstock		10/31/2014
106983	THM Unit 1 Flood Insp/Refurb		10/31/2014
106281	THM Back-up Control Room		11/30/2014
106260	THM Flowline_Penstock_Abate_Line		12/31/2014
106262	THM - Electrical Infrastructure		12/31/2014
106286	THM Cathodic Protection Grnd Rpl		12/31/2014
106501	THM Rpl Penstock Vlv Operators 2-6		12/31/2014
106373	THM Basement Lead Abatement		3/31/2015
106069	THM Replace/Refurbish Dam 6		12/30/2015
106794	THM Spill Capacity		12/31/2016
106270	THM 115KV SUB - Add & Rpl Bkrs		7/31/2014
106293	TMS Substation Elec. Infrastructure		7/31/2014

The response to DOC IR 6¹⁴ shows MP's calculation of the amount removed for the revenue requirements associated with expected plant retirements in base rates. Exhibit B-1 of the response to DOC IR 6 demonstrates that MP has removed that amount from its revenue requirement calculations. Consistent with past Commission precedent, the response to DOC IR 6¹⁵ also demonstrates that MP removed internal costs and the associated allowance for funds used during construction (AFUDC).

Regarding insurance proceeds, the response to DOC IR 6¹⁶ shows that MP credited insurance proceeds in its calculation of the capital costs used to estimate the project's revenue requirements.

MP has updated its estimate of insurance payments since its initial filing.¹⁷ MP has received insurance payments totaling \$7 million to date and expects to receive a total of \$20.4 million. MP's property insurance policy did not include coverage of dams, dikes, damage to land, relocation of power lines or business interruption. MP stated that it evaluated the costs of supplemental coverage in the past and decided that given the

¹⁴ Page 62 of Attachment C (Page 50 of Exhibit B-2).

¹⁵ Exhibit B-3 of Attachment C.

¹⁶ Exhibit B-3 of Attachment C.

¹⁷ Response to DOC IR 7 included as Attachment D.

residual risk still inherent in the supplemental coverage, the excessive cost was not worth the additional coverage.

MP stated that it thoroughly reviewed its risk exposures after the 2012 Thomson flood and decided not to make any changes to its insurance policy. MP stated that:

The decision was based on the cost and residual exposure. The additional cost to add coverage for dams, dikes and business interruption was quoted at a considerably higher amount than our existing coverage. The decision also considered that the Thomson reconstruction project will mitigate the most significant risk exposure, since the standards for reconstruction will make it far less likely that Thomson will suffer extensive damages in another catastrophic event.

The Department concludes that MP has appropriately removed internal costs, revenue requirements associated with expected plant retirements in base rates, and insurance proceeds.

2. Water Conveyance System

The Department notes that the Thomson Water Conveyance System was repaired and upgraded at an estimated cost of \$31 million. The water conveyance system was not damaged in the flood; however, MP stated that the repairs and upgrades to the water conveyance system would have been necessary in the near future. MP stated that once the outage was underway and it was possible to conduct thorough inspections, it was discovered that portions of the system were not suitable to put back into service without rehabilitation. Further, through a combination of replacement energy costs avoided and additional costs of construction due to inefficiencies caused by limited access and underwater work, MP estimated that approximately \$25 million was saved by repairing the water conveyance system during the outage caused by the flood.¹⁸ The Department concludes that it was reasonable to repair and upgrade the water conveyance system during the flood-induced outage.

3. Cost Estimates

The costs used in the cost-effectiveness modeling and throughout MP's filing are estimated costs. MP estimated total costs of \$90.4 million, net of insurance proceeds, as shown in Attachment B.

The Department notes that MP excluded insurance proceeds and internal costs from the project costs used in its cost-effectiveness analysis.¹⁹ The Department notes that, while internal costs would not be recovered through a subsequent rider recovery mechanism, these internal costs are eligible for recovery in a subsequent rate case. Thus, the

¹⁸ Response to DOC IR 8 included as Attachment E.

¹⁹ MP's initial filing, Appendix A, p. 1.

Department concludes that these internal costs should be included in a cost-effectiveness analysis. However, as the difference in this case is only \$6 million, the Thomson Project would remain cost-effective even if MP had included these internal costs.

4. *Cost Recovery*

Minn. Stat. §216B.1645, subd. 2 and subd. 2a identify the cost recovery process. They state:

Subd. 2. **Cost recovery.** The expenses incurred by the utility over the duration of the approved contract or useful life of the investment and expenditures made pursuant to section 116C.779 shall be recoverable from the ratepayers of the utility, to the extent they are not offset by utility revenues attributable to the contracts, investments, or expenditures. Upon petition by a public utility, the commission shall approve or approve as modified a rate schedule providing for the automatic adjustment of charges to recover the expenses or costs approved by the commission under subdivision 1, which, in the case of transmission expenditures, are limited to the portion of actual transmission costs that are directly allocable to the need to transmit power from the renewable sources of energy. The commission may not approve recovery of the costs for that portion of the power generated from sources governed by this section that the utility sells into the wholesale market.

Subd. 2a. **Cost recovery for utility's renewable facilities.**

(a) A utility may petition the commission to approve a rate schedule that provides for the automatic adjustment of charges to recover prudently incurred investments, expenses, or costs associated with facilities constructed, owned, or operated by a utility to satisfy the requirements of section 216B.1691, provided those facilities were previously approved by the commission under section 216B.2422 or 216B.243, or were determined by the commission to be reasonable and prudent under section 216B.243, subdivision 9. For facilities not subject to review by the commission under section 216B.2422 or 216B.243, a utility shall petition the commission for eligibility for cost recovery under this section prior to requesting cost recovery for the facility. The commission may approve, or approve as modified, a rate schedule that:

(1) allows a utility to recover directly from customers on a timely basis the costs of qualifying renewable energy projects, including:

- (i) return on investment;
 - (ii) depreciation;
 - (iii) ongoing operation and maintenance costs;
 - (iv) taxes; and
 - (v) costs of transmission and other ancillary expenses directly allocable to transmitting electricity generated from a project meeting the specifications of this paragraph;
- (2) provides a current return on construction work in progress, provided that recovery of these costs from Minnesota ratepayers is not sought through any other mechanism;
- (3) allows recovery of other expenses incurred that are directly related to a renewable energy project, including expenses for energy storage, provided that the utility demonstrates to the commission's satisfaction that the expenses improve project economics, ensure project implementation, advance research and understanding of how storage devices may improve renewable energy projects, or facilitate coordination with the development of transmission necessary to transport energy produced by the project to market;
- (4) allocates recoverable costs appropriately between wholesale and retail customers;
- (5) terminates recovery when costs have been fully recovered or have otherwise been reflected in a utility's rates.
- (b) A petition filed under this subdivision must include:
- (1) a description of the facilities for which costs are to be recovered;
 - (2) an implementation schedule for the facilities;
 - (3) the utility's costs for the facilities;
 - (4) a description of the utility's efforts to ensure that costs of the facilities are reasonable and were prudently incurred; and
 - (5) a description of the benefits of the project in promoting the development of renewable energy in a manner consistent with this chapter.

The Department notes that Minn. Stat. §216B.1645 contains two provisions related to Commission approval:

1. Subd. 1 requires the Commission to approve or disapprove the investment and expenditures associated with the renewable energy facilities, and
2. Subd. 2 states that upon petition of the public utility the Commission shall approve or approve as modified a rate

schedule providing for the automatic adjustment of charges to recover the expenses or costs approved by the Commission under subdivision 1. Moreover, subdivision 2a more specifically itemizes the cost components that may be recovered by a utility that constructs, owns, or operates the renewable energy facility.

The Department further notes that the second cost recovery provision is closely related to the first provision. In particular, subdivision 2 of Minn. Stat. §216B.1645 allows for automatic adjustment of charges to recover the expenses or costs approved by the Commission under subdivision 1 for service to retail customers.

Therefore, consistent with past renewable rider proceedings,²⁰ the Department concludes that Commission approval of the investment and expenditures for Thomson, under subdivision 1, requires MP to include in its petition for automatic adjustment of charges only the investment and expenditures approved by the Commission under subdivision 1 for service to retail customers based on Minn. Stat. §216B.1645 and the discussion above. If MP's petition is approved, then upon MP's eventual filing for automatic adjustments to charges, the Department expects these cost adjustments to include only costs that were approved by the Commission under subdivision 1.

III. CONCLUSION AND RECOMMENDATIONS

The Department recommends that the Commission:

- Find that the investments and expenditures for MP's Thomson Restoration Project are eligible for cost recovery under Minn. Stat. § 216B.1645.
- Limit MP's cost recovery through the renewable rider to the amount of MP's cost estimates as detailed in Attachment C to the Department's comments. Clarify that the Company will have the opportunity to seek recovery of other costs on a prospective basis.

/ja

²⁰ See *In the Matter of the Petition of Minnesota Power (MP) for Approval of Investments and Expenditures in the Bison 4 Wind Project for Recovery through MP's Renewable Resources Rider Under Minn. Stat. §216B.1645*, Docket No. E015/M-13-907.

State of Minnesota
DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

Utility Information Request

Docket Number: E015/M-14-577

Date of Request: October 30, 2014

Requested From: Minnesota Power

Response Due: November 11, 2014

Analysts Requesting Information: Chris Shaw

Type of Inquiry: ☐.....Financial ☐.....Rate of Return ☐.....Rate Design
 ☐.....Engineering ☐.....Forecasting ☐.....Conservation
 ☐.....Cost of Service ☐.....CIP ☐.....Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
9	Has MP received final approval from FERC to refill the forebay and return Thomson to service? If not, when does MP expect it will receive FERC approval? Is any portion of the Thomson facility currently in-service?

Response:

Minnesota Power received approval to begin refilling the forebay on October 8, 2014 and a phased refill is in process. Refill reached an elevation to allow generating unit commissioning to begin on October 20, 2014 and one unit (Unit 6) was manually synchronized to the transmission system on October 29, 2014. Final commissioning of that unit is ongoing and the unit is anticipated to be complete and in full generation production on November 13, 2014.

State of Minnesota
DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

Utility Information Request

Docket Number: E015/M-14-577

Date of Request: October 30, 2014

Requested From: Minnesota Power

Response Due: November 11, 2014

Analysts Requesting Information: Chris Shaw

Type of Inquiry: ☐.....Financial ☐.....Rate of Return ☐.....Rate Design
 ☐.....Engineering ☐.....Forecasting ☐.....Conservation
 ☐.....Cost of Service ☐.....CIP ☐.....Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
10	Are the costs shown in Table 1 of MP's petition final costs, with the exception of the Dam Spill Capacity project? Please provide any updates to the costs shown in Table 1.

Response:

Minnesota Power has spent \$87.0 million on the Thomson Project through the end of September, though none of the costs shown in Table 1 of the original petition have been finalized. This amount is the gross actual spend and does not include insurance premiums received. The attached file, DOC IR 10 Attachment, shows an update to Table 1, expanded and updated to include actual costs through September and estimated costs for the total project.

It is now anticipated that the repairs and upgrades will improve efficiency at Thomson beyond its pre-flood operations. It is expected that with the same amount of water, Thomson will produce an additional 6 MW to 8 MW of energy, an increase of about 10 percent. This efficiency improvement was not included in the original petition.

State of Minnesota
DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

Utility Information Request

Docket Number: E015/M-14-577

Date of Request: October 30, 2014

Requested From: Minnesota Power

Response Due: November 11, 2014

Analysts Requesting Information: Chris Shaw

Type of Inquiry: ☐.....Financial ☐.....Rate of Return ☐.....Rate Design
 ☐.....Engineering ☐.....Forecasting ☐.....Conservation
 ☐.....Cost of Service ☐.....CIP ☐.....Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
6	<p>Regarding MPUC IR 1:</p> <p>a. Please provide the response to this and any other IRs received by the Commission or other parties.</p> <p>b. Please also provide the basis for the total revenue requirement calculations shown in Table 2 of MP's petition. Please show the rate base and operating cost calculations, the amount of internal costs removed, and the amount removed for the revenue requirements currently being recovered in base rates.</p> <p>c. Please also provide the assumed depreciable life of the project.</p>

Response:

- a. Please refer to DOC IR 6 Attachment A for a copy of the Company's response to MPUC IR 1. No other information requests from other parties have been received to date. The Company will forward responses to all future information requests from other parties.

- b. Please refer to DOC IR 6 Attachment B for the requested information. A summary of the revenue requirements is provided in Exhibit B-1. The revenue requirements for each project are provided in Exhibit B-2. The amount being removed for the revenue requirements associated with expected plant retirements in base rates is provided in Exhibit B-2 page 50 of 50. The amount of internal costs and AFUDC on internal costs being removed is provided in Exhibit B-3
- c. The assumed book depreciable life is 50 years for all sub-projects except for two substation projects. Refer to Exhibit B-2 Section A for the book depreciation of each sub-project. The book depreciation rate for the two substation related projects (ID# 106270 and 10293) is an average transmission rate of 2.76% or about 36 years. The tax depreciable life is 20 years for all sub-projects except for two substation related projects. Refer to Exhibit B-2 Section B for the tax depreciation of each sub-project. The tax depreciable life for the two substation related projects (ID# 106270 and 10293) is 15 years.

This question is:

 Non-Public **x** **Public****State of Minnesota
Public Utilities Commission****Utility Information Request**

Docket Number: E-015/M-14-577

Date of Request: October 29, 2014

Requested From: Minnesota Power

Response Due: November 10, 2014

Analyst Requesting Information: Dorothy Morrissey

Type of Inquiry:

x	Financial		Rate of Return		Rate Design
	Engineering		Forecasting		Conservation
	Cost of Service		CIP		Other:

If you feel your response contains non-public information, please indicate.

Request Number	
1.	<p>The Company's filing, page 7, stated: "The flood damage in June 2012 completely wiped out 280,000 MWh of annual energy production from Thomson, eliminating 71 MW of accredited renewable energy capacity from the Minnesota Power system. The "old" Thomson generating facility ceased to exist." And on page 17, the Company stated, "The entire Thomson Development has been out of service since the June 2012 flood."</p> <p>A. Please provide the estimated revenue requirements currently being recovered in base rates associated with the entire Thomson Development. Please breakdown the revenue requirement amounts attributed to rate base return, depreciation and operational costs.</p> <p>B. Please provide the estimated revenue requirements currently being recovered in base rates associated with plant equipment that is expected to be retired/replaced as a result of the Thomson Project (specifically, the total annual credit/deduction incorporated into Table 2 calculations). Please breakdown the revenue requirement amounts attributed to rate base return, depreciation and operational costs.</p>

Response:

- A. In its last rate case, Minnesota Power developed detailed revenue requirements for Minnesota Power's hydro system overall and did not detail revenue requirement items by the Thomson Development. In order to develop an approximation of revenue requirements for the Thomson Development, an allocation was made to asset-based revenue requirement items based on the Thomson Development's net asset percentage of Minnesota Power's overall hydro system. The attached file, "MPUC IR 1 Attachment A" provides an estimate of the Thomson Development's revenue requirements based on this net asset allocation for all items except O&M and payroll expense. The amounts for Thomson Development's O&M and payroll expense are the amounts included in base rates and not allocations.
- B. As described in Section IV, E of the Thomson filing, Minnesota Power deducted the estimated revenue requirements associated with plant equipment currently being recovered in base rates that will be retired as a result of the Thomson Project. A detailed list of these retirements is included in attachment "MPUC IR 1 Attachment B."

MPUC IR 1 Attachment A

Minnesota Power
Renewable Resources Rider
Thomson Cost RecoveryThomson Plan Petition
Docket E-015/M-14-577

	Minnesota Power Hydro System 2010 Rate Case Revenue Requirements				Thomson Average Balance	Thomson Net Plant in Service as % of Total Company Hydro	Thomson's Estimated Rate Case Balance		
	Total Company	Minnesota Jurisdiction		Jurisdictional Percentage			Total Company	Minnesota Jurisdiction 14/	
2010 average balances									
1 Plant in Service	63,484,116	52,146,029	1/	82.14%	22,888,134		22,888,134		18,800,377
2 Accumulated Depreciation	(33,799,235)	(27,762,785)	2/	82.14%	(13,412,189)		(13,412,189)		(11,016,809)
3 Net Plant	29,684,881	24,383,244	3/	82.14%	9,475,945	31.92%	9,475,945		7,783,568
4 ADITL - Def Taxes	(5,397,789)	(4,433,759)	4/	82.14%			(1,723,071)	12/	(1,415,335)
5 Average Rate Base	24,287,092	19,949,485	5/	82.14%			7,752,875	5/	6,368,233
<u>Revenue Requirements</u>									
6 Return on Average Rate Base	2,950,882	2,423,862	6/	82.14%			941,974	6/	773,740
7 Operation & Maintenance Expense	5,766,037	4,747,321	7/	82.33%			2,547,921	13/	2,097,766
8 Depreciation Expense	1,270,021	1,043,199	8/	82.14%			405,413	12/	333,008
9 Property Tax	1,614,952	1,326,526	9/	82.14%			515,522	12/	423,451
10 Payroll Tax	220,443	182,951	10/	82.99%			124,506	13/	103,331
11 Total 2010 Test Year Revenue Requirements	11,822,335	9,723,859	11/				4,535,336	11/	3,731,296

Notes:

- 1/ Docket No. E015/GR-09-1151, Compliance Filing, Section IX, page 2 of 34, line 10
2/ Docket No. E015/GR-09-1151, Compliance Filing, Section IX, page 5 of 34, line 2 + line 3
3/ Line 1 + Line 2
4/ Docket No. E015/GR-09-1151, Compliance Filing, Section IX, page 7 of 34, (line 7 - line 15)*-1
5/ Line 3 + Line 4
6/ Line 5 x 12.15% Authorized pre-tax rate of return Docket No. E015/GR-09-1151
7/ Docket No. E015/GR-09-1151, Compliance Filing, Section IX, page 10 of 34, line 6
8/ Docket No. E015/GR-09-1151, Compliance Filing, Section IX, page 12 of 34, line 2
9/ Docket No. E015/GR-09-1151, Compliance Filing, Section IX, page 12 of 34, line 14
10/ Docket No. E015/GR-09-1151, Compliance Filing, Section IX, page 12 of 34, line 21
11/ Sum Lines 6 to 10
12/ Line 4 Total Company Rate Case amount x Thomson Net Plant as % of Total Company Hydro
13/ 2010 Rate case budget for Thomson location (0205)
14/ Thomson's estimated Rate Case amounts x jurisdictional percentage

MPUC IR 1 Attachment B

Minnesota Power
Renewable Resource Rider
Thomson Plan PetitionThomson Plan Petition
Docket E-015/M-14-577

Requirement Credit for Revenue Requirements in Base Rates Associated with Plant to be Retired

Thomson Base Rate Revenue Credit**Expected Property Retirements in Base Rates**

Section	Line	2009	Base Rates 2010
A	Book Basis of Property to be Retired		
	1 Plant in Service	3,435,256	3,491,217
	2 Total Accumulated Depreciation	1,410,075	1,494,270
	3 Net Plant	2,025,181	1,996,947
	4 Depreciation Expense		84,196
B	Tax Basis of Property of to be Retired		
	1 Plant in Service	3,435,256	3,491,217
	2 Accumulated Depreciation	2,971,727	3,117,267
	3 Net Plant	463,529	373,950
	4 Total Tax Depreciation		145,541
	5 Tax Book Difference	1,561,652	1,622,997
	6 Income Tax Rate 1/	41.37%	41.37%
	7 Accumulated Deferred Income Tax Liability	646,055	671,434
	8 Deferred Tax Expense debit / (Credit)		25,378
C	Revenue Requirements in Base Rates		
	1 Net Plant	2,025,181	1,996,947
	2 Less: ADITL - Def Taxes	(646,055)	(671,434)
	3 Rate Base	1,379,126	1,325,513
	4 Average Rate Base		1,352,319
	5 Return on Average Rate Base 2/		
	6 After Tax Return on Equity		76,194
	7 Income Tax Component		53,764
	8 Interest Expense Component		34,349
	9 Total Return on Average Rate Base		164,307
	10 Operation & Maintenance Expense Associated with Plant to be Retired		-
	11 Depreciation Expense		84,196
	12 Property Tax		81,741
	13 Revenue Requirements in Base Rates Associated with Property to be Retired		330,243
	14 Monthly Credit for Revenue Requirements in Base Rates		(27,520)
	15 MN Jurisdictional Allocator 3/		0.82017
	16 Monthly MN jurisdictional Credit for Revenue Requirements in Base Rates 4/		(22,571)

1/ Minnesota Composite Income Tax Rate.

2/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-6 rate of return components.

3/ Refer to Exhibit B-7.

4/ This monthly revenue requirement credit is needed beginning the month following MPUC approval of the Thomson Plan Petition and until the retirements and the Thomson projects are incorporated into base rates in a subsequent rate case.

Thomson Plan Filing

Table of Contents

<u>Exhibit</u>	<u>Description</u>
----------------	--------------------

Exhibit B-1	Summary Revenue Requirements, Cost Allocation and Rate Design
Exhibit B-1	Summary: Projected 2015 - 2017 Revenue Requirements
Exhibit B-1	Summary: Revenue Requirements All Project 2014-2025

Exhibit B-2	Project Identification List	Project ID#
Exhibit B-2	Revenue Requirements	104989
Exhibit B-2	Revenue Requirements	106287
Exhibit B-2	Revenue Requirements	106288
Exhibit B-2	Revenue Requirements	106389
Exhibit B-2	Revenue Requirements	106984
Exhibit B-2	Revenue Requirements	106284
Exhibit B-2	Revenue Requirements	106997
Exhibit B-2	Revenue Requirements	107017
Exhibit B-2	Revenue Requirements	106156
Exhibit B-2	Revenue Requirements	106282
Exhibit B-2	Revenue Requirements	106998
Exhibit B-2	Revenue Requirements	106999
Exhibit B-2	Revenue Requirements	106949
Exhibit B-2	Revenue Requirements	106983
Exhibit B-2	Revenue Requirements	106281
Exhibit B-2	Revenue Requirements	106260
Exhibit B-2	Revenue Requirements	106262
Exhibit B-2	Revenue Requirements	106286
Exhibit B-2	Revenue Requirements	106501
Exhibit B-2	Revenue Requirements	106373
Exhibit B-2	Revenue Requirements	106069
Exhibit B-2	Revenue Requirements	106794
Exhibit B-2	Revenue Requirements	106270
Exhibit B-2	Revenue Requirements	106293
Exhibit B-2	Base Rate Revenue Credit for Retirements	

Exhibit B-3	Plant Additions, AFUDC and Return on CWIP
-------------	---

Exhibit B-4	Authorized Rates of Return
-------------	----------------------------

Exhibit B-5	2010 Rate Case D-01 & D-02 P&A Allocation Factors
-------------	---

Minnesota Power
Renewable Resources Rider: Thomson Plan Filing
Summary: Revenue Requirements, Cost Allocation and Rate Design

		2015	2016	2017
Minnesota Jurisdictional Revenue Requirements		\$ 10,200,826	\$ 10,754,123	\$ 10,661,838
	Allocators /1			
MN Jurisdictional & Class Revenue Requirements	100.000%	\$ 10,200,826	\$ 10,754,123	\$ 10,661,838
Large Power	62.510%	\$ 6,376,558	\$ 6,722,425	\$ 6,664,737
All Other Retail Classes	37.490%	\$ 3,824,268	\$ 4,031,698	\$ 3,997,100
 <u>Billing Units 1/</u>				
Large Power	kW - month	715,217	715,217	715,217
	kWh	5,998,692,000	5,998,692,000	5,998,692,000
All Other Retail Classes	kWh	3,310,820,000	3,310,820,000	3,310,820,000
 <u>Billing Factors 2/</u>				
Large Power	\$/kW - month	0.45	0.47	0.47
	¢/kWh	0.043	0.045	0.044
Large Power (demand and energy average)	¢/kWh	0.106	0.112	0.111
All Other Retail Classes	¢/kWh	0.116	0.122	0.121

Notes:

1/ Jurisdictional Power Supply Demand (D-01/D-02) allocator and Peak & Average (P&A) class allocators from 2009 MPUC rate case Docket No. E-015/GR-09-1151. Refer to Exhibit B-7, line 11.

2/ 2014 Budget.

3/ The LP rate design is a demand rate adder (\$/kW-month) and an energy adder (¢/kWh). The LP allocated costs are to be split between demand and energy on the 2010 base rate demand and energy revenue split of approximately 60% demand and 40% energy per results of MP's most recent MPUC rate case (Docket No. E015/GR-09-1151). All other retail classes will have an energy adder (¢/kWh).

Minnesota Power
Renewable Resources Rider: Thomson Plan Filing
Summary: 2015 -2017 Revenue Requirements

Minnesota Jurisdictional Revenue Requirements (\$)

Project Number 1/	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Total
104989	19,843	19,798	19,752	19,707	19,661	19,616	19,570	19,525	19,480	19,434	19,389	19,343	235,117
106287	18,361	18,317	18,273	18,229	18,185	18,141	18,098	18,054	18,010	17,966	17,922	17,878	217,434
106288	21,487	21,436	21,385	21,334	21,283	21,231	21,180	21,129	21,078	21,027	20,976	20,924	254,470
106389	19,692	19,645	19,598	19,552	19,505	19,458	19,411	19,364	19,317	19,271	19,224	19,177	233,214
106984	1,975	1,970	1,966	1,962	1,958	1,954	1,949	1,945	1,941	1,937	1,932	1,928	23,417
106284	4,898	4,886	4,875	4,863	4,851	4,840	4,828	4,816	4,804	4,793	4,781	4,769	58,004
106997	1,092	1,090	1,087	1,084	1,081	1,078	1,075	1,072	1,069	1,067	1,064	1,061	12,920
107017	2,092	2,087	2,083	2,078	2,073	2,068	2,063	2,058	2,053	2,049	2,044	2,039	24,787
106156	303,425	302,800	302,174	301,548	300,922	300,297	299,671	299,045	298,420	297,794	297,168	296,542	3,599,807
106282	10,792	10,772	10,751	10,731	10,711	10,691	10,670	10,650	10,630	10,610	10,590	10,569	128,167
106998	1,823	1,819	1,814	1,810	1,806	1,801	1,797	1,793	1,788	1,784	1,780	1,775	21,589
106999	1,731	1,727	1,723	1,719	1,715	1,711	1,707	1,703	1,699	1,694	1,690	1,686	20,506
106949	6,448	6,432	6,417	6,402	6,386	6,371	6,356	6,340	6,325	6,310	6,294	6,279	76,359
106983	13,176	13,143	13,111	13,079	13,047	13,015	12,982	12,950	12,918	12,886	12,854	12,822	155,982
106281	2,976	2,968	2,961	2,954	2,947	2,940	2,933	2,926	2,919	2,912	2,904	2,897	35,237
106260	242,417	241,878	241,339	240,800	240,260	239,721	239,182	238,642	238,103	237,564	237,025	236,485	2,873,416
106262	107,976	107,780	107,585	107,389	107,194	106,998	106,802	106,607	106,411	106,216	106,020	105,824	1,282,802
106286	9,253	9,230	9,208	9,185	9,163	9,140	9,118	9,095	9,073	9,050	9,028	9,005	109,548
106501	497	497	496	495	494	493	492	491	490	489	488	488	5,910
106373	108	108	344	361	360	359	359	358	357	356	355	355	3,781
106069	4,481	4,834	5,187	5,540	5,893	6,246	6,600	6,953	7,306	7,659	8,012	8,365	77,690
106794	11,954	12,454	12,954	13,454	13,954	14,454	14,954	15,454	15,954	16,454	16,954	17,454	177,650
106270	15,889	15,846	15,802	15,758	15,715	15,671	15,628	15,584	15,541	15,497	15,453	15,410	187,795
106293	32,745	32,646	32,547	32,448	32,349	32,250	32,151	32,052	31,953	31,854	31,755	31,656	386,404
Base Rate Revenue Credit	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(270,856)
Total	832,561	831,593	830,861	830,160	829,814	834,976	845,523	855,820	865,862	877,146	883,340	883,171	10,200,826

Project Number 1/	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
104989	19,299	19,256	19,213	19,170	19,127	19,084	19,041	18,998	18,955	18,912	18,869	18,826	228,752
106287	17,835	17,794	17,752	17,711	17,669	17,627	17,586	17,544	17,503	17,461	17,420	17,378	211,281
106288	20,875	20,826	20,778	20,729	20,681	20,632	20,584	20,535	20,487	20,439	20,390	20,342	247,297
106389	19,131	19,087	19,043	18,998	18,954	18,910	18,865	18,821	18,777	18,732	18,688	18,644	226,650
106984	1,924	1,920	1,916	1,912	1,908	1,904	1,900	1,896	1,892	1,888	1,884	1,880	22,825
106284	4,758	4,747	4,736	4,725	4,714	4,703	4,692	4,681	4,670	4,659	4,648	4,637	56,368
106997	1,058	1,055	1,053	1,050	1,047	1,044	1,042	1,039	1,036	1,033	1,031	1,028	12,515
107017	2,034	2,029	2,025	2,020	2,016	2,011	2,006	2,002	1,997	1,993	1,988	1,983	24,105
106156	295,932	295,336	294,741	294,145	293,550	292,954	292,358	291,763	291,167	290,572	289,976	289,381	3,511,875
106282	10,549	10,530	10,511	10,491	10,472	10,453	10,433	10,414	10,395	10,375	10,356	10,337	125,318
106998	1,771	1,767	1,763	1,759	1,755	1,751	1,746	1,742	1,738	1,734	1,730	1,726	20,981
106999	1,682	1,678	1,674	1,671	1,667	1,663	1,659	1,655	1,651	1,647	1,643	1,639	19,930
106949	6,264	6,249	6,235	6,220	6,206	6,191	6,177	6,162	6,148	6,133	6,119	6,104	74,211
106983	12,790	12,760	12,729	12,699	12,668	12,638	12,608	12,577	12,547	12,516	12,486	12,455	151,474
106281	2,890	2,884	2,877	2,870	2,864	2,857	2,850	2,843	2,837	2,830	2,823	2,816	34,241
106260	235,960	235,448	234,937	234,425	233,914	233,402	232,890	232,379	231,867	231,356	230,844	230,333	2,797,754
106262	105,633	105,446	105,259	105,072	104,885	104,698	104,511	104,324	104,137	103,950	103,763	103,576	1,255,257
106286	8,983	8,962	8,941	8,919	8,898	8,877	8,855	8,834	8,813	8,791	8,770	8,749	106,391
106501	487	486	485	484	483	482	482	481	480	479	478	477	5,783
106373	354	353	352	352	351	350	349	349	348	347	346	346	4,197
106069	11,123	11,097	11,070	11,043	11,016	10,990	10,963	10,936	10,909	10,883	10,856	10,829	131,715
106794	98,078	98,103	98,103	98,103	98,103	98,853	100,386	101,169	101,169	101,169	101,169	101,169	1,201,663
106270	15,368	15,327	15,287	15,247	15,206	15,166	15,125	15,085	15,044	15,004	14,963	14,923	181,745
106293	31,560	31,468	31,376	31,284	31,192	31,100	31,008	30,916	30,824	30,732	30,640	30,548	372,650
Base Rate Revenue Credit	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(270,856)
Total	903,768	902,038	900,283	898,528	896,774	895,769	895,547	894,576	892,821	891,066	889,311	889,642	10,754,123

Minnesota Power
Renewable Resources Rider: Thomson Plan Filing
Summary: 2015 -2017 Revenue Requirements

Minnesota Jurisdictional Revenue Requirements (\$)

<u>Project Number 1/</u>	<u>Jan-17</u>	<u>Feb-17</u>	<u>Mar-17</u>	<u>Apr-17</u>	<u>May-17</u>	<u>Jun-17</u>	<u>Jul-17</u>	<u>Aug-17</u>	<u>Sep-17</u>	<u>Oct-17</u>	<u>Nov-17</u>	<u>Dec-17</u>	
104989	18,784	18,744	18,703	18,662	18,621	18,581	18,540	18,499	18,459	18,418	18,377	18,336	222,724
106287	17,338	17,298	17,259	17,220	17,180	17,141	17,102	17,062	17,023	16,983	16,944	16,905	205,454
106288	20,295	20,249	20,203	20,157	20,111	20,065	20,019	19,973	19,927	19,882	19,836	19,790	240,506
106389	18,601	18,559	18,517	18,475	18,433	18,391	18,349	18,307	18,265	18,223	18,181	18,139	220,435
106984	1,876	1,872	1,869	1,865	1,861	1,857	1,853	1,850	1,846	1,842	1,838	1,835	22,264
106284	4,626	4,615	4,605	4,594	4,584	4,573	4,563	4,552	4,542	4,532	4,521	4,511	54,818
106997	1,025	1,023	1,020	1,018	1,015	1,012	1,010	1,007	1,005	1,002	999	997	12,133
107017	1,979	1,975	1,970	1,966	1,962	1,957	1,953	1,948	1,944	1,940	1,935	1,931	23,459
106156	288,799	288,231	287,664	287,096	286,528	285,961	285,393	284,825	284,258	283,690	283,122	282,554	3,428,121
106282	10,318	10,299	10,281	10,262	10,244	10,225	10,207	10,188	10,170	10,151	10,133	10,114	122,594
106998	1,722	1,718	1,714	1,710	1,706	1,702	1,699	1,695	1,691	1,687	1,683	1,679	20,406
106999	1,636	1,632	1,628	1,625	1,621	1,617	1,614	1,610	1,606	1,603	1,599	1,595	19,385
106949	6,090	6,077	6,063	6,049	6,035	6,022	6,008	5,994	5,981	5,967	5,953	5,939	72,178
106983	12,426	12,397	12,368	12,339	12,310	12,282	12,253	12,224	12,195	12,166	12,138	12,109	147,207
106281	2,810	2,804	2,797	2,791	2,784	2,778	2,772	2,765	2,759	2,753	2,746	2,740	33,298
106260	229,834	229,348	228,862	228,376	227,890	227,404	226,918	226,432	225,946	225,460	224,974	224,488	2,725,930
106262	103,393	103,214	103,035	102,856	102,678	102,499	102,320	102,141	101,962	101,783	101,604	101,425	1,228,908
106286	8,728	8,708	8,688	8,667	8,647	8,627	8,607	8,587	8,566	8,546	8,526	8,506	103,403
106501	476	476	475	474	473	472	472	471	470	469	468	468	5,664
106373	345	344	344	343	342	341	341	340	339	339	338	337	4,093
106069	10,803	10,778	10,753	10,727	10,702	10,677	10,652	10,626	10,601	10,576	10,551	10,525	127,971
106794	114,490	114,216	113,941	113,666	113,392	113,117	112,843	112,568	112,294	112,019	111,745	111,470	1,355,760
106270	14,884	14,846	14,809	14,771	14,733	14,695	14,658	14,620	14,582	14,545	14,507	14,469	176,120
106293	30,460	30,374	30,288	30,203	30,117	30,031	29,945	29,860	29,774	29,688	29,603	29,517	359,860
Base Rate Revenue Credit	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(22,571)	(270,856)
Total	899,166	897,224	895,283	893,341	891,399	889,457	887,516	885,574	883,632	881,690	879,749	877,807	10,661,838

1/ Refer to Exhibit B-2, page 1, for project identification list.

Minnesota Power
Renewable Resources Rider
Revenue Requirements: Total Sum All Projects

Total Sum: All Projects

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	1,108,757	9,053,258	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	73,698,604	74,629,037	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574
	2 Total Accumulated Depreciation	443,306	1,948,061	3,478,797	5,197,777	6,916,756	8,635,735	10,354,714	12,073,693	13,792,673	15,511,652	17,230,631	18,949,610
	3 Net Plant	73,255,298	72,680,976	80,578,776	78,859,797	77,140,818	75,421,839	73,702,859	71,983,880	70,264,901	68,545,922	66,826,942	65,107,963
	4 Total Depreciation	443,306	1,504,755	1,530,736	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979
	5 Book Depreciation Rate (35 year book life)												
B	Tax Basis of Property												
	1 Plant in Service	73,698,604	74,629,037	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574	84,057,574
	2 Accumulated Depreciation	18,164,943	22,434,106	26,786,339	31,157,773	35,193,656	38,919,660	42,368,665	45,576,396	48,671,331	51,729,596	54,782,594	57,835,108
	3 Net Plant	55,533,661	52,194,932	57,271,234	52,899,800	48,863,918	45,137,913	41,688,909	38,481,178	35,386,242	32,327,977	29,274,980	26,222,466
	4 Bonus Depreciation (50% on 2013 spend)	16,867,935	-	-	-	-	-	-	-	-	-	-	-
	5 Total Tax Depreciation (including bonus)	18,164,943	4,269,162	4,352,234	4,371,434	4,035,883	3,726,004	3,449,005	3,207,731	3,094,935	3,058,265	3,052,998	3,052,514
	6 Accumulated Tax Depreciation	18,164,943	22,434,106	26,786,339	31,157,773	35,193,656	38,919,660	42,368,665	45,576,396	48,671,331	51,729,596	54,782,594	57,835,108
	7 Tax Book Difference	17,721,637	20,486,044	23,307,542	25,959,997	28,276,900	30,283,925	32,013,951	33,502,702	34,878,658	36,217,944	37,551,963	38,885,497
	8 Income Tax Rate 1/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	9 Accumulated Deferred Income Tax Liability	7,331,441	8,475,076	9,642,330	10,739,651	11,698,154	12,528,460	13,244,171	13,860,068	14,429,301	14,983,364	15,535,247	16,086,930
	10 Deferred Tax Expense debit / (Credit)	7,331,441	1,143,635	1,167,254	1,097,321	958,503	830,306	715,711	615,897	569,233	554,063	551,883	551,683
	11 ADITA for NOL Carryforward 2/	-	-	-	-	-	-	-	-	-	-	-	-
	12 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	13 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	73,255,298	72,680,976	80,578,776	78,859,797	77,140,818	75,421,839	73,702,859	71,983,880	70,264,901	68,545,922	66,826,942	65,107,963
	2 Less: ADITL - Def Taxes	(7,331,441)	(8,475,076)	(9,642,330)	(10,739,651)	(11,698,154)	(12,528,460)	(13,244,171)	(13,860,068)	(14,429,301)	(14,983,364)	(15,535,247)	(16,086,930)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	65,923,856	64,205,899	70,936,446	68,120,146	65,442,664	62,893,379	60,458,688	58,123,812	55,835,600	53,562,558	51,291,695	49,021,033
	5 Average Rate Base	51,867,274	63,865,949	66,403,835	68,237,492	65,554,226	62,999,599	60,560,133	58,221,099	55,930,942	53,657,268	51,386,315	49,115,644
	6 Current Return on CWIP 3/	-	580,441	1,075,332	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 3/												
	8 After Tax Return on Equity	1,100,384	3,643,162	3,567,608	3,917,461	3,762,691	3,615,445	3,475,037	3,340,671	3,210,430	3,081,932	2,953,923	2,825,980
	9 Income Tax Component	776,445	2,570,661	2,517,348	2,764,209	2,655,002	2,551,102	2,452,029	2,357,219	2,265,319	2,174,649	2,084,324	1,994,047
	10 Interest Expense Component	496,061	1,642,363	1,608,303	1,766,019	1,696,248	1,629,868	1,566,571	1,505,998	1,447,285	1,389,357	1,331,649	1,273,972
	11 Total Return on Average Rate Base	2,372,890	7,856,186	7,693,259	8,447,688	8,113,941	7,796,415	7,493,638	7,203,887	6,923,034	6,645,938	6,369,896	6,093,998
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	443,306	1,504,755	1,530,736	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979
	14 Property Tax	1,663,030	2,867,119	3,182,380	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211
	15 Revenue Requirements	4,479,226	12,808,501	13,481,707	13,367,878	13,034,131	12,716,605	12,413,828	12,124,077	11,843,224	11,566,128	11,290,086	11,014,188

1/ Minnesota Composite Income Tax Rate.

2/ All MP rider NOL computations use FIFO for NOL, with all Transmission Cost Recovery Rider (TCR) projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

3/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements: Total Sum All Projects

Total Sum: All Projects

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	73,255,298	72,680,976	80,578,776	78,859,797	77,140,818	75,421,839	73,702,859	71,983,880	70,264,901	68,545,922	66,826,942	65,107,963
	2 Less: ADITL - Def Taxes	(7,331,441)	(8,475,076)	(9,642,330)	(10,739,651)	(11,698,154)	(12,528,460)	(13,244,171)	(13,860,068)	(14,429,301)	(14,983,364)	(15,535,247)	(16,086,930)
	3 Plus: ADITA - NOL (Stand Alone)	6,623,395	5,165,927	3,747,036	2,367,472	1,242,235	515,432	244,513	-	-	-	-	-
	4 Rate Base	72,547,251	69,371,826	74,683,482	70,487,618	66,684,899	63,408,811	60,703,201	58,123,812	55,835,600	53,562,558	51,291,695	49,021,033
	5 Average Rate Base	56,828,743	69,089,935	70,207,486	70,660,040	66,833,210	63,526,372	60,815,540	58,229,831	55,930,942	53,657,268	51,386,315	49,115,644
	6 Current Return on CWIP 3/	-	580,441	1,075,332	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 3/												
	8 After Tax Return on Equity	1,195,210	3,974,611	3,818,086	4,089,126	3,860,971	3,661,371	3,496,349	3,347,275	3,210,430	3,081,932	2,953,923	2,825,980
	9 Income Tax Component	843,355	2,804,535	2,694,089	2,885,338	2,724,349	2,583,508	2,467,067	2,361,879	2,265,319	2,174,649	2,084,324	1,994,047
	10 Interest Expense Component	538,809	1,791,782	1,721,220	1,843,407	1,740,553	1,650,572	1,576,179	1,508,975	1,447,285	1,389,357	1,331,649	1,273,972
	11 Total Return on Average Rate Base	2,577,374	8,570,928	8,233,395	8,817,870	8,325,873	7,895,450	7,539,595	7,218,129	6,923,034	6,645,938	6,369,896	6,093,998
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	443,306	1,504,755	1,530,736	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979	1,718,979
	14 Property Tax	1,663,030	2,867,119	3,182,380	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211
	15 Revenue Requirements	4,683,711	13,523,243	14,021,843	13,738,060	13,246,063	12,815,640	12,459,786	12,138,319	11,843,224	11,566,128	11,290,086	11,014,188
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	4,683,711	13,523,243	14,021,843	13,738,060	13,246,063	12,815,640	12,459,786	12,138,319	11,843,224	11,566,128	11,290,086	11,014,188
	2 Tax Depreciation	18,164,943	4,269,162	4,352,234	4,371,434	4,035,883	3,726,004	3,449,005	3,207,731	3,094,935	3,058,265	3,052,998	3,052,514
	3 Property Tax	1,663,030	2,867,119	3,182,380	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211	3,201,211
	4 Interest Expense (including on CWIP)	538,809	1,913,126	1,946,022	1,843,407	1,740,553	1,650,572	1,576,179	1,508,975	1,447,285	1,389,357	1,331,649	1,273,972
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	20,366,783	9,049,407	9,480,635	9,416,051	8,977,646	8,577,787	8,226,394	7,917,917	7,743,431	7,648,833	7,585,857	7,527,696
	7 Taxable Income (NOL)	(15,683,072)	4,473,836	4,541,208	4,322,009	4,268,417	4,237,854	4,233,391	4,220,402	4,099,794	3,917,295	3,704,229	3,486,492
	8 Current tax expense	(6,488,090)	1,850,830	1,878,702	1,788,021	1,765,850	1,753,197	1,751,358	1,745,981	1,696,081	1,620,582	1,532,443	1,442,367
	9 Taxable Income (NOL)	(15,683,072)	4,473,836	4,541,208	4,322,009	4,268,417	4,237,854	4,233,391	4,220,402	4,099,794	3,917,295	3,704,229	3,486,492
	10 NOL carryforward	-	(15,952,918)	(12,320,741)	(8,470,034)	(5,644,103)	(2,838,255)	(959,248)	(300,840)	-	-	-	-
	11 Taxable Income after NOL carryforward	(56,495,958)	(167,867,557)	(125,311,420)	(85,721,468)	(47,687,538)	(20,284,054)	(7,065,777)	524,799	4,099,794	3,917,295	3,704,229	3,486,492
	12 Expected stand alone ADITA NOL	6,623,395	5,165,927	3,747,036	2,367,472	1,242,235	515,432	244,513	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	-	12,808,501	13,481,707	13,367,878	13,034,131	12,716,605	12,413,828	12,124,077	11,843,224	11,566,128	11,290,086	11,014,188
	2 Revenue Requirement: Stand Alone	-	13,523,243	14,021,843	13,738,060	13,246,063	12,815,640	12,459,786	12,138,319	11,843,224	11,566,128	11,290,086	11,014,188
	3 Revenue Requirement: Rider 4/	-	12,808,501	13,481,707	13,367,878	13,034,131	12,716,605	12,413,828	12,124,077	11,843,224	11,566,128	11,290,086	11,014,188
	4 Base Rate Revenue Credit /5	-	(330,243)	(330,243)	(330,243)	(330,243)	(330,243)	(330,243)	(330,243)	(330,243)	(330,243)	(330,243)	(330,243)
	5 Total Net Revenue Requirements	-	12,478,258	13,151,463	13,037,635	12,703,887	12,386,361	12,083,585	11,793,834	11,512,981	11,235,885	10,959,843	10,683,945
	7 MN Jurisdictional Revenue Requirement	-	10,200,826	10,754,123	10,661,838	10,389,109	10,129,619	9,882,176	9,645,398	9,415,919	9,189,521	8,963,987	8,738,572

3/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

4/ Lesser of E1 or E2. For the sum of all projects, E3 may not equal the lesser of E1 or E2 if there is utilization of NOL carryforwards that result in each individual projects' lower requirement changing from stand-alone to consolidated at different times.

5/ Refer to Exhibit B-2, page 50 of 50.

Minnesota Power
Renewable Resources Rider: Thomson Plan Filing
Project Identification List

Project ID#	Description	Expected In-Service Date 1/
104989	THM Unit 6 Overhaul	5/30/2014
106287	THM Lwr Gate Hse-Rpl Stl & Trsh Rks	4/30/2014
106288	THM Rpl/Rfb Lwr Gate Hse Gates	4/30/2014
106389	THM Upper Gate House Head Gate	4/30/2014
106984	THM Unit 3 Flood Insp/Refurb	6/30/2014
106284	THM Replace #1 Penstock Valve	5/30/2014
106997	THM Unit 2 Flood Insp/Refurb	5/31/2014
107017	THM Basement Flood Proofing	6/30/2014
106156	THM Forebay Embankment Reconstruct	7/31/2014
106282	THM Lower Wye Hse - Replace Valves	9/30/2014
106998	THM Unit 4 Flood Insp/Refurb	9/30/2014
106999	THM Unit 5 Flood Insp/Refurb	9/30/2014
106949	THM Refurbish #4 & #5 Penstock	10/31/2014
106983	THM Unit 1 Flood Insp/Refurb	10/31/2014
106281	THM Back-up Control Room	11/30/2014
106260	THM Flowline_Penstock_Abate_Line	12/31/2014
106262	THM - Electrical Infrastructure	12/31/2014
106286	THM Cathodic Protection Grnd Rpl	12/31/2014
106501	THM Rpl Penstock Vlv Operators 2-6	12/31/2014
106373	THM Basement Lead Abatement	3/31/2015
106069	THM Replace/Refurbish Dam 6	12/30/2015
106794	THM Spill Capacity	12/31/2016
106270	THM 115KV SUB - Add & Rpl Bkrs	7/31/2014
106293	TMS Substation Elec. Infrastructure	7/31/2014

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 2 of 50

THM Unit 6 Overhaul
Project ID # 104989
In Service 5/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464
	2 Accumulated Depreciation 5/2014 Plant	19,868	51,658	83,447	115,236	147,025	178,815	210,604	242,393	274,183	305,972	337,761	369,550
	3 Net Plant	1,569,596	1,537,807	1,506,017	1,474,228	1,442,439	1,410,649	1,378,860	1,347,071	1,315,282	1,283,492	1,251,703	1,219,914
	4 Total Depreciation	19,868	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789
	5 Book Depreciation Rate 2/	1.33%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464
	2 Accumulated Depreciation	74,514	188,129	293,224	390,436	480,368	563,545	640,490	711,667	782,604	853,542	924,480	995,418
	3 Net Plant	1,514,950	1,401,335	1,296,240	1,199,028	1,109,096	1,025,920	948,974	877,797	806,860	735,922	664,984	594,046
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 5/2014 Plant	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464	1,589,464
	6 Tax Depreciation Rate 5/2014 Plant (20 yr, mid 2nd QTR)	4.6880%	7.1480%	6.6120%	6.1160%	5.6580%	5.2330%	4.8410%	4.4780%	4.4630%	4.4630%	4.4630%	4.4630%
	7 Total Tax Depreciation (including bonus)	74,514	113,615	105,095	97,212	89,932	83,177	76,946	71,176	70,938	70,938	70,938	70,938
	8 Tax Book Difference	54,646	136,471	209,777	275,200	333,342	384,730	429,886	469,273	508,422	547,570	586,719	625,867
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	22,607	56,458	86,785	113,850	137,904	159,163	177,844	194,138	210,334	226,530	242,726	258,921
	11 Deferred Tax Expense debit / (Credit)	22,607	33,851	30,327	27,065	24,054	21,259	18,681	16,294	16,196	16,196	16,196	16,196
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	1,569,596	1,537,807	1,506,017	1,474,228	1,442,439	1,410,649	1,378,860	1,347,071	1,315,282	1,283,492	1,251,703	1,219,914
	2 Less: ADITL - Def Taxes	(22,607)	(56,458)	(86,785)	(113,850)	(137,904)	(159,163)	(177,844)	(194,138)	(210,334)	(226,530)	(242,726)	(258,921)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,546,989	1,481,348	1,419,232	1,360,378	1,304,535	1,251,487	1,201,016	1,152,932	1,104,947	1,056,962	1,008,977	960,992
	5 Average Rate Base	979,483	1,514,169	1,450,290	1,389,805	1,332,456	1,278,011	1,226,251	1,176,974	1,128,940	1,080,955	1,032,970	984,985
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	55,187	85,313	81,714	78,306	75,075	72,007	69,091	66,315	63,608	60,905	58,201	55,497
	9 Income Tax Component	38,941	60,198	57,659	55,254	52,974	50,809	48,752	46,792	44,883	42,975	41,067	39,160
	10 Interest Expense Component	24,879	38,460	36,837	35,301	33,844	32,461	31,147	29,895	28,675	27,456	26,237	25,019
	11 Total Return on Average Rate Base	119,007	183,971	176,210	168,861	161,893	155,278	148,990	143,002	137,166	131,336	125,506	119,676
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	19,868	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789
	14 Property Tax	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908
	15 Revenue Requirements	209,784	286,669	278,908	271,559	264,591	257,976	251,687	245,700	239,864	234,034	228,203	222,373

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 3 of 50

THM Unit 6 Overhaul
Project ID # 104989
In Service 5/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	1,569,596	1,537,807	1,506,017	1,474,228	1,442,439	1,410,649	1,378,860	1,347,071	1,315,282	1,283,492	1,251,703	1,219,914
	2 Less: ADITL - Def Taxes	(22,607)	(56,458)	(86,785)	(113,850)	(137,904)	(159,163)	(177,844)	(194,138)	(210,334)	(226,530)	(242,726)	(258,921)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,546,989	1,481,348	1,419,232	1,360,378	1,304,535	1,251,487	1,201,016	1,152,932	1,104,947	1,056,962	1,008,977	960,992
	5 Average Rate Base	979,540	1,514,169	1,450,290	1,389,805	1,332,456	1,278,011	1,226,251	1,176,974	1,128,940	1,080,955	1,032,970	984,985
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/												
	8 After Tax Return on Equity	55,191	85,313	81,714	78,306	75,075	72,007	69,091	66,315	63,608	60,905	58,201	55,497
	9 Income Tax Component	38,943	60,198	57,659	55,254	52,974	50,809	48,752	46,792	44,883	42,975	41,067	39,160
	10 Interest Expense Component	24,880	38,460	36,837	35,301	33,844	32,461	31,147	29,895	28,675	27,456	26,237	25,019
	11 Total Return on Average Rate Base	119,014	183,971	176,210	168,861	161,893	155,278	148,990	143,002	137,166	131,336	125,506	119,676
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	19,868	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789	31,789
	14 Property Tax	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908
	15 Revenue Requirements	209,791	286,669	278,908	271,559	264,591	257,976	251,687	245,700	239,864	234,034	228,203	222,373
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	209,791	286,669	278,908	271,559	264,591	257,976	251,687	245,700	239,864	234,034	228,203	222,373
	2 Tax Depreciation	74,514	113,615	105,095	97,212	89,932	83,177	76,946	71,176	70,938	70,938	70,938	70,938
	3 Property Tax	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908	70,908
	4 Interest Expense (including on CWIP)	24,880	38,460	36,837	35,301	33,844	32,461	31,147	29,895	28,675	27,456	26,237	25,019
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	170,303	222,983	212,841	203,421	194,685	186,546	179,001	171,980	170,521	169,302	168,084	166,865
	7 Taxable Income (NOL)	39,488	63,686	66,067	68,138	69,906	71,429	72,686	73,720	69,343	64,731	60,120	55,509
	8 Current tax expense	16,336	26,347	27,332	28,188	28,920	29,550	30,071	30,498	28,686	26,778	24,872	22,965
	9 Taxable Income (NOL)	39,488	63,686	66,067	68,138	69,906	71,429	72,686	73,720	69,343	64,731	60,120	55,509
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	39,488	63,686	66,067	68,138	69,906	71,429	72,686	73,720	69,343	64,731	60,120	55,509
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	209,784	286,669	278,908	271,559	264,591	257,976	251,687	245,700	239,864	234,034	228,203	222,373
	2 Revenue Requirement: Stand Alone	209,791	286,669	278,908	271,559	264,591	257,976	251,687	245,700	239,864	234,034	228,203	222,373
	3 Revenue Requirement: Rider 7/	209,784	286,669	278,908	271,559	264,591	257,976	251,687	245,700	239,864	234,034	228,203	222,373
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	235,117	228,752	222,724	217,010	211,584	206,426	201,516	196,729	191,947	187,166	182,384

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 4 of 50

THM Lwr Gate Hse-Rpl Stl & Trsh Rks

Project ID # 106287
In Service 4/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414
	2 Accumulated Depreciation 4/2014 Plant	21,766	52,494	83,222	113,951	144,679	175,407	206,135	236,864	267,592	298,320	329,049	359,777
	3 Net Plant	1,514,648	1,483,920	1,453,191	1,422,463	1,391,735	1,361,006	1,330,278	1,299,550	1,268,822	1,238,093	1,207,365	1,176,637
	4 Total Depreciation	21,766	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728
	5 Book Depreciation Rate 2/	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414
	2 Accumulated Depreciation	72,027	181,850	283,438	377,405	464,335	544,735	619,113	687,914	756,484	825,054	893,624	962,194
	3 Net Plant	1,464,387	1,354,564	1,252,976	1,159,009	1,072,079	991,678	917,300	848,500	779,930	711,360	642,789	574,219
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 4/2014 Plant	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414	1,536,414
	6 Tax Depreciation Rate 4/2014 Plant (20 yr, mid 2nd QTR)	4.6880%	7.1480%	6.6120%	6.1160%	5.6580%	5.2330%	4.8410%	4.4780%	4.4630%	4.4630%	4.4630%	4.4630%
	7 Total Tax Depreciation (including bonus)	72,027	109,823	101,588	93,967	86,930	80,401	74,378	68,801	68,570	68,570	68,570	68,570
	8 Tax Book Difference	50,261	129,356	200,215	263,454	319,656	369,328	412,978	451,050	488,892	526,734	564,576	602,418
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	20,793	53,514	82,829	108,991	132,242	152,791	170,849	186,599	202,255	217,910	233,565	249,220
	11 Deferred Tax Expense debit / (Credit)	20,793	32,721	29,315	26,162	23,251	20,549	18,058	15,751	15,655	15,655	15,655	15,655
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	1,514,648	1,483,920	1,453,191	1,422,463	1,391,735	1,361,006	1,330,278	1,299,550	1,268,822	1,238,093	1,207,365	1,176,637
	2 Less: ADITL - Def Taxes	(20,793)	(53,514)	(82,829)	(108,991)	(132,242)	(152,791)	(170,849)	(186,599)	(202,255)	(217,910)	(233,565)	(249,220)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,493,855	1,430,405	1,370,362	1,313,472	1,259,493	1,208,215	1,159,429	1,112,950	1,066,567	1,020,184	973,800	927,417
	5 Average Rate Base	1,072,584	1,462,130	1,400,384	1,341,917	1,286,483	1,233,854	1,183,822	1,136,190	1,089,759	1,043,375	996,992	950,608
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	60,433	82,381	78,902	75,608	72,485	69,520	66,701	64,017	61,401	58,787	56,174	53,561
	9 Income Tax Component	42,642	58,129	55,674	53,350	51,146	49,054	47,065	45,171	43,325	41,481	39,637	37,793
	10 Interest Expense Component	27,244	37,138	35,570	34,085	32,677	31,340	30,069	28,859	27,680	26,502	25,324	24,145
	11 Total Return on Average Rate Base	130,319	177,649	170,147	163,043	156,308	149,913	143,834	138,047	132,406	126,770	121,135	115,499
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	21,766	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728
	14 Property Tax	36,196	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731
	15 Revenue Requirements	188,281	265,108	257,606	250,502	243,767	237,373	231,294	225,506	219,865	214,229	208,594	202,958

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life 50 years.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 5 of 50

THM Lwr Gate Hse-Rpl Stl & Trsh Rks

Project ID # 106287
In Service 4/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	1,514,648	1,483,920	1,453,191	1,422,463	1,391,735	1,361,006	1,330,278	1,299,550	1,268,822	1,238,093	1,207,365	1,176,637
	2 Less: ADITL - Def Taxes	(20,793)	(53,514)	(82,829)	(108,991)	(132,242)	(152,791)	(170,849)	(186,599)	(202,255)	(217,910)	(233,565)	(249,220)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,493,855	1,430,405	1,370,362	1,313,472	1,259,493	1,208,215	1,159,429	1,112,950	1,066,567	1,020,184	973,800	927,417
	5 Average Rate Base	1,072,604	1,462,130	1,400,384	1,341,917	1,286,483	1,233,854	1,183,822	1,136,190	1,089,759	1,043,375	996,992	950,608
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/												
	8 After Tax Return on Equity	60,434	82,381	78,902	75,608	72,485	69,520	66,701	64,017	61,401	58,787	56,174	53,561
	9 Income Tax Component	42,643	58,129	55,674	53,350	51,146	49,054	47,065	45,171	43,325	41,481	39,637	37,793
	10 Interest Expense Component	27,244	37,138	35,570	34,085	32,677	31,340	30,069	28,859	27,680	26,502	25,324	24,145
	11 Total Return on Average Rate Base	130,321	177,649	170,147	163,043	156,308	149,913	143,834	138,047	132,406	126,770	121,135	115,499
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	21,766	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728	30,728
	14 Property Tax	36,196	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731
	15 Revenue Requirements	188,283	265,108	257,606	250,502	243,767	237,373	231,294	225,506	219,865	214,229	208,594	202,958
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	188,283	265,108	257,606	250,502	243,767	237,373	231,294	225,506	219,865	214,229	208,594	202,958
	2 Tax Depreciation	72,027	109,823	101,588	93,967	86,930	80,401	74,378	68,801	68,570	68,570	68,570	68,570
	3 Property Tax	36,196	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731	56,731
	4 Interest Expense (including on CWIP)	27,244	37,138	35,570	34,085	32,677	31,340	30,069	28,859	27,680	26,502	25,324	24,145
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	135,467	203,692	193,888	184,783	176,338	168,471	161,178	154,391	152,981	151,803	150,625	149,447
	7 Taxable Income (NOL)	52,816	61,416	63,717	65,719	67,429	68,901	70,116	71,116	66,884	62,426	57,969	53,512
	8 Current tax expense	21,851	25,409	26,360	27,188	27,896	28,505	29,007	29,420	27,669	25,827	23,981	22,137
	9 Taxable Income (NOL)	52,816	61,416	63,717	65,719	67,429	68,901	70,116	71,116	66,884	62,426	57,969	53,512
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	52,816	61,416	63,717	65,719	67,429	68,901	70,116	71,116	66,884	62,426	57,969	53,512
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	188,281	265,108	257,606	250,502	243,767	237,373	231,294	225,506	219,865	214,229	208,594	202,958
	2 Revenue Requirement: Stand Alone	188,283	265,108	257,606	250,502	243,767	237,373	231,294	225,506	219,865	214,229	208,594	202,958
	3 Revenue Requirement: Rider 7/	188,281	265,108	257,606	250,502	243,767	237,373	231,294	225,506	219,865	214,229	208,594	202,958
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	217,434	211,281	205,454	199,930	194,686	189,700	184,954	180,327	175,705	171,082	166,460

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 6 of 50

THM Rpl/Rfb Lwr Gate Hse Gates

Project ID # 106288
In Service 4/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935
	2 Accumulated Depreciation 4/2014 Plant	25,372	61,190	97,009	132,828	168,646	204,465	240,284	276,103	311,921	347,740	383,559	419,377
	3 Net Plant	1,765,564	1,729,745	1,693,926	1,658,108	1,622,289	1,586,470	1,550,651	1,514,833	1,479,014	1,443,195	1,407,377	1,371,558
	4 Total Depreciation	25,372	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819
	5 Book Depreciation Rate 2/	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935
	2 Accumulated Depreciation	83,959	211,975	330,392	439,925	541,256	634,976	721,675	801,873	881,803	961,732	1,041,662	1,121,591
	3 Net Plant	1,706,976	1,578,960	1,460,543	1,351,010	1,249,679	1,155,959	1,069,260	989,062	909,132	829,203	749,274	669,344
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 4/2014 Plant	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935	1,790,935
	6 Tax Depreciation Rate 4/2014 Plant (20 yr, mid 2nd QTR)	4.6880%	7.1480%	6.6120%	6.1160%	5.6580%	5.2330%	4.8410%	4.4780%	4.4630%	4.4630%	4.4630%	4.4630%
	7 Total Tax Depreciation (including bonus)	83,959	128,016	118,417	109,534	101,331	93,720	86,699	80,198	79,929	79,929	79,929	79,929
	8 Tax Book Difference	58,587	150,785	233,383	307,098	372,610	430,511	481,391	525,771	569,882	613,992	658,103	702,214
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	24,238	62,380	96,550	127,046	154,149	178,102	199,152	217,511	235,760	254,009	272,257	290,506
	11 Deferred Tax Expense debit / (Credit)	24,238	38,142	34,171	30,496	27,102	23,954	21,049	18,360	18,249	18,249	18,249	18,249
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	1,765,564	1,729,745	1,693,926	1,658,108	1,622,289	1,586,470	1,550,651	1,514,833	1,479,014	1,443,195	1,407,377	1,371,558
	2 Less: ADITL - Def Taxes	(24,238)	(62,380)	(96,550)	(127,046)	(154,149)	(178,102)	(199,152)	(217,511)	(235,760)	(254,009)	(272,257)	(290,506)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,741,326	1,667,365	1,597,376	1,531,061	1,468,140	1,408,368	1,351,500	1,297,321	1,243,254	1,189,187	1,135,119	1,081,052
	5 Average Rate Base	1,250,267	1,704,346	1,632,371	1,564,219	1,499,601	1,438,254	1,379,934	1,324,411	1,270,288	1,216,220	1,162,153	1,108,086
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	70,444	96,029	91,973	88,133	84,493	81,036	77,750	74,622	71,572	68,526	65,480	62,433
	9 Income Tax Component	49,706	67,759	64,898	62,188	59,619	57,180	54,861	52,654	50,502	48,353	46,203	44,054
	10 Interest Expense Component	31,757	43,290	41,462	39,731	38,090	36,532	35,050	33,640	32,265	30,892	29,519	28,145
	11 Total Return on Average Rate Base	151,907	207,078	198,333	190,053	182,201	174,748	167,662	160,916	154,340	147,771	141,202	134,632
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	25,372	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819
	14 Property Tax	35,645	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368
	15 Revenue Requirements	212,924	310,265	301,520	293,239	285,388	277,935	270,849	264,103	257,527	250,957	244,388	237,819

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life 50 years.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 7 of 50

THM Rpl/Rfb Lwr Gate Hse Gates

Project ID # 106288
In Service 4/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	1,765,564	1,729,745	1,693,926	1,658,108	1,622,289	1,586,470	1,550,651	1,514,833	1,479,014	1,443,195	1,407,377	1,371,558
	2 Less: ADITL - Def Taxes	(24,238)	(62,380)	(96,550)	(127,046)	(154,149)	(178,102)	(199,152)	(217,511)	(235,760)	(254,009)	(272,257)	(290,506)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,741,326	1,667,365	1,597,376	1,531,061	1,468,140	1,408,368	1,351,500	1,297,321	1,243,254	1,189,187	1,135,119	1,081,052
	5 Average Rate Base	1,250,291	1,704,346	1,632,371	1,564,219	1,499,601	1,438,254	1,379,934	1,324,411	1,270,288	1,216,220	1,162,153	1,108,086
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/												
	8 After Tax Return on Equity	70,446	96,029	91,973	88,133	84,493	81,036	77,750	74,622	71,572	68,526	65,480	62,433
	9 Income Tax Component	49,707	67,759	64,898	62,188	59,619	57,180	54,861	52,654	50,502	48,353	46,203	44,054
	10 Interest Expense Component	31,757	43,290	41,462	39,731	38,090	36,532	35,050	33,640	32,265	30,892	29,519	28,145
	11 Total Return on Average Rate Base	151,910	207,078	198,333	190,053	182,201	174,748	167,662	160,916	154,340	147,771	141,202	134,632
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	25,372	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819	35,819
	14 Property Tax	35,645	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368
	15 Revenue Requirements	212,927	310,265	301,520	293,239	285,388	277,935	270,849	264,103	257,527	250,957	244,388	237,819
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	212,927	310,265	301,520	293,239	285,388	277,935	270,849	264,103	257,527	250,957	244,388	237,819
	2 Tax Depreciation	83,959	128,016	118,417	109,534	101,331	93,720	86,699	80,198	79,929	79,929	79,929	79,929
	3 Property Tax	35,645	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368	67,368
	4 Interest Expense (including on CWIP)	31,757	43,290	41,462	39,731	38,090	36,532	35,050	33,640	32,265	30,892	29,519	28,145
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	151,361	238,675	227,247	216,633	206,789	197,619	189,117	181,206	179,563	178,189	176,816	175,443
	7 Taxable Income (NOL)	61,565	71,590	74,273	76,607	78,599	80,315	81,731	82,896	77,964	72,768	67,572	62,376
	8 Current tax expense	25,469	29,617	30,728	31,692	32,517	33,228	33,812	34,293	32,253	30,104	27,954	25,806
	9 Taxable Income (NOL)	61,565	71,590	74,273	76,607	78,599	80,315	81,731	82,896	77,964	72,768	67,572	62,376
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	61,565	71,590	74,273	76,607	78,599	80,315	81,731	82,896	77,964	72,768	67,572	62,376
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	212,924	310,265	301,520	293,239	285,388	277,935	270,849	264,103	257,527	250,957	244,388	237,819
	2 Revenue Requirement: Stand Alone	212,927	310,265	301,520	293,239	285,388	277,935	270,849	264,103	257,527	250,957	244,388	237,819
	3 Revenue Requirement: Rider 7/	212,924	310,265	301,520	293,239	285,388	277,935	270,849	264,103	257,527	250,957	244,388	237,819
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	254,470	247,297	240,506	234,067	227,954	222,142	216,609	211,216	205,828	200,440	195,052

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 8 of 50

THM Upper Gate House Head Gate

Project ID # 106389
In Service 4/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054
	2 Accumulated Depreciation 4/2014 Plant	23,220	56,001	88,782	121,563	154,344	187,125	219,906	252,687	285,469	318,250	351,031	383,812
	3 Net Plant	1,615,834	1,583,053	1,550,272	1,517,491	1,484,710	1,451,929	1,419,148	1,386,367	1,353,585	1,320,804	1,288,023	1,255,242
	4 Total Depreciation	23,220	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781
	5 Book Depreciation Rate 2/	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054
	2 Accumulated Depreciation	76,839	193,998	302,373	402,617	495,355	581,127	660,473	733,870	807,021	880,172	953,323	1,026,474
	3 Net Plant	1,562,215	1,445,056	1,336,681	1,236,437	1,143,699	1,057,927	978,581	905,184	832,033	758,882	685,731	612,580
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 4/2014 Plant	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054	1,639,054
	6 Tax Depreciation Rate 4/2014 Plant (20 yr, mid 2nd QTR)	4.6880%	7.1480%	6.6120%	6.1160%	5.6580%	5.2330%	4.8410%	4.4780%	4.4630%	4.4630%	4.4630%	4.4630%
	7 Total Tax Depreciation (including bonus)	76,839	117,160	108,374	100,245	92,738	85,772	79,347	73,397	73,151	73,151	73,151	73,151
	8 Tax Book Difference	53,619	137,997	213,591	281,054	341,011	394,001	440,567	481,183	521,552	561,922	602,292	642,662
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	22,182	57,090	88,362	116,272	141,076	162,998	182,262	199,065	215,766	232,467	249,168	265,869
	11 Deferred Tax Expense debit / (Credit)	22,182	34,907	31,273	27,910	24,804	21,922	19,264	16,803	16,701	16,701	16,701	16,701
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	1,615,834	1,583,053	1,550,272	1,517,491	1,484,710	1,451,929	1,419,148	1,386,367	1,353,585	1,320,804	1,288,023	1,255,242
	2 Less: ADITL - Def Taxes	(22,182)	(57,090)	(88,362)	(116,272)	(141,076)	(162,998)	(182,262)	(199,065)	(215,766)	(232,467)	(249,168)	(265,869)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,593,652	1,525,964	1,461,910	1,401,219	1,343,634	1,288,930	1,236,885	1,187,301	1,137,819	1,088,337	1,038,855	989,373
	5 Average Rate Base	1,144,238	1,559,808	1,493,937	1,431,564	1,372,426	1,316,282	1,262,908	1,212,093	1,162,560	1,113,078	1,063,596	1,014,114
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	64,470	87,885	84,173	80,659	77,327	74,164	71,157	68,293	65,503	62,715	59,927	57,139
	9 Income Tax Component	45,491	62,013	59,394	56,914	54,563	52,331	50,209	48,189	46,219	44,252	42,285	40,318
	10 Interest Expense Component	29,064	39,619	37,946	36,362	34,860	33,434	32,078	30,787	29,529	28,272	27,015	25,758
	11 Total Return on Average Rate Base	139,025	189,517	181,513	173,935	166,750	159,928	153,443	147,269	141,251	135,239	129,227	123,215
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	23,220	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781
	14 Property Tax	44,512	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051
	15 Revenue Requirements	206,757	284,349	276,345	268,767	261,582	254,760	248,275	242,101	236,083	230,071	224,059	218,047

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life 50 years.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 9 of 50

THM Upper Gate House Head Gate

Project ID # 106389
In Service 4/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	1,615,834	1,583,053	1,550,272	1,517,491	1,484,710	1,451,929	1,419,148	1,386,367	1,353,585	1,320,804	1,288,023	1,255,242
	2 Less: ADITL - Def Taxes	(22,182)	(57,090)	(88,362)	(116,272)	(141,076)	(162,998)	(182,262)	(199,065)	(215,766)	(232,467)	(249,168)	(265,869)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,593,652	1,525,964	1,461,910	1,401,219	1,343,634	1,288,930	1,236,885	1,187,301	1,137,819	1,088,337	1,038,855	989,373
	5 Average Rate Base	1,144,259	1,559,808	1,493,937	1,431,564	1,372,426	1,316,282	1,262,908	1,212,093	1,162,560	1,113,078	1,063,596	1,014,114
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/												
	8 After Tax Return on Equity	64,471	87,885	84,173	80,659	77,327	74,164	71,157	68,293	65,503	62,715	59,927	57,139
	9 Income Tax Component	45,492	62,013	59,394	56,914	54,563	52,331	50,209	48,189	46,219	44,252	42,285	40,318
	10 Interest Expense Component	29,064	39,619	37,946	36,362	34,860	33,434	32,078	30,787	29,529	28,272	27,015	25,758
	11 Total Return on Average Rate Base	139,028	189,517	181,513	173,935	166,750	159,928	153,443	147,269	141,251	135,239	129,227	123,215
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	23,220	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781	32,781
	14 Property Tax	44,512	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051
	15 Revenue Requirements	206,759	284,349	276,345	268,767	261,582	254,760	248,275	242,101	236,083	230,071	224,059	218,047
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	206,759	284,349	276,345	268,767	261,582	254,760	248,275	242,101	236,083	230,071	224,059	218,047
	2 Tax Depreciation	76,839	117,160	108,374	100,245	92,738	85,772	79,347	73,397	73,151	73,151	73,151	73,151
	3 Property Tax	44,512	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051	62,051
	4 Interest Expense (including on CWIP)	29,064	39,619	37,946	36,362	34,860	33,434	32,078	30,787	29,529	28,272	27,015	25,758
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	150,415	218,830	208,371	198,657	189,648	181,256	173,475	166,235	164,731	163,474	162,217	160,960
	7 Taxable Income (NOL)	56,344	65,519	67,974	70,110	71,934	73,504	74,800	75,866	71,352	66,597	61,842	57,086
	8 Current tax expense	23,306	27,105	28,122	29,004	29,758	30,409	30,945	31,386	29,518	27,550	25,583	23,618
	9 Taxable Income (NOL)	56,344	65,519	67,974	70,110	71,934	73,504	74,800	75,866	71,352	66,597	61,842	57,086
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	56,344	65,519	67,974	70,110	71,934	73,504	74,800	75,866	71,352	66,597	61,842	57,086
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	206,757	284,349	276,345	268,767	261,582	254,760	248,275	242,101	236,083	230,071	224,059	218,047
	2 Revenue Requirement: Stand Alone	206,759	284,349	276,345	268,767	261,582	254,760	248,275	242,101	236,083	230,071	224,059	218,047
	3 Revenue Requirement: Rider 7/	206,757	284,349	276,345	268,767	261,582	254,760	248,275	242,101	236,083	230,071	224,059	218,047
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	233,214	226,650	220,435	214,542	208,947	203,628	198,564	193,628	188,697	183,766	178,836

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 10 of 50

THM Unit 3 Flood Insp/Refurb

Project ID # 106984
In Service 6/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837
	2 Accumulated Depreciation 6/2014 Plant	1,602	4,558	7,515	10,472	13,429	16,385	19,342	22,299	25,256	28,212	31,169	34,126
	3 Net Plant	146,236	143,279	140,322	137,366	134,409	131,452	128,495	125,539	122,582	119,625	116,668	113,712
	4 Total Depreciation	1,602	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957
	5 Book Depreciation Rate 2/	1.17%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837
	2 Accumulated Depreciation	6,931	17,498	27,273	36,315	44,679	52,416	59,573	66,193	72,791	79,389	85,987	92,585
	3 Net Plant	140,907	130,339	120,564	111,523	103,158	95,422	88,265	81,645	75,047	68,449	61,851	55,253
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 6/2014 Plant	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837	147,837
	6 Tax Depreciation Rate 6/2014 Plant (20 yr, mid 2nd QTR)	4.6880%	7.1480%	6.6120%	6.1160%	5.6580%	5.2330%	4.8410%	4.4780%	4.4630%	4.4630%	4.4630%	4.4630%
	7 Total Tax Depreciation (including bonus)	6,931	10,567	9,775	9,042	8,365	7,736	7,157	6,620	6,598	6,598	6,598	6,598
	8 Tax Book Difference	5,329	12,940	19,758	25,843	31,251	36,030	40,231	43,894	47,535	51,176	54,818	58,459
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	2,205	5,353	8,174	10,691	12,928	14,906	16,643	18,159	19,665	21,172	22,678	24,184
	11 Deferred Tax Expense debit / (Credit)	2,205	3,149	2,821	2,517	2,237	1,977	1,738	1,516	1,506	1,506	1,506	1,506
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	146,236	143,279	140,322	137,366	134,409	131,452	128,495	125,539	122,582	119,625	116,668	113,712
	2 Less: ADITL - Def Taxes	(2,205)	(5,353)	(8,174)	(10,691)	(12,928)	(14,906)	(16,643)	(18,159)	(19,665)	(21,172)	(22,678)	(24,184)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	144,031	137,926	132,148	126,674	121,480	116,546	111,852	107,380	102,917	98,453	93,990	89,527
	5 Average Rate Base	78,987	140,979	135,037	129,411	124,077	119,013	114,199	109,616	105,148	100,685	96,222	91,759
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	4,450	7,943	7,608	7,291	6,991	6,706	6,434	6,176	5,924	5,673	5,421	5,170
	9 Income Tax Component	3,140	5,605	5,369	5,145	4,933	4,732	4,540	4,358	4,180	4,003	3,825	3,648
	10 Interest Expense Component	2,006	3,581	3,430	3,287	3,152	3,023	2,901	2,784	2,671	2,557	2,444	2,331
	11 Total Return on Average Rate Base	9,597	17,129	16,407	15,723	15,075	14,460	13,875	13,318	12,775	12,233	11,691	11,149
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	1,602	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957
	14 Property Tax	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466
	15 Revenue Requirements	19,664	28,551	27,829	27,146	26,498	25,882	25,298	24,741	24,198	23,656	23,113	22,571

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life 50 years.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 11 of 50

THM Unit 3 Flood Insp/Refurb

Project ID # 106984
In Service 6/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	146,236	143,279	140,322	137,366	134,409	131,452	128,495	125,539	122,582	119,625	116,668	113,712
	2 Less: ADITL - Def Taxes	(2,205)	(5,353)	(8,174)	(10,691)	(12,928)	(14,906)	(16,643)	(18,159)	(19,665)	(21,172)	(22,678)	(24,184)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	144,031	137,926	132,148	126,674	121,480	116,546	111,852	107,380	102,917	98,453	93,990	89,527
	5 Average Rate Base	78,996	140,979	135,037	129,411	124,077	119,013	114,199	109,616	105,148	100,685	96,222	91,759
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	4,451	7,943	7,608	7,291	6,991	6,706	6,434	6,176	5,924	5,673	5,421	5,170
	9 Income Tax Component	3,141	5,605	5,369	5,145	4,933	4,732	4,540	4,358	4,180	4,003	3,825	3,648
	10 Interest Expense Component	<u>2,006</u>	<u>3,581</u>	<u>3,430</u>	<u>3,287</u>	<u>3,152</u>	<u>3,023</u>	<u>2,901</u>	<u>2,784</u>	<u>2,671</u>	<u>2,557</u>	<u>2,444</u>	<u>2,331</u>
	11 Total Return on Average Rate Base	9,598	17,129	16,407	15,723	15,075	14,460	13,875	13,318	12,775	12,233	11,691	11,149
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	1,602	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957	2,957
	14 Property Tax	<u>8,466</u>	<u>8,466</u>	<u>8,466</u>	<u>8,466</u>	<u>8,466</u>	<u>8,466</u>	<u>8,466</u>	<u>8,466</u>	<u>8,466</u>	<u>8,466</u>	<u>8,466</u>	<u>8,466</u>
	15 Revenue Requirements	19,665	28,551	27,829	27,146	26,498	25,882	25,298	24,741	24,198	23,656	23,113	22,571
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	19,665	28,551	27,829	27,146	26,498	25,882	25,298	24,741	24,198	23,656	23,113	22,571
	2 Tax Depreciation	6,931	10,567	9,775	9,042	8,365	7,736	7,157	6,620	6,598	6,598	6,598	6,598
	3 Property Tax	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466	8,466
	4 Interest Expense (including on CWIP)	2,006	3,581	3,430	3,287	3,152	3,023	2,901	2,784	2,671	2,557	2,444	2,331
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	17,403	22,614	21,671	20,794	19,982	19,225	18,523	17,870	17,734	17,621	17,508	17,394
	7 Taxable Income (NOL)	2,262	5,937	6,159	6,351	6,516	6,658	6,774	6,871	6,464	6,035	5,606	5,177
	8 Current tax expense	936	2,456	2,549	2,628	2,696	2,754	2,802	2,842	2,674	2,496	2,319	2,142
	9 Taxable Income (NOL)	2,262	5,937	6,159	6,351	6,516	6,658	6,774	6,871	6,464	6,035	5,606	5,177
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	2,262	5,937	6,159	6,351	6,516	6,658	6,774	6,871	6,464	6,035	5,606	5,177
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	19,664	28,551	27,829	27,146	26,498	25,882	25,298	24,741	24,198	23,656	23,113	22,571
	2 Revenue Requirement: Stand Alone	19,665	28,551	27,829	27,146	26,498	25,882	25,298	24,741	24,198	23,656	23,113	22,571
	3 Revenue Requirement: Rider 7/	19,664	28,551	27,829	27,146	26,498	25,882	25,298	24,741	24,198	23,656	23,113	22,571
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	23,417	22,825	22,264	21,733	21,228	20,748	20,292	19,846	19,402	18,957	18,512

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 12 of 50

THM Replace #1 Penstock Valve

Projects ID # 106284
In Service 5/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644
	2 Accumulated Depreciation 5/2014 Plant	5,108	13,281	21,454	29,627	37,800	45,972	54,145	62,318	70,491	78,664	86,837	95,010
	3 Net Plant	403,536	395,363	387,190	379,017	370,844	362,672	354,499	346,326	338,153	329,980	321,807	313,634
	4 Total Depreciation	5,108	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173
	5 Book Depreciation Rate 2/	1.33%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644
	2 Accumulated Depreciation	19,157	48,367	75,387	100,379	123,500	144,885	164,667	182,966	201,204	219,442	237,680	255,917
	3 Net Plant	389,487	360,277	333,257	308,265	285,144	263,759	243,977	225,678	207,440	189,202	170,964	152,727
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 5/2014 Plant	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644	408,644
	6 Tax Depreciation Rate 5/2014 Plant (20 yr, mid 2nd QTR)	4.6880%	7.1480%	6.6120%	6.1160%	5.6580%	5.2330%	4.8410%	4.4780%	4.4630%	4.4630%	4.4630%	4.4630%
	7 Total Tax Depreciation (including bonus)	19,157	29,210	27,020	24,993	23,121	21,384	19,782	18,299	18,238	18,238	18,238	18,238
	8 Tax Book Difference	14,049	35,086	53,933	70,753	85,701	98,912	110,522	120,648	130,713	140,778	150,843	160,908
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	5,812	14,515	22,312	29,270	35,454	40,920	45,723	49,912	54,076	58,240	62,404	66,568
	11 Deferred Tax Expense debit / (Credit)	5,812	8,703	7,797	6,958	6,184	5,466	4,803	4,189	4,164	4,164	4,164	4,164
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	403,536	395,363	387,190	379,017	370,844	362,672	354,499	346,326	338,153	329,980	321,807	313,634
	2 Less: ADITL - Def Taxes	(5,812)	(14,515)	(22,312)	(29,270)	(35,454)	(40,920)	(45,723)	(49,912)	(54,076)	(58,240)	(62,404)	(66,568)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	397,724	380,848	364,878	349,747	335,390	321,752	308,776	296,414	284,077	271,740	259,404	247,067
	5 Average Rate Base	251,821	389,286	372,863	357,313	342,569	328,571	315,264	302,595	290,245	277,909	265,572	253,235
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	14,188	21,934	21,008	20,132	19,301	18,513	17,763	17,049	16,353	15,658	14,963	14,268
	9 Income Tax Component	10,012	15,477	14,824	14,206	13,619	13,063	12,534	12,030	11,539	11,049	10,558	10,068
	10 Interest Expense Component	6,396	9,888	9,471	9,076	8,701	8,346	8,008	7,686	7,372	7,059	6,746	6,432
	11 Total Return on Average Rate Base	30,596	47,298	45,303	43,413	41,622	39,921	38,305	36,765	35,265	33,766	32,267	30,768
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	5,108	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173
	14 Property Tax	8,532	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251
	15 Revenue Requirements	44,236	70,722	68,727	66,837	65,046	63,345	61,728	60,189	58,689	57,190	55,691	54,192

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 13 of 50

THM Replace #1 Penstock Valve

Projects ID # 106284
In Service 5/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	403,536	395,363	387,190	379,017	370,844	362,672	354,499	346,326	338,153	329,980	321,807	313,634
	2 Less: ADITL - Def Taxes	(5,812)	(14,515)	(22,312)	(29,270)	(35,454)	(40,920)	(45,723)	(49,912)	(54,076)	(58,240)	(62,404)	(66,568)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	397,724	380,848	364,878	349,747	335,390	321,752	308,776	296,414	284,077	271,740	259,404	247,067
	5 Average Rate Base	251,835	389,286	372,863	357,313	342,569	328,571	315,264	302,595	290,245	277,909	265,572	253,235
	7 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	6 Return on Average Rate Base 5/												
	7 After Tax Return on Equity	14,189	21,934	21,008	20,132	19,301	18,513	17,763	17,049	16,353	15,658	14,963	14,268
	8 Income Tax Component	10,012	15,477	14,824	14,206	13,619	13,063	12,534	12,030	11,539	11,049	10,558	10,068
	9 Interest Expense Component	6,397	9,888	9,471	9,076	8,701	8,346	8,008	7,686	7,372	7,059	6,746	6,432
	10 Total Return on Average Rate Base	30,598	47,298	45,303	43,413	41,622	39,921	38,305	36,765	35,265	33,766	32,267	30,768
	11 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	12 Depreciation Expense	5,108	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173	8,173
	13 Property Tax	8,532	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251
	14 Revenue Requirements	44,238	70,722	68,727	66,837	65,046	63,345	61,728	60,189	58,689	57,190	55,691	54,192
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	44,238	70,722	68,727	66,837	65,046	63,345	61,728	60,189	58,689	57,190	55,691	54,192
	2 Tax Depreciation	19,157	29,210	27,020	24,993	23,121	21,384	19,782	18,299	18,238	18,238	18,238	18,238
	3 Property Tax	8,532	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251	15,251
	4 Interest Expense (including on CWIP)	6,397	9,888	9,471	9,076	8,701	8,346	8,008	7,686	7,372	7,059	6,746	6,432
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	34,086	54,349	51,741	49,319	47,073	44,981	43,041	41,236	40,861	40,548	40,234	39,921
	7 Taxable Income (NOL)	10,152	16,373	16,985	17,518	17,973	18,364	18,687	18,953	17,828	16,642	15,457	14,271
	8 Current tax expense	4,199	6,773	7,027	7,247	7,437	7,597	7,731	7,841	7,376	6,884	6,395	5,904
	9 Taxable Income (NOL)	10,152	16,373	16,985	17,518	17,973	18,364	18,687	18,953	17,828	16,642	15,457	14,271
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	10,152	16,373	16,985	17,518	17,973	18,364	18,687	18,953	17,828	16,642	15,457	14,271
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	44,236	70,722	68,727	66,837	65,046	63,345	61,728	60,189	58,689	57,190	55,691	54,192
	2 Revenue Requirement: Stand Alone	44,238	70,722	68,727	66,837	65,046	63,345	61,728	60,189	58,689	57,190	55,691	54,192
	3 Revenue Requirement: Rider 7/	44,236	70,722	68,727	66,837	65,046	63,345	61,728	60,189	58,689	57,190	55,691	54,192
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	58,004	56,368	54,818	53,349	51,954	50,628	49,365	48,135	46,905	45,676	44,447

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 14 of 50

THM Unit 2 Flood Insp/Refurb

Projects ID # 106997
In Service 5/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927
	2 Accumulated Depreciation 5/2014 Plant	1,262	3,280	5,299	7,317	9,336	11,354	13,373	15,391	17,410	19,429	21,447	23,466
	3 Net Plant	99,666	97,647	95,629	93,610	91,592	89,573	87,554	85,536	83,517	81,499	79,480	77,462
	4 Total Depreciation	1,262	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019
	5 Book Depreciation Rate 2/	1.33%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927
	2 Accumulated Depreciation	4,731	11,946	18,619	24,792	30,502	35,784	40,670	45,189	49,694	54,198	58,702	63,207
	3 Net Plant	96,196	88,982	82,308	76,136	70,425	65,144	60,258	55,738	51,234	46,729	42,225	37,721
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 5/2014 Plant	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927	100,927
	6 Tax Depreciation Rate 5/2014 Plant (20 yr, mid 2nd QTR)	4.6880%	7.1480%	6.6120%	6.1160%	5.6580%	5.2330%	4.8410%	4.4780%	4.4630%	4.4630%	4.4630%	4.4630%
	7 Total Tax Depreciation (including bonus)	4,731	7,214	6,673	6,173	5,710	5,282	4,886	4,520	4,504	4,504	4,504	4,504
	8 Tax Book Difference	3,470	8,666	13,320	17,475	21,166	24,429	27,297	29,798	32,284	34,769	37,255	39,741
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	1,435	3,585	5,511	7,229	8,757	10,106	11,293	12,327	13,356	14,384	15,413	16,441
	11 Deferred Tax Expense debit / (Credit)	1,435	2,149	1,926	1,719	1,527	1,350	1,186	1,035	1,028	1,028	1,028	1,028
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	99,666	97,647	95,629	93,610	91,592	89,573	87,554	85,536	83,517	81,499	79,480	77,462
	2 Less: ADITL - Def Taxes	(1,435)	(3,585)	(5,511)	(7,229)	(8,757)	(10,106)	(11,293)	(12,327)	(13,356)	(14,384)	(15,413)	(16,441)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	98,230	94,062	90,118	86,381	82,835	79,467	76,262	73,209	70,162	67,115	64,068	61,021
	5 Average Rate Base	62,195	96,146	92,090	88,249	84,608	81,151	77,864	74,735	71,685	68,638	65,591	62,544
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	3,504	5,417	5,189	4,972	4,767	4,572	4,387	4,211	4,039	3,867	3,696	3,524
	9 Income Tax Component	2,473	3,822	3,661	3,508	3,364	3,226	3,096	2,971	2,850	2,729	2,608	2,487
	10 Interest Expense Component	1,580	2,442	2,339	2,242	2,149	2,061	1,978	1,898	1,821	1,743	1,666	1,589
	11 Total Return on Average Rate Base	7,557	11,682	11,189	10,722	10,280	9,860	9,460	9,080	8,710	8,340	7,969	7,599
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	1,262	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019
	14 Property Tax	62	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052
	15 Revenue Requirements	8,880	15,752	15,259	14,793	14,350	13,930	13,531	13,151	12,780	12,410	12,040	11,670

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 15 of 50

THM Unit 2 Flood Insp/Refurb

Projects ID # 106997
In Service 5/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	99,666	97,647	95,629	93,610	91,592	89,573	87,554	85,536	83,517	81,499	79,480	77,462
	2 Less: ADITL - Def Taxes	(1,435)	(3,585)	(5,511)	(7,229)	(8,757)	(10,106)	(11,293)	(12,327)	(13,356)	(14,384)	(15,413)	(16,441)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	98,230	94,062	90,118	86,381	82,835	79,467	76,262	73,209	70,162	67,115	64,068	61,021
	5 Average Rate Base	62,199	96,146	92,090	88,249	84,608	81,151	77,864	74,735	71,685	68,638	65,591	62,544
	7 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	6 Return on Average Rate Base 5/												
	7 After Tax Return on Equity	3,504	5,417	5,189	4,972	4,767	4,572	4,387	4,211	4,039	3,867	3,696	3,524
	8 Income Tax Component	2,473	3,822	3,661	3,508	3,364	3,226	3,096	2,971	2,850	2,729	2,608	2,487
	9 Interest Expense Component	1,580	2,442	2,339	2,242	2,149	2,061	1,978	1,898	1,821	1,743	1,666	1,589
	10 Total Return on Average Rate Base	7,557	11,682	11,189	10,722	10,280	9,860	9,460	9,080	8,710	8,340	7,969	7,599
	11 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	12 Depreciation Expense	1,262	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019	2,019
	13 Property Tax	62	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052
	14 Revenue Requirements	8,881	15,752	15,259	14,793	14,350	13,930	13,531	13,151	12,780	12,410	12,040	11,670
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	8,881	15,752	15,259	14,793	14,350	13,930	13,531	13,151	12,780	12,410	12,040	11,670
	2 Tax Depreciation	4,731	7,214	6,673	6,173	5,710	5,282	4,886	4,520	4,504	4,504	4,504	4,504
	3 Property Tax	62	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052	2,052
	4 Interest Expense (including on CWIP)	1,580	2,442	2,339	2,242	2,149	2,061	1,978	1,898	1,821	1,743	1,666	1,589
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	6,373	11,708	11,064	10,466	9,912	9,395	8,916	8,470	8,377	8,300	8,222	8,145
	7 Taxable Income (NOL)	2,507	4,044	4,195	4,327	4,439	4,536	4,615	4,681	4,403	4,110	3,817	3,525
	8 Current tax expense	1,037	1,673	1,736	1,793	1,837	1,877	1,909	1,936	1,822	1,700	1,580	1,458
	9 Taxable Income (NOL)	2,507	4,044	4,195	4,327	4,439	4,536	4,615	4,681	4,403	4,110	3,817	3,525
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	2,507	4,044	4,195	4,327	4,439	4,536	4,615	4,681	4,403	4,110	3,817	3,525
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	8,880	15,752	15,259	14,793	14,350	13,930	13,531	13,151	12,780	12,410	12,040	11,670
	2 Revenue Requirement: Stand Alone	8,881	15,752	15,259	14,793	14,350	13,930	13,531	13,151	12,780	12,410	12,040	11,670
	3 Revenue Requirement: Rider 7/	8,880	15,752	15,259	14,793	14,350	13,930	13,531	13,151	12,780	12,410	12,040	11,670
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	12,920	12,515	12,133	11,770	11,425	11,098	10,786	10,482	10,178	9,875	9,571

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 16 of 50

Thomson Basement Flood Proofing

Project ID # 107017
In Service 6/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250
	2 Accumulated Depreciation 6/2014 Plant	1,844	5,249	8,654	12,059	15,464	18,869	22,274	25,679	29,084	32,489	35,894	39,299
	3 Net Plant	168,406	165,001	161,596	158,191	154,786	151,381	147,976	144,571	141,166	137,761	134,356	130,951
	4 Total Depreciation	1,844	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405
	5 Book Depreciation Rate 2/	1.17%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250
	2 Accumulated Depreciation	7,981	20,151	31,408	41,820	51,453	60,362	68,604	76,228	83,826	91,424	99,023	106,621
	3 Net Plant	162,269	150,099	138,842	128,430	118,797	109,888	101,646	94,022	86,424	78,826	71,227	63,629
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 6/2014 Plant	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250	170,250
	6 Tax Depreciation Rate 6/2014 Plant (20 yr, mid 2nd QTR)	4.6880%	7.1480%	6.6120%	6.1160%	5.6580%	5.2330%	4.8410%	4.4780%	4.4630%	4.4630%	4.4630%	4.4630%
	7 Total Tax Depreciation (including bonus)	7,981	12,169	11,257	10,412	9,633	8,909	8,242	7,624	7,598	7,598	7,598	7,598
	8 Tax Book Difference	6,137	14,901	22,753	29,761	35,989	41,493	46,330	50,548	54,742	58,935	63,128	67,321
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	2,539	6,165	9,413	12,312	14,888	17,166	19,167	20,912	22,647	24,381	26,116	27,851
	11 Deferred Tax Expense debit / (Credit)	2,539	3,626	3,248	2,899	2,576	2,277	2,001	1,745	1,735	1,735	1,735	1,735
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	168,406	165,001	161,596	158,191	154,786	151,381	147,976	144,571	141,166	137,761	134,356	130,951
	2 Less: ADITL - Def Taxes	(2,539)	(6,165)	(9,413)	(12,312)	(14,888)	(17,166)	(19,167)	(20,912)	(22,647)	(24,381)	(26,116)	(27,851)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Plus: ADITA - PTC	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	165,867	158,836	152,183	145,879	139,897	134,215	128,809	123,659	118,519	113,379	108,240	103,100
	5 Average Rate Base	90,961	162,351	155,509	149,031	142,888	137,056	131,512	126,234	121,089	115,949	110,809	105,670
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	5,125	9,147	8,762	8,397	8,051	7,722	7,410	7,112	6,823	6,533	6,243	5,954
	9 Income Tax Component	3,616	6,455	6,183	5,925	5,681	5,449	5,228	5,019	4,814	4,610	4,405	4,201
	10 Interest Expense Component	2,310	4,124	3,950	3,785	3,629	3,481	3,340	3,206	3,076	2,945	2,815	2,684
	11 Total Return on Average Rate Base	11,052	19,726	18,894	18,107	17,361	16,652	15,979	15,337	14,712	14,088	13,463	12,839
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	1,844	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405
	14 Property Tax	-	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091
	15 Revenue Requirements	12,896	30,222	29,390	28,603	27,857	27,148	26,475	25,833	25,208	24,584	23,959	23,335

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

C-2 Revenue Requirements - Stand Alone NOL

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 17 of 50

Thomson Basement Flood Proofing

Project ID # 107017
In Service 6/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
	1 Net Plant	168,406	165,001	161,596	158,191	154,786	151,381	147,976	144,571	141,166	137,761	134,356	130,951
	2 Less: ADITL - Def Taxes	(2,539)	(6,165)	(9,413)	(12,312)	(14,888)	(17,166)	(19,167)	(20,912)	(22,647)	(24,381)	(26,116)	(27,851)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Plus: ADITA - PTC	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	165,867	158,836	152,183	145,879	139,897	134,215	128,809	123,659	118,519	113,379	108,240	103,100
	5 Average Rate Base	90,972	162,351	155,509	149,031	142,888	137,056	131,512	126,234	121,089	115,949	110,809	105,670
	7 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	6 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 After Tax Return on Equity	5,126	9,147	8,762	8,397	8,051	7,722	7,410	7,112	6,823	6,533	6,243	5,954
	8 Income Tax Component	3,617	6,455	6,183	5,925	5,681	5,449	5,228	5,019	4,814	4,610	4,405	4,201
	9 Interest Expense Component	2,311	4,124	3,950	3,785	3,629	3,481	3,340	3,206	3,076	2,945	2,815	2,684
	10 Total Return on Average Rate Base	11,053	19,726	18,894	18,107	17,361	16,652	15,979	15,337	14,712	14,088	13,463	12,839
	11 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	12 Depreciation Expense	1,844	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405	3,405
	13 Property Tax	-	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091
	14 Federal Production Tax Credit 5/	-	-	-	-	-	-	-	-	-	-	-	-
	15 ND Investment Tax Credit 6/	-	-	-	-	-	-	-	-	-	-	-	-
	14 Revenue Requirements	12,897	30,222	29,390	28,603	27,857	27,148	26,475	25,833	25,208	24,584	23,959	23,335
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	12,897	30,222	29,390	28,603	27,857	27,148	26,475	25,833	25,208	24,584	23,959	23,335
	2 Tax Depreciation	7,981	12,169	11,257	10,412	9,633	8,909	8,242	7,624	7,598	7,598	7,598	7,598
	3 Property Tax	-	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091	7,091
	4 Interest Expense (including on CWIP)	2,311	4,124	3,950	3,785	3,629	3,481	3,340	3,206	3,076	2,945	2,815	2,684
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	10,292	23,384	22,298	21,289	20,353	19,481	18,673	17,921	17,765	17,634	17,504	17,373
	7 Taxable Income (NOL)	2,605	6,837	7,093	7,314	7,504	7,667	7,802	7,912	7,443	6,949	6,456	5,962
	8 Current tax expense	1,078	2,830	2,934	3,027	3,105	3,172	3,228	3,273	3,079	2,875	2,671	2,466
	9 Taxable Income (NOL)	2,605	6,837	7,093	7,314	7,504	7,667	7,802	7,912	7,443	6,949	6,456	5,962
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	2,605	6,837	7,093	7,314	7,504	7,667	7,802	7,912	7,443	6,949	6,456	5,962
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
	13 Annual Fed Production Tax Credit (\$)	-	-	-	-	-	-	-	-	-	-	-	-
	14 Utilized PTC 8/	-	-	-	-	-	-	-	-	-	-	-	-
	15 ADITA for PTC	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	12,896	30,222	29,390	28,603	27,857	27,148	26,475	25,833	25,208	24,584	23,959	23,335
	2 Revenue Requirement: Stand Alone	12,897	30,222	29,390	28,603	27,857	27,148	26,475	25,833	25,208	24,584	23,959	23,335
	3 Revenue Requirement: Rider 7/	12,896	30,222	29,390	28,603	27,857	27,148	26,475	25,833	25,208	24,584	23,959	23,335
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	24,787	24,105	23,459	22,847	22,266	21,714	21,188	20,675	20,163	19,651	19,139

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 18 of 50

Thomson Forebay Embankment Reconstruction

Project ID # 106156
In Service 7/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172
	2 Accumulated Depreciation 7/2014 Plant	252,699	804,043	1,355,386	1,906,729	2,458,073	3,009,416	3,560,760	4,112,103	4,663,447	5,214,790	5,766,134	6,317,477
	3 Net Plant	27,314,473	26,763,130	26,211,786	25,660,443	25,109,100	24,557,756	24,006,413	23,455,069	22,903,726	22,352,382	21,801,039	21,249,695
	4 Total Depreciation	252,699	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343
	5 Book Depreciation Rate 2/	1.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172	27,567,172
	2 Accumulated Depreciation	8,843,531	10,247,799	11,546,685	12,748,279	13,859,711	14,887,722	15,838,671	16,718,338	17,577,583	18,436,828	19,296,073	20,155,318
	3 Net Plant	18,723,642	17,319,373	16,020,488	14,818,893	13,707,462	12,679,450	11,728,501	10,848,835	9,989,590	9,130,345	8,271,100	7,411,855
	4 Bonus Depreciation (50% on spend thru 2013)	8,301,590	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 7/2014 Plant	19,265,582	19,265,582	19,265,582	19,265,582	19,265,582	19,265,582	19,265,582	19,265,582	19,265,582	19,265,582	19,265,582	19,265,582
	6 Tax Depreciation Rate 7/2014 Plant (20 yr, mid 3rd QTR)	2.8130%	7.2890%	6.7420%	6.2370%	5.7690%	5.3360%	4.9360%	4.5660%	4.4600%	4.4600%	4.4600%	4.4600%
	7 Total Tax Depreciation (including bonus)	8,843,531	1,404,268	1,298,886	1,201,594	1,111,431	1,028,011	950,949	879,666	859,245	859,245	859,245	859,245
	8 Tax Book Difference	8,590,832	9,443,757	10,191,299	10,841,550	11,401,638	11,878,306	12,277,911	12,606,234	12,914,136	13,222,037	13,529,939	13,837,841
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	3,554,027	3,906,882	4,216,140	4,485,149	4,716,857	4,914,055	5,079,372	5,215,199	5,342,578	5,469,957	5,597,336	5,724,715
	11 Deferred Tax Expense debit / (Credit)	3,554,027	352,855	309,258	269,009	231,708	197,198	165,317	135,827	127,379	127,379	127,379	127,379
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	27,314,473	26,763,130	26,211,786	25,660,443	25,109,100	24,557,756	24,006,413	23,455,069	22,903,726	22,352,382	21,801,039	21,249,695
	2 Less: ADITL - Def Taxes	(3,554,027)	(3,906,882)	(4,216,140)	(4,485,149)	(4,716,857)	(4,914,055)	(5,079,372)	(5,215,199)	(5,342,578)	(5,469,957)	(5,597,336)	(5,724,715)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	23,760,446	22,856,248	21,995,646	21,175,294	20,392,242	19,643,701	18,927,041	18,239,870	17,561,148	16,882,425	16,203,703	15,524,981
	5 Average Rate Base	10,970,585	23,308,347	22,425,947	21,585,470	20,783,768	20,017,972	19,285,371	18,583,455	17,900,509	17,221,787	16,543,064	15,864,342
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	618,120	1,313,272	1,263,554	1,216,199	1,171,028	1,127,881	1,086,603	1,047,055	1,008,576	970,334	932,092	893,851
	9 Income Tax Component	436,153	926,661	891,579	858,165	826,292	795,846	766,721	738,815	711,663	684,680	657,696	630,712
	10 Interest Expense Component	278,653	592,032	569,619	548,271	527,908	508,456	489,848	472,020	454,673	437,433	420,194	402,954
	11 Total Return on Average Rate Base	1,332,926	2,831,964	2,724,753	2,622,635	2,525,228	2,432,184	2,343,173	2,257,890	2,174,912	2,092,447	2,009,982	1,927,518
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	252,699	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343
	14 Property Tax	601,770	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791
	15 Revenue Requirements	2,187,396	4,389,099	4,281,887	4,179,769	4,082,362	3,989,318	3,900,307	3,815,024	3,732,046	3,649,581	3,567,117	3,484,652

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 19 of 50

Thomson Forebay Embankment Reconstruction
Project ID # 106156
In Service 7/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	27,314,473	26,763,130	26,211,786	25,660,443	25,109,100	24,557,756	24,006,413	23,455,069	22,903,726	22,352,382	21,801,039	21,249,695
	2 Less: ADITL - Def Taxes	(3,554,027)	(3,906,882)	(4,216,140)	(4,485,149)	(4,716,857)	(4,914,055)	(5,079,372)	(5,215,199)	(5,342,578)	(5,469,957)	(5,597,336)	(5,724,715)
	3 Plus: ADITA - NOL (Stand Alone)	3,058,597	2,376,950	1,713,518	1,069,237	444,743	-	-	-	-	-	-	-
	4 Rate Base	26,819,043	25,233,198	23,709,164	22,244,531	20,836,985	19,643,701	18,927,041	18,239,870	17,561,148	16,882,425	16,203,703	15,524,981
	5 Average Rate Base	12,461,587	26,020,903	24,466,167	22,972,029	21,536,128	20,178,411	19,285,371	18,583,455	17,900,509	17,221,787	16,543,064	15,864,342
	7 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	6 Return on Average Rate Base 5/												
	7 After Tax Return on Equity	702,128	1,466,106	1,378,507	1,294,322	1,213,419	1,136,920	1,086,603	1,047,055	1,008,576	970,334	932,092	893,851
	8 Income Tax Component	495,430	1,034,503	972,692	913,290	856,203	802,225	766,721	738,815	711,663	684,680	657,696	630,712
	9 Interest Expense Component	316,524	660,931	621,441	583,490	547,018	512,532	489,848	472,020	454,673	437,433	420,194	402,954
	10 Total Return on Average Rate Base	1,514,083	3,161,540	2,972,639	2,791,102	2,616,639	2,451,677	2,343,173	2,257,890	2,174,912	2,092,447	2,009,982	1,927,518
	11 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	12 Depreciation Expense	252,699	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343	551,343
	13 Property Tax	601,770	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791
	14 Revenue Requirements	2,368,552	4,718,674	4,529,774	4,348,236	4,173,774	4,008,811	3,900,307	3,815,024	3,732,046	3,649,581	3,567,117	3,484,652
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	2,368,552	4,718,674	4,529,774	4,348,236	4,173,774	4,008,811	3,900,307	3,815,024	3,732,046	3,649,581	3,567,117	3,484,652
	2 Tax Depreciation	8,843,531	1,404,268	1,298,886	1,201,594	1,111,431	1,028,011	950,949	879,666	859,245	859,245	859,245	859,245
	3 Property Tax	601,770	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791	1,005,791
	4 Interest Expense (including on CWIP)	316,524	660,931	621,441	583,490	547,018	512,532	489,848	472,020	454,673	437,433	420,194	402,954
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	9,761,826	3,070,990	2,926,117	2,790,875	2,664,240	2,546,334	2,446,589	2,357,477	2,319,709	2,302,469	2,285,230	2,267,990
	7 Taxable Income (NOL)	(7,393,273)	1,647,684	1,603,657	1,557,361	1,509,534	1,462,477	1,453,718	1,457,547	1,412,337	1,347,112	1,281,887	1,216,662
	8 Current tax expense	(3,058,598)	681,646	663,432	644,278	624,493	605,026	601,403	602,987	584,284	557,300	530,317	503,333
	9 Taxable Income (NOL)	(7,393,273)	1,647,684	1,603,657	1,557,361	1,509,534	1,462,477	1,453,718	1,457,547	1,412,337	1,347,112	1,281,887	1,216,662
	10 NOL carryforward	-	(7,393,273)	(5,745,589)	(4,141,933)	(2,584,572)	(1,075,038)	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	(7,393,273)	(5,745,589)	(4,141,933)	(2,584,572)	(1,075,038)	387,439	1,453,718	1,457,547	1,412,337	1,347,112	1,281,887	1,216,662
	12 Expected stand alone ADITA NOL	3,058,597	2,376,950	1,713,518	1,069,237	444,743	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	2,187,396	4,389,099	4,281,887	4,179,769	4,082,362	3,989,318	3,900,307	3,815,024	3,732,046	3,649,581	3,567,117	3,484,652
	2 Revenue Requirement: Stand Alone	2,368,552	4,718,674	4,529,774	4,348,236	4,173,774	4,008,811	3,900,307	3,815,024	3,732,046	3,649,581	3,567,117	3,484,652
	3 Revenue Requirement: Rider 7/	2,187,396	4,389,099	4,281,887	4,179,769	4,082,362	3,989,318	3,900,307	3,815,024	3,732,046	3,649,581	3,567,117	3,484,652
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	3,599,807	3,511,875	3,428,121	3,348,231	3,271,919	3,198,915	3,128,968	3,060,912	2,993,277	2,925,642	2,858,007

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 20 of 50

THM Lower Wye Hse - Replace Valves

Project IDs # 106282
In Service 9/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272
	2 Accumulated Depreciation 9/2014 Plant	5,852	25,918	45,983	66,049	86,114	106,180	126,245	146,311	166,376	186,441	206,507	226,572
	3 Net Plant	997,420	977,355	957,289	937,224	917,158	897,093	877,027	856,962	836,896	816,831	796,766	776,700
	4 Total Depreciation	5,852	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065
	5 Book Depreciation Rate 2/	0.67%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272	1,003,272
	2 Accumulated Depreciation	439,694	481,962	521,058	557,226	590,680	621,623	650,246	676,724	702,587	728,450	754,314	780,177
	3 Net Plant	563,579	521,311	482,214	446,047	412,593	381,650	353,026	326,548	300,685	274,822	248,959	223,096
	4 Bonus Depreciation	423,381	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 9/2014 Plant	579,891	579,891	579,891	579,891	579,891	579,891	579,891	579,891	579,891	579,891	579,891	579,891
	6 Tax Depreciation Rate 9/2014 Plant (20 yr, mid 3rd QTR)	2.8130%	7.2890%	6.7420%	6.2370%	5.7690%	5.3360%	4.9360%	4.5660%	4.4600%	4.4600%	4.4600%	4.4600%
	7 Total Tax Depreciation (including bonus)	439,694	42,268	39,096	36,168	33,454	30,943	28,623	26,478	25,863	25,863	25,863	25,863
	8 Tax Book Difference	433,841	456,044	475,075	491,177	504,566	515,443	524,001	530,414	536,211	542,009	547,807	553,604
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	179,480	188,665	196,538	203,200	208,739	213,239	216,779	219,432	221,831	224,229	226,628	229,026
	11 Deferred Tax Expense debit / (Credit)	179,480	9,185	7,873	6,662	5,539	4,500	3,540	2,653	2,399	2,399	2,399	2,399
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	997,420	977,355	957,289	937,224	917,158	897,093	877,027	856,962	836,896	816,831	796,766	776,700
	2 Less: ADITL - Def Taxes	(179,480)	(188,665)	(196,538)	(203,200)	(208,739)	(213,239)	(216,779)	(219,432)	(221,831)	(224,229)	(226,628)	(229,026)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	817,940	788,689	760,751	734,024	708,419	683,854	660,248	637,530	615,066	592,602	570,138	547,674
	5 Average Rate Base	239,900	803,315	774,720	747,387	721,222	696,137	672,051	648,889	626,298	603,834	581,370	558,906
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	13,517	45,261	43,650	42,110	40,636	39,223	37,866	36,561	35,288	34,022	32,756	31,491
	9 Income Tax Component	9,538	31,937	30,800	29,714	28,673	27,676	26,718	25,798	24,899	24,006	23,113	22,220
	10 Interest Expense Component	6,093	20,404	19,678	18,984	18,319	17,682	17,070	16,482	15,908	15,337	14,767	14,196
	11 Total Return on Average Rate Base	29,148	97,603	94,128	90,808	87,628	84,581	81,654	78,840	76,095	73,366	70,636	67,907
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	5,852	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065
	14 Property Tax	32,745	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601
	15 Revenue Requirements	67,745	156,269	152,795	149,474	146,295	143,247	140,321	137,506	134,762	132,032	129,303	126,574

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 21 of 50

THM Lower Wye Hse - Replace Valves

Project IDs # 106282
In Service 9/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	997,420	977,355	957,289	937,224	917,158	897,093	877,027	856,962	836,896	816,831	796,766	776,700
	2 Less: ADITL - Def Taxes	(179,480)	(188,665)	(196,538)	(203,200)	(208,739)	(213,239)	(216,779)	(219,432)	(221,831)	(224,229)	(226,628)	(229,026)
	3 Plus: ADITA - NOL (Stand Alone)	167,949	139,102	111,206	84,275	58,313	33,322	9,303	-	-	-	-	-
	4 Rate Base	985,889	927,791	871,957	818,299	766,732	717,176	669,551	637,530	615,066	592,602	570,138	547,674
	5 Average Rate Base	290,030	956,649	899,690	844,952	792,346	741,791	693,207	650,729	626,298	603,834	581,370	558,906
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/												
	8 After Tax Return on Equity	16,341	53,901	50,692	47,607	44,643	41,795	39,058	36,664	35,288	34,022	32,756	31,491
	9 Income Tax Component	11,531	38,033	35,769	33,592	31,501	29,491	27,560	25,871	24,899	24,006	23,113	22,220
	10 Interest Expense Component	7,367	24,299	22,852	21,462	20,126	18,842	17,607	16,529	15,908	15,337	14,767	14,196
	11 Total Return on Average Rate Base	35,239	116,233	109,312	102,662	96,270	90,128	84,225	79,064	76,095	73,366	70,636	67,907
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	5,852	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065	20,065
	14 Property Tax	32,745	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601
	15 Revenue Requirements	73,836	174,899	167,979	161,328	154,937	148,794	142,891	137,730	134,762	132,032	129,303	126,574
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	73,836	174,899	167,979	161,328	154,937	148,794	142,891	137,730	134,762	132,032	129,303	126,574
	2 Tax Depreciation	439,694	42,268	39,096	36,168	33,454	30,943	28,623	26,478	25,863	25,863	25,863	25,863
	3 Property Tax	32,745	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601	38,601
	4 Interest Expense (including on CWIP)	7,367	24,299	22,852	21,462	20,126	18,842	17,607	16,529	15,908	15,337	14,767	14,196
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	479,805	105,168	100,549	96,231	92,181	88,385	84,832	81,607	80,372	79,802	79,231	78,660
	7 Taxable Income (NOL)	(405,969)	69,731	67,429	65,097	62,756	60,409	58,059	56,123	54,390	52,231	50,072	47,913
	8 Current tax expense	(167,949)	28,849	27,896	26,930	25,963	24,990	24,021	23,218	22,501	21,609	20,715	19,823
	9 Taxable Income (NOL)	(405,969)	69,731	67,429	65,097	62,756	60,409	58,059	56,123	54,390	52,231	50,072	47,913
	10 NOL carryforward	-	(405,969)	(336,238)	(268,809)	(203,711)	(140,955)	(80,547)	(22,487)	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	(405,969)	(336,238)	(268,809)	(203,711)	(140,955)	(80,547)	(22,487)	33,635	54,390	52,231	50,072	47,913
	12 Expected stand alone ADITA NOL	167,949	139,102	111,206	84,275	58,313	33,322	9,303	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	67,745	156,269	152,795	149,474	146,295	143,247	140,321	137,506	134,762	132,032	129,303	126,574
	2 Revenue Requirement: Stand Alone	73,836	174,899	167,979	161,328	154,937	148,794	142,891	137,730	134,762	132,032	129,303	126,574
	3 Revenue Requirement: Rider 7/	67,745	156,269	152,795	149,474	146,295	143,247	140,321	137,506	134,762	132,032	129,303	126,574
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	128,167	125,318	122,594	119,987	117,487	115,087	112,779	110,527	108,289	106,050	103,812

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Consolidated revenue requirements through 12/31/2012, then lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 22 of 50

THM Unit 4 Flood Insp/Refurb

Project IDs # 106998
In Service 9/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634
	2 Accumulated Depreciation 9/2014 Plant	873	3,866	6,858	9,851	12,844	15,836	18,829	21,822	24,814	27,807	30,800	33,792
	3 Net Plant	148,761	145,768	142,775	139,783	136,790	133,797	130,805	127,812	124,819	121,827	118,834	115,841
	4 Total Depreciation	873	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993
	5 Book Depreciation Rate 2/	0.67%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634
	2 Accumulated Depreciation	4,209	15,116	25,204	34,537	43,169	51,154	58,540	65,372	72,046	78,719	85,393	92,067
	3 Net Plant	145,424	134,518	124,429	115,097	106,464	98,480	91,094	84,262	77,588	70,914	64,241	57,567
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 9/2014 Plant	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634	149,634
	6 Tax Depreciation Rate 9/2014 Plant (20 yr, mid 3rd QTR)	2.8130%	7.2890%	6.7420%	6.2370%	5.7690%	5.3360%	4.9360%	4.5660%	4.4600%	4.4600%	4.4600%	4.4600%
	7 Total Tax Depreciation (including bonus)	4,209	10,907	10,088	9,333	8,632	7,984	7,386	6,832	6,674	6,674	6,674	6,674
	8 Tax Book Difference	3,336	11,250	18,346	24,686	30,326	35,318	39,711	43,550	47,231	50,912	54,593	58,274
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	1,380	4,654	7,590	10,213	12,546	14,611	16,428	18,017	19,540	21,062	22,585	24,108
	11 Deferred Tax Expense debit / (Credit)	1,380	3,274	2,935	2,623	2,333	2,065	1,817	1,588	1,523	1,523	1,523	1,523
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	148,761	145,768	142,775	139,783	136,790	133,797	130,805	127,812	124,819	121,827	118,834	115,841
	2 Less: ADITL - Def Taxes	(1,380)	(4,654)	(7,590)	(10,213)	(12,546)	(14,611)	(16,428)	(18,017)	(19,540)	(21,062)	(22,585)	(24,108)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	147,381	141,114	135,186	129,570	124,244	119,187	114,376	109,795	105,280	100,764	96,249	91,733
	5 Average Rate Base	43,277	144,247	138,150	132,378	126,907	121,715	116,781	112,086	107,538	103,022	98,507	93,991
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	2,438	8,127	7,784	7,459	7,150	6,858	6,580	6,315	6,059	5,805	5,550	5,296
	9 Income Tax Component	1,721	5,735	5,492	5,263	5,045	4,839	4,643	4,456	4,275	4,096	3,916	3,737
	10 Interest Expense Component	1,099	3,664	3,509	3,362	3,223	3,092	2,966	2,847	2,731	2,617	2,502	2,387
	11 Total Return on Average Rate Base	5,258	17,526	16,785	16,084	15,419	14,788	14,189	13,618	13,066	12,517	11,969	11,420
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	873	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993
	14 Property Tax	1,863	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804
	15 Revenue Requirements	7,994	26,323	25,582	24,881	24,216	23,585	22,986	22,415	21,862	21,314	20,765	20,217

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 23 of 50

THM Unit 4 Flood Insp/Refurb

Project IDs # 106998
In Service 9/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	148,761	145,768	142,775	139,783	136,790	133,797	130,805	127,812	124,819	121,827	118,834	115,841
	2 Less: ADITL - Def Taxes	(1,380)	(4,654)	(7,590)	(10,213)	(12,546)	(14,611)	(16,428)	(18,017)	(19,540)	(21,062)	(22,585)	(24,108)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	147,381	141,114	135,186	129,570	124,244	119,187	114,376	109,795	105,280	100,764	96,249	91,733
	5 Average Rate Base	43,288	144,247	138,150	132,378	126,907	121,715	116,781	112,086	107,538	103,022	98,507	93,991
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	2,439	8,127	7,784	7,459	7,150	6,858	6,580	6,315	6,059	5,805	5,550	5,296
	9 Income Tax Component	1,721	5,735	5,492	5,263	5,045	4,839	4,643	4,456	4,275	4,096	3,916	3,737
	10 Interest Expense Component	1,100	3,664	3,509	3,362	3,223	3,092	2,966	2,847	2,731	2,617	2,502	2,387
	11 Total Return on Average Rate Base	5,260	17,526	16,785	16,084	15,419	14,788	14,189	13,618	13,066	12,517	11,969	11,420
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	873	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993	2,993
	14 Property Tax	1,863	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804
	15 Revenue Requirements	7,995	26,323	25,582	24,881	24,216	23,585	22,986	22,415	21,862	21,314	20,765	20,217
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	7,995	26,323	25,582	24,881	24,216	23,585	22,986	22,415	21,862	21,314	20,765	20,217
	2 Tax Depreciation	4,209	10,907	10,088	9,333	8,632	7,984	7,386	6,832	6,674	6,674	6,674	6,674
	3 Property Tax	1,863	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804	5,804
	4 Interest Expense (including on CWIP)	1,100	3,664	3,509	3,362	3,223	3,092	2,966	2,847	2,731	2,617	2,502	2,387
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	7,172	20,375	19,401	18,499	17,660	16,880	16,156	15,483	15,209	15,094	14,980	14,865
	7 Taxable Income (NOL)	824	5,948	6,181	6,382	6,556	6,705	6,829	6,932	6,653	6,219	5,785	5,352
	8 Current tax expense	341	2,461	2,557	2,640	2,712	2,773	2,824	2,868	2,753	2,574	2,394	2,214
	9 Taxable Income (NOL)	824	5,948	6,181	6,382	6,556	6,705	6,829	6,932	6,653	6,219	5,785	5,352
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	824	5,948	6,181	6,382	6,556	6,705	6,829	6,932	6,653	6,219	5,785	5,352
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	7,994	26,323	25,582	24,881	24,216	23,585	22,986	22,415	21,862	21,314	20,765	20,217
	2 Revenue Requirement: Stand Alone	7,995	26,323	25,582	24,881	24,216	23,585	22,986	22,415	21,862	21,314	20,765	20,217
	3 Revenue Requirement: Rider 7/	7,994	26,323	25,582	24,881	24,216	23,585	22,986	22,415	21,862	21,314	20,765	20,217
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	21,589	20,981	20,406	19,861	19,344	18,852	18,384	17,931	17,481	17,031	16,581

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Consolidated revenue requirements through 12/31/2012, then lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 24 of 50

THM Unit 5 Flood Insp/Refurb

Project IDs # 106999
In Service 9/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827
	2 Accumulated Depreciation 9/2014 Plant	827	3,664	6,500	9,337	12,173	15,010	17,847	20,683	23,520	26,356	29,193	32,029
	3 Net Plant	141,000	138,163	135,327	132,490	129,654	126,817	123,980	121,144	118,307	115,471	112,634	109,798
	4 Total Depreciation	827	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837
	5 Book Depreciation Rate 2/	0.67%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827
	2 Accumulated Depreciation	3,990	14,327	23,889	32,735	40,917	48,485	55,486	61,961	68,287	74,612	80,938	87,263
	3 Net Plant	137,837	127,500	117,938	109,092	100,910	93,342	86,341	79,866	73,540	67,215	60,889	54,564
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 9/2014 Plant	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827	141,827
	6 Tax Depreciation Rate 9/2014 Plant (20 yr, mid 3rd QTR)	2.8130%	7.2890%	6.7420%	6.2370%	5.7690%	5.3360%	4.9360%	4.5660%	4.4600%	4.4600%	4.4600%	4.4600%
	7 Total Tax Depreciation (including bonus)	3,990	10,338	9,562	8,846	8,182	7,568	7,001	6,476	6,325	6,325	6,325	6,325
	8 Tax Book Difference	3,162	10,664	17,389	23,398	28,744	33,475	37,639	41,278	44,767	48,256	51,745	55,234
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	1,308	4,411	7,194	9,680	11,891	13,849	15,571	17,077	18,520	19,964	21,407	22,850
	11 Deferred Tax Expense debit / (Credit)	1,308	3,103	2,782	2,486	2,211	1,957	1,723	1,506	1,443	1,443	1,443	1,443
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	141,000	138,163	135,327	132,490	129,654	126,817	123,980	121,144	118,307	115,471	112,634	109,798
	2 Less: ADITL - Def Taxes	(1,308)	(4,411)	(7,194)	(9,680)	(11,891)	(13,849)	(15,571)	(17,077)	(18,520)	(19,964)	(21,407)	(22,850)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	139,691	133,752	128,133	122,810	117,762	112,968	108,409	104,067	99,787	95,507	91,227	86,947
	5 Average Rate Base	41,019	136,722	130,942	125,472	120,286	115,365	110,689	106,238	101,927	97,647	93,367	89,087
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	2,311	7,703	7,378	7,069	6,777	6,500	6,237	5,986	5,743	5,502	5,261	5,019
	9 Income Tax Component	1,631	5,436	5,206	4,988	4,782	4,587	4,401	4,224	4,052	3,882	3,712	3,542
	10 Interest Expense Component	1,042	3,473	3,326	3,187	3,055	2,930	2,811	2,698	2,589	2,480	2,372	2,263
	11 Total Return on Average Rate Base	4,984	16,612	15,909	15,245	14,615	14,017	13,449	12,908	12,384	11,864	11,344	10,824
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	827	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837
	14 Property Tax	1,759	5,554	5,554	5,554	5,554	5,554	5,554	5,554	5,554	5,554	5,554	5,554
	15 Revenue Requirements	7,570	25,002	24,300	23,635	23,005	22,407	21,839	21,298	20,775	20,255	19,735	19,215

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 25 of 50

THM Unit 5 Flood Insp/Refurb

Project IDs # 106999
In Service 9/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	141,000	138,163	135,327	132,490	129,654	126,817	123,980	121,144	118,307	115,471	112,634	109,798
	2 Less: ADITL - Def Taxes	(1,308)	(4,411)	(7,194)	(9,680)	(11,891)	(13,849)	(15,571)	(17,077)	(18,520)	(19,964)	(21,407)	(22,850)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	139,691	133,752	128,133	122,810	117,762	112,968	108,409	104,067	99,787	95,507	91,227	86,947
	5 Average Rate Base	41,030	136,722	130,942	125,472	120,286	115,365	110,689	106,238	101,927	97,647	93,367	89,087
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	2,312	7,703	7,378	7,069	6,777	6,500	6,237	5,986	5,743	5,502	5,261	5,019
	9 Income Tax Component	1,631	5,436	5,206	4,988	4,782	4,587	4,401	4,224	4,052	3,882	3,712	3,542
	10 Interest Expense Component	<u>1,042</u>	<u>3,473</u>	<u>3,326</u>	<u>3,187</u>	<u>3,055</u>	<u>2,930</u>	<u>2,811</u>	<u>2,698</u>	<u>2,589</u>	<u>2,480</u>	<u>2,372</u>	<u>2,263</u>
	11 Total Return on Average Rate Base	4,985	16,612	15,909	15,245	14,615	14,017	13,449	12,908	12,384	11,864	11,344	10,824
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	827	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837	2,837
	14 Property Tax	<u>1,759</u>	<u>5,554</u>	<u>5,554</u>	<u>5,554</u>	<u>5,554</u>	<u>5,554</u>	<u>5,554</u>	<u>5,554</u>	<u>5,554</u>	<u>5,554</u>	<u>5,554</u>	<u>5,554</u>
	15 Revenue Requirements	7,571	25,002	24,300	23,635	23,005	22,407	21,839	21,298	20,775	20,255	19,735	19,215
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	7,571	25,002	24,300	23,635	23,005	22,407	21,839	21,298	20,775	20,255	19,735	19,215
	2 Tax Depreciation	3,990	10,338	9,562	8,846	8,182	7,568	7,001	6,476	6,325	6,325	6,325	6,325
	3 Property Tax	1,759	5,554	5,554	5,554	5,554	5,554	5,554	5,554	5,554	5,554	5,554	5,554
	4 Interest Expense (including on CWIP)	1,042	3,473	3,326	3,187	3,055	2,930	2,811	2,698	2,589	2,480	2,372	2,263
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	6,791	19,364	18,442	17,587	16,791	16,052	15,366	14,728	14,468	14,360	14,251	14,142
	7 Taxable Income (NOL)	781	5,638	5,858	6,049	6,214	6,355	6,473	6,570	6,306	5,895	5,484	5,072
	8 Current tax expense	324	2,332	2,423	2,502	2,572	2,628	2,678	2,719	2,609	2,439	2,269	2,098
	9 Taxable Income (NOL)	781	5,638	5,858	6,049	6,214	6,355	6,473	6,570	6,306	5,895	5,484	5,072
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	781	5,638	5,858	6,049	6,214	6,355	6,473	6,570	6,306	5,895	5,484	5,072
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	7,570	25,002	24,300	23,635	23,005	22,407	21,839	21,298	20,775	20,255	19,735	19,215
	2 Revenue Requirement: Stand Alone	7,571	25,002	24,300	23,635	23,005	22,407	21,839	21,298	20,775	20,255	19,735	19,215
	3 Revenue Requirement: Rider 7/	7,570	25,002	24,300	23,635	23,005	22,407	21,839	21,298	20,775	20,255	19,735	19,215
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	20,506	19,930	19,385	18,868	18,378	17,912	17,468	17,039	16,612	16,186	15,759

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Consolidated revenue requirements through 12/31/2012, then lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 26 of 50

THM Refurbish #4 & #5 Penstock

Project IDs # 106949
In Service 10/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856
	2 Accumulated Depreciation 10/2014 Plant	2,174	12,612	23,049	33,486	43,923	54,360	64,797	75,234	85,671	96,109	106,546	116,983
	3 Net Plant	519,682	509,245	498,808	488,371	477,934	467,496	457,059	446,622	436,185	425,748	415,311	404,874
	4 Total Depreciation	2,174	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437
	5 Book Depreciation Rate 2/	0.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856
	2 Accumulated Depreciation	4,895	43,669	79,531	112,705	143,390	171,774	198,029	222,316	245,580	268,845	292,109	315,373
	3 Net Plant	516,961	478,187	442,326	409,151	378,466	350,082	323,828	299,540	276,276	253,012	229,747	206,483
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 10/2014 Plant	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856	521,856
	6 Tax Depreciation Rate 10/2014 Plant (20 yr, mid 4th QTR)	0.9380%	7.4300%	6.8720%	6.3570%	5.8800%	5.4390%	5.0310%	4.6540%	4.4580%	4.4580%	4.4580%	4.4580%
	7 Total Tax Depreciation (including bonus)	4,895	38,774	35,862	33,174	30,685	28,384	26,255	24,287	23,264	23,264	23,264	23,264
	8 Tax Book Difference	2,721	31,057	56,482	79,220	99,468	117,414	133,232	147,082	159,909	172,736	185,563	198,391
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	1,126	12,848	23,367	32,773	41,150	48,574	55,118	60,848	66,154	71,461	76,768	82,074
	11 Deferred Tax Expense debit / (Credit)	1,126	11,723	10,518	9,406	8,377	7,425	6,544	5,730	5,307	5,307	5,307	5,307
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	519,682	509,245	498,808	488,371	477,934	467,496	457,059	446,622	436,185	425,748	415,311	404,874
	2 Less: ADITL - Def Taxes	(1,126)	(12,848)	(23,367)	(32,773)	(41,150)	(48,574)	(55,118)	(60,848)	(66,154)	(71,461)	(76,768)	(82,074)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	518,557	496,396	475,441	455,598	436,784	418,922	401,941	385,774	370,031	354,287	338,543	322,799
	5 Average Rate Base	108,329	507,476	485,919	465,519	446,191	427,853	410,432	393,858	377,903	362,159	346,415	330,671
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	6,104	28,593	27,378	26,229	25,140	24,107	23,125	22,191	21,292	20,405	19,518	18,631
	9 Income Tax Component	4,307	20,176	19,318	18,507	17,739	17,010	16,317	15,658	15,024	14,398	13,772	13,146
	10 Interest Expense Component	2,752	12,890	12,342	11,824	11,333	10,867	10,425	10,004	9,599	9,199	8,799	8,399
	11 Total Return on Average Rate Base	13,162	61,658	59,039	56,561	54,212	51,984	49,867	47,854	45,915	44,002	42,089	40,177
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	2,174	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437
	14 Property Tax	-	21,006	21,006	21,006	21,006	21,006	21,006	21,006	21,006	21,006	21,006	21,006
	15 Revenue Requirements	15,336	93,102	90,482	88,004	85,655	83,427	81,311	79,297	77,358	75,445	73,533	71,620

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 27 of 50

THM Refurbish #4 & #5 Penstock

Project IDs # 106949
In Service 10/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	519,682	509,245	498,808	488,371	477,934	467,496	457,059	446,622	436,185	425,748	415,311	404,874
	2 Less: ADITL - Def Taxes	(1,126)	(12,848)	(23,367)	(32,773)	(41,150)	(48,574)	(55,118)	(60,848)	(66,154)	(71,461)	(76,768)	(82,074)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	518,557	496,396	475,441	455,598	436,784	418,922	401,941	385,774	370,031	354,287	338,543	322,799
	5 Average Rate Base	108,329	507,476	485,919	465,519	446,191	427,853	410,432	393,858	377,903	362,159	346,415	330,671
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	6,104	28,593	27,378	26,229	25,140	24,107	23,125	22,191	21,292	20,405	19,518	18,631
	9 Income Tax Component	4,307	20,176	19,318	18,507	17,739	17,010	16,317	15,658	15,024	14,398	13,772	13,146
	10 Interest Expense Component	<u>2,752</u>	<u>12,890</u>	<u>12,342</u>	<u>11,824</u>	<u>11,333</u>	<u>10,867</u>	<u>10,425</u>	<u>10,004</u>	<u>9,599</u>	<u>9,199</u>	<u>8,799</u>	<u>8,399</u>
	11 Total Return on Average Rate Base	13,162	61,658	59,039	56,561	54,212	51,984	49,867	47,854	45,915	44,002	42,089	40,177
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	2,174	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437	10,437
	14 Property Tax	<u>-</u>	<u>21,006</u>	<u>21,006</u>	<u>21,006</u>	<u>21,006</u>	<u>21,006</u>	<u>21,006</u>	<u>21,006</u>	<u>21,006</u>	<u>21,006</u>	<u>21,006</u>	<u>21,006</u>
	15 Revenue Requirements	15,336	93,102	90,482	88,004	85,655	83,427	81,311	79,297	77,358	75,445	73,533	71,620
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	15,336	93,102	90,482	88,004	85,655	83,427	81,311	79,297	77,358	75,445	73,533	71,620
	2 Tax Depreciation	4,895	38,774	35,862	33,174	30,685	28,384	26,255	24,287	23,264	23,264	23,264	23,264
	3 Property Tax	-	21,006	21,006	21,006	21,006	21,006	21,006	21,006	21,006	21,006	21,006	21,006
	4 Interest Expense (including on CWIP)	2,752	12,890	12,342	11,824	11,333	10,867	10,425	10,004	9,599	9,199	8,799	8,399
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	7,647	72,670	69,210	66,005	63,024	60,257	57,686	55,297	53,869	53,469	53,069	52,669
	7 Taxable Income (NOL)	7,690	20,432	21,272	21,999	22,631	23,170	23,625	24,000	23,489	21,976	20,463	18,950
	8 Current tax expense	3,182	8,453	8,800	9,102	9,363	9,585	9,774	9,929	9,718	9,091	8,466	7,839
	9 Taxable Income (NOL)	7,690	20,432	21,272	21,999	22,631	23,170	23,625	24,000	23,489	21,976	20,463	18,950
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	7,690	20,432	21,272	21,999	22,631	23,170	23,625	24,000	23,489	21,976	20,463	18,950
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	15,336	93,102	90,482	88,004	85,655	83,427	81,311	79,297	77,358	75,445	73,533	71,620
	2 Revenue Requirement: Stand Alone	15,336	93,102	90,482	88,004	85,655	83,427	81,311	79,297	77,358	75,445	73,533	71,620
	3 Revenue Requirement: Rider 7/	15,336	93,102	90,482	88,004	85,655	83,427	81,311	79,297	77,358	75,445	73,533	71,620
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	76,359	74,211	72,178	70,252	68,425	66,689	65,037	63,447	61,878	60,309	58,740

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Consolidated revenue requirements through 12/31/2012, then lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 28 of 50

THM Unit 1 Flood Insp/Refurb
Project IDs # 106983
In Service 10/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302
	2 Accumulated Depreciation 10/2014 Plant	4,564	26,470	48,376	70,282	92,188	114,094	136,000	157,906	179,812	201,718	223,624	245,530
	3 Net Plant	1,090,738	1,068,832	1,046,926	1,025,020	1,003,114	981,208	959,302	937,396	915,490	893,584	871,678	849,771
	4 Total Depreciation	4,564	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906
	5 Book Depreciation Rate 2/	0.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302
	2 Accumulated Depreciation	10,274	91,655	166,924	236,552	300,956	360,529	415,634	466,609	515,438	564,267	613,095	661,924
	3 Net Plant	1,085,028	1,003,647	928,378	858,749	794,346	734,772	679,668	628,692	579,864	531,035	482,207	433,378
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 10/2014 Plant	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302	1,095,302
	6 Tax Depreciation Rate 10/2014 Plant (20 yr, mid 4th QTR)	0.9380%	7.4300%	6.8720%	6.3570%	5.8800%	5.4390%	5.0310%	4.6540%	4.4580%	4.4580%	4.4580%	4.4580%
	7 Total Tax Depreciation (including bonus)	10,274	81,381	75,269	69,628	64,404	59,573	55,105	50,975	48,829	48,829	48,829	48,829
	8 Tax Book Difference	5,710	65,185	118,548	166,270	208,768	246,436	279,634	308,703	335,626	362,548	389,471	416,394
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	2,362	26,967	49,043	68,786	86,367	101,950	115,685	127,711	138,848	149,986	161,124	172,262
	11 Deferred Tax Expense debit / (Credit)	2,362	24,605	22,076	19,743	17,581	15,583	13,734	12,026	11,138	11,138	11,138	11,138
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	1,090,738	1,068,832	1,046,926	1,025,020	1,003,114	981,208	959,302	937,396	915,490	893,584	871,678	849,771
	2 Less: ADITL - Def Taxes	(2,362)	(26,967)	(49,043)	(68,786)	(86,367)	(101,950)	(115,685)	(127,711)	(138,848)	(149,986)	(161,124)	(172,262)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,088,376	1,041,865	997,882	956,234	916,746	879,257	843,617	809,685	776,641	743,597	710,553	677,510
	5 Average Rate Base	227,367	1,065,120	1,019,874	977,058	936,490	898,002	861,437	826,651	793,163	760,119	727,075	694,031
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	12,811	60,012	57,463	55,051	52,765	50,596	48,536	46,576	44,690	42,828	40,966	39,104
	9 Income Tax Component	9,039	42,346	40,547	38,845	37,232	35,701	34,248	32,865	31,533	30,220	28,906	27,592
	10 Interest Expense Component	5,775	27,054	25,905	24,817	23,787	22,809	21,881	20,997	20,146	19,307	18,468	17,628
	11 Total Return on Average Rate Base	27,625	129,412	123,915	118,713	113,784	109,107	104,665	100,438	96,369	92,354	88,340	84,325
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	4,564	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906
	14 Property Tax	17,575	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865
	15 Revenue Requirements	49,764	190,183	184,686	179,484	174,555	169,878	165,436	161,209	157,140	153,126	149,111	145,096

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 29 of 50

THM Unit 1 Flood Insp/Refurb
Project IDs # 106983
In Service 10/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	1,090,738	1,068,832	1,046,926	1,025,020	1,003,114	981,208	959,302	937,396	915,490	893,584	871,678	849,771
	2 Less: ADITL - Def Taxes	(2,362)	(26,967)	(49,043)	(68,786)	(86,367)	(101,950)	(115,685)	(127,711)	(138,848)	(149,986)	(161,124)	(172,262)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,088,376	1,041,865	997,882	956,234	916,746	879,257	843,617	809,685	776,641	743,597	710,553	677,510
	5 Average Rate Base	227,367	1,065,120	1,019,874	977,058	936,490	898,002	861,437	826,651	793,163	760,119	727,075	694,031
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	12,811	60,012	57,463	55,051	52,765	50,596	48,536	46,576	44,690	42,828	40,966	39,104
	9 Income Tax Component	9,039	42,346	40,547	38,845	37,232	35,701	34,248	32,865	31,533	30,220	28,906	27,592
	10 Interest Expense Component	5,775	27,054	25,905	24,817	23,787	22,809	21,881	20,997	20,146	19,307	18,468	17,628
	11 Total Return on Average Rate Base	27,625	129,412	123,915	118,713	113,784	109,107	104,665	100,438	96,369	92,354	88,340	84,325
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	4,564	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906	21,906
	14 Property Tax	17,575	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865
	15 Revenue Requirements	49,764	190,183	184,686	179,484	174,555	169,878	165,436	161,209	157,140	153,126	149,111	145,096
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	49,764	190,183	184,686	179,484	174,555	169,878	165,436	161,209	157,140	153,126	149,111	145,096
	2 Tax Depreciation	10,274	81,381	75,269	69,628	64,404	59,573	55,105	50,975	48,829	48,829	48,829	48,829
	3 Property Tax	17,575	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865	38,865
	4 Interest Expense (including on CWIP)	5,775	27,054	25,905	24,817	23,787	22,809	21,881	20,997	20,146	19,307	18,468	17,628
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	33,624	147,300	140,039	133,311	127,056	121,248	115,850	110,837	107,840	107,001	106,161	105,322
	7 Taxable Income (NOL)	16,140	42,883	44,647	46,173	47,499	48,631	49,586	50,372	49,300	46,125	42,949	39,774
	8 Current tax expense	6,677	17,740	18,471	19,104	19,650	20,118	20,514	20,839	20,396	19,081	17,769	16,454
	9 Taxable Income (NOL)	16,140	42,883	44,647	46,173	47,499	48,631	49,586	50,372	49,300	46,125	42,949	39,774
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	16,140	42,883	44,647	46,173	47,499	48,631	49,586	50,372	49,300	46,125	42,949	39,774
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	49,764	190,183	184,686	179,484	174,555	169,878	165,436	161,209	157,140	153,126	149,111	145,096
	2 Revenue Requirement: Stand Alone	49,764	190,183	184,686	179,484	174,555	169,878	165,436	161,209	157,140	153,126	149,111	145,096
	3 Revenue Requirement: Rider 7/	49,764	190,183	184,686	179,484	174,555	169,878	165,436	161,209	157,140	153,126	149,111	145,096
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	155,982	151,474	147,207	143,164	139,329	135,685	132,219	128,882	125,589	122,296	119,003

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Consolidated revenue requirements through 12/31/2012, then lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 30 of 50

Thomson Back-UP Control Room
Project ID # 106281
In Service 11/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976
	2 Accumulated Depreciation 11/2014 Plant	605	5,444	10,284	15,124	19,963	24,803	29,642	34,482	39,321	44,161	49,000	53,840
	3 Net Plant	241,371	236,532	231,692	226,853	222,013	217,174	212,334	207,495	202,655	197,816	192,976	188,137
	4 Total Depreciation	605	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840
	5 Book Depreciation Rate 2/	0.33%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976
	2 Accumulated Depreciation	2,270	20,249	36,877	52,260	66,488	79,649	91,823	103,084	113,872	124,659	135,446	146,234
	3 Net Plant	239,707	221,728	205,099	189,717	175,488	162,327	150,154	138,892	128,105	117,317	106,530	95,743
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 11/2014 Plant	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976	241,976
	6 Tax Depreciation Rate 11/2014 Plant (20 yr, mid 4rd QTR)	0.9380%	7.4300%	6.8720%	6.3570%	5.8800%	5.4390%	5.0310%	4.6540%	4.4580%	4.4580%	4.4580%	4.4580%
	7 Total Tax Depreciation (including bonus)	2,270	17,979	16,629	15,382	14,228	13,161	12,174	11,262	10,787	10,787	10,787	10,787
	8 Tax Book Difference	1,665	14,804	26,593	37,136	46,525	54,846	62,181	68,603	74,550	80,498	86,446	92,394
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	689	6,124	11,002	15,363	19,247	22,690	25,724	28,381	30,842	33,302	35,763	38,223
	11 Deferred Tax Expense debit / (Credit)	689	5,436	4,877	4,362	3,884	3,443	3,034	2,657	2,461	2,461	2,461	2,461
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	241,371	236,532	231,692	226,853	222,013	217,174	212,334	207,495	202,655	197,816	192,976	188,137
	2 Less: ADITL - Def Taxes	(689)	(6,124)	(11,002)	(15,363)	(19,247)	(22,690)	(25,724)	(28,381)	(30,842)	(33,302)	(35,763)	(38,223)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	240,683	230,407	220,691	211,490	202,766	194,484	186,610	179,114	171,814	164,513	157,213	149,913
	5 Average Rate Base	30,144	235,545	225,549	216,090	207,128	198,625	190,547	182,862	175,464	168,164	160,863	153,563
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	1,698	13,271	12,708	12,175	11,670	11,191	10,736	10,303	9,886	9,475	9,064	8,652
	9 Income Tax Component	1,198	9,364	8,967	8,591	8,235	7,897	7,575	7,270	6,976	6,686	6,395	6,105
	10 Interest Expense Component	766	5,983	5,729	5,489	5,261	5,045	4,840	4,645	4,457	4,271	4,086	3,901
	11 Total Return on Average Rate Base	3,663	28,619	27,404	26,255	25,166	24,133	23,151	22,218	21,319	20,432	19,545	18,658
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	605	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840
	14 Property Tax	5,946	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505
	15 Revenue Requirements	10,213	42,963	41,749	40,599	39,511	38,477	37,496	36,562	35,663	34,776	33,889	33,002

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 31 of 50

Thomson Back-UP Control Room

Project ID # 106281

In Service 11/30/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	241,371	236,532	231,692	226,853	222,013	217,174	212,334	207,495	202,655	197,816	192,976	188,137
	2 Less: ADITL - Def Taxes	(689)	(6,124)	(11,002)	(15,363)	(19,247)	(22,690)	(25,724)	(28,381)	(30,842)	(33,302)	(35,763)	(38,223)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	240,683	230,407	220,691	211,490	202,766	194,484	186,610	179,114	171,814	164,513	157,213	149,913
	5 Average Rate Base	30,144	235,545	225,549	216,090	207,128	198,625	190,547	182,862	175,464	168,164	160,863	153,563
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	1,698	13,271	12,708	12,175	11,670	11,191	10,736	10,303	9,886	9,475	9,064	8,652
	9 Income Tax Component	1,198	9,364	8,967	8,591	8,235	7,897	7,575	7,270	6,976	6,686	6,395	6,105
	10 Interest Expense Component	766	5,983	5,729	5,489	5,261	5,045	4,840	4,645	4,457	4,271	4,086	3,901
	11 Total Return on Average Rate Base	3,663	28,619	27,404	26,255	25,166	24,133	23,151	22,218	21,319	20,432	19,545	18,658
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	605	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840	4,840
	14 Property Tax	5,946	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505
	15 Revenue Requirements	10,213	42,963	41,749	40,599	39,511	38,477	37,496	36,562	35,663	34,776	33,889	33,002
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	10,213	42,963	41,749	40,599	39,511	38,477	37,496	36,562	35,663	34,776	33,889	33,002
	2 Tax Depreciation	2,270	17,979	16,629	15,382	14,228	13,161	12,174	11,262	10,787	10,787	10,787	10,787
	3 Property Tax	5,946	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505	9,505
	4 Interest Expense (including on CWIP)	766	5,983	5,729	5,489	5,261	5,045	4,840	4,645	4,457	4,271	4,086	3,901
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	8,981	33,467	31,863	30,376	28,994	27,711	26,519	25,411	24,749	24,564	24,378	24,193
	7 Taxable Income (NOL)	1,232	9,497	9,886	10,223	10,516	10,766	10,977	11,151	10,914	10,213	9,511	8,810
	8 Current tax expense	510	3,928	4,090	4,229	4,351	4,454	4,541	4,613	4,512	4,224	3,936	3,648
	9 Taxable Income (NOL)	1,232	9,497	9,886	10,223	10,516	10,766	10,977	11,151	10,914	10,213	9,511	8,810
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	1,232	9,497	9,886	10,223	10,516	10,766	10,977	11,151	10,914	10,213	9,511	8,810
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	10,213	42,963	41,749	40,599	39,511	38,477	37,496	36,562	35,663	34,776	33,889	33,002
	2 Revenue Requirement: Stand Alone	10,213	42,963	41,749	40,599	39,511	38,477	37,496	36,562	35,663	34,776	33,889	33,002
	3 Revenue Requirement: Rider 7/	10,213	42,963	41,749	40,599	39,511	38,477	37,496	36,562	35,663	34,776	33,889	33,002
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	35,237	34,241	33,298	32,405	31,558	30,753	29,987	29,250	28,523	27,795	27,068

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 32 of 50

THM Flowline_Penstock_Abate_Line

Project ID # 106260

In Service 12/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149
	2 Accumulated Depreciation 12/2014 Plant	17,481	437,024	856,567	1,276,110	1,695,653	2,115,196	2,534,739	2,954,282	3,373,825	3,793,368	4,212,911	4,632,454
	3 Net Plant	20,959,668	20,540,125	20,120,582	19,701,039	19,281,496	18,861,953	18,442,410	18,022,867	17,603,324	17,183,781	16,764,238	16,344,695
	4 Total Depreciation	17,481	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543
	5 Book Depreciation Rate 2/	0.17%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149	20,977,149
	2 Accumulated Depreciation	3,789,409	5,078,550	6,270,876	7,373,846	8,394,055	9,337,748	10,210,651	11,018,143	11,791,628	12,565,112	13,338,597	14,112,082
	3 Net Plant	17,187,740	15,898,599	14,706,273	13,603,303	12,583,094	11,639,401	10,766,498	9,959,006	9,185,522	8,412,037	7,638,552	6,865,067
	4 Bonus Depreciation (50% on spend thru 2013)	3,626,662	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 12/2014 Plant	17,350,488	17,350,488	17,350,488	17,350,488	17,350,488	17,350,488	17,350,488	17,350,488	17,350,488	17,350,488	17,350,488	17,350,488
	6 Tax Depreciation Rate 12/2014 Plant (20 yr, mid 4rd QTR)	0.9380%	7.4300%	6.8720%	6.3570%	5.8800%	5.4390%	5.0310%	4.6540%	4.4580%	4.4580%	4.4580%	4.4580%
	7 Total Tax Depreciation (including bonus)	3,789,409	1,289,141	1,192,326	1,102,970	1,020,209	943,693	872,903	807,492	773,485	773,485	773,485	773,485
	8 Tax Book Difference	3,771,928	4,641,526	5,414,309	6,097,737	6,698,402	7,222,552	7,675,912	8,063,861	8,417,803	8,771,744	9,125,686	9,479,628
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	1,560,447	1,920,200	2,239,900	2,522,634	2,771,129	2,987,970	3,175,525	3,336,019	3,482,445	3,628,871	3,775,296	3,921,722
	11 Deferred Tax Expense debit / (Credit)	1,560,447	359,753	319,700	282,734	248,495	216,841	187,555	160,494	146,426	146,426	146,426	146,426
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	20,959,668	20,540,125	20,120,582	19,701,039	19,281,496	18,861,953	18,442,410	18,022,867	17,603,324	17,183,781	16,764,238	16,344,695
	2 Less: ADITL - Def Taxes	(1,560,447)	(1,920,200)	(2,239,900)	(2,522,634)	(2,771,129)	(2,987,970)	(3,175,525)	(3,336,019)	(3,482,445)	(3,628,871)	(3,775,296)	(3,921,722)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	19,399,222	18,619,926	17,880,683	17,178,406	16,510,367	15,873,983	15,266,885	14,686,848	14,120,879	13,554,911	12,988,942	12,422,973
	5 Average Rate Base	808,301	19,009,574	18,250,304	17,529,544	16,844,387	16,192,175	15,570,434	14,976,867	14,403,864	13,837,895	13,271,926	12,705,958
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	45,542	1,071,064	1,028,284	987,674	949,070	912,322	877,291	843,848	811,563	779,674	747,785	715,897
	9 Income Tax Component	32,135	755,756	725,570	696,915	669,676	643,746	619,028	595,429	572,649	550,148	527,647	505,146
	10 Interest Expense Component	20,531	482,843	463,558	445,250	427,847	411,281	395,489	380,412	365,858	351,483	337,107	322,731
	11 Total Return on Average Rate Base	98,209	2,309,663	2,217,412	2,129,840	2,046,593	1,967,349	1,891,808	1,819,689	1,750,069	1,681,304	1,612,539	1,543,774
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	17,481	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543
	14 Property Tax	268,258	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233
	15 Revenue Requirements	383,948	3,503,439	3,411,188	3,323,616	3,240,369	3,161,125	3,085,584	3,013,465	2,943,845	2,875,080	2,806,315	2,737,550

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 33 of 50

THM Flowline_Penstock_Abate_Line

Project ID # 106260

In Service 12/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	20,959,668	20,540,125	20,120,582	19,701,039	19,281,496	18,861,953	18,442,410	18,022,867	17,603,324	17,183,781	16,764,238	16,344,695
	2 Less: ADITL - Def Taxes	(1,560,447)	(1,920,200)	(2,239,900)	(2,522,634)	(2,771,129)	(2,987,970)	(3,175,525)	(3,336,019)	(3,482,445)	(3,628,871)	(3,775,296)	(3,921,722)
	3 Plus: ADITA - NOL (Stand Alone)	1,525,784	1,078,179	638,343	207,497	-	-	-	-	-	-	-	-
	4 Rate Base	20,925,006	19,698,105	18,519,026	17,385,903	16,510,367	15,873,983	15,266,885	14,686,848	14,120,879	13,554,911	12,988,942	12,422,973
	5 Average Rate Base	871,875	20,307,519	19,104,686	17,948,736	16,894,073	16,192,175	15,570,434	14,976,867	14,403,864	13,837,895	13,271,926	12,705,958
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/												
	8 After Tax Return on Equity	49,124	1,144,195	1,076,423	1,011,293	951,870	912,322	877,291	843,848	811,563	779,674	747,785	715,897
	9 Income Tax Component	34,663	807,358	759,537	713,581	671,651	643,746	619,028	595,429	572,649	550,148	527,647	505,146
	10 Interest Expense Component	22,146	515,811	485,259	455,898	429,109	411,281	395,489	380,412	365,858	351,483	337,107	322,731
	11 Total Return on Average Rate Base	105,933	2,467,364	2,321,219	2,180,771	2,052,630	1,967,349	1,891,808	1,819,689	1,750,069	1,681,304	1,612,539	1,543,774
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	17,481	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543	419,543
	14 Property Tax	268,258	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233
	15 Revenue Requirements	391,672	3,661,140	3,514,995	3,374,547	3,246,406	3,161,125	3,085,584	3,013,465	2,943,845	2,875,080	2,806,315	2,737,550
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	391,672	3,661,140	3,514,995	3,374,547	3,246,406	3,161,125	3,085,584	3,013,465	2,943,845	2,875,080	2,806,315	2,737,550
	2 Tax Depreciation	3,789,409	1,289,141	1,192,326	1,102,970	1,020,209	943,693	872,903	807,492	773,485	773,485	773,485	773,485
	3 Property Tax	268,258	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233	774,233
	4 Interest Expense (including on CWIP)	22,146	515,811	485,259	455,898	429,109	411,281	395,489	380,412	365,858	351,483	337,107	322,731
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	4,079,813	2,579,185	2,451,818	2,333,101	2,223,551	2,129,207	2,042,625	1,962,137	1,913,576	1,899,200	1,884,825	1,870,449
	7 Taxable Income (NOL)	(3,688,141)	1,081,954	1,063,178	1,041,446	1,022,855	1,031,918	1,042,959	1,051,328	1,030,270	975,880	921,490	867,101
	8 Current tax expense	(1,525,784)	447,604	439,838	430,846	423,155	426,905	431,472	434,934	426,222	403,722	381,221	358,719
	9 Taxable Income (NOL)	(3,688,141)	1,081,954	1,063,178	1,041,446	1,022,855	1,031,918	1,042,959	1,051,328	1,030,270	975,880	921,490	867,101
	10 NOL carryforward	-	(3,688,141)	(2,606,187)	(1,543,009)	(501,563)	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	(3,688,141)	(2,606,187)	(1,543,009)	(501,563)	521,292	1,031,918	1,042,959	1,051,328	1,030,270	975,880	921,490	867,101
	12 Expected stand alone ADITA NOL	1,525,784	1,078,179	638,343	207,497	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	383,948	3,503,439	3,411,188	3,323,616	3,240,369	3,161,125	3,085,584	3,013,465	2,943,845	2,875,080	2,806,315	2,737,550
	2 Revenue Requirement: Stand Alone	391,672	3,661,140	3,514,995	3,374,547	3,246,406	3,161,125	3,085,584	3,013,465	2,943,845	2,875,080	2,806,315	2,737,550
	3 Revenue Requirement: Rider 7/	383,948	3,503,439	3,411,188	3,323,616	3,240,369	3,161,125	3,085,584	3,013,465	2,943,845	2,875,080	2,806,315	2,737,550
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	2,873,416	2,797,754	2,725,930	2,657,653	2,592,660	2,530,703	2,471,554	2,414,454	2,358,055	2,301,655	2,245,256

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 34 of 50

THM - Electrical Infrastructure

Project ID # 106262

In Service 12/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682
	2 Accumulated Depreciation 12/2014 Plant	8,271	206,785	405,299	603,812	802,326	1,000,840	1,199,353	1,397,867	1,596,380	1,794,894	1,993,408	2,191,921
	3 Net Plant	9,917,410	9,718,897	9,520,383	9,321,869	9,123,356	8,924,842	8,726,328	8,527,815	8,329,301	8,130,788	7,932,274	7,733,760
	4 Total Depreciation	8,271	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514
	5 Book Depreciation Rate 2/	0.17%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682	9,925,682
	2 Accumulated Depreciation	4,567,043	4,968,960	5,340,692	5,684,566	6,002,638	6,296,854	6,569,000	6,820,752	7,061,902	7,303,052	7,544,203	7,785,353
	3 Net Plant	5,358,639	4,956,722	4,584,990	4,241,115	3,923,044	3,628,828	3,356,682	3,104,929	2,863,779	2,622,629	2,381,479	2,140,329
	4 Bonus Depreciation (50% on spend thru 2013)	4,516,303	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 12/2014 Plant	5,409,379	5,409,379	5,409,379	5,409,379	5,409,379	5,409,379	5,409,379	5,409,379	5,409,379	5,409,379	5,409,379	5,409,379
	6 Tax Depreciation Rate 12/2014 Plant (20 yr, mid 4rd QTR)	0.9380%	7.4300%	6.8720%	6.3570%	5.8800%	5.4390%	5.0310%	4.6540%	4.4580%	4.4580%	4.4580%	4.4580%
	7 Total Tax Depreciation (including bonus)	4,567,043	401,917	371,733	343,874	318,071	294,216	272,146	251,752	241,150	241,150	241,150	241,150
	8 Tax Book Difference	4,558,771	4,762,174	4,935,393	5,080,754	5,200,312	5,296,014	5,369,647	5,422,885	5,465,522	5,508,158	5,550,795	5,593,431
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	1,885,964	1,970,112	2,041,772	2,101,908	2,151,369	2,190,961	2,221,423	2,243,448	2,261,086	2,278,725	2,296,364	2,314,003
	11 Deferred Tax Expense debit / (Credit)	1,885,964	84,148	71,661	60,136	49,461	39,592	30,462	22,025	17,639	17,639	17,639	17,639
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	9,917,410	9,718,897	9,520,383	9,321,869	9,123,356	8,924,842	8,726,328	8,527,815	8,329,301	8,130,788	7,932,274	7,733,760
	2 Less: ADITL - Def Taxes	(1,885,964)	(1,970,112)	(2,041,772)	(2,101,908)	(2,151,369)	(2,190,961)	(2,221,423)	(2,243,448)	(2,261,086)	(2,278,725)	(2,296,364)	(2,314,003)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	8,031,447	7,748,785	7,478,611	7,219,961	6,971,987	6,733,881	6,504,906	6,284,367	6,068,215	5,852,062	5,635,910	5,419,758
	5 Average Rate Base	334,644	7,890,116	7,613,698	7,349,286	7,095,974	6,852,934	6,619,393	6,394,636	6,176,291	5,960,139	5,743,986	5,527,834
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	18,855	444,556	428,982	414,084	399,811	386,118	372,959	360,296	347,993	335,814	323,636	311,457
	9 Income Tax Component	13,304	313,684	302,695	292,183	282,112	272,449	263,165	254,229	245,548	236,955	228,361	219,768
	10 Interest Expense Component	8,500	200,409	193,388	186,672	180,238	174,065	168,133	162,424	156,878	151,388	145,897	140,407
	11 Total Return on Average Rate Base	40,659	958,649	925,064	892,938	862,161	832,631	804,256	776,948	750,419	724,157	697,894	671,632
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	8,271	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514
	14 Property Tax	346,642	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906
	15 Revenue Requirements	395,573	1,564,069	1,530,484	1,498,358	1,467,580	1,438,051	1,409,676	1,382,368	1,355,839	1,329,576	1,303,314	1,277,051

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 35 of 50

THM - Electrical Infrastructure

Project ID # 106262

In Service 12/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	9,917,410	9,718,897	9,520,383	9,321,869	9,123,356	8,924,842	8,726,328	8,527,815	8,329,301	8,130,788	7,932,274	7,733,760
	2 Less: ADITL - Def Taxes	(1,885,964)	(1,970,112)	(2,041,772)	(2,101,908)	(2,151,369)	(2,190,961)	(2,221,423)	(2,243,448)	(2,261,086)	(2,278,725)	(2,296,364)	(2,314,003)
	3 Plus: ADITA - NOL (Stand Alone)	1,869,562	1,571,696	1,283,969	1,006,463	739,179	482,110	235,210	-	-	-	-	-
	4 Rate Base	9,901,009	9,320,481	8,762,580	8,226,424	7,711,166	7,215,991	6,740,116	6,284,367	6,068,215	5,852,062	5,635,910	5,419,758
	5 Average Rate Base	412,542	9,608,835	9,039,695	8,492,738	7,967,100	7,461,949	6,976,488	6,510,014	6,176,291	5,960,139	5,743,986	5,527,834
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/												
	8 After Tax Return on Equity	23,244	541,394	509,327	478,510	448,894	420,432	393,079	366,796	347,993	335,814	323,636	311,457
	9 Income Tax Component	16,401	382,015	359,388	337,642	316,745	296,662	277,361	258,816	245,548	236,955	228,361	219,768
	10 Interest Expense Component	10,479	244,064	229,608	215,716	202,364	189,534	177,203	165,354	156,878	151,388	145,897	140,407
	11 Total Return on Average Rate Base	50,124	1,167,473	1,098,323	1,031,868	968,003	906,627	847,643	790,967	750,419	724,157	697,894	671,632
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	8,271	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514	198,514
	14 Property Tax	346,642	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906
	15 Revenue Requirements	405,037	1,772,893	1,703,743	1,637,287	1,573,422	1,512,046	1,453,063	1,396,386	1,355,839	1,329,576	1,303,314	1,277,051
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	405,037	1,772,893	1,703,743	1,637,287	1,573,422	1,512,046	1,453,063	1,396,386	1,355,839	1,329,576	1,303,314	1,277,051
	2 Tax Depreciation	4,567,043	401,917	371,733	343,874	318,071	294,216	272,146	251,752	241,150	241,150	241,150	241,150
	3 Property Tax	346,642	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906	406,906
	4 Interest Expense (including on CWIP)	10,479	244,064	229,608	215,716	202,364	189,534	177,203	165,354	156,878	151,388	145,897	140,407
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	4,924,163	1,052,887	1,008,247	966,496	927,342	890,656	856,255	824,013	804,934	799,444	793,953	788,463
	7 Taxable Income (NOL)	(4,519,126)	720,006	695,496	670,792	646,080	621,391	596,808	572,373	550,905	530,133	509,361	488,588
	8 Current tax expense	(1,869,562)	297,866	287,726	277,507	267,285	257,069	246,900	236,792	227,910	219,316	210,722	202,130
	9 Taxable Income (NOL)	(4,519,126)	720,006	695,496	670,792	646,080	621,391	596,808	572,373	550,905	530,133	509,361	488,588
	10 NOL carryforward	-	(4,519,126)	(3,799,120)	(3,103,624)	(2,432,833)	(1,786,752)	(1,165,361)	(568,553)	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	(4,519,126)	(3,799,120)	(3,103,624)	(2,432,833)	(1,786,752)	(1,165,361)	(568,553)	3,820	550,905	530,133	509,361	488,588
	12 Expected stand alone ADITA NOL	1,869,562	1,571,696	1,283,969	1,006,463	739,179	482,110	235,210	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	395,573	1,564,069	1,530,484	1,498,358	1,467,580	1,438,051	1,409,676	1,382,368	1,355,839	1,329,576	1,303,314	1,277,051
	2 Revenue Requirement: Stand Alone	405,037	1,772,893	1,703,743	1,637,287	1,573,422	1,512,046	1,453,063	1,396,386	1,355,839	1,329,576	1,303,314	1,277,051
	3 Revenue Requirement: Rider 7/	395,573	1,564,069	1,530,484	1,498,358	1,467,580	1,438,051	1,409,676	1,382,368	1,355,839	1,329,576	1,303,314	1,277,051
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	1,282,802	1,255,257	1,228,908	1,203,665	1,179,446	1,156,174	1,133,777	1,112,018	1,090,479	1,068,939	1,047,399

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 36 of 50

THM Cathodic Protection Grnd Rpl

Project ID # 106286

In Service 12/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000
	2 Accumulated Depreciation 12/2014 Plant	639	15,979	31,319	46,659	61,999	77,339	92,679	108,019	123,359	138,699	154,039	169,379
	3 Net Plant	766,361	751,021	735,681	720,341	705,001	689,661	674,321	658,981	643,641	628,301	612,961	597,621
	4 Total Depreciation	639	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340
	5 Book Depreciation Rate 2/	0.17%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000
	2 Accumulated Depreciation	7,194	64,183	116,891	165,649	210,749	252,466	291,053	326,750	360,943	395,135	429,328	463,521
	3 Net Plant	759,805	702,817	650,109	601,351	556,251	514,534	475,946	440,250	406,057	371,865	337,672	303,479
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 12/2014 Plant	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000	767,000
	6 Tax Depreciation Rate 12/2014 Plant (20 yr, mid 4rd QTR)	0.9380%	7.4300%	6.8720%	6.3570%	5.8800%	5.4390%	5.0310%	4.6540%	4.4580%	4.4580%	4.4580%	4.4580%
	7 Total Tax Depreciation (including bonus)	7,194	56,988	52,708	48,758	45,100	41,717	38,588	35,696	34,193	34,193	34,193	34,193
	8 Tax Book Difference	6,555	48,203	85,572	118,990	148,749	175,127	198,374	218,730	237,583	256,436	275,289	294,142
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	2,712	19,942	35,401	49,226	61,538	72,450	82,067	90,489	98,288	106,088	113,887	121,687
	11 Deferred Tax Expense debit / (Credit)	2,712	17,230	15,459	13,825	12,312	10,912	9,618	8,421	7,799	7,799	7,799	7,799
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	766,361	751,021	735,681	720,341	705,001	689,661	674,321	658,981	643,641	628,301	612,961	597,621
	2 Less: ADITL - Def Taxes	(2,712)	(19,942)	(35,401)	(49,226)	(61,538)	(72,450)	(82,067)	(90,489)	(98,288)	(106,088)	(113,887)	(121,687)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	763,649	731,079	700,280	671,115	643,463	617,211	592,253	568,492	545,353	522,213	499,074	475,934
	5 Average Rate Base	31,819	747,364	715,679	685,697	657,289	630,337	604,732	580,373	556,922	533,783	510,643	487,504
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	1,793	42,109	40,324	38,635	37,034	35,515	34,073	32,700	31,379	30,075	28,771	27,468
	9 Income Tax Component	1,265	29,713	28,453	27,261	26,132	25,060	24,042	23,074	22,141	21,221	20,301	19,382
	10 Interest Expense Component	808	18,983	18,178	17,417	16,695	16,011	15,360	14,741	14,146	13,558	12,970	12,383
	11 Total Return on Average Rate Base	3,866	90,805	86,955	83,312	79,861	76,586	73,475	70,515	67,666	64,855	62,043	59,232
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	639	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340
	14 Property Tax	1,005	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423
	15 Revenue Requirements	5,510	133,568	129,718	126,075	122,624	119,349	116,238	113,278	110,429	107,618	104,806	101,995

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 37 of 50

THM Cathodic Protection Grnd Rpl

Project ID # 106286

In Service 12/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	766,361	751,021	735,681	720,341	705,001	689,661	674,321	658,981	643,641	628,301	612,961	597,621
	2 Less: ADITL - Def Taxes	(2,712)	(19,942)	(35,401)	(49,226)	(61,538)	(72,450)	(82,067)	(90,489)	(98,288)	(106,088)	(113,887)	(121,687)
	3 Plus: ADITA - NOL (Stand Alone)	1,445	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	765,094	731,079	700,280	671,115	643,463	617,211	592,253	568,492	545,353	522,213	499,074	475,934
	5 Average Rate Base	31,879	747,453	715,679	685,697	657,289	630,337	604,732	580,373	556,922	533,783	510,643	487,504
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	1,796	42,114	40,324	38,635	37,034	35,515	34,073	32,700	31,379	30,075	28,771	27,468
	9 Income Tax Component	1,267	29,716	28,453	27,261	26,132	25,060	24,042	23,074	22,141	21,221	20,301	19,382
	10 Interest Expense Component	810	18,985	18,178	17,417	16,695	16,011	15,360	14,741	14,146	13,558	12,970	12,383
	11 Total Return on Average Rate Base	3,873	90,816	86,955	83,312	79,861	76,586	73,475	70,515	67,666	64,855	62,043	59,232
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	639	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340	15,340
	14 Property Tax	1,005	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423
	15 Revenue Requirements	5,517	133,579	129,718	126,075	122,624	119,349	116,238	113,278	110,429	107,618	104,806	101,995
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	5,517	133,579	129,718	126,075	122,624	119,349	116,238	113,278	110,429	107,618	104,806	101,995
	2 Tax Depreciation	7,194	56,988	52,708	48,758	45,100	41,717	38,588	35,696	34,193	34,193	34,193	34,193
	3 Property Tax	1,005	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423	27,423
	4 Interest Expense (including on CWIP)	810	18,985	18,178	17,417	16,695	16,011	15,360	14,741	14,146	13,558	12,970	12,383
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	9,009	103,396	98,309	93,598	89,218	85,151	81,371	77,861	75,762	75,174	74,586	73,998
	7 Taxable Income (NOL)	(3,492)	30,182	31,409	32,477	33,406	34,198	34,867	35,418	34,667	32,444	30,220	27,996
	8 Current tax expense	(1,445)	12,489	12,996	13,437	13,820	14,148	14,424	14,653	14,342	13,422	12,502	11,582
	9 Taxable Income (NOL)	(3,492)	30,182	31,409	32,477	33,406	34,198	34,867	35,418	34,667	32,444	30,220	27,996
	10 NOL carryforward	-	(3,492)	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	(3,492)	26,690	31,409	32,477	33,406	34,198	34,867	35,418	34,667	32,444	30,220	27,996
	12 Expected stand alone ADITA NOL	1,445	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	5,510	133,568	129,718	126,075	122,624	119,349	116,238	113,278	110,429	107,618	104,806	101,995
	2 Revenue Requirement: Stand Alone	5,517	133,579	129,718	126,075	122,624	119,349	116,238	113,278	110,429	107,618	104,806	101,995
	3 Revenue Requirement: Rider 7/	5,510	133,568	129,718	126,075	122,624	119,349	116,238	113,278	110,429	107,618	104,806	101,995
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	109,548	106,391	103,403	100,572	97,886	95,335	92,907	90,571	88,265	85,959	83,653

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 38 of 50

THM Rpl Penstock Vlv Operators 2-6

Project ID # 106501

In Service 12/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669
	2 Accumulated Depreciation 12/2014 Plant	26	639	1,252	1,866	2,479	3,092	3,706	4,319	4,933	5,546	6,159	6,773
	3 Net Plant	30,643	30,030	29,417	28,803	28,190	27,576	26,963	26,350	25,736	25,123	24,510	23,896
	4 Total Depreciation	26	613	613	613	613	613	613	613	613	613	613	613
	5 Book Depreciation Rate 2/	0.17%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
B	Tax Basis of Property												
	1 Plant in Service	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669
	2 Accumulated Depreciation	288	2,566	4,674	6,624	8,427	10,095	11,638	13,065	14,432	15,800	17,167	18,534
	3 Net Plant	30,381	28,103	25,995	24,045	22,242	20,574	19,031	17,604	16,236	14,869	13,502	12,135
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 12/2014 Plant	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669	30,669
	6 Tax Depreciation Rate 12/2014 Plant (20 yr, mid 4rd QTR)	0.9380%	7.4300%	6.8720%	6.3570%	5.8800%	5.4390%	5.0310%	4.6540%	4.4580%	4.4580%	4.4580%	4.4580%
	7 Total Tax Depreciation (including bonus)	288	2,279	2,108	1,950	1,803	1,668	1,543	1,427	1,367	1,367	1,367	1,367
	8 Tax Book Difference	262	1,927	3,422	4,758	5,948	7,003	7,932	8,746	9,500	10,254	11,008	11,761
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	108	797	1,416	1,968	2,461	2,897	3,282	3,618	3,930	4,242	4,554	4,866
	11 Deferred Tax Expense debit / (Credit)	108	689	618	553	492	436	385	337	312	312	312	312
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	30,643	30,030	29,417	28,803	28,190	27,576	26,963	26,350	25,736	25,123	24,510	23,896
	2 Less: ADITL - Def Taxes	(108)	(797)	(1,416)	(1,968)	(2,461)	(2,897)	(3,282)	(3,618)	(3,930)	(4,242)	(4,554)	(4,866)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	30,535	29,233	28,001	26,835	25,729	24,680	23,682	22,731	21,806	20,881	19,956	19,031
	5 Average Rate Base	1,272	29,884	28,617	27,418	26,282	25,204	24,181	23,207	22,269	21,344	20,418	19,493
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	72	1,684	1,612	1,545	1,481	1,420	1,362	1,308	1,255	1,203	1,150	1,098
	9 Income Tax Component	51	1,188	1,138	1,090	1,045	1,002	961	923	885	849	812	775
	10 Interest Expense Component	32	759	727	696	668	640	614	589	566	542	519	495
	11 Total Return on Average Rate Base	155	3,631	3,477	3,331	3,193	3,062	2,938	2,820	2,706	2,593	2,481	2,368
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	26	613	613	613	613	613	613	613	613	613	613	613
	14 Property Tax	1,744	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961
	15 Revenue Requirements	1,924	7,205	7,051	6,906	6,768	6,637	6,512	6,394	6,280	6,168	6,055	5,943

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 39 of 50

THM Rpl Penstock Vlv Operators 2-6

Project ID # 106501

In Service 12/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	30,643	30,030	29,417	28,803	28,190	27,576	26,963	26,350	25,736	25,123	24,510	23,896
	2 Less: ADITL - Def Taxes	(108)	(797)	(1,416)	(1,968)	(2,461)	(2,897)	(3,282)	(3,618)	(3,930)	(4,242)	(4,554)	(4,866)
	3 Plus: ADITA - NOL (Stand Alone)	58	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	30,593	29,233	28,001	26,835	25,729	24,680	23,682	22,731	21,806	20,881	19,956	19,031
	5 Average Rate Base	1,275	29,887	28,617	27,418	26,282	25,204	24,181	23,207	22,269	21,344	20,418	19,493
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/												
	8 After Tax Return on Equity	72	1,684	1,612	1,545	1,481	1,420	1,362	1,308	1,255	1,203	1,150	1,098
	9 Income Tax Component	51	1,188	1,138	1,090	1,045	1,002	961	923	885	849	812	775
	10 Interest Expense Component	32	759	727	696	668	640	614	589	566	542	519	495
	11 Total Return on Average Rate Base	155	3,631	3,477	3,331	3,193	3,062	2,938	2,820	2,706	2,593	2,481	2,368
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	26	613	613	613	613	613	613	613	613	613	613	613
	14 Property Tax	1,744	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961
	15 Revenue Requirements	1,924	7,206	7,051	6,906	6,768	6,637	6,512	6,394	6,280	6,168	6,055	5,943
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	1,924	7,206	7,051	6,906	6,768	6,637	6,512	6,394	6,280	6,168	6,055	5,943
	2 Tax Depreciation	288	2,279	2,108	1,950	1,803	1,668	1,543	1,427	1,367	1,367	1,367	1,367
	3 Property Tax	1,744	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961	2,961
	4 Interest Expense (including on CWIP)	32	759	727	696	668	640	614	589	566	542	519	495
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	2,064	5,999	5,795	5,607	5,432	5,269	5,118	4,978	4,894	4,870	4,847	4,823
	7 Taxable Income (NOL)	(140)	1,207	1,256	1,299	1,336	1,367	1,394	1,416	1,386	1,297	1,208	1,119
	8 Current tax expense	(58)	499	518	538	553	566	577	585	573	537	501	462
	9 Taxable Income (NOL)	(140)	1,207	1,256	1,299	1,336	1,367	1,394	1,416	1,386	1,297	1,208	1,119
	10 NOL carryforward	-	(140)	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	(140)	1,067	1,256	1,299	1,336	1,367	1,394	1,416	1,386	1,297	1,208	1,119
	12 Expected stand alone ADITA NOL	58	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	1,924	7,205	7,051	6,906	6,768	6,637	6,512	6,394	6,280	6,168	6,055	5,943
	2 Revenue Requirement: Stand Alone	1,924	7,206	7,051	6,906	6,768	6,637	6,512	6,394	6,280	6,168	6,055	5,943
	3 Revenue Requirement: Rider 7/	1,924	7,205	7,051	6,906	6,768	6,637	6,512	6,394	6,280	6,168	6,055	5,943
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	5,910	5,783	5,664	5,551	5,443	5,341	5,244	5,151	5,059	4,966	4,874

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 40 of 50

THM Basement Lead Abatement

Project ID # 106373
In Service 3/31/2015

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	(370,414.100)	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	-	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186
	2 Accumulated Depreciation 12/2014 Plant	-	423	957	1,492	2,026	2,561	3,095	3,630	4,164	4,698	5,233	5,767
	3 Net Plant	-	25,763	25,229	24,694	24,160	23,626	23,091	22,557	22,022	21,488	20,953	20,419
	4 Total Depreciation	-	423	534	534	534	534	534	534	534	534	534	534
	5 Book Depreciation Rate 2/	0.00%	1.70%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%
B	Tax Basis of Property												
	1 Plant in Service	-	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186
	2 Accumulated Depreciation	-	1,719	3,552	5,249	6,819	8,271	9,615	10,858	12,025	13,193	14,361	15,528
	3 Net Plant	-	24,468	22,635	20,937	19,367	17,915	16,571	15,329	14,161	12,993	11,826	10,658
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 3/2015 Plant	-	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186	26,186
	6 Tax Depreciation Rate 3/2015 Plant (20 yr, mid 1st QTR)	0.0000%	6.5630%	7.0000%	6.4820%	5.9960%	5.5460%	5.1300%	4.7460%	4.4590%	4.4590%	4.4590%	4.4590%
	7 Total Tax Depreciation (including bonus)	-	1,719	1,833	1,697	1,570	1,452	1,343	1,243	1,168	1,168	1,168	1,168
	8 Tax Book Difference	-	1,296	2,594	3,757	4,793	5,711	6,520	7,228	7,861	8,495	9,128	9,761
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	-	536	1,073	1,554	1,983	2,363	2,697	2,990	3,252	3,514	3,776	4,038
	11 Deferred Tax Expense debit / (Credit)	-	536	537	481	428	380	335	293	262	262	262	262
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	-	25,763	25,229	24,694	24,160	23,626	23,091	22,557	22,022	21,488	20,953	20,419
	2 Less: ADITL - Def Taxes	-	(536)	(1,073)	(1,554)	(1,983)	(2,363)	(2,697)	(2,990)	(3,252)	(3,514)	(3,776)	(4,038)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	-	25,227	24,156	23,140	22,177	21,263	20,394	19,566	18,770	17,974	17,177	16,381
	5 Average Rate Base	-	20,336	24,691	23,648	22,659	21,720	20,828	19,980	19,168	18,372	17,576	16,779
	6 Current Return on CWIP 5/	-	133	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	-	1,146	1,391	1,332	1,277	1,224	1,174	1,126	1,080	1,035	990	945
	9 Income Tax Component	-	808	982	940	901	864	828	794	762	730	699	667
	10 Interest Expense Component	-	517	627	601	576	552	529	507	487	467	446	426
	11 Total Return on Average Rate Base	-	2,471	3,000	2,873	2,753	2,639	2,531	2,428	2,329	2,232	2,135	2,039
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	-	423	534	534	534	534	534	534	534	534	534	534
	14 Property Tax	1,912	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583
	15 Revenue Requirements	1,912	4,609	5,117	4,991	4,870	4,756	4,648	4,545	4,446	4,350	4,253	4,156

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 41 of 50

THM Basement Lead Abatement

Project ID # 106373
In Service 3/31/2015

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	-	25,763	25,229	24,694	24,160	23,626	23,091	22,557	22,022	21,488	20,953	20,419
	2 Less: ADITL - Def Taxes	-	(536)	(1,073)	(1,554)	(1,983)	(2,363)	(2,697)	(2,990)	(3,252)	(3,514)	(3,776)	(4,038)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	-	25,227	24,156	23,140	22,177	21,263	20,394	19,566	18,770	17,974	17,177	16,381
	5 Average Rate Base	-	20,336	24,691	23,648	22,659	21,720	20,828	19,980	19,168	18,372	17,576	16,779
	6 Current Return on CWIP 5/	-	133	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	-	1,146	1,391	1,332	1,277	1,224	1,174	1,126	1,080	1,035	990	945
	9 Income Tax Component	-	808	982	940	901	864	828	794	762	730	699	667
	10 Interest Expense Component	-	517	627	601	576	552	529	507	487	467	446	426
	11 Total Return on Average Rate Base	-	2,471	3,000	2,873	2,753	2,639	2,531	2,428	2,329	2,232	2,135	2,039
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	-	423	534	534	534	534	534	534	534	534	534	534
	14 Property Tax	1,912	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583
	15 Revenue Requirements	1,912	4,609	5,117	4,991	4,870	4,756	4,648	4,545	4,446	4,350	4,253	4,156
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	1,912	4,609	5,117	4,991	4,870	4,756	4,648	4,545	4,446	4,350	4,253	4,156
	2 Tax Depreciation	-	1,719	1,833	1,697	1,570	1,452	1,343	1,243	1,168	1,168	1,168	1,168
	3 Property Tax	1,912	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583	1,583
	4 Interest Expense (including on CWIP)	-	544	627	601	576	552	529	507	487	467	446	426
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	1,912	3,846	4,043	3,881	3,729	3,587	3,455	3,333	3,238	3,217	3,197	3,177
	7 Taxable Income (NOL)	-	764	1,074	1,110	1,142	1,169	1,193	1,212	1,209	1,132	1,056	979
	8 Current tax expense	-	316	444	460	472	483	493	502	500	468	437	406
	9 Taxable Income (NOL)	-	764	1,074	1,110	1,142	1,169	1,193	1,212	1,209	1,132	1,056	979
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	-	764	1,074	1,110	1,142	1,169	1,193	1,212	1,209	1,132	1,056	979
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	1,912	4,609	5,117	4,991	4,870	4,756	4,648	4,545	4,446	4,350	4,253	4,156
	2 Revenue Requirement: Stand Alone	1,912	4,609	5,117	4,991	4,870	4,756	4,648	4,545	4,446	4,350	4,253	4,156
	3 Revenue Requirement: Rider 7/	1,912	4,609	5,117	4,991	4,870	4,756	4,648	4,545	4,446	4,350	4,253	4,156
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	3,781	4,197	4,093	3,995	3,901	3,812	3,728	3,647	3,567	3,488	3,409

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 42 of 50

THM Replace/Refurbish Dam 6

Project ID # 106069

In Service 12/30/2015

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	393,958	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	-	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247
	2 Accumulated Depreciation 12/2015 Plant	-	769	19,223	37,677	56,131	74,585	93,039	111,493	129,947	148,401	166,855	185,309
	3 Net Plant	-	903,478	885,024	866,570	848,116	829,662	811,208	792,754	774,300	755,846	737,392	718,938
	4 Total Depreciation	-	769	18,454	18,454	18,454	18,454	18,454	18,454	18,454	18,454	18,454	18,454
	5 Book Depreciation Rate 2/	0.00%	0.17%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%
B	Tax Basis of Property												
	1 Plant in Service	-	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247
	2 Accumulated Depreciation	-	8,482	75,667	137,807	195,290	248,460	297,642	343,135	385,218	425,530	465,841	506,152
	3 Net Plant	-	895,765	828,580	766,440	708,957	655,787	606,605	561,112	519,029	478,717	438,406	398,095
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 12/2015 Plant	-	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247	904,247
	6 Tax Depreciation Rate 12/2015 Plant (20 yr, mid 4rd QTR)	0.0000%	0.9380%	7.4300%	6.8720%	6.3570%	5.8800%	5.4390%	5.0310%	4.6540%	4.4580%	4.4580%	4.4580%
	7 Total Tax Depreciation (including bonus)	-	8,482	67,186	62,140	57,483	53,170	49,182	45,493	42,084	40,311	40,311	40,311
	8 Tax Book Difference	-	7,713	56,444	100,130	139,159	173,875	204,603	231,642	255,271	277,128	298,986	320,843
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	-	3,191	23,351	41,424	57,570	71,932	84,644	95,830	105,606	114,648	123,690	132,733
	11 Deferred Tax Expense debit / (Credit)	-	3,191	20,160	18,073	16,146	14,362	12,712	11,186	9,776	9,042	9,042	9,042
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	-	903,478	885,024	866,570	848,116	829,662	811,208	792,754	774,300	755,846	737,392	718,938
	2 Less: ADITL - Def Taxes	-	(3,191)	(23,351)	(41,424)	(57,570)	(71,932)	(84,644)	(95,830)	(105,606)	(114,648)	(123,690)	(132,733)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	-	900,287	861,673	825,146	790,546	757,730	726,564	696,924	668,694	641,198	613,701	586,205
	5 Average Rate Base	-	37,512	880,980	843,409	807,846	774,138	742,147	711,744	682,809	654,946	627,450	599,953
	6 Current Return on CWIP 5/	-	74,288	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	-	2,114	49,637	47,521	45,517	43,618	41,815	40,102	38,472	36,902	35,353	33,803
	9 Income Tax Component	-	1,491	35,025	33,531	32,117	30,777	29,505	28,297	27,146	26,038	24,945	23,852
	10 Interest Expense Component	-	953	22,377	21,423	20,519	19,663	18,851	18,078	17,343	16,636	15,937	15,239
	11 Total Return on Average Rate Base	-	4,558	107,039	102,474	98,153	94,058	90,171	86,477	82,961	79,576	76,235	72,894
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	-	769	18,454	18,454	18,454	18,454	18,454	18,454	18,454	18,454	18,454	18,454
	14 Property Tax	-	15,110	35,102	35,102	35,102	35,102	35,102	35,102	35,102	35,102	35,102	35,102
	15 Revenue Requirements	-	94,725	160,595	156,030	151,709	147,614	143,727	140,033	136,517	133,132	129,791	126,450

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 43 of 50

THM Replace/Refurbish Dam 6

Project ID # 106069

In Service 12/30/2015

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	-	903,478	885,024	866,570	848,116	829,662	811,208	792,754	774,300	755,846	737,392	718,938
	2 Less: ADITL - Def Taxes	-	(3,191)	(23,351)	(41,424)	(57,570)	(71,932)	(84,644)	(95,830)	(105,606)	(114,648)	(123,690)	(132,733)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	-	900,287	861,673	825,146	790,546	757,730	726,564	696,924	668,694	641,198	613,701	586,205
	5 Average Rate Base	-	37,512	880,980	843,409	807,846	774,138	742,147	711,744	682,809	654,946	627,450	599,953
	6 Current Return on CWIP 5/	-	74,288	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	-	2,114	49,637	47,521	45,517	43,618	41,815	40,102	38,472	36,902	35,353	33,803
	9 Income Tax Component	-	1,491	35,025	33,531	32,117	30,777	29,505	28,297	27,146	26,038	24,945	23,852
	10 Interest Expense Component	-	953	22,377	21,423	20,519	19,663	18,851	18,078	17,343	16,636	15,937	15,239
	11 Total Return on Average Rate Base	-	4,558	107,039	102,474	98,153	94,058	90,171	86,477	82,961	79,576	76,235	72,894
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	-	769	18,454	18,454	18,454	18,454	18,454	18,454	18,454	18,454	18,454	18,454
	14 Property Tax	-	15,110	35,102	35,102	35,102	35,102	35,102	35,102	35,102	35,102	35,102	35,102
	15 Revenue Requirements	-	94,725	160,595	156,030	151,709	147,614	143,727	140,033	136,517	133,132	129,791	126,450
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	-	94,725	160,595	156,030	151,709	147,614	143,727	140,033	136,517	133,132	129,791	126,450
	2 Tax Depreciation	-	8,482	67,186	62,140	57,483	53,170	49,182	45,493	42,084	40,311	40,311	40,311
	3 Property Tax	-	15,110	35,102	35,102	35,102	35,102	35,102	35,102	35,102	35,102	35,102	35,102
	4 Interest Expense (including on CWIP)	-	16,483	22,377	21,423	20,519	19,663	18,851	18,078	17,343	16,636	15,937	15,239
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	-	40,075	124,664	118,664	113,104	107,935	103,135	98,673	94,529	92,049	91,351	90,652
	7 Taxable Income (NOL)	-	54,650	35,931	37,366	38,605	39,679	40,592	41,360	41,988	41,083	38,441	35,798
	8 Current tax expense	-	22,609	14,864	15,458	15,970	16,415	16,794	17,111	17,370	16,996	15,902	14,810
	9 Taxable Income (NOL)	-	54,650	35,931	37,366	38,605	39,679	40,592	41,360	41,988	41,083	38,441	35,798
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	-	54,650	35,931	37,366	38,605	39,679	40,592	41,360	41,988	41,083	38,441	35,798
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	-	94,725	160,595	156,030	151,709	147,614	143,727	140,033	136,517	133,132	129,791	126,450
	2 Revenue Requirement: Stand Alone	-	94,725	160,595	156,030	151,709	147,614	143,727	140,033	136,517	133,132	129,791	126,450
	3 Revenue Requirement: Rider 7/	-	94,725	160,595	156,030	151,709	147,614	143,727	140,033	136,517	133,132	129,791	126,450
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	77,690	131,715	127,971	124,427	121,068	117,880	114,851	111,967	109,191	106,451	103,711

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 44 of 50

THM Spill Capacity
Project ID # 106794
In Service 12/31/2016

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	1,085,213	9,053,258	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	-	-	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536
	2 Accumulated Depreciation 12/2016 Plant	-	-	8,184	204,612	401,040	597,468	793,896	990,324	1,186,752	1,383,179	1,579,607	1,776,035
	3 Net Plant	-	-	9,420,352	9,223,924	9,027,496	8,831,068	8,634,641	8,438,213	8,241,785	8,045,357	7,848,929	7,652,501
	4 Total Depreciation	-	-	8,184	196,428	196,428	196,428	196,428	196,428	196,428	196,428	196,428	196,428
	5 Book Depreciation Rate 2/	0.00%	0.00%	0.17%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%
B	Tax Basis of Property												
	1 Plant in Service	-	-	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536
	2 Accumulated Depreciation	-	-	353,570	1,034,216	1,663,760	2,246,160	2,784,813	3,283,111	3,743,978	4,170,336	4,591,037	5,011,644
	3 Net Plant	-	-	9,074,966	8,394,320	7,764,777	7,182,376	6,643,724	6,145,426	5,684,559	5,258,200	4,837,499	4,416,892
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 12/2016 Plant	-	-	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536	9,428,536
	6 Tax Depreciation Rate 12/2016 Plant (20 yr, half-year)	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%	4.522%	4.462%	4.461%
	7 Total Tax Depreciation (including bonus)	-	-	353,570	680,646	629,543	582,401	538,652	498,298	460,867	426,358	420,701	420,607
	8 Tax Book Difference	-	-	345,386	829,604	1,262,719	1,648,692	1,990,917	2,292,787	2,557,226	2,787,157	3,011,430	3,235,609
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	-	-	142,886	343,207	522,387	682,064	823,642	948,526	1,057,924	1,153,047	1,245,829	1,338,572
	11 Deferred Tax Expense debit / (Credit)	-	-	142,886	200,321	179,180	159,677	141,578	124,884	109,398	95,122	92,782	92,743
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	-	-	9,420,352	9,223,924	9,027,496	8,831,068	8,634,641	8,438,213	8,241,785	8,045,357	7,848,929	7,652,501
	2 Less: ADITL - Def Taxes	-	-	(142,886)	(343,207)	(522,387)	(682,064)	(823,642)	(948,526)	(1,057,924)	(1,153,047)	(1,245,829)	(1,338,572)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	-	-	9,277,466	8,880,717	8,505,109	8,149,004	7,810,998	7,489,687	7,183,860	6,892,310	6,603,101	6,313,930
	5 Average Rate Base	-	-	386,561	9,079,091	8,692,913	8,327,057	7,980,001	7,650,343	7,336,774	7,038,085	6,747,705	6,458,515
	6 Current Return on CWIP 5/	-	506,020	1,075,332	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	-	-	21,780	511,547	489,788	469,175	449,620	431,046	413,379	396,550	380,189	363,895
	9 Income Tax Component	-	-	15,368	360,954	345,601	331,055	317,258	304,152	291,685	279,810	268,266	256,769
	10 Interest Expense Component	-	-	9,819	230,609	220,800	211,507	202,692	194,319	186,354	178,767	171,392	164,046
	11 Total Return on Average Rate Base	-	-	46,967	1,103,110	1,056,189	1,011,737	969,570	929,517	891,418	855,127	819,846	784,710
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	-	-	8,184	196,428	196,428	196,428	196,428	196,428	196,428	196,428	196,428	196,428
	14 Property Tax	12,222	39,386	334,655	353,486	353,486	353,486	353,486	353,486	353,486	353,486	353,486	353,486
	15 Revenue Requirements	12,222	545,406	1,465,139	1,653,023	1,606,103	1,561,651	1,519,484	1,479,430	1,441,332	1,405,041	1,369,760	1,334,623

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Remaining life is 50 years beginning 1/1/2014.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with Transmission (TCR) and Renewable (RRR) Rider projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 45 of 50

THM Spill Capacity
Project ID # 106794
In Service 12/31/2016

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	-	-	9,420,352	9,223,924	9,027,496	8,831,068	8,634,641	8,438,213	8,241,785	8,045,357	7,848,929	7,652,501
	2 Less: ADITL - Def Taxes	-	-	(142,886)	(343,207)	(522,387)	(682,064)	(823,642)	(948,526)	(1,057,924)	(1,153,047)	(1,245,829)	(1,338,572)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	-	-	9,277,466	8,880,717	8,505,109	8,149,004	7,810,998	7,489,687	7,183,860	6,892,310	6,603,101	6,313,930
	5 Average Rate Base	-	-	386,561	9,079,091	8,692,913	8,327,057	7,980,001	7,650,343	7,336,774	7,038,085	6,747,705	6,458,515
	6 Current Return on CWIP 5/	-	506,020	1,075,332	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	-	-	21,780	511,547	489,788	469,175	449,620	431,046	413,379	396,550	380,189	363,895
	9 Income Tax Component	-	-	15,368	360,954	345,601	331,055	317,258	304,152	291,685	279,810	268,266	256,769
	10 Interest Expense Component	-	-	9,819	230,609	220,800	211,507	202,692	194,319	186,354	178,767	171,392	164,046
	11 Total Return on Average Rate Base	-	-	46,967	1,103,110	1,056,189	1,011,737	969,570	929,517	891,418	855,127	819,846	784,710
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	-	-	8,184	196,428	196,428	196,428	196,428	196,428	196,428	196,428	196,428	196,428
	14 Property Tax	12,222	39,386	334,655	353,486	353,486	353,486	353,486	353,486	353,486	353,486	353,486	353,486
	15 Revenue Requirements	12,222	545,406	1,465,139	1,653,023	1,606,103	1,561,651	1,519,484	1,479,430	1,441,332	1,405,041	1,369,760	1,334,623
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	12,222	545,406	1,465,139	1,653,023	1,606,103	1,561,651	1,519,484	1,479,430	1,441,332	1,405,041	1,369,760	1,334,623
	2 Tax Depreciation	-	-	353,570	680,646	629,543	582,401	538,652	498,298	460,867	426,358	420,701	420,607
	3 Property Tax	12,222	39,386	334,655	353,486	353,486	353,486	353,486	353,486	353,486	353,486	353,486	353,486
	4 Interest Expense (including on CWIP)	-	105,785	234,621	230,609	220,800	211,507	202,692	194,319	186,354	178,767	171,392	164,046
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	12,222	145,171	922,846	1,264,741	1,203,829	1,147,394	1,094,830	1,046,103	1,000,707	958,612	945,579	938,139
	7 Taxable Income (NOL)	-	400,235	542,293	388,282	402,273	414,257	424,654	433,328	440,625	446,429	424,181	396,484
	8 Current tax expense	-	165,578	224,347	160,632	166,421	171,378	175,680	179,267	182,287	184,686	175,483	164,026
	9 Taxable Income (NOL)	-	400,235	542,293	388,282	402,273	414,257	424,654	433,328	440,625	446,429	424,181	396,484
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	-	400,235	542,293	388,282	402,273	414,257	424,654	433,328	440,625	446,429	424,181	396,484
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	12,222	545,406	1,465,139	1,653,023	1,606,103	1,561,651	1,519,484	1,479,430	1,441,332	1,405,041	1,369,760	1,334,623
	2 Revenue Requirement: Stand Alone	12,222	545,406	1,465,139	1,653,023	1,606,103	1,561,651	1,519,484	1,479,430	1,441,332	1,405,041	1,369,760	1,334,623
	3 Revenue Requirement: Rider 7/	12,222	545,406	1,465,139	1,653,023	1,606,103	1,561,651	1,519,484	1,479,430	1,441,332	1,405,041	1,369,760	1,334,623
	4 MN Jurisdictional Allocator 8/	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017	0.82017
	5 MN Jurisdictional Revenue Requirement	-	447,326	1,201,663	1,355,760	1,317,277	1,280,820	1,246,235	1,213,384	1,182,137	1,152,373	1,123,436	1,094,618

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 46 of 50

Thomson 115 kV Substation - Add & Rpl Brkrs

Project ID # 106270
In Service 7/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385
	2 Accumulated Depreciation 7/2014 Plant	15,046	47,873	80,700	113,527	146,354	179,181	212,008	244,835	277,662	310,489	343,316	376,143
	3 Net Plant	1,174,339	1,141,512	1,108,685	1,075,858	1,043,031	1,010,204	977,377	944,550	911,723	878,896	846,069	813,242
	4 Total Depreciation	15,046	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827
	5 Book Depreciation Rate 2/	1.38%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%
B	Tax Basis of Property												
	1 Plant in Service	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385
	2 Accumulated Depreciation	44,602	159,140	262,140	354,912	438,407	513,457	583,631	653,805	724,098	794,271	864,564	934,738
	3 Net Plant	1,144,783	1,030,245	927,244	834,472	750,978	675,927	605,754	535,580	465,287	395,114	324,821	254,647
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 7/2014 Plant	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385	1,189,385
	6 Tax Depreciation Rate 7/2014 Plant (15 yr, mid 3rd QTR)	3.750%	9.630%	8.660%	7.800%	7.020%	6.310%	5.900%	5.900%	5.910%	5.900%	5.910%	5.900%
	7 Total Tax Depreciation (including bonus)	44,602	114,538	103,001	92,772	83,495	75,050	70,174	70,174	70,293	70,174	70,293	70,174
	8 Tax Book Difference	29,556	111,267	181,441	241,386	292,053	334,277	371,623	408,970	446,436	483,782	521,248	558,595
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	12,227	46,031	75,062	99,861	120,823	138,290	153,741	169,191	184,690	200,141	215,640	231,091
	11 Deferred Tax Expense debit / (Credit)	12,227	33,804	29,031	24,799	20,961	17,468	15,450	15,450	15,500	15,450	15,500	15,450
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	1,174,339	1,141,512	1,108,685	1,075,858	1,043,031	1,010,204	977,377	944,550	911,723	878,896	846,069	813,242
	2 Less: ADITL - Def Taxes	(12,227)	(46,031)	(75,062)	(99,861)	(120,823)	(138,290)	(153,741)	(169,191)	(184,690)	(200,141)	(215,640)	(231,091)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,162,112	1,095,481	1,033,623	975,997	922,209	871,914	823,636	775,359	727,033	678,755	630,429	582,151
	5 Average Rate Base	538,484	1,128,796	1,064,552	1,004,810	949,103	897,061	847,775	799,498	751,196	702,894	654,592	606,290
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	30,340	63,600	59,980	56,614	53,476	50,543	47,767	45,046	42,325	39,603	36,882	34,160
	9 Income Tax Component	21,408	44,877	42,323	39,948	37,733	35,664	33,705	31,785	29,865	27,945	26,024	24,104
	10 Interest Expense Component	13,677	28,671	27,040	25,522	24,107	22,785	21,533	20,307	19,080	17,854	16,627	15,400
	11 Total Return on Average Rate Base	65,426	137,149	129,343	122,084	115,316	108,993	103,005	97,139	91,270	85,402	79,533	73,664
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	15,046	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827
	14 Property Tax	58,044	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340
	15 Revenue Requirements	138,515	242,316	234,510	227,251	220,483	214,160	208,172	202,306	196,437	190,569	184,700	178,831

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Depreciation rate per Property.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with all Transmission Cost Recovery Rider (TCR) projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 47 of 50

Thomson 115 kV Substation - Add & Rpl Brkrs
Project ID # 106270
In Service 7/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	1,174,339	1,141,512	1,108,685	1,075,858	1,043,031	1,010,204	977,377	944,550	911,723	878,896	846,069	813,242
	2 Less: ADITL - Def Taxes	(12,227)	(46,031)	(75,062)	(99,861)	(120,823)	(138,290)	(153,741)	(169,191)	(184,690)	(200,141)	(215,640)	(231,091)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	1,162,112	1,095,481	1,033,623	975,997	922,209	871,914	823,636	775,359	727,033	678,755	630,429	582,151
	5 Average Rate Base	538,529	1,128,796	1,064,552	1,004,810	949,103	897,061	847,775	799,498	751,196	702,894	654,592	606,290
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/												
	8 After Tax Return on Equity	30,343	63,600	59,980	56,614	53,476	50,543	47,767	45,046	42,325	39,603	36,882	34,160
	9 Income Tax Component	21,410	44,877	42,323	39,948	37,733	35,664	33,705	31,785	29,865	27,945	26,024	24,104
	10 Interest Expense Component	13,679	28,671	27,040	25,522	24,107	22,785	21,533	20,307	19,080	17,854	16,627	15,400
	11 Total Return on Average Rate Base	65,431	137,149	129,343	122,084	115,316	108,993	103,005	97,139	91,270	85,402	79,533	73,664
	12 Operation & Maintenance Expense												
	13 Depreciation Expense	15,046	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827	32,827
	14 Property Tax	58,044	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340
	15 Revenue Requirements	138,521	242,316	234,510	227,251	220,483	214,160	208,172	202,306	196,437	190,569	184,700	178,831
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	138,521	242,316	234,510	227,251	220,483	214,160	208,172	202,306	196,437	190,569	184,700	178,831
	2 Tax Depreciation	44,602	114,538	103,001	92,772	83,495	75,050	70,174	70,174	70,293	70,174	70,293	70,174
	3 Property Tax	58,044	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340	72,340
	4 Interest Expense (including on CWIP)	13,679	28,671	27,040	25,522	24,107	22,785	21,533	20,307	19,080	17,854	16,627	15,400
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	116,325	215,549	202,380	190,634	179,942	170,176	164,047	162,821	161,713	160,367	159,259	157,913
	7 Taxable Income (NOL)	22,196	26,767	32,130	36,617	40,541	43,984	44,125	39,485	34,724	30,201	25,441	20,918
	8 Current tax expense	9,182	11,074	13,292	15,149	16,772	18,197	18,256	16,336	14,365	12,496	10,524	8,652
	9 Taxable Income (NOL)	22,196	26,767	32,130	36,617	40,541	43,984	44,125	39,485	34,724	30,201	25,441	20,918
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	22,196	26,767	32,130	36,617	40,541	43,984	44,125	39,485	34,724	30,201	25,441	20,918
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	138,515	242,316	234,510	227,251	220,483	214,160	208,172	202,306	196,437	190,569	184,700	178,831
	2 Revenue Requirement: Stand Alone	138,521	242,316	234,510	227,251	220,483	214,160	208,172	202,306	196,437	190,569	184,700	178,831
	3 Revenue Requirement: Rider 7/	138,515	242,316	234,510	227,251	220,483	214,160	208,172	202,306	196,437	190,569	184,700	178,831
	4 MN Jurisdictional Allocator 8/	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500
	5 MN Jurisdictional Revenue Requirement	-	187,795	181,745	176,120	170,874	165,974	161,333	156,787	152,239	147,691	143,142	138,594

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 48 of 50

TMS Substation Elec. Infrastructure

Project ID # 106270
In Service 7/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
A	Book Basis of Property												
	0 CWIP	-	-	-	-	-	-	-	-	-	-	-	-
	1 Plant in Service	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154
	2 Accumulated Depreciation 7/2014 Plant	34,208	108,842	183,477	258,111	332,746	407,381	482,015	556,650	631,285	705,919	780,554	855,189
	3 Net Plant	2,669,946	2,595,311	2,520,677	2,446,042	2,371,407	2,296,773	2,222,138	2,147,504	2,072,869	1,998,234	1,923,600	1,848,965
	4 Total Depreciation	34,208	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635
	5 Book Depreciation Rate 2/	1.38%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%	2.76%
B	Tax Basis of Property												
	1 Plant in Service	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154
	2 Accumulated Depreciation	101,406	361,816	595,995	806,919	996,751	1,167,383	1,326,928	1,486,473	1,646,289	1,805,834	1,965,649	2,125,194
	3 Net Plant	2,602,748	2,342,338	2,108,158	1,897,234	1,707,403	1,536,770	1,377,225	1,217,680	1,057,865	898,320	738,504	578,959
	4 Bonus Depreciation	-	-	-	-	-	-	-	-	-	-	-	-
	5 Net Depreciable 7/2014 Plant	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154	2,704,154
	6 Tax Depreciation Rate 7/2014 Plant (15 yr, mid 3rd QTR)	3.750%	9.630%	8.660%	7.800%	7.020%	6.310%	5.900%	5.900%	5.910%	5.900%	5.910%	5.900%
	7 Total Tax Depreciation (including bonus)	101,406	260,410	234,180	210,924	189,832	170,632	159,545	159,545	159,815	159,545	159,815	159,545
	8 Tax Book Difference	67,198	252,974	412,519	548,808	664,005	760,002	844,913	929,823	1,015,004	1,099,914	1,185,095	1,270,006
	9 Income Tax Rate 3/	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%	41.37%
	10 Accumulated Deferred Income Tax Liability	27,800	104,655	170,659	227,042	274,699	314,413	349,540	384,668	419,907	455,035	490,274	525,401
	11 Deferred Tax Expense debit / (Credit)	27,800	76,855	66,004	56,383	47,657	39,714	35,127	35,127	35,239	35,127	35,239	35,127
	12 ADITA for NOL Carryforward 4/	-	-	-	-	-	-	-	-	-	-	-	-
	13 Carryforward utilized	-	-	-	-	-	-	-	-	-	-	-	-
	14 ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
C-1	Revenue Requirements - MP Regulated NOL												
	1 Net Plant	2,669,946	2,595,311	2,520,677	2,446,042	2,371,407	2,296,773	2,222,138	2,147,504	2,072,869	1,998,234	1,923,600	1,848,965
	2 Less: ADITL - Def Taxes	(27,800)	(104,655)	(170,659)	(227,042)	(274,699)	(314,413)	(349,540)	(384,668)	(419,907)	(455,035)	(490,274)	(525,401)
	3 Plus: ADITA - NOL	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	2,642,146	2,490,656	2,350,018	2,219,000	2,096,709	1,982,360	1,872,598	1,762,836	1,652,962	1,543,200	1,433,326	1,323,564
	5 Average Rate Base	1,224,282	2,566,401	2,420,337	2,284,509	2,157,854	2,039,534	1,927,479	1,817,717	1,707,899	1,598,081	1,488,263	1,378,445
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/	-	-	-	-	-	-	-	-	-	-	-	-
	8 After Tax Return on Equity	68,980	144,600	136,370	128,717	121,581	114,914	108,601	102,416	96,229	90,041	83,854	77,666
	9 Income Tax Component	48,673	102,031	96,224	90,824	85,789	81,085	76,630	72,266	67,900	63,534	59,168	54,802
	10 Interest Expense Component	31,097	65,187	61,477	58,027	54,810	51,804	48,958	46,170	43,381	40,591	37,802	35,012
	11 Total Return on Average Rate Base	148,750	311,818	294,071	277,568	262,179	247,803	234,189	220,853	207,510	194,167	180,824	167,481
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	34,208	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635
	14 Property Tax	107,224	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133
	15 Revenue Requirements	290,182	498,585	480,839	464,335	448,947	434,571	420,956	407,620	394,277	380,934	367,592	354,249

1/ Refer to Exhibit B-2, page 1 for Project List.

2/ Depreciation rate per Property.

3/ Minnesota Composite Income Tax Rate.

4/ All MP rider NOL computations use FIFO for NOL, with all Transmission Cost Recovery Rider (TCR) projects computed first.

NOL DTA limit currently applied in RRR Bison projects. If additional NOL DTA become available, the limit in the RRR will be increased. Thus no MP NOL DTAs are established for Thomson.

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

Minnesota Power
Renewable Resources Rider
Revenue Requirements for Thomson Plan Filing

Exhibit B-2
Page 49 of 50

TMS Substation Elec. Infrastructure

Project ID # 106270

In Service 7/31/2014

Section	Line	Total Year Dec-14	Total Year Dec-15	Total Year Dec-16	Total Year Dec-17	Total Year Dec-18	Total Year Dec-19	Total Year Dec-20	Total Year Dec-21	Total Year Dec-22	Total Year Dec-23	Total Year Dec-24	Total Year Dec-25
C-2	Revenue Requirements - Stand Alone NOL												
	1 Net Plant	2,669,946	2,595,311	2,520,677	2,446,042	2,371,407	2,296,773	2,222,138	2,147,504	2,072,869	1,998,234	1,923,600	1,848,965
	2 Less: ADITL - Def Taxes	(27,800)	(104,655)	(170,659)	(227,042)	(274,699)	(314,413)	(349,540)	(384,668)	(419,907)	(455,035)	(490,274)	(525,401)
	3 Plus: ADITA - NOL (Stand Alone)	-	-	-	-	-	-	-	-	-	-	-	-
	4 Rate Base	2,642,146	2,490,656	2,350,018	2,219,000	2,096,709	1,982,360	1,872,598	1,762,836	1,652,962	1,543,200	1,433,326	1,323,564
	5 Average Rate Base	1,224,385	2,566,401	2,420,337	2,284,509	2,157,854	2,039,534	1,927,479	1,817,717	1,707,899	1,598,081	1,488,263	1,378,445
	6 Current Return on CWIP 5/	-	-	-	-	-	-	-	-	-	-	-	-
	7 Return on Average Rate Base 5/												
	8 After Tax Return on Equity	68,986	144,600	136,370	128,717	121,581	114,914	108,601	102,416	96,229	90,041	83,854	77,666
	9 Income Tax Component	48,677	102,031	96,224	90,824	85,789	81,085	76,630	72,266	67,900	63,534	59,168	54,802
	10 Interest Expense Component	31,099	65,187	61,477	58,027	54,810	51,804	48,958	46,170	43,381	40,591	37,802	35,012
	11 Total Return on Average Rate Base	148,763	311,818	294,071	277,568	262,179	247,803	234,189	220,853	207,510	194,167	180,824	167,481
	12 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	13 Depreciation Expense	34,208	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635	74,635
	14 Property Tax	107,224	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133
	15 Revenue Requirements	290,194	498,585	480,839	464,335	448,947	434,571	420,956	407,620	394,277	380,934	367,592	354,249
D	Stand Alone Taxable Income or Loss (NOL)												
	1 Revenue Requirements	290,194	498,585	480,839	464,335	448,947	434,571	420,956	407,620	394,277	380,934	367,592	354,249
	2 Tax Depreciation	101,406	260,410	234,180	210,924	189,832	170,632	159,545	159,545	159,815	159,545	159,815	159,545
	3 Property Tax	107,224	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133	112,133
	4 Interest Expense (including on CWIP)	31,099	65,187	61,477	58,027	54,810	51,804	48,958	46,170	43,381	40,591	37,802	35,012
	5 Operation & Maintenance Expense	-	-	-	-	-	-	-	-	-	-	-	-
	6 Total Tax Deduction	239,729	437,730	407,789	381,084	356,774	334,569	320,636	317,848	315,329	312,269	309,750	306,691
	7 Taxable Income (NOL)	50,465	60,856	73,049	83,252	92,173	100,002	100,320	89,772	78,948	68,665	57,841	47,558
	8 Current tax expense	20,878	25,176	30,220	34,442	38,132	41,370	41,502	37,139	32,662	28,407	23,930	19,675
	9 Taxable Income (NOL)	50,465	60,856	73,049	83,252	92,173	100,002	100,320	89,772	78,948	68,665	57,841	47,558
	10 NOL carryforward	-	-	-	-	-	-	-	-	-	-	-	-
	11 Taxable Income after NOL carryforward 6/	50,465	60,856	73,049	83,252	92,173	100,002	100,320	89,772	78,948	68,665	57,841	47,558
	12 Expected stand alone ADITA NOL	-	-	-	-	-	-	-	-	-	-	-	-
E	Summary: Revenue Requirements												
	1 Revenue Requirement: Consolidated	290,182	498,585	480,839	464,335	448,947	434,571	420,956	407,620	394,277	380,934	367,592	354,249
	2 Revenue Requirement: Stand Alone	290,194	498,585	480,839	464,335	448,947	434,571	420,956	407,620	394,277	380,934	367,592	354,249
	3 Revenue Requirement: Rider 7/	290,182	498,585	480,839	464,335	448,947	434,571	420,956	407,620	394,277	380,934	367,592	354,249
	4 MN Jurisdictional Allocator 8/	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500	0.77500
	5 MN Jurisdictional Revenue Requirement	-	386,404	372,650	359,860	347,934	336,793	326,241	315,906	305,565	295,224	284,883	274,543

5/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-4.

6/ For in-service year, any positive taxable income from return on CWIP is added to first month of taxable loss to establish the correct first month NOL ADITA.

7/ Lesser of E1 or E2.

8/ Refer to Exhibit B-5.

Minnesota Power
Renewable Resource Rider
Thomson Plan Petition

Exhibit B-2
Page 50 of 50

Requirement Credit for Revenue Requirements in Base Rates Associated with Plant to be Retired

Thomson Base Rate Revenue Credit

Expected Property Retirements in Base Rates

Section	Line	2009	Base Rates 2010
A	Book Basis of Property to be Retired		
	1 Plant in Service	3,435,256	3,491,217
	2 Total Accumulated Depreciation	1,410,075	1,494,270
	3 Net Plant	2,025,181	1,996,947
	4 Depreciation Expense		84,196
B	Tax Basis of Property of to be Retired		
	1 Plant in Service	3,435,256	3,491,217
	2 Accumulated Depreciation	2,971,727	3,117,267
	3 Net Plant	463,529	373,950
	4 Total Tax Depreciation		145,541
	5 Tax Book Difference	1,561,652	1,622,997
	6 Income Tax Rate 1/	41.37%	41.37%
	7 Accumulated Deferred Income Tax Liability	646,055	671,434
	8 Deferred Tax Expense debit / (Credit)		25,378
C	Revenue Requirements in Base Rates		
	1 Net Plant	2,025,181	1,996,947
	2 Less: ADITL - Def Taxes	(646,055)	(671,434)
	3 Rate Base	1,379,126	1,325,513
	4 Average Rate Base		1,352,319
	5 Return on Average Rate Base 2/		
	6 After Tax Return on Equity		76,194
	7 Income Tax Component		53,764
	8 Interest Expense Component		34,349
	9 Total Return on Average Rate Base		164,307
	10 Operation & Maintenance Expense Associated with Plant to be Retired		-
	11 Depreciation Expense		84,196
	12 Property Tax		81,741
	13 Revenue Requirements in Base Rates Associated with Property to be Retired		330,243
	14 Monthly Credit for Revenue Requirements in Base Rates		(27,520)
	15 MN Jurisdictional Allocator 3/		0.82017
	16 Monthly MN jurisdictional Credit for Revenue Requirements in Base Rates 4/		(22,571)

1/ Minnesota Composite Income Tax Rate.

2/ Pre-tax rate of return is 12.15% from 2009 MPUC rate case, Docket No. E-015/GR-09-1151. Refer to Exhibit B-6 rate of return components.

3/ Refer to Exhibit B-7.

4/ This monthly revenue requirement credit is needed beginning the month following MPUC approval of the Thomson Plan Petition and until the retirements and the Thomson projects are incorporated into base rates in a subsequent rate case.

	Total	to date											
	Project	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Unit 6 Overhaul	1,589,464												
In Service 5/30/2014													
BOM		58,179	50,170	57,547	61,891	65,195	66,296	68,290	69,362	92,119	230,221	750,168	1,504,603
CapEx	3,121,957	31,482	43,140	22,660	11,929	5,611	5,670	3,281	29,484	152,124	564,071	793,337	417,590
Less Internal Cost	-403,654	-39,622	-35,912	-18,472	-8,782	-4,667	-3,838	-2,375	-6,963	-14,779	-47,035	-45,974	-21,791
AFUDC	77,889	131	149	160	163	163	169	176	275	853	3,199	7,647	11,680
Less AFUDC on Internal Cost	-6,727	0	0	-3	-6	-6	-6	-11	-39	-97	-288	-574	-780
Less Insurance Proceeds	-1,200,000	0	0	0	0	0	0	0	0	0	0	0	0
EOM		50,170	57,547	61,891	65,195	66,296	68,290	69,362	92,119	230,221	750,168	1,504,603	1,911,302
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Lwr Gate Hse-Rpl Stl & Trsh Rks	1,536,414												
In Service 4/30/2014													
BOM		0	0	0	0	1,454	3,559	200,748	273,177	600,424	613,434	650,077	681,467
CapEx	1,560,839	0	0	0	1,607	8,979	217,058	80,900	328,911	11,838	35,301	30,645	289,678
Less Internal Cost	-60,532	0	0	0	-157	-6,891	-19,953	-8,638	-2,863	-1,487	-1,697	-2,315	-3,156
AFUDC	39,161	0	0	0	5	40	195	365	1,428	2,904	3,295	3,328	4,371
Less AFUDC on Internal Cost	-3,055	0	0	0	-1	-24	-111	-198	-229	-244	-255	-268	-294
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	1,454	3,559	200,748	273,177	600,424	613,434	650,077	681,467	972,066
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Rpl/Rfb Lwr Gate Hse Gates	1,790,935												
In Service 4/30/2014													
BOM		0	0	0	0	8,653	7,002	67,406	147,458	212,400	213,130	182,977	472,666
CapEx	1,874,287	0	0	0	8,830	1,675	63,313	81,728	66,219	3,200	-19,080	320,929	471,310
Less Internal Cost	-105,791	0	0	0	-206	-3,377	-2,993	-2,069	-2,081	-3,475	-12,002	-32,243	-11,331
AFUDC	25,713	0	0	0	29	64	118	442	867	1,087	1,061	1,262	2,264
Less AFUDC on Internal Cost	-3,273	0	0	0	-1	-12	-33	-50	-63	-82	-131	-259	-390
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	8,653	7,002	67,406	147,458	212,40				

Exhibit B-3
Page 2 of 19

	Total Project	Jan-14	Feb-14	Mar-14	Apr-14	May-14 <u>In-Service</u>	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
Unit 6 Overhaul In Service 5/30/2014	1,589,464					<u>In-Service</u> 5/30/2014							
BOM		1,911,302	2,161,526	1,887,387	2,754,402	2,789,464							
CapEx	3,121,957	274,215	-254,211	888,116	35,936	0							
Less Internal Cost	-403,654	-36,721	-32,410	-35,335	-8,651	0							
AFUDC	77,889	13,682	13,628	15,572	9,258	0							
Less AFUDC on Internal Cost	-6,727	-952	-1,146	-1,338	-1,481	0							
Less Insurance Proceeds	-1,200,000	0	0	0	0	-1,200,000							
EOM		2,161,526	1,887,387	2,754,402	2,789,464	1,589,464							
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Lwr Gate Hse-Rpl Stl & Trsh Rks In Service 4/30/2014	1,536,414				<u>In-Service</u> 4/30/2014								
BOM		972,066	1,348,627	1,488,483	1,506,013								
CapEx	1,560,839	376,227	136,162	13,625	29,909								
Less Internal Cost	-60,532	-5,719	-3,885	-3,770	0								
AFUDC	39,161	6,373	7,929	8,050	879								
Less AFUDC on Internal Cost	-3,055	-319	-350	-375	-387								
Less Insurance Proceeds	0	0	0	0	0								
EOM		1,348,627	1,488,483	1,506,013	1,536,414								
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Rpl/Rfb Lwr Gate Hse Gates In Service 4/30/2014	1,790,935				<u>In-Service</u> 4/30/2014								
BOM		934,519	1,307,489	1,570,781	1,771,258								
CapEx	1,874,287	378,068	276,883	204,480	16,733								
Less Internal Cost	-105,791	-8,132	-18,045	-9,838	0								
AFUDC	25,713	3,480	4,984	6,457	3,598								
Less AFUDC on Internal Cost	-3,273	-447	-531	-621	-653								
Less Insurance Proceeds	0	0	0	0	0								
EOM		1,307,489	1,570,781	1,771,258	1,790,935								
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Upper Gate House Head Gate In Service 4/30/2014	1,639,054				<u>In-Service</u> 4/30/2014								
BOM		1,169,549	1,434,570	1,536,755	1,592,736								
CapEx	1,715,067	268,486	104,099	54,622	42,918								
Less Internal Cost	-107,303	-8,776	-8,374	-5,633	0								
AFUDC	34,978	5,837	7,041	7,617	4,045								
Less AFUDC on Internal Cost	-3,688	-526	-581	-626	-644								
Less Insurance Proceeds	0	0	0	0	0								
EOM		1,434,570	1,536,755	1,592,736	1,639,054								
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													

	Total	to date											
	Project	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Unit 3 Flood Insp/Refurb	147,837												
In Service 6/30/2014													
BOM		0	0	0	0	0	0	0	0	0	0	0	3,128
CapEx	1,407,705	0	0	0	0	0	0	0	0	0	0	8,066	340,061
Less Internal Cost	-89,890	0	0	0	0	0	0	0	0	0	0	-4,947	-16,777
AFUDC	31,051	0	0	0	0	0	0	0	0	0	0	10	959
Less AFUDC on Internal Cost	-1,029	0	0	0	0	0	0	0	0	0	0	0	-25
Less Insurance Proceeds	-1,200,000	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	0	0	0	0	0	0	0	3,128	327,346
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Replace #1 Penstock Valve	408,644												
In Service 5/30/2014													
BOM		0	0	0	0	2,093	4,475	11,700	70,395	63,016	62,422	95,895	96,180
CapEx	422,385	0	0	0	2,172	2,407	7,184	61,911	-2,051	1,875	33,340	124	132,263
Less Internal Cost	-21,314	0	0	0	-86	-47	-13	-3,324	-5,472	-2,623	-27	0	-77
AFUDC	7,735	0	0	0	7	22	53	108	144	154	161	162	602
Less AFUDC on Internal Cost	-163	0	0	0	0	0	0	0	0	0	0	0	-1
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	2,093	4,475	11,700	70,395	63,016	62,422	95,895	96,180	228,967
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Unit 2 Flood Insp/Refurb	100,927												
In Service 5/31/2014													
BOM		0	0	0	0	0	0	0	0	0	0	0	0
CapEx	1,000,424	0	0	0	0	0	0	0	0	0	0	61,762	1,762
Less Internal Cost	-15,424	0	0	0	0	0	0	0	0	0	0	-1,762	-1,762
AFUDC	1,237	0	0	0	0	0	0	0	0	0	0	6	17
Less AFUDC on Internal Cost	-309	0	0	0	0	0	0	0	0	0	0	-6	-17
Less Insurance Proceeds	-885,000	0	0	0	0	0	0	0	0	0	0	-60,000	0
EOM		0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Basement Flood Proofing	170,250												
In Service 6/30/2014													
BOM		0	0	0	0	0	0	0	0	0	0	0	0
CapEx	240,000												
Less Internal Cost	-29,750												

	Total Project	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
Unit 3 Flood Insp/Refurb	147,837												
In Service 6/30/2014							<u>In-Service</u> 6/30/2014						
BOM		327,346	709,405	1,327,751	1,196,666	1,817,104	1,825,540						
CapEx	1,407,705	398,245	635,754	-123,612	629,192	0	-480,000						
Less Internal Cost	-89,890	-18,355	-21,899	-12,860	-15,053	0	0						
AFUDC	31,051	2,243	4,604	5,541	6,502	8,663	2,530						
Less AFUDC on Internal Cost	-1,029	-74	-113	-154	-204	-227	-232						
Less Insurance Proceeds	-1,200,000	0	0	0	0	0	-1,200,000						
EOM		709,405	1,327,751	1,196,666	1,817,104	1,825,540	147,837						
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Replace #1 Penstock Valve	408,644						<u>In-Service</u> 5/30/2014						
In Service 5/30/2014							5/30/2014						
BOM		228,967	256,822	322,054	323,493	366,351							
CapEx	422,385	29,241	66,411	0	43,696	43,811							
Less Internal Cost	-21,314	-2,411	-2,411	0	-2,411	-2,411							
AFUDC	7,735	1,033	1,256	1,472	1,613	948							
Less AFUDC on Internal Cost	-163	-9	-24	-32	-40	-56							
Less Insurance Proceeds	0	0	0	0	0	0							
EOM		256,822	322,054	323,493	366,351	408,644							
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Unit 2 Flood Insp/Refurb	100,927						<u>In-Service</u> 5/30/2014						
In Service 5/31/2014							5/30/2014						
BOM		0	0	0	50,162	100,650							
CapEx	1,000,424	0	303,400	328,400	203,400	101,700							
Less Internal Cost	-15,424	0	-3,400	-3,400	-3,400	-1,700							
AFUDC	1,237	23	34	219	566	372							
Less AFUDC on Internal Cost	-309	-23	-34	-56	-78	-95							
Less Insurance Proceeds	-885,000	0	-300,000	-275,000	-150,000	-100,000							
EOM		0	0	50,162	100,650	100,927							
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Basement Flood Proofing	170,250						<u>In-Service</u> 6/30/2014						
In Service 6/30/2014							6/30/2014						
BOM		0	0	0	0	0	110,000						
CapEx	240,000	11,900	2,550</										

	Total	to date											
	Project	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Forebay Embankment Reconstr	27,567,172												
In Service 7/31/2014													
BOM		259,023	431,177	591,597	912,125	1,078,341	1,137,302	1,536,539	1,482,564	3,658,098	5,006,907	5,114,035	15,097,334
CapEx	27,074,348	180,226	172,760	326,115	170,597	87,341	411,653	-36,755	2,216,420	1,353,347	104,718	9,955,368	1,448,303
Less Internal Cost	-762,608	-10,330	-15,674	-10,479	-10,839	-35,535	-21,195	-27,076	-57,644	-32,758	-30,407	-37,803	-46,552
AFUDC	1,292,232	2,425	3,588	5,232	6,868	7,718	9,542	10,777	17,958	29,718	34,522	67,665	106,356
Less AFUDC on Internal Cost	-36,799	-168	-253	-340	-410	-563	-762	-921	-1,200	-1,498	-1,706	-1,930	-2,261
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		431,177	591,597	912,125	1,078,341	1,137,302	1,536,539	1,482,564	3,658,098	5,006,907	5,114,035	15,097,334	16,603,180
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Lower Wye Hse - Replace Valve	1,003,272												
Est. In Service 9/30/2014													
BOM		0	0	47	123	49,996	59,616	245,439	259,401	405,406	526,185	914,003	801,600
CapEx	1,042,858	0	2,309	2,249	53,980	15,281	193,010	19,256	150,177	131,565	396,895	-104,201	47,998
Less Internal Cost	-79,829	0	-2,261	-2,173	-4,270	-6,012	-8,176	-6,620	-5,328	-11,874	-11,309	-11,347	-5,673
AFUDC	45,811	0	0	7	191	406	1,079	1,456	1,321	1,305	2,517	3,490	3,234
Less AFUDC on Internal Cost	-5,568	0	0	-7	-28	-54	-90	-131	-165	-218	-285	-345	-397
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	47	123	49,996	59,616	245,439	259,401	405,406	526,185	914,003	801,600	846,762
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Unit 4 Flood Insp/Refurb	149,634												
Est. In Service 9/30/2014													
BOM		0	0	0	0	0	0	0	0	0	0	0	2,915
CapEx	1,038,874	0	0	0	0	0	0	0	0	0	0	2,908	49,437
Less Internal Cost	-13,829	0	0	0	0	0	0	0	0	0	0	-2	-29
AFUDC	9,810	0	0	0	0	0	0	0	0	0	0	10	182
Less AFUDC on Internal Cost	-220	0	0	0	0	0	0	0	0	0	0	0	0
Less Insurance Proceeds	-885,000	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	0	0	0	0	0	0	0	2,915	52,506
Return on CWIP				</									

	Total Project	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
Forebay Embankment Reconstructr In Service 7/31/2014	27,567,172							In-Service 7/31/2014					
BOM		16,603,180	18,763,154	23,037,780	23,469,730	24,782,668	26,118,947	27,483,393					
CapEx	27,074,348	2,068,628	4,164,834	350,643	1,234,626	1,253,075	1,270,780	64,296					
Less Internal Cost	-762,608	-22,245	-23,856	-66,684	-76,352	-76,352	-76,352	-64,296					
AFUDC	1,292,232	116,045	136,250	150,887	158,025	163,415	174,484	88,704					
Less AFUDC on Internal Cost	-36,799	-2,453	-2,603	-2,897	-3,362	-3,858	-4,468	-4,925					
Less Insurance Proceeds	0	0	0	0	0	0	0	0					
EOM		18,763,154	23,037,780	23,469,730	24,782,668	26,118,947	27,483,393	27,567,172					
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Lower Wye Hse - Replace Valve Est. In Service 9/30/2014	1,003,272							In-Service 9/30/2014					
BOM		846,762	881,198	898,159	971,509	979,750	988,024	992,435	996,853	1,001,277			
CapEx	1,042,858	35,455	14,594	70,790	5,000	5,000	1,000	1,000	1,000	500			
Less Internal Cost	-79,829	-3,909	-489	-387	0	0	0	0	0	0			
AFUDC	45,811	3,302	3,277	3,368	3,663	3,695	3,849	3,855	3,862	1,933			
Less AFUDC on Internal Cost	-5,568	-413	-421	-421	-421	-421	-438	-438	-438	-438			
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0			
EOM		881,198	898,159	971,509	979,750	988,024	992,435	996,853	1,001,277	1,003,272			
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Unit 4 Flood Insp/Refurb Est. In Service 9/30/2014	149,634							In-Service 9/30/2014					
BOM		52,506	52,867	120,467	224,186	225,639	227,093	228,585	173,491	190,545			
CapEx	1,038,874	868	67,058	102,691	0	0	303,215	253,239	186,233	73,225			
Less Internal Cost	-13,829	-846	-14	-79	0	0	-3,215	-3,215	-3,215	-3,215			
AFUDC	9,810	342	562	1,113	1,460	1,460	1,509	1,347	1,237	587			
Less AFUDC on Internal Cost	-220	-3	-6	-6	-6	-6	-17	-38	-59	-80			
Less Insurance Proceeds	-885,000	0	0	0	0	0	-300,000	-306,429	-167,143	-111,429			
EOM		52,867	120,467	224,186	225,639	227,093	228,585	173,491	190,545	149,634			
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Unit 5 Flood Insp/Refurb Est. In Service 9/30/2014	141,827							In-Service 9/30/2014					
BOM		49,924	49,924	184,766	186,039	187							

	Total	to date											
	Project	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Refurbish #4 & #5 Penstock	521,856												
Est. In Service 10/31/2014													
BOM		0	0	0	0	0	0	0	0	0	0	0	0
CapEx	581,118												
Less Internal Cost	-69,118												
AFUDC	11,317												
Less AFUDC on Internal Cost	-1,460												
Less Insurance Proceeds	0												
EOM		0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Unit 1 Flood Insp/Refurb	1,095,302												
Est. In Service 10/31/2014													
BOM		0	0	0	0	0	0	0	0	0	0	237,500	480,194
CapEx	2,226,388	0	0	0	0	0	0	0	0	0	237,696	242,854	14,825
Less Internal Cost	-789	0	0	0	0	0	0	0	0	0	-196	-169	-9
AFUDC	4,719	0	0	0	0	0	0	0	0	0	0	10	281
Less AFUDC on Internal Cost	-16	0	0	0	0	0	0	0	0	0	0	0	0
Less Insurance Proceeds	-1,135,000	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	0	0	0	0	0	0	237,500	480,194	495,292
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Back-up Control Room	241,976												
Est. In Service 11/30/2014													
BOM		0	0	0	0	0	0	0	0	0	0	0	88,618
CapEx	251,785	0	0	0	0	0	0	0	0	0	0	88,388	78,171
Less Internal Cost	-25,435	0	0	0	0	0	0	0	0	0	0	-61	-46
AFUDC	16,290	0	0	0	0	0	0	0	0	0	0	291	842
Less AFUDC on Internal Cost	-664	0	0	0	0	0	0	0	0	0	0	0	-1
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	0	0	0	0	0	0	0	88,618	167,584
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Flowline_Penstock_Abate_Line	20,977,149												
Est. In Service 12/31/2014													
BOM		1,817,341	2,382,637	3,268,464	3,985,528	4,648,280	5,141,227	5,266,148	5,349,648	5,537,270	6,004,042	6,529,684	6,622,273
CapEx	21,120,338	584,044	911,295	736,431	686,34								

	Total Project	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14 <u>In-Service</u>	Nov-14	Dec-14
Refurbish #4 & #5 Penstock	521,856												
Est. In Service 10/31/2014											10/31/2014		
BOM													
CapEx	581,118	0	0	0	73,822	85,074	85,074	69,000	98,571	114,651	54,925		
Less Internal Cost	-69,118	0	0	0	-4,822	-16,074	-16,074	0	0	-16,074	-16,074		
AFUDC	11,317	0	0	0	239	754	1,312	1,812	2,355	3,046	1,798		
Less AFUDC on Internal Cost	-1,460	0	0	0	-16	-84	-189	-241	-241	-293	-398		
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0	0		
EOM		0	0	0	69,224	138,895	209,018	279,589	380,275	481,605	521,856		
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Unit 1 Flood Insp/Refurb	1,095,302										<u>In-Service</u>		
Est. In Service 10/31/2014											10/31/2014		
BOM		495,292	611,773	808,642	1,095,316	1,095,314	1,095,312	1,095,310	1,095,308	1,473,306	1,851,304		
CapEx	2,226,388	116,103	195,743	284,168	0	0	0	0	378,000	378,000	379,000		
Less Internal Cost	-789	-157	-42	-218	0	0	0	0	0	0	0		
AFUDC	4,719	535	1,169	2,725	0	0	0	0	0	0	0		
Less AFUDC on Internal Cost	-16	0	0	-1	-2	-2	-2	-2	-2	-2	-2		
Less Insurance Proceeds	-1,135,000	0	0	0	0	0	0	0	0	0	-1,135,000		
EOM		611,773	808,642	1,095,316	1,095,314	1,095,312	1,095,310	1,095,308	1,473,306	1,851,304	1,095,302		
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Back-up Control Room	241,976										<u>In-Service</u>		
Est. In Service 11/30/2014											11/30/2014		
BOM		167,584	169,061	196,104	204,252	214,154	219,094	224,107	229,142	234,200	239,740	241,286	
CapEx	251,785	395	25,881	6,880	8,549	7,568	7,809	7,809	7,809	8,266	4,260	0	
Less Internal Cost	-25,435	-1	-6	-5	0	-4,019	-4,260	-4,260	-4,260	-4,260	-4,260	0	
AFUDC	16,290	1,083	1,168	1,274	1,353	1,405	1,504	1,554	1,605	1,657	1,698	856	
Less AFUDC on Internal Cost	-664	-1	-1	-1	-1	-14	-41	-69	-96	-124	-152	-165	
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0	0	0	
EOM		169,061	196,104	204,252	214,154	219,094	224,107	229,142	234,200	239,740	241,286	241,976	
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Flowline_Penstock_Abate_Line	20,977,149			</									

	Total	to date											
	Project	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Electrical Infrastructure Est. In Service 12/31/2014	9,925,682												
BOM		818,088	877,400	1,029,958	1,754,067	2,148,390	2,295,482	3,566,952	5,549,397	6,720,121	7,675,038	8,317,198	9,421,598
CapEx	13,106,874	80,814	178,589	740,294	419,643	190,363	1,303,443	2,016,394	1,185,664	974,644	631,874	1,187,053	-321,376
Less Internal Cost	-1,461,530	-26,861	-31,475	-24,248	-36,932	-56,515	-50,201	-62,648	-53,571	-64,790	-39,618	-137,758	-130,126
AFUDC	1,149,202	5,438	5,664	8,437	12,168	14,082	19,415	30,248	40,547	47,350	52,516	58,287	66,652
Less AFUDC on Internal Cost	-88,865	-79	-220	-373	-555	-838	-1,186	-1,548	-1,917	-2,287	-2,612	-3,182	-4,143
Less Insurance Proceeds	-2,780,000	0	0	0	0	0	0	0	0	0	0	0	0
EOM		877,400	1,029,958	1,754,067	2,148,390	2,295,482	3,566,952	5,549,397	6,720,121	7,675,038	8,317,198	9,421,598	9,032,605
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Cathodic Protection Grnd Rpl Est. In Service 12/31/2014	767,000												
BOM		0	0	0	0	0	0	0	0	0	0	0	16,549
CapEx	751,140	0	0	0	0	0	0	0	0	0	0	20,663	7,451
Less Internal Cost	-5,918	0	0	0	0	0	0	0	0	0	0	-4,168	-4
AFUDC	22,276	0	0	0	0	0	0	0	0	0	0	68	161
Less AFUDC on Internal Cost	-498	0	0	0	0	0	0	0	0	0	0	-14	-28
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	0	0	0	0	0	0	0	16,549	24,130
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Rpl Penstock Vlv Operators 2-6 Est. In Service 12/31/2014	30,669												
BOM		0	0	0	0	0	0	601	902	1,126	1,351	47,246	47,544
CapEx	583,516	0	0	0	0	0	602	301	225	225	45,783	0	308
Less Internal Cost	-52,847	0	0	0	0	0	-1	-1	0	0	-38	0	0
AFUDC	0	0	0	0	0	0	0	0	0	0	149	299	303
Less AFUDC on Internal Cost	0	0	0	0	0	0	0	0	0	0	0	0	0
Less Insurance Proceeds	-500,000	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	0	0	601	902	1,126	1,351	47,246	47,544	48,155
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Basement Lead Abatement Est. In Service 3/31/2015	26,186												
BOM		0	0	0	0								

Exhibit B-3
Page 10 of 19

[illegible]

	Total												
	Project	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Electrical Infrastructure	9,925,682												
Est. In Service 12/31/2014													
BOM													
CapEx	13,106,874												
Less Internal Cost	-1,461,530												
AFUDC	1,149,202												
Less AFUDC on Internal Cost	-88,865												
Less Insurance Proceeds	-2,780,000												
EOM													
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Cathodic Protection Grnd Rpl	767,000												
Est. In Service 12/31/2014													
BOM													
CapEx	751,140												
Less Internal Cost	-5,918												
AFUDC	22,276												
Less AFUDC on Internal Cost	-498												
Less Insurance Proceeds	0												
EOM													
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Rpl Penstock Vlv Operators 2-6	30,669												
Est. In Service 12/31/2014													
BOM													
CapEx	583,516												
Less Internal Cost	-52,847												
AFUDC	0												
Less AFUDC on Internal Cost	0												
Less Insurance Proceeds	-500,000												
EOM													
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Basement Lead Abatement	26,186												
Est. In Service 3/31/2015													
BOM		-370,414	-170,414										
CapEx	690,000	203,215	199,815										
Less Internal Cost	-63,814	-3,215	-3,215										
AFUDC	0	0	0										
Less AFUDC on Internal Cost	0	0	0										
Less Insurance Proceeds	-600,000	0	0										
EOM		-170,414	26,186	26,186									
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													

Exhibit B-3
Page 12 of 19

	Total	to date											
	Project	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Replace/Refurbish Dam 6	904,247												
Est. In Service 12/30/2015													
BOM		0	0	0	0	0	0	0	0	0	0	0	0
CapEx	965,981												
Less Internal Cost	-72,976												
AFUDC	12,163												
Less AFUDC on Internal Cost	-921												
Less Insurance Proceeds	0												
EOM		0	0	0	0	0	0	0	0	0	0	0	0
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Thomson Spill Capacity	9,428,536												
Est. In Service 12/31/2016													
BOM		0	0	0	0	0	0	0	0	16	170,035	270,308	315,976
CapEx	9,781,975	0	0	0	0	0	0	0	837	171,090	103,366	46,349	23,057
Less Internal Cost	-365,379	0	0	0	0	0	0	0	-821	-1,071	-3,093	-681	-14
AFUDC	12,933	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-992	0	0	0	0	0	0	0	0	0	0	0	0
Less Insurance Proceeds	0	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	0	0	0	0	0	16	170,035	270,308	315,976	339,019
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
115KV Sub - Add & Rpl Bkrs	1,189,385												
Est. In Service 7/31/2014													
BOM		0	0	0	14	299	6,915	9,995	144,612	243,395	725,094	1,241,485	1,432,630
CapEx	2,242,647	0	0	7,048	12,163	57,961	11,023	153,088	198,190	517,007	551,745	349,066	-251,932
Less Internal Cost	-818,478	0	0	-7,034	-11,879	-51,345	-7,943	-18,470	-99,407	-38,223	-41,512	-166,284	-80,058
AFUDC	107,586	0	0	0	0	0	0	0	256	3,713	7,195	10,071	10,441
Less AFUDC on Internal Cost	-32,370	0	0	0	0	0	0	0	-256	-798	-1,036	-1,709	-2,534
Less Insurance Proceeds	-310,000	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	14	299	6,915	9,995	144,612	243,395	725,094	1,241,485	1,432,630	1,108,546
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													
Substation Elec. Infrastructu	2,704,154												
Est. In Service 7/31/2014													
BOM		0	0	0	283	202,452	505,792	1,070,278	1,089,378	1,390,244	1,933,087	2,027,584	2,164,107
CapEx	3,350,921	1,078	3,507	5,592	217,560	316,250	570,236	23,718	306,417	539,155	88,486	134,053	738,793
Less Internal Cost	-438,975	-1,078	-3,507	-5,310	-16,057	-15,230	-10,835	-11,569	-13,517	-6,908	-6,541	-10,653	-32,563
AFUDC	211,596	4	19	49	784	2,536	5,368	7,288	8,386	11,082	13,083	13,712	16,906
Less AFUDC on Internal Cost	-19,388	-4	-19	-48	-118	-216	-282	-337	-420	-487	-532	-588	-748
Less Insurance Proceeds	-400,000	0	0	0	0	0	0	0	0	0	0	0	0
EOM		0	0	283	202,452	505,792	1,070,278	1,089,378	1,390,244	1,933,087	2,027,584	2,164,107	2,886,496
Return on CWIP													
After Tax Return on Equity													
Income Tax Component													
Interest Expense Component													
Total Return on CWIP													

Exhibit B-3
Page 13 of 19

[illegible]

Exhibit B-3
Page 14 of 19

[illegible]

[illegible]

Exhibit B-3

[illegible]

[illegible]

Minnesota Power
Renewable Resources Rider: Thomson Hydro
Plant Additions, AFUDC and Return on CWIP

	Total Project	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Total	84,057,574												
BOM		74,807,361	75,110,107	75,409,454	75,512,201	75,674,947	75,867,694	77,357,112	78,846,531	80,275,727	81,703,923	83,432,232	83,634,352
CapEx	97,184,090	335,155	331,755	131,940	191,940	221,940	1,518,612	1,518,612	1,458,390	1,457,390	1,757,502	231,313	77,137
Less Internal Cost	-5,906,432	-32,408	-32,408	-29,193	-29,193	-29,193	-29,193	-29,193	-29,193	-29,193	-29,193	-29,193	-29,193
AFUDC	3,838,219	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-238,304	0	0	0	0	0	0	0	0	0	0	0	0
Less Insurance Proceeds	-10,820,000	0	0	0	0	0	0	0	0	0	0	0	0
EOM		75,110,107	75,409,454	75,512,201	75,674,947	75,867,694	77,357,112	78,846,531	80,275,727	81,703,923	83,432,232	83,634,352	83,682,295
Return on CWIP													
After Tax Return on Equity	767,834	7,186	7,669	8,213	8,774	9,609	13,558	20,551	27,403	34,111	41,522	46,054	44,518
Income Tax Component	541,794	5,071	5,411	5,795	6,191	6,780	9,567	14,501	19,336	24,069	29,298	32,496	31,412
Interest Expense Component	346,145	3,240	3,457	3,702	3,956	4,332	6,112	9,265	12,354	15,378	18,718	20,761	20,069
Total Return on CWIP	1,655,773	15,497	16,537	17,710	18,921	20,721	29,237	44,317	59,093	73,558	89,538	99,311	95,999

Minnesota Power
Renewable Resources Rider: Thomson Hydro
Plant Additions, AFUDC and Return on CWIP

	Total Project	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
Total	84,057,574												
BOM		83,682,295	83,688,318	83,688,318	83,688,318	83,688,318	83,688,318	83,688,985	84,057,573	84,057,573	84,057,573	84,057,573	84,057,573
CapEx	97,184,090	6,022	0	0	0	8,037	188,704	196,625	8,037	0	0	0	0
Less Internal Cost	-5,906,432	0	0	0	0	-8,037	-8,037	-8,037	-8,037	0	0	0	0
AFUDC	3,838,219	0	0	0	0	0	0	0	0	0	0	0	0
Less AFUDC on Internal Cost	-238,304	0	0	0	0	0	0	0	0	0	0	0	0
Less Insurance Proceeds	-10,820,000	0	0	0	0	0	0	0	0	0	0	0	0
EOM		83,688,318	83,688,318	83,688,318	83,688,318	83,688,318	83,688,985	84,057,573	84,057,573	84,057,573	84,057,573	84,057,573	84,057,574
Return on CWIP													
After Tax Return on Equity	767,834	42,522	42,536	42,536	42,536	42,536	42,960	43,827	44,270	44,270	44,270	44,270	22,135
Income Tax Component	541,794	30,004	30,014	30,014	30,014	30,014	30,313	30,925	31,237	31,237	31,237	31,237	15,619
Interest Expense Component	346,145	19,169	19,175	19,175	19,175	19,175	19,367	19,757	19,957	19,957	19,957	19,957	9,979
Total Return on CWIP	1,655,773	91,695	91,725	91,725	91,725	91,725	92,640	94,509	95,464	95,464	95,464	95,464	47,732

Minnesota Power
MPUC Docket E015/GR-09-1151
Rate of Return / Cost of Capital Summary
(thousands of dollars)
Commission Decision (9/29/2010)

Average for 13 months Ended 12/31/10						
	Amount	% of Total	Component Cost	Weighted Cost	Pre-tax Rate	After-Tax Rate
Long Term Debt	\$ 696,677	45.71%	5.56%	2.540%	2.540%	1.490%
Common Equity	\$ 827,534	54.29%	10.38%	5.640%	9.610%	5.640%
	<u>\$ 1,524,211</u>	<u>100.00%</u>		<u>8.180%</u>	<u>12.150%</u>	<u>7.130%</u>
Federal & State Income Tax Rate						41.37%
Pretax "Gross-up" Factor						1.70560
After Tax Return on Equity						5.6343% 1/
Income Tax Component						3.9757% 2/
Interest Expense Component						<u>2.5400%</u>
Pre-tax Return						<u>12.1500%</u>

1/ Rounding forced to equity.

2/ Shown here as a component of the pretax rate of return. Can also be computed as 70.56% gross up on After Tax Return on Equity.

Minnesota Power
Renewable Resources Rider: Thomson Plan Filing
Allocation Factors

	D-01		D-02	
	Rate Case	Normalized	Rate Case	Normalized
MN Jurisdiction	0.82017	1.0000	0.77570	1.0000
Residential	0.11259	0.1373	0.10649	0.1373
General Service	0.06213	0.0758	0.05876	0.0758
Large Light & Power	0.12471	0.1521	0.11795	0.1521
Large Power	0.51269	0.6251	0.48489	0.6251
Municipal Pumping	0.00568	0.0069	0.00537	0.0069
Lighting	0.00237	0.0029	0.00224	0.0029

The D-01 and D-02 allocators from MP's 2009 MPUC rate case Docket No. E-015/GR-09-1151 were applied in 2011 Factor Filing beginning April 2011. Refer to Exhibit B-5, page 2 of 2.

Because the revenue tracker amounts are 100% MN Jurisdictional, the factor are normalized to obtain class allocations.

Minnesota Power
Demand Responsibility of Power Supply Cost Based on Peak & Average Methodology: D-01 & D-02
Test Year 2010 Rebuttal Customer Budget
Revised from original work paper AF-3, page 14.
MP Exhibit (SJS) Rebuttal Schedule 2, page 9 of 15
Docket No. E-015/GR-09-1151

		Total Retail	Residential	General Service	Large Light & Power	Large Power	Municipal Pumping	Lighting
1	Annual Energy (E-01 with losses)	8,973,590	1,164,063	645,945	1,311,171	5,768,410	61,116	22,885
2	Average Demand	1,024,382	132,884	73,738	149,677	658,494	6,977	2,612
3	Percent	100.000	12.972	7.198	14.611	64.282	0.681	0.255
4	Annual CP Demand (loss adjusted)	1,267,035	214,342	116,138	224,399	697,256	9,334	5,567
5	Percent	100.000	16.917	9.166	17.711	55.031	0.737	0.439
6	Annual Load Factor (Line 2 / Line 4)	0.80849						
7	1.0 - Load Factor	0.19151						
8	Average Factor (Line 3 x Line 6 total)	80.849	10.488	5.820	11.813	51.971	0.551	0.206
9	Peak Factor (Line 5 x Line 7 total)	19.151	3.240	1.755	3.392	10.539	0.141	0.084
10	Composite Factor - D-01 (Line 8 + Line 9)	100.000	13.728	7.575	15.205	62.510	0.692	0.290
11	Power Supply Production - D-01 Adjusted for Jurisdictional Split (Line 10 x .82017)	82.017	11.259	6.213	12.471	51.269	0.568	0.237
12	Power Supply Transmission - D-02 Adjusted for Jurisdictional Split (Line 10 x .77570)	77.570	10.649	5.876	11.795	48.489	0.537	0.224

Notes:

Residential, General Service, Large Light and Power and Municipal Pumping CP demands per customer from load research multiplied by budgeted number of customers and adjusted for losses. Large Power CP demand based on 2008 CP adjusted for losses and ratio of 2008 to Test Year average demand. Large Light and Power and Large Power loads normalized to reflect three customers that moved from Large Power to Large Light and Power. Lighting CP is average load based on Test Year budgeted total energy and 4,200 burning hours and adjusted for losses.

State of Minnesota
DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

Utility Information Request

Docket Number: E015/M-14-577

Date of Request: October 30, 2014

Requested From: Minnesota Power

Response Due: November 11, 2014

Analysts Requesting Information: Chris Shaw

Type of Inquiry: ☐.....Financial ☐.....Rate of Return ☐.....Rate Design
 ☐.....Engineering ☐.....Forecasting ☐.....Conservation
 ☐.....Cost of Service ☐.....CIP ☐.....Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
8	<p>Regarding the water conveyance system:</p> <p>a. Please explain whether the water conveyance system was damaged during the 2012 flood.</p> <p>b. Regardless of any damage sustained during the 2012 flood, would the repairs and upgrades to the water conveyance system have been necessary in the next four to eight years?</p> <p>c. What was the approximate amount of costs avoided due to making the repairs and upgrades to the water conveyance system during the unplanned outage rather than phasing the upgrades in over the next four to eight years?</p> <p>d. Where there any other repairs or upgrades made or planned that were not required due to the 2012 flood?</p>

Response:

- a. The water conveyance system was not damaged in the flood.

- b. Yes, the repairs and upgrades to the water conveyance system would have been necessary in the near future. Evaluation of its integrity and upgrades as necessary were planned to be phased over the next several years. Once the outage was underway and it was possible to conduct thorough inspections, it was discovered that portions of the system were not suitable to put back into service without rehabilitation.
- c. Costs avoided are a combination of the replacement energy cost of avoided lost generation and additional costs of construction due to inefficiencies caused by limited access and underwater work. Phasing the work in partial outages would result in replacement energy costs of about \$15 million and additional construction costs of about \$10 million as shown below.

Estimate of Additional Cost of Phased Rehabilitation of the Thomson Water Conveyance System					
Replacement Energy Cost	Out of Service	Number of Units Out of Service	Outage Duration (months)	Lost Generation (MWH) *	Value (at \$35)
Flowline 4, Penstock 3 and Surge Tank 1	Unit 3	1	12	47,000	\$ 1,600,000
Flowline 5, Penstocks 4 & 5 and Surge Tank #2	Units 4, 5 & 6	3	12	141,000	\$ 4,900,000
Flowline 6 and Penstocks 1 & 2	Units 1 & 2	2	12	94,000	\$ 3,300,000
Cross Receiver and Penstock 6 (during LGH Structural Steel Project full outage)	Units 1, 2, 3 and 6	4	6	-	\$ -
Upper Gate House Gates	1-2 Units	1	6	24,000	\$ 800,000
Lower Gate House Structural Steel and Trash Racks	All Units	6	6	141,000	\$ 4,900,000
Lower Gate Gates (during LGH Structural Steel Project full outage)	2-6 Units	6	6	-	\$ -
Total Replacement Energy Cost				447,000	\$ 15,500,000
Additional Construction Cost		Present Cost	Additional Cost Factor		Additional Cost
Flowlines and Penstocks		\$ 22,400,000	20%		\$ 4,500,000
Upper Gate House Gates		\$ 1,700,000	50%		\$ 900,000
Lower Gate House Structural Steel and Trash Racks (all diver)		\$ 1,600,000	200%		\$ 3,200,000
Lower Gate House Gates		\$ 2,000,000	50%		\$ 1,000,000
Total Additional Construction Cost		\$ 27,700,000			\$ 9,600,000
Total Additional Cost of Phased Construction (Avoided in 2012-2014 Outage)					\$ 25,100,000
* Lost Generation based on approximately 280,000 MWH/Year (47,000 per unit)					

- d. All of the other projects were made or planned due to the 2012 flood. Most of those projects included additional repairs in addition to flood damaged facilities or upgrades as necessary to meet current design criteria and high flow events like that experienced in June 2012.

State of Minnesota
DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

Utility Information Request

Docket Number: E015/M-14-577

Date of Request: October 30, 2014

Requested From: Minnesota Power

Response Due: November 11, 2014

Analysts Requesting Information: Chris Shaw

Type of Inquiry: ☐.....Financial ☐.....Rate of Return ☐.....Rate Design
 ☐.....Engineering ☐.....Forecasting ☐.....Conservation
 ☐.....Cost of Service ☐.....CIP ☐.....Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
7	<p>Regarding the insurance for Thomson:</p> <p>a. Please provide an updated estimate of expected insurance payments as well as insurance payments received to date. Please break down the expected or received payment by the categories shown in Table 1 of MP's petition.</p> <p>b. Please explain why MP did not have insurance coverage that included dams, dikes, damage to land, relocation of power lines and business interruption.</p> <p>c. Please explain if, based on its experience at Thomson, MP is evaluating any changes in its insurance policy.</p>

Response:

- a. Minnesota Power has received advance insurance payments totaling \$7 million to date. This includes approximately \$1.8 million to offset additional operating costs incurred as a direct result of the flood. (These additional costs were not included in the original petition.) The table below includes expected insurance payments by the categories shown in Table 1 from the original petition.

Thomson Project - Expected Insurance Payments			
(\$ in millions)			
		Current Estimate	
Forebay Reconstruction			\$0.0
Electrical			5.7
	Hydroelectric station electrical infrastructure	5.0	
	Substation - breakers	0.2	
	Back-up control room	-	
	Substation electrical infrastructure	0.5	
	Total Electrical	5.7	
Mechanical and General Civil			14.7
	Units 1-6 flood inspection and refurbishment	12.3	
	Basement lead abatement	1.8	
	Basement flood proofing	0.1	
	Penstock valve operators	0.5	
	Total Mechanical and General Civil	14.7	
Water Conveyance System			-
	Flowline/penstock lead abatement and lining	-	
	Lower gatehouse structural steel and trash racks	-	
	Upper gatehouse head gates	-	
	Lower gatehouse gates	-	
	Valve refurbishment or replacement	-	
	Cathodic protection system	-	
	Total Water Conveyance System	-	
Thomson Dam Spill Capacity			-
Thomson Expected Insurance Payments			\$20.4

- b. Minnesota Power's property insurance policy does not include an option for coverage of dams, dikes, damage to land, relocation of power lines and business interruption. It is possible to purchase coverage for dams, dikes, and business interruption separately in the marketplace. However, there are no policy coverages available in the marketplace for land or relocation of power lines. Minnesota Power evaluated the costs and benefits of supplemental coverage in the past and decided that given the residual risk still inherent in the supplemental coverage, the excessive cost was not worth the additional coverage.
- c. A risk assessment of Minnesota Power's hydro facilities was conducted following the flooding at Thomson. A thorough review of the risk exposures was conducted and the decision was made not to make any changes to the insurance policy. The decision was based on the cost and residual exposure. The additional cost to add coverage for dams, dikes and business interruption was quoted at a considerably higher amount than our existing coverage. The decision also considered that the Thomson reconstruction project will mitigate the most significant risk exposure, since the standards for reconstruction will make it far less likely that Thomson will suffer extensive damages in another catastrophic event.

CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Minnesota Department of Commerce
Comments

Docket No. E015/M-14-577

Dated this **17th** day of **November 2014**

/s/Sharon Ferguson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	Yes	OFF_SL_14-577_M-14-577
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_14-577_M-14-577
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_14-577_M-14-577
Elizabeth	Goodpaster	bgoodpaster@mncenter.org	MN Center for Environmental Advocacy	Suite 206 26 East Exchange Street St. Paul, MN 551011667	Electronic Service	No	OFF_SL_14-577_M-14-577
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_14-577_M-14-577
Margaret	Hodnik	mhodnik@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_14-577_M-14-577
Lori	Hoyum	lhoyum@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_14-577_M-14-577
Michael	Krikava	mkrikava@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_14-577_M-14-577
Douglas	Larson	dlarson@dakotaelectric.com	Dakota Electric Association	4300 220th St W Farmington, MN 55024	Electronic Service	No	OFF_SL_14-577_M-14-577
James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_14-577_M-14-577
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_14-577_M-14-577

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Susan	Ludwig	sludwig@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_14-577_M-14-577
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_14-577_M-14-577
Herbert	Minke	hminke@allete.com	Minnesota Power	30 W Superior St Duluth, MN 55802	Electronic Service	No	OFF_SL_14-577_M-14-577
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	Yes	OFF_SL_14-577_M-14-577
Andrew	Moratzka	apmoratzka@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_14-577_M-14-577
Jennifer	Peterson	jppeterson@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_14-577_M-14-577
Thomas	Scharff	thomas.scharff@newpagecorp.com	New Page Corporation	P.O. Box 8050 610 High Street Wisconsin Rapids, WI 544958050	Electronic Service	No	OFF_SL_14-577_M-14-577
Ron	Spangler, Jr.	rlspangler@otpc.com	Otter Tail Power Company	215 So. Cascade St. PO Box 496 Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_14-577_M-14-577
Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_14-577_M-14-577
Karen	Turnboom	karen.turnboom@newpagecorp.com	NewPage Corporation	100 Central Avenue Duluth, MN 55807	Electronic Service	No	OFF_SL_14-577_M-14-577