MINNESOTA
PUBLIC UTILITIES COMMISSION

Staff Briefing Papers

Meeting Date	**April 24, 2025**		**Agenda Item 1****
Company	Minnesota Power		
Docket No.	E-015/M-24-344		
	In the Matter of the Petition of Minnesota Power for Approval of Investments and Expenditures in the Boswell Solar Project for Recovery through Minnesota Power's Renewable Resources Rider under Minn. Stat. § 216B.1645.		
Issues	Should the Commission approve Minnesota Power's recovery of investments and expenditures in the Boswell Solar Project through the Renewable Resources Rider?		
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✓ **Relevant Documents**	**Date**
Minnesota Power – Initial Filing	November 13, 2024
Department of Commerce – Comments	February 11, 2025
City of Cohasset – Comments	February 13, 2025
LIUNA Minnesota/North Dakota – Comments	February 24, 2025
Clean Energy Economy Minnesota (CEEM) – Comments	February 24, 2025
IUOE Local 49 and NCSRC of Carpenters - Comments	February 24, 2025
Minnesota Power – Reply Comments	February 24, 2025
Department of Commerce – Response to Reply Comments	March 18, 2025

Table of Contents

I. Statement of the Issue

Should the Commission approve Minnesota Power's recovery of investments and expenditures in the Boswell Solar Project through its Renewable Resources Rider?

II. Background

On November 13, 2024, Minnesota Power (MP or the Company) filed a petition (Petition) seeking recovery approval, through its Renewable Resources Rider, for costs related to the Boswell Solar Project (Project).

On February 11, 2025, the Department of Commerce (the Department) filed Comments recommending Project approval, with conditions.

On February 13, 2025, the City of Cohasset filed Comments recommending Project approval.

On February 24, 2025, the Laborers' International Union of North America (LIUNA) filed Comments recommending Project approval.

On February 24, 2025, Clean Energy Economy Minnesota (CEEM) filed Comments recommending Project approval.

On February 24, 2025, IUOE Local 49 and NCSRC of Carpenters filed Comments recommending Project approval.

On February 24, 2025, Minnesota Power filed Reply Comments agreeing with some of the Department's recommendations and requested additional recovery of costs associated with the Boswell Interconnector transmission line.

March 18, 2025, the Department filed a response to MP's Reply Comments and reaffirmed its previous recommendations.

III. Parties' Comments

A. Minnesota Power – Petition

MP stated that, in compliance with the 2021 IRP Order,[1] the Boswell Solar Project is an 85 megawatt (MW) alternating current (AC) solar energy facility located near the Boswell Energy Center (BEC) in Itasca County, Minnesota and will cost approximately $163.5 million to build. The Project will be connected to the 230 kV substation at the Boswell Energy Center via an approximately 2.75-mile 230 kV transmission line (Boswell Interconnector). The Company noted

[1] Commission January 9, 2023 Order, Docket No. E-015/RP-21-33, Order Point 1b.

that the Project will generate carbon-free energy for customers, help MP make progress on the Carbon Free and Renewable Energy Standards, boost the tax base of local economies, and create local union jobs.

Minnesota Power requested the following be approved:

1. Approval for investments and expenditures related to the Boswell Solar Project and the Boswell Interconnector pursuant to Minn. Stat. § 216B.1645. Minnesota Power's development of this 85 MW solar project will facilitate compliance under the requirements under Minn. Stat. § 216B.1691.
2. Approval to include associated costs to the existing Renewable Resources Factor under its Renewable Resources Rider.

The Company pointed out that its commitment to diversifying its power supply and supporting renewable energy options is guided by the Company's 2021 IRP[2] and its climate related goals in its *Energy Forward* resource strategy. The Boswell Project is an integral part of its progress towards meeting both the Carbon Free Standard (CFS) and Renewable Energy Standard (RES)[3] and an example of its commitment to reinvest in host communities.

In addition to the Order Point 1b mentioned above, the same Commission Order laid out a bidding process for resource acquisitions for projects in the IRP.[4] MP noted that compliance with this order point is outlined in detail in section III.D.

On November 15, 2023, Minnesota Power issued a Request for Proposal (RFP) for up to 300 MW of regional/in-service territory or net-zero solar. The RFP sought to maximize the regional economic benefits of solar development by including preferences for diverse bidders and domestically sourced materials. Additionally, it contained requirements for using local union labor for construction and permanent staffing, and the development of apprenticeship programs. Evaluation on bids received were performed by Minnesota Power and Independent Evaluator (IE) Levelized Consulting.[5] On September 23, 2024, the Company announced the selection of 205 MW of new solar projects: the Regal and the Boswell Solar Projects.

1. Overview of the Project

The Project was submitted as a self-build project in the RFP and was the lowest cost project bid. The proposed Project will consist of approximately 180,000 mono-crystalline, bifacial solar modules and use single axis tracking technology and is expected to add approximately 166,000 MWh of renewable energy. The Project will interconnect to Minnesota Power's transmission system at the Boswell 230 kV substation. Minnesota Power intends to use Surplus

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[2] Docket No. E-015/RP-21-33.

[3] Petition, at 2.

[4] Commission January 9, 2023 Order, Docket No. E-015/RP-21-33, Order Point 4a.

[5] Petition, Appendix A.

Interconnection Service at the existing Unit 3 generator to interconnect the Boswell Solar Project. This 85 MW Project will provide enough electricity to power approximately 20,300 homes.[6]

2. EnergyForward Strategy

MP observed that this renewable resource development is guided by its 2021 IRP and *EnergyForward* resource strategy, which incorporates a diverse renewable and carbon-free strategy including hydroelectric, solar, biomass, wind, and energy storage resources. Under this strategy, the Company is currently delivering over 50 percent renewable energy to customers and is the first Minnesota utility to achieve this milestone.[7]

MP noted that it is currently exceeding Minnesota's RES requirement in the near term, nearing completion of an RFP to procure up to 400 MW of additional wind energy. The Company's upcoming 2025 IRP will assess a wide range of power supply resources and pathways to meet the recent carbon-free energy generation standard.

3. Project Location

The Project is located near the BEC in Cohasset and in rural Itasca County, Minnesota (Figure 1). A portion of the project is also on privately owned land within the Leech Lake Band of Ojibwe reservation boundaries. Minnesota Power has had project introductory meetings with Leech Lake and has engaged their Tribal Historic Preservation Office. MP noted that initial project introductory letters were provided to the 11 federally recognized tribes within the state as part of Site Permit process.

MP stated that the Project site was selected to utilize existing assets at the BEC, including land already owned by Minnesota Power and the interconnection rights of BEC Unit 3. Locating the Project partially on land already owned by Minnesota Power is efficient and will reduce the revenue requirements of the Project for customers. The site is currently a combination of agricultural land and woodland. Additionally, the Boswell Solar Project is in census tracts identified by the US Department of Energy as containing or adjoining a tract containing a coal-fired electric generation unit retirement. This qualifies the Boswell Solar project for the 10 percent Energy Community Tax Credit Bonus, further reducing the project cost for customers.

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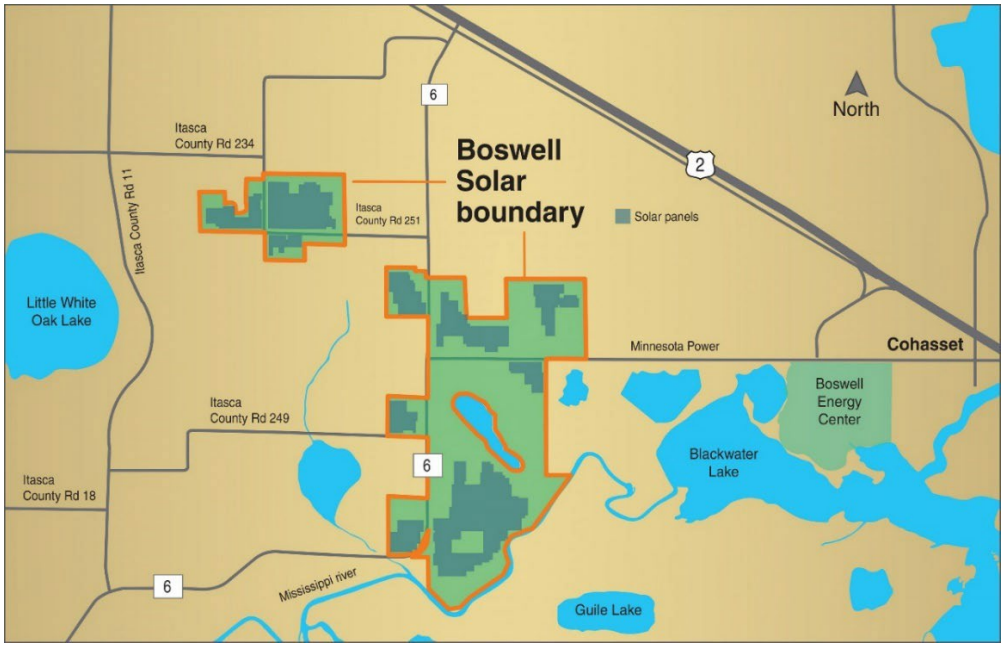
[6] Petition, at 3.

[7] *Id*, at 4.

Figure 1. Location of the Bowell Solar Project.



4. National Grid Renewables Partnership

MP entered into an Asset Purchase Agreement with National Grid on November 20, 2023 that provided a pathway to acquire National Grid's assets associated with the Boswell Solar Project, including land agreements and some early development work products. The Asset Purchase Agreement price is included in the overall project cost.

5. Request for Proposal Process and Project Award

Pursuant to the 2021 IRP Order,[8] Minnesota Power retained an independent evaluator to oversee the RFP process for Minnesota Power's Regional Solar Request for Proposals and provide an independent evaluation of bids. The independent evaluator was obtained because Minnesota Power was proposing solar projects into the bidding process.[9]

On November 15, 2023, Minnesota Power issued a press release opening the RFP all developers. On December 11, 2023, an email was issued by the North American Energy Markets Association (NAEMA) notifying the public and industry members of the RFP opportunity. On November 18, 2023, Minnesota Power held an online seminar that allowed prospective bidders to ask clarifying questions regarding the RFP that was issued.

The RFP requested 300 MW of regionally located solar generation that could be comprised of

[8] Commission January 9, 2023 Order, Docket No. E-015/RP-21-33, Order Point 4e.

[9] Petition, at 11.

PPAs, Build-Operate-Transfer (BOT) agreements, and/or self-build projects. In response, 11 proposals were received, consisting of two energy storage projects, one PPA, two self-build projects, one BOT project, and five BOT or PPA proposals. During the initial independent evaluator's review, it was determined that six proposals did not meet the criteria set forth in the RFP. The remaining five proposals were moved forward to the next phase of the evaluation which included qualitative and quantitative (cost) evaluations.

Since the Company was expecting to receive self-build proposals, consistent with the Commission's Order and FERC Code of Conduct requirements, and under the guidance of legal counsel, the Company instituted a "wall" prior to submitting the RFP between its RFP Team that was responsible for developing, issuing, and implementing the Solar Project and the Solar Development Team that was responsible for developing the self-build proposals. The separation ensured both the integrity of the process and value for Minnesota Power's customers.

The Company received (trade secret) bids for BOT, PPA and self-build options. The cost range was higher due to supply chain uncertainty, concerns about workforce availability, MISO interconnection costs and general inflation and higher interest rates. The Company noted that, while the Inflation Reduction Act (IRA) provides benefits for solar projects, those benefits did not fully offset the increase in cost of solar projects.

In the shortlisting process, Boswell Solar Project was deemed the lowest cost option by the initial assessment by the independent evaluator. Three other projects, including another self-build proposal (Regal Solar Project) and two BOT proposals were selected to continue to the next phase of evaluation, which included further risk assessment and pricing adjustments. At the end of the selection process, the Boswell and Regal Solar[10] self-build projects, totaling 204.5 MW, were selected. The Company then petitioned recovery approval for both projects through its Renewable Resources Rider.

Due to the large cost gap between the self-build projects and the next lowest cost shortlisted projects, MP did not select the full 300 MW of solar projects through this RFP process.[11]

6. Utilization of Federal Legislation

The Boswell Project will take advantage of the extended Production Tax Credit (PTC) and will qualify for a 110 percent production tax credit because it is in census tracts identified by the US Department of Energy as containing or adjoining a tract containing a coal-fired electric generation unit retirement.[12] Furthermore, MP noted that the Project will utilize labor resources complying with the IRA's wage and apprenticeship requirements to secure the full

[10] Docket No. E-015/M-24-343.

[11] Petition, at 13.

[12] Petition, at 13.

base tax credit.[13]

7. Solar Array Construction

The Project's 180,000 modules will be on conventional piles using single axis tracking technology. The tracker technology will be equipped with backtracking, snow shed, and wind/hail stow capabilities. Approximately 22 central inverters will be located throughout the project site. Additionally, a 34.5 kV collector line system will connect the inverters back to a new central collector substation located at the project site[14] that will contain a single 230/34.5 kV with a top rating of 150 megavolt-amperes (MVA) and will connect to a 230 kV line that will deliver energy to BEC's interconnection point.

To ensure the community benefits from the Project, MP plans to utilize local union labor and businesses as much as possible. Additionally, upon the completion of construction, the site restoration work will be completed to establish diverse and native perennials at the site that will provide soil stability and improve soil health while also supporting native pollinators.

8. Socioeconomic Impact

The economic benefits of this investment in solar energy will provide an average of $319,000 in annual tax revenue in Minnesota Power's local communities and will add an estimated $1.26 million to the 2028 Gross Regional Product and boost 2028 regional employment by about 10 (full-time equivalent) jobs[15] and provide long-term employment, tax revenue, and local consumer spending.

9. Transmission and Interconnection

The Company intends to use Surplus Interconnection Service at the existing BEC Unit 3 generator to interconnect the Boswell Solar Project. The Surplus Interconnection Service will allow Minnesota Power to "increase the gross generating capability at the same Point of Interconnection of an Existing Generation Facility without increasing the total amount of Interconnection Service at the Point of Interconnection." It will also allow BEC Unit 3 and the Boswell Solar Project to both operate concurrently so long as "the total combined generating output at the Point of Interconnection for both the original and surplus Interconnection Customer is limited to and shall not exceed the total amount of Interconnection Service of an Existing Generating Facility."[16] Operationally, when solar energy is being produced the BEC Unit 3 will need to decrease coal generation to allow room for the solar energy to be injected into the grid, resulting in a reduction in carbon and other emissions and fuel cost savings.

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[13] *Id*.

[14] *Id*; at 14.

[15] *Id*.

[16] Petition, at 15.

This Solar Project will be connected to BEC's 230 kV substation via a 2.75-mile 230 kV transmission line (Boswell Interconnector). The Boswell Interconnector will be designed to have enough capacity to facilitate surplus or replacement interconnection requests for BEC Units 3 and 4 total combined 959.5 MW generation interconnection rights.[17] The Boswell Solar Project's allocation of Boswell Interconnector costs, excluding costs to make the line double circuit capable, will be based on the percentage of total line capacity used by the Boswell Solar Project. Additionally, a new solar collector substation called Warburg Lake[18] will be constructed along the Boswell Interconnector transmission line and will contain a single 230/34.5 kV transformer with a top rating of 150 MVA connecting the Boswell Solar Project. The Project will be responsible for 100 percent of the Warburg Lake cost.

10. Ensuring Reasonable Project Costs

MP asserted that, when possible, engineering, procurement, and construction contracts will be issued based on competitive bidding. However, contracts may be awarded on a single source basis to qualified contractors based on utilizing existing partnering agreements or to those who have a specific expertise. Furthermore, contractors will be asked to enroll in Minnesota Power's Tier 2 reporting program, which promotes doing business with diverse and small companies (as subcontractors).

11. Renewable Energy Credits

Since 2006, MP has executed PPAs, constructed, or rebuilt over 1,350 MW of wind, solar, and hydro facilities to increase its Minnesota-eligible renewable energy supply.[19] In 2023, the renewable portion of Minnesota Power's retail energy supply was greater than 50 percent of its projected 2025 retail and wholesale electric sales. With the Commission approved 2021 IRP, Minnesota Power's renewable portfolio is expected to increase by up to 400 MW of new wind and up to 300 MW of new regional solar. Minnesota Power is currently working through an RFP process to procure up to 400 MW of additional wind resources. Moreover, the it is currently working through an RFP process to comply with the Distributed Solar Energy Standard (DSES),[20] which is expected to add approximately 65 to 85 MW of additional solar energy to Minnesota Power's portfolio.[21] MP asserted that its customers will receive all the Renewable Energy Credits (RECs) and carbon free benefits from the Project.

12. Project Schedule and Permitting

The Project's proposed schedule is shown in Table 1, which assumes Commission approval by

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17 *Id*.

18 *Id*.

19 *Id*; at 17.

20 Docket No. E-002, E-015, E-017/CI-23-403.

21 Petition, at 17.

October 2025 and the necessary permitting by Q1 2026.

Table 1. Boswell Solar Project Schedule

Task	Anticipated Date
MPUC Permitting Application Filing	Q4 2024
Application for Surplus Interconnection Service with MISO	Q2 2025
Construct Solar Array	Q1 2026-Q2 2027
Conduct Commissioning / Start-up	Q2 2027
Begin Commercial Operation	Q3 2027

MP intended to apply for state site permit by the end of 2024 under Minn. Stat. Ch. 216E. MP will apply for the Boswell Interconnector's Route Permit at the same time.

Currently, the Project does not currently anticipate impacting jurisdictional wetlands; however, as the Project design and layout progresses, MP will assess the need for wetland impact permitting from both the US Army Corps of Engineers and the Minnesota Board of Water and Soil Resources. Additionally, the Project will work with Engineering and Construction partners to develop a Storm Water Pollution Prevention Plan and receive coverage under the statewide general National Pollutant Discharge Elimination System construction stormwater permit from the Minnesota Pollution Control Agency.

13. Summary of Investments, Expenditures and Customer Impacts

a. Estimated Project Costs

As shown in Table 2, the Project will cost approximately $163.5 million.

Table 2. Minnesota Power's Capital Costs for the Boswell Solar Project and Surplus Interconnector

Capital Costs * **(dollars in millions)**	
[TRADE SECRET DATA BEGINS	
1) Solar Array	[redacted]
2) Solar Transmission Interconnection	
3) Sub-total Boswell Solar Project	
4) Boswell Surplus Interconnection	
Total Project	$ 163.5
Costs include AFUDC and internal capitalized costs and assumes current cost recovery starting October 1, 2025.	
TRADE SECRET DATA ENDS]	

The total annual revenue requirements over the 35-year life of the Project were presented in a Trade Secret Table[22] and were calculated using the total capital costs and anticipated PTC revenue, including Allowance for Funds Used During Construction (AFUDC) and internal capitalized costs. MP will exclude internal capitalized costs and AFUDC on internal capitalized costs from the revenue requirements once the project is included in a subsequent Renewable Resources Rider Factor filing. Additionally, the revenue requirements will be updated to reflect the outcomes of the Company's current rate case.[23]

Minnesota Power and its Contractors will be responsible for project management, permitting, licensing and approvals, design, procurement, site preparation, balance of plant construction, and ancillary facilities. The Procurement and Construction Contractor will be responsible for delivery of all the remaining solar components to the project site, as well as the installation and commissioning of the solar array.

b. Operations and Maintenance

MP will build upon its experience operating and maintaining solar facilities and will continue to use renewable technicians to perform the operation and maintenance activities required to operate the solar facility. While solar photovoltaic systems do not require fuel, have minimal moving parts, and do not require substantial personnel, considerable operations and maintenance (O&M) costs exist to properly maintain the array. Base O&M expense for the Project is trade secret and is projected to escalate at approximately 2.5 percent annually.[24] It is assumed that many internal components will need to be replaced when equipment warranties

[22] Petition, pp 20-21.

[23] Docket No. E-015/GR-23-155.

[24] Petition, at 22.

come to an end. These ongoing (trade secret) capital costs will begin in 2037 and are projected to escalate at approximately 1.5 percent annually.

c. Estimated Customer Impact

Assuming approval by October 2025, Table 3 summarizes the estimated rate impact by customer class, with rider recovery starting in October 2025, and an in-service by September 30, 2027. The Boswell and Regal Solar Projects are the first Minnesota Power solar projects where costs will apply to all customer classes.[25] Previously, Large Power classes were exempt from solar projects that complied with the Solar Energy Standard.

Based on the above assumptions, all the Non-Large Power classes would have a gradual increase in rates in 2025 and 2026 to about 0.185 cents per kWh by 2027, the first-year in-service. For an average residential customer, in 2027, this represent $1.31, or 1.34 percent, monthly increase. The Large Power average class rate would see a gradual increase in 2025 and 2026 to about 0.151 cents per kWh by 2027. This would be an increase of about 1.78 percent in 2027.[26]

When factoring in the reduction in the Fuel Adjustment Clause (FAC), the total rate impact will be lower than the values discussed above.[27]

[25] *Id*; at 23.
[26] *Id*.
[27] *Id*.

Table 3. Estimated Rate Impacts

Rate Class Impacts /1	2025	2026	2027
Annual MN Jurisdictional Revenue Requirements	340,508	6,723,418	12,693,770
Residential (average current rate, cents/kWh)	13.814	13.814	13.814
Increase/Decrease (cents/kWh) /2	0.005	0.098	0.185
Increase/Decrease (%)	0.04%	0.71%	1.34%
Average Impact ($ / month)	$0.03	$0.69	$1.31
General Service (average current rate, cents/kWh)	13.879	13.879	13.879
Increase/Decrease (cents/kWh) /2	0.005	0.098	0.185
Increase/Decrease (%)	0.04%	0.71%	1.34%
Average Impact ($ / month)	$0.13	$2.65	$5.02
Large Light & Power (average current rate, cents/kWh)	10.862	10.862	10.862
Increase/Decrease (cents/kWh) /2	0.005	0.098	0.185
Increase/Decrease (%)	0.05%	0.90%	1.71%
Average Impact ($ / month)	$12	$235	$445
Large Power (average current rate, cents/kWh)	8.491	8.491	8.491
Increase/Decrease (Demand & Energy Combined) (cents/kWh) /2	0.004	0.080	0.151
Increase/Decrease (%)	0.05%	0.94%	1.78%
Average Impact ($ / month)	$1,996	$39,919	$75,346
Lighting (average current rate, cents/kWh)	31.171	31.171	31.171
Increase/Decrease (cents/kWh) /2	0.005	0.098	0.185
Increase/Decrease (%)	0.02%	0.31%	0.59%
Average Impact ($ / month)	$0.01	$0.15	$0.29

Notes:

1/ Average current rates are 2022 Final General base rates without riders per MPUC decision (E-015/GR-21-335) adjusted to include current rider rates. Current rider rates included Renewable Resources Rider rates, Transmission Cost Recovery Rider rates, Solar Adjustment rates, Conservation Program Adjustment rates, and Fuel and Purchased Energy with True-Up. Average $/month impact based on 2024 budgeted billing units.

2/ Increase/Decrease (cents/kWh) shown is the estimated average rate based on annual revenue requirements of the new project with full transmission costs.

d. Tax Matters

MP stated that the Project will comply with prevailing wage and apprenticeship requirements and expects to qualify for 110 percent of the PTC value. The total gross PTC benefit of approximately $63.4 million will reduce the revenue requirement during the first 10 years the Project is in service.

The IRA allows PTCs generated after 2022 to be transferred (sold) to an eligible. The Company intends to transfer (sell) the Boswell Project credits at a discount, which is necessary to incentivize eligible transferee taxpayers to purchase them. The discount will reduce the net benefit of the PTCs to customers, but the cumulative benefit of immediately reducing the Accumulated Deferred Income Tax Asset (ADITA) through the sale of PTCs and customers seeing those benefits sooner will outweigh the detriment of the discount. The benefits will flow

through the Renewable Resource Rider.

14. The Boswell Solar Project is in the Public Interest

MP considers the Boswell Project a key component of continuing the Company's *EnergyForward* resource strategy because it will provide substantial benefits to its system and its customers through the addition of local renewable clean power that will continue to diversify the Company's wind, hydro, and distributed solar centric renewable portfolio, provide energy during higher demand periods, and will reduce greenhouse gases and other criteria pollutants. Additionally, the Boswell Project will ensure that the Company is making progress towards the RES and CFS, while leveraging federal tax credits and existing energy infrastructure to efficiently add new renewable energy to the system.

The Company further pointed out that this Project will both reduce carbon emissions and criteria pollutants and increase access to clean energy resources for Minnesota Power's customers in Northern Minnesota.

15. Capacity and Energy

When fully operational, the Boswell Solar Project will add approximately 166,000 MWh of renewable energy and, on average, about 3 MW of accredited capacity across the four annual planning seasons.[28] MP anticipates the accredited capacity value for the Boswell Project to decline as additional solar is added to the broader system and as MISO continues to update its resource adequacy program. Since the Boswell Solar Project will share a generator interconnect with BEC Unit 3, approximately 15 MW of the 85 MW of nameplate capacity can be accredited in MISO. However, BEC Unit 3 is using the remainder of the interconnect for their accredited capacity, which is better overall for customers due to the higher accreditation a dispatchable resource reserves in MISO's construct. Table 4 summarizes seasonal capacity values.

Table 4. Boswell Solar Project - Seasonal Accredited Capacity Values (MW)[29]

Boswell Seasonal Capacity Values				
	Spring	**Summer**	**Fall**	**Winter**
2028	3	5	4	0
2038	2	4	4	0

[28] Petition, at 26.

[29] Capacity values are based off MISO's current Seasonal Accredited Capacity methodology. The 2028 and 2037 value applies an Effective Load Carrying Capability curve. This accredited capacity values could be reduced further if FERC approves MISO's proposed Direct-Loss of Load approach for resource adequacy, which is expected to start for MISO Planning Year 2028-2029.

16. Meeting the RES and CFS

In addition to the Boswell Project moving towards the goals of the CFS and exceed the RES, Minnesota Power is seeking up to 400 MW of wind through an RFP that was issued on February 15, 2024. The Company expects to bring forward wind projects from the RFP for Commission approval in early 2025. Furthermore, in compliance with the DSES, MP is seeking approximately 65 to 85 MW of distributed solar through at least two RFP rounds. The first DSES RFP was filed with the Commission on November 1, 2024 for review by the Department of Commerce. These initiatives will each continue Minnesota Power's decarbonization progress.

MP, in its upcoming IRP, will continue the evaluation and consideration of power supply alternatives as it works towards a sustainable path to meet the CFS by 2040. The Boswell Project is projected to provide energy during periods of high customer demand during the on-peak hours of a day when solar irradiance is available and can help protect customers against the volatility of regional energy markets.

The Company noted that energy production is not well matched with customer demand in the winter season because customer demand is highest in the evening hours when the sun is not shining. MP provided a trade secret demonstration[30] of how the timing of customer demand versus solar production in a typical winter week is more misaligned than in a typical summer week. This variability of solar generation contributes to a no accredited capacity value for a solar project for the purposes of demonstrating resource adequacy. Consequently, it is estimated that the Boswell Solar Project will provide 0 MW of accredited capacity in the winter season versus the full 85.0 MW nameplate of the solar array during the winter season.

17. Customer Impact Analysis

To determine the Project's Q3 2027 addition impact on customers, Minnesota Power added the Project to its EnCompass modeling. The Encompass results quantified that the proposed Boswell Project will:

1. displace on-peak wholesale market purchases and some fossil fuel-based generation as the new solar energy is added to the Minnesota Power system,
2. reduce total carbon dioxide (CO_2) emissions, as well as other emissions, and
3. result is a small increase in power supply cost for Minnesota Power's customers.

To provide additional insight on the total solar projects selected in the RFP, included in this filing is the change in power supply cost when the Boswell Solar Project and Regal Solar Project are added. There were two Encompass scenarios MP used to simulate the addition of the Regal Project, and both scenarios were run – both with and without – the Commission-approved mid-CO_2 regulation tax of $40 per ton in 2028 and the mid-CO_2 environmental cost of $260[31]

[30] Petition, at 29.

[31] Petition, at 31.

starting in 2025, and other mid-environmental costs.[32] The Company also evaluated the power supply cost impacts for the other Commission-ordered carbon regulation cost and environmental cost scenarios (i.e. high and low scenarios), those results are shown in Appendix B (additional analysis petition) and a table of all the environmental cost scenarios evaluated is included in Appendix C (assumptions appendix):[33]

- Scenario 1 – Baseline
- Scenario 2 – Baseline + Boswell Solar
- Scenario 3 – Baseline + Regal + Boswell Solar

The Baseline scenario contains all Minnesota Power's existing thermal and renewable energy resources. Scenario 2 incrementally adds the proposed Regal Project and associated project costs to the Baseline scenario. The third scenario incrementally adds Boswell and Regal Solar, and associated costs, to the baseline scenario. The three scenarios are compared to each other to identify the power supply and cost impacts of adding the Projects.

As shown in Figure 2, when the 85.0 MW Boswell Project is added, existing market energy purchases and thermal generation are displaced. over the Project's first 20 years. On average, the Boswell solar energy generated will annually displace a mix of 49 percent market purchases and 51 percent existing thermal generation each year. These displacements will reduce Minnesota Power's emissions customers over the life of the Project.

[32] See Docket No. E-999/CI-07-1199; E-999/DI-22-236 - October 2023.

[33] Petition, at 31.

Figure 2. Energy Displaced by the Boswell Solar Project

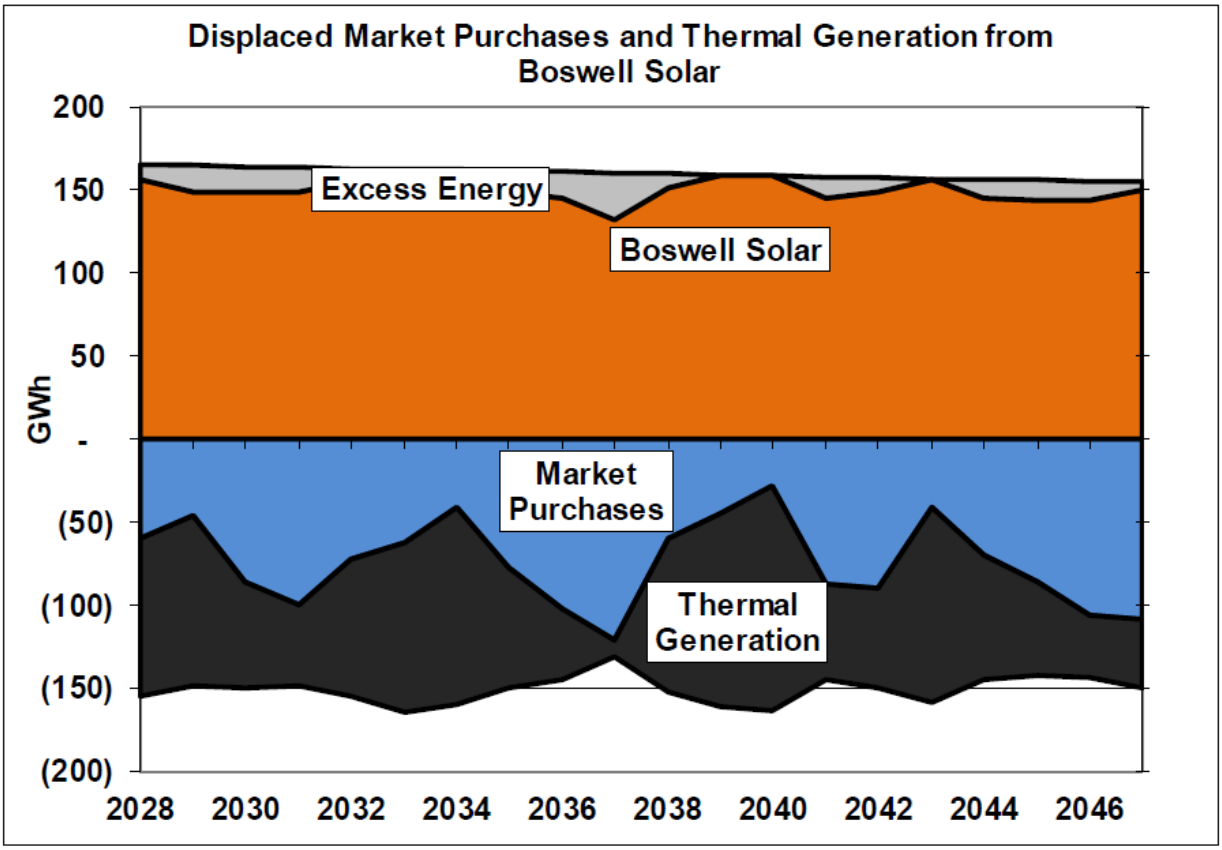


Table 5 summarizes the Project's average annual avoided emissions for CO_2, sulfur dioxide (SO_2), nitrogen oxides (NOx), and mercury (Hg), over the study period. Carbon dioxide is projected to see the greatest annual reduction with an average of 105,785 tons of CO_2 removed. When environmental externality effects are included in the analysis, the Project's reduction results, , over its life, will reduce environmental costs by $221 million.[34]

[34] Petition, at 33 (Based on the net present value for years 2025 through 2050, in 2025 dollars).

Table 5: Average Annual Avoided Emissions (2027-2050)

Effluent (Tons)	Average Annual Reduction when adding Boswell Solar	Average Annual Reduction when adding Regal + Boswell
CO2	105,785	266,832
SO2	55	135
NOx	3	9

MP observed that Encompass' resource planning evaluations identify a range of outcomes that are dependent on the carbon and regulation costs incorporated. The cases provided in Table 6 are the Customer Billing Case and the Mid Environmental and Carbon Regulation case.[35] When adding the Boswell project:

- In the Customer Billing case, total power supply costs increase by $41 million.
- When considering the carbon regulation cost and environmental cost benefits in the Mid Environmental and Carbon Regulation case, the total power supply costs decrease by $209 million, or 1%; demonstrating an overall net benefit for customers.

When considering both projects in the Customer Billing case, the Company saw an $88 million increase in power supply costs; however, in the Mid Environmental and Carbon Regulation case, the total power supply cost decreased $526 million.

[35] Petition, at 34.

Table 6: Encompass Power Supply Cost Summary ($2025, NPV 2025-2050)

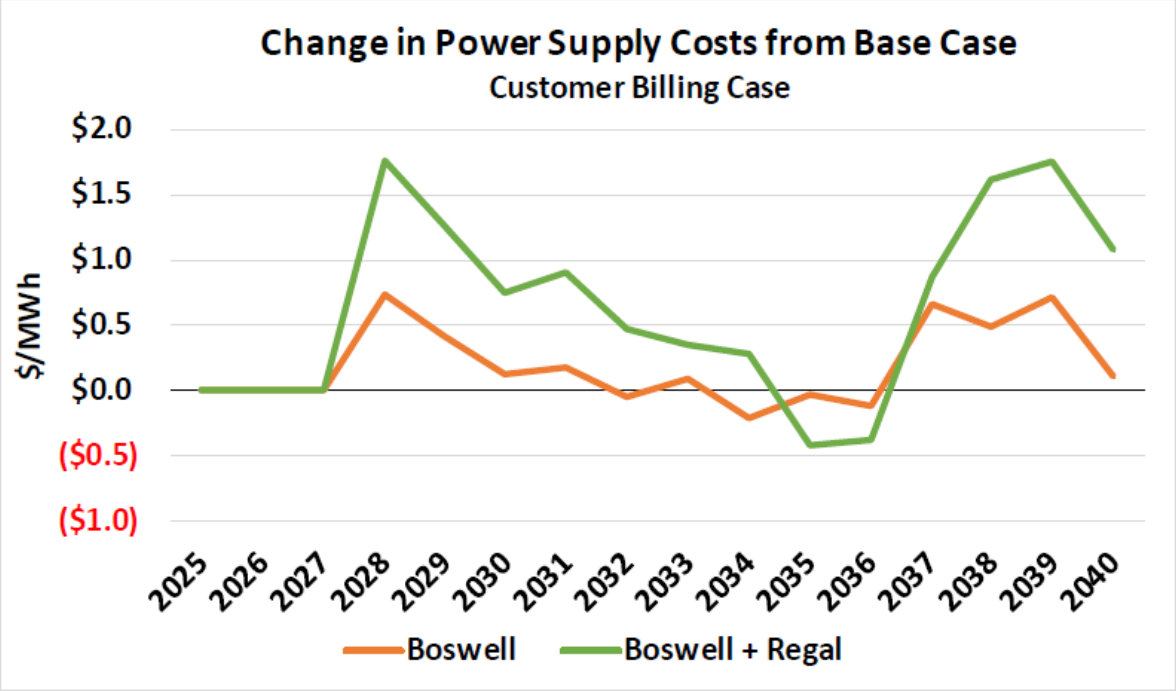
Customer Billing Case ($ in Millions, 2025 $)			
	Base	**Base + Regal (Delta from Base)**	**Base + Regal (Delta from Base)**
Total Cost	$9,569	$34	$88

Mid Environmental and Carbon Regulation Case ($ in Millions, 2025 $)			
	Base	**Base + Regal (Delta from Base)**	**Base + Regal + Boswell (Delta from Base)**
Base Cost	$10,032	$8	$35
Carbon Regulation	$1,234	($25)	($65)
Environmental Cost	$13,350	($192)	($496)
Total Cost	$24,616	($209)	($526)

Table 7 shows that, when adding the Boswell project, the cost impacts range from approximately $0.20/MWh in savings to $0.70/MWh increase in cost. When adding the Regal and Boswell projects the cost impacts range from approximately $0.40/MWh in savings to a $1.80/MWh increase. The reason for the increases starting in 2037 and 2038 is due to production tax credits rolling off.

Minnesota Power asserted that the Boswell Project is an opportunity that brings a unique solar project that reduces emissions and takes advantage of the federal tax incentives with a small increase to power supply costs.

Table 7: Customer Billing $/MWh Power Supply Cost Comparison ($2025, NPV 2025-2050)



18. Conclusion

MP requested approval of the following:

1. Approval for investments and expenditures related to the Boswell Solar Project and the Boswell Interconnector pursuant to Minn. Stat. § 216B.1645. Minnesota Power's development of this 85 MW solar project will facilitate compliance under the requirements under Minn. Stat. § 216B.1691.

2. Approval to include costs to the existing Renewable Resources Factor under its Renewable Resources Rider.

B. Department of Commerce – Comments

The Department reviewed the Petition for compliance with the completeness requirements and concluded that the Petition is complete.

As part of its review, the Department noted that it analyzed need for and alternatives to the project, ratepayer protections, and whether the Project meets the Renewable Energy Standard (RES) and Carbon Free Standard (CFS) as described in Minn. Stat. § 216B.1691.

1. Need and Alternative Analysis

The Department noted the 2021 IRP Order instructed Minnesota Power to, as practicable, acquire up to 300 MW of regional/in-service territory or net-zero solar by 2026.[36] The Boswell Solar Project was proposed help to meet those requirements.

Additionally, as both an "eligible energy technology" and a "carbon- free" technology (discussed further below), the Boswell Solar Project will help Minnesota Power to continue to comply with the RES and CFS. As a result, the Department concluded that, per the most recent IRP, MP has a need for solar and for new CFS-qualifying resources.

The Department concluded that Minnesota Power reasonably followed the steps outlined by the Commission and calculated the levelized cost of the various bids correctly, that Minnesota Power has demonstrated a need for the Boswell Solar Project and that the bidding process demonstrated there are no superior solar alternatives.[37] Consequently, the Department recommended the Commission approve Minnesota Power's investment in the Project.

2. Ratepayers Protections

The Department recommended that capital cost recovery be set at Minnesota Power's bid costs for the Boswell Solar Project.[38] This means that, if up-front capital costs exceed the cap, the Company, not customers, bears the costs. However, if savings are achieved the Company retains them. The Department noted that third party bidders are treated in this manner, so treating Minnesota Power in the same manner is reasonable and preserves the integrity of the bidding process.

Consistent with a prior Commission Order,[39] the Department recommended the Minnesota Power be authorized to request approval to exceed the cost-cap if it can show that any cost overruns are the result of a government action (e.g. tariff, trade investigation, etc.) that causes a meaningful disruption to solar panel supplies and market prices.

3. Renewable Energy Standard (RES) and Carbon Free Standard (CFS) Obligations

a. RES Obligation

Minn. Stat. § 216B.1691 Subd 2(s) describes Minnesota's Renewable Energy Standard Objectives and provides RES and CFS obligations for Minnesota Electric Utilities as follows:

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[36] IRP Order at point 1(b).

[37] Department's Comments; at 3.

[38] Department's Comments; at 3.

[39] See: Commission's October 25, 2023 Order, Docket No. E-002/M-22-403, *In the Matter of the Petition of Northern States Power Company, d/b/a Xcel Energy, for Approval of Sherco Solar 3 and the Apple River Solar Power Purchase Agreement*, Order Point 5a.

> 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 the electric utility generates or procures an amount of electricity from an eligible energy technology that is equivalent to at least the following standard percentages of the electric utility's total retail electric sales to retail customers in Minnesota by the end of the year indicated:
>
> (1) 2012 12 percent
> (2) 2016 17 percent
> (3) 2020 20 percent
> (4) 2025 25 percent
> (5) 2035 55 percent.

Since the term “eligible energy technology” is defined by Minn. Stat. § 216B.1691 subd. 1 (c) includes solar, the Department concluded that the Boswell Solar Project qualifies for application toward Minnesota Power’s EETS and RES obligation.

Since the term “eligible energy technology” as defined by Minn. Stat. § 216B.1691 subd. 1 (c) includes including solar, the Department concluded that the Boswell Solar Project qualifies for application toward Minnesota Power’s EETS and RES obligation.

b. CFS Obligations

Minn. Stat. § 216B.1691 subd. 2g states:

> In addition to the requirements under subdivisions 2a and 2f, each electric utility must generate or procure sufficient electricity generated from a carbon-free energy technology to provide the electric utility's retail customers in Minnesota, or the retail customers of a distribution utility to which the electric utility provides wholesale electric service, so that the electric utility generates or procures an amount of electricity from carbon free energy technologies that is equivalent to at least the following standard percentages of the electric utility's total retail electric sales to retail customers in Minnesota by the end of the year indicated:
>
> (1) 2030 80 percent for public utilities; 60 percent for other electric utilities
> (2) 2035 90 percent for all electric utilities
> (3) 2040 100 percent for all electric utilities.

The term "Carbon-free" is defined by Minn. Stat. § 216B.1691 subd. 1 (b) as a technology that

generates electricity without emitting carbon dioxide. As solar generation does not emit carbon dioxide, the Department concluded that the Boswell Solar Project qualifies for application toward Minnesota Power's CFS obligation.

4. Renewable Resource Rider

The Department noted that MP is seeking approval for investments, expenditures, and costs related to the Boswell Solar Project through Minnesota Power's Renewable Resources Rider. Minn. Stat. § 216B. 1645, subd. 2a (a) defines which projects qualify for rider recovery:

> 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.

The Department further observed that Minn. Stat. § 216B. 1645, subd. 2a (a) provides three paths for a project to address the RES or CFS to qualify for rider recovery:

- approval via Minn. Stat. § 216B.243, which establishes the CN requirements;
- approval via Minn. Stat. § 216B.2422, which allows a utility to select resources through a Commission-approved bidding process; or
- approval via Minn. Stat. § 216B.243 subd. 9 which states that the CN requirements do not apply to a wind or solar generation facility that is intended to be used to meet the requirements of the EETS or the CFS.

The Department acknowledged that, although MP is exceeding its RES requirements in the near term,[40] the Company has a need for additional energy under its CFS requirements. As such, the Department concluded that the Project qualifies for a CN exemption as it is being acquired via a Commission-approved bidding process. Additionally, the analyses indicate it is reasonable to conclude that the Project will address the RES and CFS and that the Project was acquired via Minn. Stat. § 216B.2422. Consequently, the Department recommended that, subject to review and approval of specific costs to be presented in a future petition, cost recovery of the Projects through the Renewable Resource Rider be authorized

5. Minnesota Power's Bidding Process

Order Point 4 of the 2021 IRP Order states that Minnesota Power must use a bidding process

[40] Department's Comments, at 5.

for its future resource acquisitions for the projects in the IRP, as follows:

a. Ensure that the RFP is consistent with the Commission's then-most-recent IRP order and direction regarding size, type, and timing unless changed circumstances dictate otherwise.
b. Provide the Department and other stakeholders with notice of RFP issuances.
c. Notify the Department and other stakeholders of material deviations from initial timelines.
d. Update the Commission, the Department, and other stakeholders regarding changes in the timing or need that occur between IRP proceedings.
e. In instances where Minnesota Power or an affiliate proposes a project, engage an independent evaluator to oversee the bid process and provide a report for the Commission.
f. Request that the independent evaluator, if engaged, specifically address the impact of material delays or changes of circumstances on the bid process.
g. Any RFP issued by Minnesota Power must include the option for both PPA and BOT proposals unless the Company can demonstrate why either a PPA or BOT proposal is not feasible.
h. Require Minnesota Power to notify the Commission of a detailed net book value offered by Minnesota Power in a future rate recovery proceeding.
i. Within 30 days of developing an RFP, require Minnesota Power to file a compliance filing detailing the RFP process and to include a template of the RFP.[41]

With the help of an independent evaluator, the Company completed the RFP seeking 300MW of regionally located solar generation.[42] Minnesota Power did not select the full 300 MW due to significant cost differences between the selected projects (Boswell and Regal) and the next least expensive proposal.[43] The Department concluded that Minnesota Power has complied with the RFP process outlined in the IRP Order.

6. Economic Development

Minn. Stat. § 216B.1691, subd. 9 (a) describes the following as reasonable actions the Commission must take to maximizes net benefits to all Minnesota citizens.

(1) the creation of high-quality jobs in Minnesota paying wages that

[41] Commission's Order January 9, 2023 Approving Plan and Setting Additional Requirements, Docket No. E-015/RP-21-33, at 14.
[42] Petition, Docket No. E-015/M-24-344 at pp 11-12.
[43] *Id*.

support families;
(2) recognition of the rights of workers to organize and unionize;
(3) ensuring that workers have the necessary tools, opportunities, and economic assistance to adapt successfully during the energy transition, particularly in environmental justice areas;
(4) ensuring that all Minnesotans share (i) the benefits of clean and renewable energy, and (ii) the opportunity to participate fully in the clean energy economy;
(5) ensuring that statewide air emissions are reduced, particularly in environmental justice areas; and
(6) the provision of affordable electric service to Minnesotans, particularly to low-income consumers.

The Department noted that the IRP 2021 Order required Minnesota Power to meet its customer and renewable product needs between 2025 and 2030 by working with organized labor and other interested stakeholders to maximize socioeconomic benefits to customers and host communities by prioritizing utility investment in its service territory, use of local labor for construction and permanent staffing, and development of apprenticeship pathways when procuring new energy resources.[44] Based on its review, the Department concluded that the Project meets the requirements for economic development as described in Minn. Stat. § 216B.1691, subd. 9 (a) and the IRP Order.

7. Reliability

Based on its review, the Department concluded that there is no indication that the Project will create negative reliability impacts.

8. Ratepayer Impacts

The ratepayer/customer impact is discussed in detail on page 12 of these briefing papers. The Boswell Solar Project was selected, in part, due to having the lowest levelized cost of energy—which means having the lowest direct impact on ratepayers. Therefore, the Department concluded that the Project's ratepayers' impact is reasonable.

9. Tax Matters

The Department observed that the Boswell Project is expected to go into service in 2027 and will qualify for production tax credits (PTCs). The project will use prevailing wage and apprenticeship requirements and is expected to qualify for 110 percent of the PTC value, which is approximately $63.4 million in earned credits during the first 10 years the Project is in

[44] Department's Comments; at 7.

service.[45] Additionally, MP stated:[46]

> The IRA allows PTCs generated after 2022 to be transferred (sold) to an eligible taxpayer in exchange for cash. The Company intends to transfer (sell) the credits for the Regal Project. Transferring credits is a benefit to customers because the ADITA [Accumulated Deferred Income Tax Asset] will remain unchanged; the credits earned will increase the ADITA, but the cash received will immediately reduce the ADITA. This will allow the ADITA to decrease faster than if the Company retained the credits for its own use. Minnesota Power expects to transfer the PTCs at a discount which is necessary to incentivize eligible transferee taxpayers to purchase the credits. The discount will reduce the net benefit of the PTCs to customers, but the cumulative benefit of immediately reducing the ADITA through the sale of PTCs and customers seeing those benefits sooner will outweigh the detriment of the discount. The benefits will flow through the Renewable Resource Rider.

The Department reviewed MP's estimate of PTC benefits and concluded that the estimate is reasonable. To ensure that there are net benefits to ratepayers, the Department recommended that MP to be required track the actual cost and benefits of selling PTCs in its annual renewable energy rider filings. To calculate the cost, MP would use the increased RES Rider revenue requirement due to additional costs/discount from selling the PTCs. To calculate the benefit, MP would calculate the revenue requirement impact of the reduced ADITA from selling the PTCs.[47] If the cost benefit tracker does not show a net benefit to ratepayers, the Department recommended MP refund the difference.

10. Department's Recommendations

The Department recommended the following:

1. COMPLETENESS
   - The Petition be found as complete.

2. APPROVE MINNESOTA POWER'S INVESTMENTS
   - Minnesota Power's investment in the Boswell Solar Project be approved.
   - Cost recovery be limited to Minnesota Power's bid costs for the Boswell Solar Project.
   - Authorize Minnesota Power to request approval to exceed the cost-cap if it can show that any cost incurred above the cap are the result of a government action

[45] Department Comments; at 8.

[46] Petition, at 25.

[47] Department's Comments, at 9.

(e.g. tariff, trade investigation, etc.) that causes meaningful disruption to solar panel supplies and market prices.

3. RENEWABLE ENERGY STANDARD AND CARBON FREE STANDARD
    - Determine that the Boswell Solar Project qualifies toward Minnesota Power's RES obligation.
    - Determine that the Boswell Solar Project qualifies toward Minnesota Power's CFS obligation.

4. RENEWABLE RESOURCE RIDER
    - Determine that the Boswell Solar Project is exempt from the CN requirements under the Bidding Exemption because the Project was selected in a Commission-approved bidding process.
    - Subject to review and approval of specific costs in a future petition, authorize future cost recovery of Boswell Solar Project through the Renewable Resource Rider.

5. TAX MATTERS
    - Approve MP's proposal to sell PTCs. However, to ensure there are net benefits to ratepayers, require MP to track the actual cost and benefits of selling PTCs in its annual renewable energy rider filings.

C. City of Cohasset – Comments

The City of Cohasset expressed support for both of Minnesota Power's Boswell and Regal Solar Projects. The City noted that while the Boswell Solar Project represents another meaningful investment in Minnesota's clean energy future, it is imperative that future initiatives prioritize economic development within coal impacted communities, like Cohasset and their surrounding communities that have been impacted by the energy transition.

The City requested approval of the Boswell and Regal Solar projects as part of this broader effort to secure a sustainable future for Minnesotans.

D. LIUNA Minnesota/North Dakota – Comments

LIUNA stated that it strongly supports the Boswell Solar Project and the Regal Solar Project, which will bring economic opportunity to communities and workers impacted by planned retirements of coal plants, while cost-effectively helping MP meet renewable and carbon-free energy generation requirements.

LIUNA concurs with the Department, that the investment is in the public interest, meets applicable requirements, and is recoverable through the renewable resource rider. LIUNA

observed that its members rely on MP for job and career opportunities building and maintaining power generating facilities. Additionally, it asserted that the Communities depend on the utility to power the mines and mills that form the backbone of the region's economy and drive the local construction industry.

LIUNA noted that it shares concerns expressed during the development of MP's current IRP over the relatively small share of clean energy investment occurring in and around the utility's service territory. However, it stated that the proposed Boswell and Regal Solar projects provide an opportunity to remedy this issue by generating hundreds of jobs and millions of dollars in lease and tax revenues for MP customers and in communities served by the utility.

The organization recommended that any cost cap recognize not only the impact of potential tariffs, but also the broader volatility around markets for components, materials and construction services required to build utility-scale infrastructure.

E. Clean Energy Economy Minnesota (CEEM) – Comments

CEEM observed that, based on the available information, the Regal and Boswell Solar Projects hold potential to generate jobs, economic development, and electricity from clean, renewable energy via solar arrays. Moreover, about 100 jobs, and 150 jobs at peak construction will be tied to the Regal Solar Project.[48] The Regal and Boswell Solar Projects will have a large, positive impact for regional economic development[49] and are anticipated to provide local jobs and boost the economy. For these jobs and economic reasons, CEEM supports the Regal and Boswell Solar Projects. Additionally, the Regal Solar Project is anticipated to add approximately 242,000 MWh of renewable energy to the grid[50] and the Boswell Solar Projects is anticipated to add 166,000 MWh to the grid.[51]

Finally, for Minnesota Power and Minnesotans to capture the potential socioeconomic and environmental benefits from these two projects, CEEM supports the approval of investments and expenditures, consistent with the applicable Minnesota law, to develop both the Regal Solar Project and the Boswell Solar Project.

F. IUOE Local 49 and NCSRC of Carpenters – Comments

IUOE Local 49 and NCSRC of Carpenters noted that their Unions represent workers in the construction industry who build and maintain energy infrastructure–including solar.

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[48] Minnesota Power, Regal Solar Project Information Sheet, 1 (February 2025) (including reference to EnergyForward, mnpower.com/EnergyForwad, at https://mnpower.com/energyforward, wherein Minnesota Power sets forth its vision on its "commitment to climate, customers and communities").

[49] Clean Energy Economy Minnesota Comments; at 2.

[50] Petition, at 8.

[51] Petition, at 9.

Additionally, both participated in the most recent IRP and were parties to the settlement that resulted in the order point requiring MP to acquire up to 300 MW of solar resources.

The group stated that they support MP's proposed investments in the Regal and Boswell solar projects, which will provide cost-effective solar energy for Minnesota ratepayers and will allow MP to comply with Minnesota's clean energy requirements. The Unions also asserted that both projects should qualify towards MP's obligations under the 100% by 2040 law; and support the use of the Renewable Resources Cost Recovery Rider for these projects.

G. Minnesota Power – Reply Comments

MP agrees with most of the Department's recommendations but specifically addressed the as following one:

1. **Limit cost recovery to costs set at Minnesota Power's bid for the Boswell Solar Project.**

Minnesota Power aims to ensure cost-effective and flexible infrastructure development that benefits customers while addressing current and future energy needs. The Company recognizes the Department's recommendation that the Commission limit the cost recovery to a capital cost cap that reflects the costs bid by Minnesota Power for the Boswell Solar Project. While the Company understands this recommendation, Minnesota Power also respectfully requests Commission approval to recover the additional costs associated with the Boswell Interconnector transmission line that were not included in the bid based on prudent utility planning principles. This includes building the Boswell Interconnector transmission line and supporting infrastructure larger to accommodate the full BEC generation of 959 MW rather than only the 85 MW from the Boswell Solar Project.

MP noted that, given the rapidly evolving economic landscape and significant constraints for siting new transmission lines near the Boswell, investment in the Boswell Interconnector is essential. Additionally, the Boswell Interconnector's proposed design positions Minnesota Power to have increased flexibility to utilize the existing interconnection rights at BEC.

The Company asserted that building new transmission near BEC is challenging due to limited space for new infrastructure so constructing facilities sized only for Boswell Solar along the current corridor would constrain future transmission expansion and potentially lead to higher costs if upgrades are needed later. Therefore, the Boswell Interconnector will be designed and constructed as a double circuit capable transmission line,[52] allowing for a future second 230 kV transmission line on the same structures, if needed. By constructing the line as proposed,

[52] Based on prudent utility planning principles at 3.

Minnesota Power is developing a least-cost pathway for flexibility at BEC, while ensuring the infrastructure is built in a way that would support future opportunities for siting at this location.

2. **Authorize Minnesota Power to request approval to exceed the cost-cap if it can show that any cost incurred above the cap are the result of a government action (e.g. tariff, trade investigation, etc.) that causes meaningful disruption to solar panel supplies and market prices.**

Minnesota Power greatly appreciates the Department's approach to managing the cost-cap associated with the Boswell Solar Project. Minnesota Power will diligently monitor expenses. The costs of photovoltaic solar energy panels, components and related equipment will be included under the Renewable Rider, ensuring transparency and accountability in managing the Boswell Solar Project's budget. This strategy helps balance cost control with the need to adapt to external economic factors, ultimately benefiting Minnesota Power customers.

3. **Approve MP's proposal to sell PTCs. However, to ensure there are net benefits to ratepayers, require MP to track the actual cost and benefits of selling PTCs in its annual renewable energy rider filings.**

To account for transfer of the PTCs to eligible transferee taxpayers in exchange for cash payments, effective with Minnesota Power's 2024 RRR Petition[53] the Company added two adjustments to its PTC true-up procedure. The first accounts for the PTC discount that is necessary to incentivize the transferees to purchase the credits. The second accounts for the ADITA reduction as cash is received from the transferee. The ADITA reduction will accumulate with each cash payment received. Minnesota Power expects an on-going net benefit to customers and commits to providing annual updates in its RRR petition.

H. Department – Response to Reply Comments

In the Department's response to MP's Reply Comment, it observed that the Boswell Interconnector was not included in the Company's bidding process. It was nonetheless included in the capital costs proposed by the Company in its Petition.[54] The Department concluded that exclusion of the Boswell Interconnector's costs may have materially impacted the bidding process and that may have been a distinguishing factor between the bids received by the Company. Moreover, the Department disagrees with MP's assertion that omission of the Boswell Interconnector in the bid was based on prudent utility planning principles.

To appropriately evaluate bids, the Department argued that all costs must be included in the evaluation. In this case, the exclusion of interconnection transmission costs from the bidding process creates an incentive to ignore such costs when developing and proposing a project. A cost recovery cap at the price where it was bid and evaluated will protect the integrity of the

[53] See Docket No. E-015/M-24-140.

[54] Petition, at 19.

bidding process. As such, the Department concluded the bidding process was not properly executed. Without a proper bidding process, inclusive of all project costs, a comparison of alternatives would be incomplete and could result in unnecessary costs to ratepayers. Therefore, the Department maintained its recommendation that the Commission cap the Boswell Solar Project's capital costs at the level bid by MP.

I. Staff Comments

Staff notes that MP's reply comments addressed their proposed handling of PTC sales; however, no party replied to the proposed handling. Therefore, the Commission may want ask parties if they agree with MP's PTC proposal.

J. Decision Options

1. Find the Petition complete under Minn. Stat. § 216B.1645 and Minn. R. 7829.1300. (Department)

2. Approve Minnesota Power's investment in the Bowell Solar Project. (Minnesota Power, Department, City of Cohasset, LIUNA Minnesota/North Dakota, CEEM, IUOE & NCSRC)

3. Determine that the Boswell Solar Project is exempt from the CN requirements under the Bidding Exemption. (Department, Minnesota Power)

4. Limit cost recovery to the capital costs in Minnesota Power's Boswell Solar Project bid. (Department)

5. Authorize Minnesota Power to request approval to exceed the cost-cap if it can show that any costs incurred above the cap are the result of a government action that causes meaningful disruption to solar panel supplies and market prices. (Department)

6. Approve recovery of Boswell Interconnector costs. (Minnesota Power)

Or

7. Do not approve recovery of Boswell Interconnector costs. (Department)

8. Determine that the Boswell Solar Project qualifies for application toward Minnesota Power's RES obligation. (Minnesota Power, Department)

9. Determine that the Boswell Solar Project qualifies for application toward Minnesota Power's CFS obligation. (Minnesota Power, Department).

10. Subject to review and approval in a future petition, authorize Minnesota Power to recover

Boswell Solar Project costs through the Renewable Resource. (Minnesota Power, Department, LIUNA Minnesota/North Dakota)

11. Approve Minnesota Power's proposal to sell PTCs. (Minnesota Power, Department)

12. Require Minnesota Power to track the actual cost and benefits of selling PTCs in its annual renewable energy rider filings. (Department, Minnesota Power agreed)