



November 23, 2022

Senator Carrie Ruud
Chair
Environment and Natural Resources Policy
and Legacy Finance Committee

Senator Foug Hawj
Ranking Minority Member
Environment and Natural Resources Policy
and Legacy Finance Committee

Senator David H. Senjem
Chair
Senate Energy and Utilities
Finance and Policy Committee

Senator Nick A. Frenz
Ranking Minority Member
Senate Energy and Utilities
Finance and Policy Committee

Representative Rick Hansen
Chair
Environment and Natural Resources Finance
and Policy Committee

Representative Josh Heintzeman
Republican Lead
Environment and Natural Resources Finance
and Policy Committee

Representative Jamie Long
Chair
Climate and Energy Finance and
Policy Division Committee

Representative Chris Swedzinski
Republican Lead
Climate and Energy Finance and
Policy Division Committee

Dear Senators Ruud, Hawj, Senjem, and Frenz and Representatives Hansen, Heintzeman, Long and Swedzinski:

Minn. Stat. § 216E.18, subdivision 1, provides that the Public Utilities Commission must submit to you at the end of each even-numbered year regarding the Commission's operations, activities, findings, and recommendations concerning the Minnesota Power Plant Siting Act (Minn. Stat. Chapter 216E). Attached is the Report of the Minnesota Public Utilities Commission.

Please let me know if you have any questions or would like additional information.

Sincerely,

A handwritten signature in black ink that reads 'Will Seuffert'.

Will Seuffert
Executive Secretary

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Report on the Minnesota Power Plant Siting Act under Minnesota Statute, Chapter 216E

November 23, 2022

Minnesota Public Utilities Commission
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mn.gov/puc

BIENNIAL REPORT MINNESOTA POWER PLANT SITING ACT



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Reporting Requirement

Statutory Reporting Requirement

Minnesota Statutes (2018), Section 216E.18, subdivision 1 requires the Public Utilities Commission (Commission) to file a report with the Legislature at the end of each even-numbered year regarding the Commission's operations, activities, findings, and recommendations concerning the Minnesota Power Plant Siting Act (Minn. Stat. Chapter 216E). The Report must also contain information on the amounts paid in permit application fees and assessments pursuant to this section of law.

Costs of Preparing Report

Pursuant to Minnesota Statutes (2018), Section 3.197, it is estimated that the costs incurred by the Minnesota Public Utilities Commission in preparing this Report are minimal. Special funding was not appropriated for the costs of preparing this report.

Focus of this Report

This report specifically addresses the Commission's responsibilities for the siting and routing of large electric energy facilities and pipelines.

In 1973 the Minnesota Legislature passed the Power Plant Siting Act. Minnesota Laws 1973, Chapter 591, codified at Minnesota Statutes § 116C.51 through 116C.69, and re-codified in Chapter 216E in 2005. The Power Plant Siting Act requires that any person who wants to build a Large Electric Power Generating Plant (LEPGP) or a High Voltage Transmission Line (HVTL), as those terms are defined in the Act, is required to obtain state approval for a specific site for the plant or a specific route for the transmission line.

The jurisdiction for power plant siting and transmission line routing was transferred from the Minnesota Environmental Quality Board (MEQB) to the Commission by 2005 legislation (Laws of Minnesota 2005, Chapter 97). The 2005 legislation also transferred jurisdiction for wind farm siting (Chapter 216F) and pipeline routing (Chapter 216G) from the MEQB to the Commission. These separate energy-related jurisdictions had been administered in conjunction with the power plant siting and transmission line routing jurisdiction under a single program at the MEQB, labeled the Power Plant Siting Program.

The transfer of jurisdiction from the MEQB to the Commission was made to enhance administrative efficiency. Prior to 2005, the determination on whether a large energy facility

was 'needed' was made by the Commission and the determination on 'where' the facility should be located was determined by the MEQB. The transfer consolidated the permitting and planning requirements for large energy facilities into a single regulatory agency. The previous Commission/MEQB split decision-making authority caused some confusion among the public and sometimes led to delays in permitting. Additionally, enabling the two separate processes to develop in parallel was intended to achieve time and cost efficiencies. Consolidation benefits have arisen from the Commission's jurisdiction of electric generation resource planning (Minn. Stat. § 216B.2422) and electric transmission planning (Minn. Stat. § 216B.2425), in which environmental and locational factors can be considered jointly.

Reporting Agency Unit

The Commission's Energy Facilities staff manages state oversight of proposals to construct or modify large energy facilities in Minnesota, which include fossil fuel electric generation units, transmission lines, solar power generation, wind power generation units, and gas and petroleum facilities. The Commission's jurisdiction encompasses Certificate of Need as well as Site or Route Permits.

Applications for projects subject to the Commission's jurisdiction are electronically filed with the Commission in compliance with state statutes and administrative rules. Joint processing of applications for a Certificate of Need and a Site or Route Permit is allowed. The Commission's procedures for review of proposed large energy facilities incorporate compliance with the Minnesota Environmental Policy Act and provide for broad spectrum public participation, including timely public notice and multiple opportunities for public comment. In addition to the review of permit applications for large energy projects, the Public Utilities Commission has specific jurisdiction related to electric transmission planning.

Energy Facilities staff also actively participate in regional transmission planning and coordination efforts conducted by the Midcontinent Independent System Operator (MISO) and more recently, the Southwest Power Pool (SPP). Minnesota's participation in this arena is facilitated through its active involvement within the Organization of MISO States (OMS) a non-profit, self-governing entity that coordinates state regulatory participation, representation, and oversight of regional transmission issues, and the SPP Regional State Committee that provides input on matters of regional importance related to the development and operation of the bulk electric transmission system. Energy Facilities staff also track relevant activities at the Federal Energy Regulatory Commission.

Agency Organization – Commission and the Department of Commerce Energy Environmental Review and Analysis Unit

At the same time the Power Plant Siting Act jurisdiction was transferred to the Commission (in 2005), the staff supporting the Power Plant Siting Program at the MEQB were moved to the Division of Energy Resources (DER) within the Minnesota Department of Commerce. See Minn. Stat. § 216E.03, Subd. 11.

This staff, the Energy Environmental Review and Analysis unit (EERA), is directly administered by the Director of the DER. The EERA unit provides guidance to applicants and permittees, assists in compiling the Commission's record and provides comments on Commission decisions regarding permit applications. The EERA prepares environmental reports, environmental assessments or environmental impact statements, when appropriate. The EERA also provides technical assistance to the Commission on facilities-related matters, including pre-and post-construction compliance review. The EERA staff typically retains 10 full time employees.

To facilitate this unique dual-agency arrangement, the Commission was granted authority to retain Energy Facility Permitting staff to coordinate with the EERA unit, provide public information and assistance, advise the Commissioners prior to decisions, and ensure sound record development. The defense of its permit decisions in the Court of Appeals remains a Commission responsibility.

Commission costs to administer its actions on siting/routing dockets are recovered from fees charged to applicants. Currently, the Commission has the equivalent of five fulltime employees that support this program.

Program Expenditures and Budget Overview

The EERA unit independently manages application fees and direct assessment authorities, and, upon request, has provided the following information:

Biennial Expenditures

Program costs included "Necessary and Reasonable Costs Incurred by Permitting" and "Activity and Program Costs." There were no general fund expenditures.

Necessary and reasonable costs must be paid by permittees to cover costs incurred in acting on a permit application. For power plants and transmission lines, see Minn. Statute § 216E.18 subd. 2, 2a, Minn. Rule Part 7850.1800; for wind farms, Minn. Statute § 216F.05, Minn. Rule Part 7854.1500; and for pipelines, Minn. Statute § 216G.02, subd. 3, Minn. Rule Part 7852.4000.

Activity and program costs are paid by a general assessment against utilities as authorized by Minn. Statute § 216E.18, subd. 3.

Expenditure Type	FY 2021	FY 2022	FY 2021-2022
Necessary/Reasonable Costs Incurred by Permitting	\$824,008	\$747,488	\$1,571,496
Activity and Program Costs	\$1,448,484	\$1,353,338	\$2,801,822
Total	\$2,272,491	\$2,100,827	\$4,373,318

The necessary and reasonable costs incurred by permitting are expected to increase in the second half of FY 2022-2023 and into 2024 given an expected increase in the number of permit applications for CO2 pipelines, major large HVTL transmission projects, and several anticipated solar and wind projects to replace energy currently generated using coal and to support the transition to renewable generation generally.

Public Information and Participation

The 'on-the-ground' consequences of the state's policies establishing the public interest in the construction of needed large energy facilities can impact many landowners, communities, governmental agencies, tribes, and other entities. The Power Plant Siting Act emphasizes a principle of broad-spectrum public participation (Minn. Stat. § 216E.08). The Commission and the EERA unit manage the siting/routing programs with a strong emphasis on this principle. While the two agencies continue to provide substantial notice via regular mail, web-based information on the Commission¹ and Department² websites have been significantly enhanced and contain useful public guidance and is being continually updated.

Within the permitting review processes, the Commission, the EERA, and the Office of Administrative Hearings (OAH) work collaboratively on a multitude of efforts. Each agency plays a unique and important role in communicating and interacting with the public during the review process, including the planning, managing, and hosting of public meetings and hearings.

During 2021-2022 the Commission conducted an interagency public engagement working group consisting of staff from the Commission, EERA, and the OAH. The working group developed web information to better communicate with the public as well as internal guidance documents to ensure the consistent application of rules and best practices, and to optimize the public experience. The Commission looks for opportunities to improve the permitting process, to

¹ <https://mn.gov/puc/>;

² <https://mn.gov/commerce/industries/energy/eera/>



make it more efficient, and to enhance public outreach and public participation in the different review processes. In a recent effort, the Commission developed a method for the use of a consent approval process for procedural steps that are non-controversial (exemption requests; completeness determinations). This method allows for review and approval of these steps using the comments and recommendations of the Department of Commerce. While maintaining the opportunity for public input, the record in these cases is reviewed using the Consent Agenda committee and results in a decision that allows the review process to proceed more quickly. This process avoids the need for the development of a staff decision making document, as well as having to schedule the item for an agenda meeting involving the entire Commission.

The Power Plant Siting Act also requires the Commission to hold an annual hearing to advise the public of matters relating to the siting of large electric power generating plants and routing of high voltage transmission lines and to afford interested persons an opportunity to be heard regarding any aspects of the Commission's activities, duties, or policies. The Commission's practice is to include all large energy facilities in the discussion, including pipeline and wind generation projects.

Operations and Activities in Biennium

Operations: Permits Processed

The following table shows the number and type of projects permitted or amended for fiscal years 2021 and 2022:

Energy Facility	CY 2021	CYFY 2022	CY 2021-2022
Power Plants³	2	4	6
Transmission Lines⁴	2	3	5
Pipelines and Pipeline Amendments⁵	1	2	3
Wind Farms⁶	3	2	5
Transmission Line Permit Amendments & Minor Alterations⁷	1	2	3
Wind Permit Amendments⁸ Repower	2	2	4

³ CY 21: 19-395, 19-495; CY 22: 20-647, 21-113, 19-620, 21-191

⁴ CY 21: 18-701, 20-423; CY 22: 19-621, 21-189, 21-190

⁵ CY 21: 20-872; CY 22: 21-266, 21-747

⁶ CY 21: 18-700, 19-394, 20-384 CY 22: 19-619, 20-860

⁷ CY 21: 21-547; CY 22 21-423, 22-232

⁸ CY 21: 07-839, 09-584; CY 22: 11-863

TOTAL	11	15	27
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Operations: Total Permitted Wind Capacity

Minnesota’s current installed wind generation capacity was approximately 4578 MW as of the 3rd Quarter of 2022.⁹ There is currently 340 MW of wind generation capacity under construction.

Program Activities

Wind Farm Siting. In CY 2021, the Commission permitted three wind power projects and issued two permit amendments for the reconstruction or updating (Repower) of projects. These projects included: Plum Creek 414 MW Wind Farm, Buffalo Ridge 109.2 MW Wind Energy, Walleye Wind 111.5 MW Wind Project, Grand Meadow 108 MW Wind Farm Repower, and Nobles 201 MW Wind Farm Repower.

In CY 2022, the Commission permitted two wind farms. Additionally, three existing wind farms were issued permit amendments for repowering. The permitted projects included Northern Wind 122 MW and Big Bend 300 MW; The permit amendments allowing for repowering included Community Wind South 30 MW Wind Farm Repower, Pleasant Valley 220 MW Wind Farm Repower and Rose Creek 17 MW.

There are two wind projects currently under review in CY 2022. These projects include Dodge County, a 280 MW Wind Project and Three Waters, a 240 MW Wind project.

Solar Generation Facilities. The Commission approved two solar facilities in CY 2021. These projects include Regal 100 MW Solar and Elk Creek 80 MW Solar. In CY 2022, three projects were permitted (Louise Solar 50 MW, Hayward Solar 150 MW, and Sherco 460 MW Solar).

Permits in process in CY 2022 include Byron Solar 200 MW and the Lake Wilson 150 MW Solar and Battery Project.

Transmission Line Routing. In CY 2021, the Commission approved four transmission projects. The projects were Plum Creek Wind 345 kV HVTL, Frazee to Erie 115 kV HVTL, and Minneapolis Lines 811 and 5521 115 kV HVTL.

⁹ U.S. Department of Energy, WindExchange 2019 - <https://windexchange.energy.gov/maps-data/321>, 20220 - <https://windexchange.energy.gov/states/mn> (retrieved 11/21/2022)



In CY 2022, the Commission approved three transmission projects. The projects include two lines for Sherco West/East 345 kV HVTL, and Big Bend 161 kV HVTL. The Commission also reviewed and approved the permit transfer of the Great River Energy 400 kV HVDC line to Nexus Line, LLC., and a Minor Alteration for Xcel Energy Line No. 0827.

In CY 2022, six projects are in the permitting process. These projects include St. Joseph 115 kV HVTL, Duluth Loop 115 kV HVTL, Byron Solar 345 kV HVTL, Dodge County Wind 161 kV HVTL, and the Three Waters Wind Farm 161 kV HVTL.

Pipeline Projects. The Commission approved a Pine Bend Landfill Gas Pipeline in CY 2021. The projects permitted in CY 2022 include a Rochester Airport Pipeline Relocation and the approval of the Unit 48 Ammonia Pipeline Project information book for impacted landowners.

The Otter Tail to Wilkin Carbon Dioxide Pipeline Project is currently under review.

New Developments

Liquefied Carbon Dioxide Pipelines. Nationally, there has been increasing interest in carbon capture, usage, and storage technologies involving the transportation of carbon dioxide (CO₂) through pipelines. End uses of CO₂ include underground storage, sequestration, and other methods to reduce atmospheric CO₂. CO₂ is commonly transported through pipelines at a pressure of approximately 1200–2800 pounds per square inch (psi).

On November 9, 2021, two separate petitions were submitted to the Environmental Quality Board (EQB) requesting the preparation of environmental assessment worksheets (EAW) on the Midwest Carbon Express (Docket 21-879) and Heartland Greenway (Docket 21-880) pipeline projects. On November 12, 2021, the EQB notified the Commission that it was being designated as the responsible government unit for the prospective pipeline projects. However, on December 15, 2021, the Commission notified the EQB that it cannot act on either petition because no permit applications had been filed.

On December 21, 2021, the Commission issued a Notice of Comment Period on Potential Carbon Dioxide Pipeline Rulemaking to consider whether the Commission currently had jurisdiction over CO₂ pipelines and whether a clarification of its rules was necessary.

Rulemaking. On June 15, 2022, the Commission issued an *Order Finding Authority* in docket U-999/CI-21-847 in which it found that it has existing authority to regulate CO₂ pipeline routing under Minn. Stat. § 216G.02 and Minn. R. Ch. 7852. CO₂ compressed to a supercritical state for pipeline transport falls under the definition of a “gas” in Minn. R. 7852.0100, subp. 16, which

includes gas that is toxic. As part of that docket, the Commission received many comments in favor of amending the definitions relating to pipeline route permitting.

On June 27, 2022, the Commission published an official notice requesting comments on possible amendments to the rules governing pipeline definitions in the Minnesota State Register. Specifically, the Commission is considering rule amendments that modernize the pipeline routing rules by explicitly including carbon dioxide in the definition of gas and modifying the definition of hazardous liquid to conform with the federal definition.

MISO-Approved Transmission Projects. In addition to the traditional or normal number of siting and routing applications in a given year, the Commission will have three significant large high voltage transmission projects to review during CYs 2023-2024.

On July 25, 2022, the MISO (Midcontinent Independent System Operator) approved a \$10.3 billion investment in 18 transmission projects. The approved projects represent one of four tranches that will be considered by MISO. Of the 18 transmission projects approved and included in Tranche 1, three are located partially or completely within the state of Minnesota. The lines include the Iron Range to Benton County to Cassie's Crossing, Big Stone South to Alexandria to Cassie's Crossing, and Wilmarth to North Rochester to Tremval.

Iron Range – Becker – Cassie's Crossing - an approximately 150-mile double circuit 345kV transmission line from the existing Iron Range Substation to the existing Benton Country Substation, to a new substation in the St. Cloud area.

Big Stone South – Alexandria – Cassie's Crossing - an approximately 190-mile total single circuit 345kV transmission line from existing Big Stone South Substation to the existing Alexandria Substation (constructed with double circuit capable 345kV structures), to the new Cassie's Crossing Substation.

Wilmarth – North Rochester – Tremval - an approximately 150-mile single circuit 345kV transmission line beginning at the existing Wilmarth Substation, running to the existing North Rochester Substation, then extend into Wisconsin to the existing Tremval Substation.

Projects of this size are reviewed under the Commission's full routing procedures under Minn. Stat. § 216E.03, which require applicants to file two route alternatives, the use of a contested case, and the development of an Environmental Impact Statement.

Joint-Targeted Interconnection Queue (JTIQ) Study. In 2020 MISO and the Southwest Power Pool (SPP) initiated the JTIQ Study to identify transmission projects that would address the

significant transmission limitations restricting the opportunity to interconnect new generating resources near the MISO-SPP seam. In March of 2022 the two RTOs released the results of the study in which they identified a portfolio of seven projects that better enable interconnection by mitigating dozens of reliability issues across both regions. The JTIQ projects will allow interconnection requests spanning multiple MISO and SPP queue cycles to connect at lower costs than what would be determined through an individual interconnection queue cycle analysis. In doing so, the joint study identified projects that will better prepare both of their systems for future portfolio change.

Of the seven projects identified in the JTIQ study, two are in Minnesota. The first project identified is the Big Stone South – Alexandria – Cassie’s crossing 345 kV transmission line also proposed in the MISO Tranche 1 study mentioned above. The second project impacting Minnesota is an approximately 100-mile 345 kV transmission line running from Brookings County, South Dakota to Lakefield, Minnesota. This line will require a certificate of need and a routing permit from the Commission.

This effort has paved the way for further collaboration between the two RTOs. As more renewables are connected to both of their systems, the ability to move power from where it is generated to where it is needed will only grow in importance.

Conclusions

The Commission concludes that the procedural model for the Power Plant Siting Act, and the corollary wind farm and pipeline siting acts, is reasonable. The Commission continually looks for opportunities to improve the permitting process, to make it more efficient, and to enhance public outreach and public participation in the different review processes, including the use of the consent agenda for non-controversial decisions. The siting and routing of large energy facilities often creates significant public engagement, and the credibility of the Commission is critical in managing these proceedings. The Commission’s process has fared well throughout even the most contentious projects. Work to improve the efficacy, coordination, and transparency throughout the processes continues as demonstrated by the Commission interagency public engagement workgroup and the continuing development of information available on the Commission’s website. Based on the experiences of the past two years, and foreseeing the continued improvement of the process, the Power Plant Siting Act continues to be in the public interest.