MINNESOTA DEPARTMENT OF COMMERCE

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AN EQUAL OPPORTUNITY EMPLOYER

August 15, 2016

Mr. Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
127 Seventh Place East, Suite 350
Saint Paul, MN 55101-2147

RE: Comments and Recommendations
Black Dog Unit 6 Project
Docket No. E002/GS-15-834

Dear Mr. Wolf:

Attached are staff comments and recommendations in the following matter:

In the Matter of the Application of Xcel Energy for a Site Permit for the 215 MW Black Dog 6 Project in Burnsville, Minnesota

The attached comments and recommendations address public comments received on the environmental assessment, corrections to the environmental assessment, the Applicant's proposed findings of fact and conclusions of law, and staff recommendations.

Staff is available to answer any questions the Commission might have.

Sincerely,

Andrew Levi
Environmental Review Specialist
Energy Environmental Review and Analysis

cc: Cezar Panait, Minnesota Public Utilities Commission
Jennie Skancke, Department of Natural Resources
Amy Fredregill, Excel Energy
Timothy Edman, Xcel Energy
John Wachtler, Department of Commerce

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MINNESOTA DEPARTMENT OF COMMERCE

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS AND RECOMMENDATIONS OF THE MINNESOTA DEPARTMENT OF COMMERCE ENERGY ENVIRONMENTAL REVIEW AND ANALYSIS

DOCKET NO. E002/GS-15-834

Date: August 15, 2016
Staff: Andrew Levi 651-539-1840

In the Matter of the Application of Xcel Energy for a Site Permit for the 215 MW Black Dog 6 Project in Dakota County, Minnesota

Issues Addressed: These comments and recommendations address public comments received on the environmental assessment, corrections to the environmental assessment, the Applicant's proposed findings of fact and conclusions of law, and staff recommendations.

Additional documents and information can be found on the EERA website at http://mn.gov/commerce/energyfacilities/Docket.html?Id=34314 or the Minnesota eDockets website at https://www.edockets.state.mn.us/EFiling/search.jsp by selecting "15" for year and "834" for number.

This document can be made available in alternative formats, that is, large print or audio, by calling 651-539-1530.

Background

On May 26, 2016, Department of Commerce, Energy Environmental Review and Analysis (EERA) staff published an environmental assessment[1] regarding the Black Dog Unit 6 Project (proposed project) proposed by Northern States Power Company – Minnesota (Applicant). On June 16, 2016, Administrative Law Judge James LaFave presided over a public hearing on behalf of the Minnesota Public Utilities Commission (Commission). [2]

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[1] Minnesota Department of Commerce (May 25, 2016) *Black Dog Unit Six Project – Environmental Assessment*, eDockets No. 20165-121667-01 (hereinafter "Environmental Assessment").

[2] Minnesota Public Utilities Commission (June 3, 2016) *Notice of Public Hearing*, eDockets No. 20166-121988-01 (hereinafter "Public Notice").

Interested persons were afforded the opportunity to provide verbal comments at the public hearing and written comments through June 30, 2016.[3]

Three individuals provided verbal comments at the public hearing.[4] Written comments were received from the Minnesota Pollution Control Agency (MPCA),[5] the city of Burnsville,[6] the Metropolitan Council,[7] and the Applicant.[8] The Lower Minnesota River Watershed District and one interested person utilized the Commission's *Speak Up!* online commenting tool.[9]

On July 22, 2016, the applicant provided proposed findings of fact and conclusions of law.[10]

Response to Comments on the Environmental Assessment

Three verbal and six written comments were received prior to the close of the public comment period. Responses to questions or comments specific to the EA are provided below.[11]

Minnesota Pollution Control Agency

The MPCA indicated that the Minnesota River is listed on the MPCA *Inventory of Impaired Waters*. As such, increased stormwater treatment during and after construction will be required. These requirements will be included in the National Pollutant Discharge Elimination System/State Disposal System Construction Stormwater General Permit should a permit be required for this project.

Response

Staff appreciates this clarification. This information is reflected in the EA Errata.

Metropolitan Council

The Metropolitan Council stated an environmental impact statement "is not necessary for regional purposes." Additionally, the Council provided clarification regarding the Black Dog Greenway portion of a paved, multi-use regional trail.

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3 Public Notice.

4 Shaddix & Associates (June 30, 2016) *Transcripts – Public Hearing – June 16, 2016*, eDockets No. 20166-122844-01 (hereinafter "Transcript").

5 Minnesota Pollution Control Agency (June 30, 2016) *Black Dog Unit 6 Project Comments*, eDockets No. 20166-122852-01.

6 City of Burnsville (June 27, 2016) *Comments*, eDockets No. 20166-122745-01.

7 Metropolitan Council (June 30, 2016) *Environmental Assessment Comments*, eDockets No. 20167-123150-01.

8 Northern States Power Company – Minnesota (June 30, 2016) *EA Comments*, eDockets No. 20166-122838-01 (hereinafter "NSPM" Comments").

9 Minnesota Public Utilities Commission (July 5, 2016) *Public Comment*, eDockets No. 20167-123007-01.

10 Northern States Power Company – Minnesota (July 22, 2016) *Proposed Findings of Fact and Conclusions of Law*, eDockets No. 20167-123534-01.

11 For a summary of all public comments received during the public hearing *see* Office of Administrative Hearings (August 2, 2016) *Summary of Public Testimony*, eDockets No. 20168-123875-01.

Response
Staff appreciates this clarification. This information is reflected in the EA Errata.

Northern States Power Company – Minnesota
The Applicant indicated that it found the EA to be a "thorough and accurate summary of the potential environmental impacts of the project."[12] The applicant further indicated that it intends to implement any required mitigation measures and comply with required permit conditions. Additionally, the comment letter offered several clarifications:

- The winter rating of the facility will be 229 megawatts.
- Lowering the temperature of incoming air does not increase the efficiency of the turbine; rather, it increases the amount of power that can be achieved.
- An exhaust gas silencer will be installed inside the exhaust stack.
- The fin fan cooler footing type will be underground cast footings.

Response
Staff appreciates these clarifications. This information is reflected in the EA Errata. These project-specific clarifications do not change the analysis in the EA; therefore, an amendment is not required.

Lower Minnesota River Watershed District
The District provided several comments, and, on July 8 and 9, responded to staff requests for clarification via telephone and email. Staff appreciates these communications.

Comment 1
The District requested the opportunity to review and comment on the Construction Stormwater Pollution Prevention Plan (SWPPP).

Response 1
The applicant indicated that should a SWPPP be required for the proposed project, a draft version can be shared with the District. This agreement is stipulated as Proposed Finding No. 126a.

Comment 2
The District requested that potential impacts to the Black Dog Fen be included in the EA.

Response 2
See response three below.

Comment 3
The District asked how groundwater appropriation permit No. 1961-0271, directly or indirectly impacts the Black Dog Fen.

[12] NSPM Comments.

Response 3

DNR Water Appropriations Permit No. 1961-0271 allows the Applicant to withdraw up to 50 million gallons of well water per year at a peak of 250 gallons per minute (gpm), with a daily average of 200 gpm to be maintained.[13] This permit was issued in 1961. Average groundwater use at the generating plant over the past five years averaged 38 million gallons per year.[14] More specifically, groundwater use since 2010 as reported to the DNR is as follows:

Year	Gallons
2015	35,518,005
2014	44,453,309
2013	32,522,545
2012	33,551,334
2011	37,450,100
2010	40,636,900

Source: Applicant (July 27, 2016) Email Communication.

Of these totals, approximately 25 million gallons per year can be attributed to Units 3 and 4 (coal-fired) according to operational data provided by the Applicant.[15] These units are no longer operational. Nevertheless, their historic use of well water constitutes the existing condition with regards to the environment review conducted for the proposed project.

Unit 6 is anticipated to use less than 7 million gallons of water per year.[16] This estimate is based on year-round use at full capacity.[17] This estimate is conservative considering the proposed project will be operated as a "peaking" facility,[18] and is anticipated to have an annual capacity factor of four to 10 percent.[19]

Based on existing conditions, staff expects that impacts to the Black Dog Fen from the proposed project will not occur, or, if impacts do occur, will be negligible. The source of the water is listed as one well, unique well number 207690.[20] It is 201' deep.[21] The well is approximately one-mile from the Black Dog Fen (Figure 1). It is separated by Black Dog Lake

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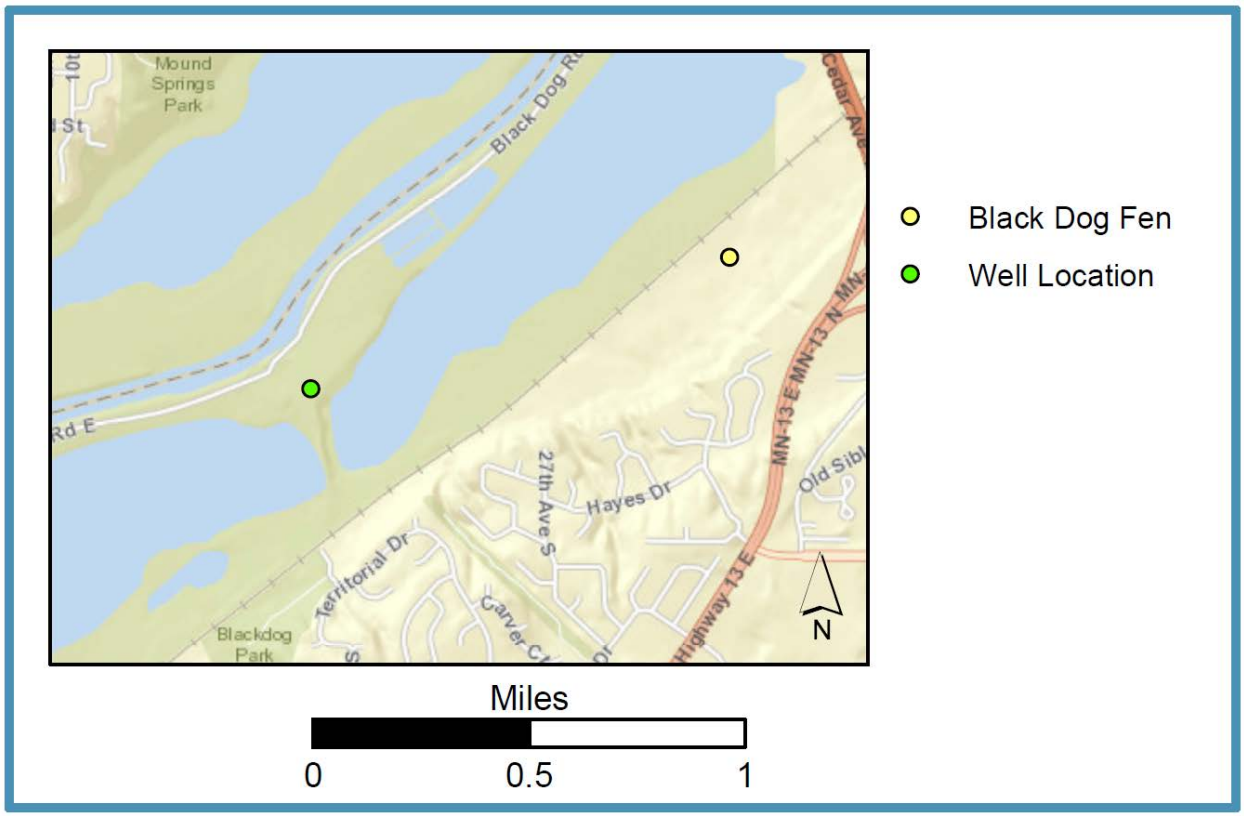
13 Environmental Assessment, at page 56.
14 Environmental Assessment, at page 56.
15 Applicant (August 11, 2016) *Email Communication*.
16 Applicant (August 11, 2016)
17 Applicant (August 11, 2016); Applicant (July 27, 2016) *Email Communication*; Environmental Assessment, at page 3. (This estimate assumes the evaporative cooler would operate 168 days per year. Considering an annual capacity factor of 10 percent, the evaporative cooler might operate up to 37 days per year. The evaporative cooler is expected to use approximately 40,000 gallons of water per day. At this rate, 37 days of continuous operation would use approximately 1,480,000 gallons.)
18 Environmental Assessment, at page 3.
19 Northern States Power Company – Minnesota (October 15, 2016) *Application for a Site Permit for the Black Dog Unit 6 Project*, eDockets No. 201510-114858-01.
20 Minnesota Department of Natural Resources (July 22, 2016) *Email Communication*.
21 Minnesota Department of Natural Resources (July 22, 2016).

and a drainage ditch (railway). Well water use at the generating plant is anticipated to be 18 million gallons less than the historic average.

Staff recommends the District contact Jennie Skancke, Area Hydrologist, with the DNR for further requests regarding the water appropriations permit. Ms. Skancke can be reached at *jennie.skancke@state.mn.us* or 651-259-5790.

Figure 1



Comment 4

The District asked how the groundwater appropriation permit in concert with other permitted appropriations directly or indirectly impacts the Black Dog Fen.

Response 4

Permitted ground water appropriations in the area may or may not directly or indirectly impact the Black Dog Fen. See response three above.

Comment 5

The District requested that, if dewatering is required, it be allowed the opportunity to comment on the DNR Temporary Appropriation Permit Application.

Response 5

The applicant indicates that dewatering will not occur. As a result, the applicant will not submit a Temporary Appropriation Permit Application to DNR as a part of the proposed project.

Environmental Assessment Errata

Page i, Abstract, first paragraph, second sentence. The winter rating of the turbine will be 229 MW.

> Xcel Energy (applicant) filed an application with the Commission for a site permit to construct a 215 megawatt (MW) summer rating (229 MW winter rating) natural gas-fired combustion turbine unit (Unit 6) at its existing Black Dog Generating Plant in the city of Burnsville, Minnesota.

Page 2, Introduction, first paragraph, second sentence. The winter rating of the turbine will be 229 MW.

> The applicant intends to construct a 215 megawatt (MW) summer rating (229 MW winter rating) natural gas-fired combustion turbine unit and associated facilities (proposed project). [footnotes omitted]

Page 3, Section 1.2 Project Description, first paragraph. The winter rating of the turbine will be 229 MW.

> The applicant proposes to construct a 215 MW summer rating (229 MW winter rating) simple-cycle natural gas-fired combustion turbine unit (Unit 6) and associated facilities at the existing generating plant in the city of Burnsville, Minnesota. Unit 6 will increase the generating plant's overall electric generating capacity to ~~498~~512 MW.

Page 6, Section 2.1 Site Permit, second paragraph, first sentence. The winter rating of the turbine will be 229 MW.

> Unit 6 will have ~~an~~ a maximum electric generating capacity of ~~215~~229 MW; therefore, the proposed project requires a site permit from the Commission. [footnotes omitted]

Pages 6-7, Section 2.2 Certificate of Need, first paragraph, third sentence. The winter rating of the turbine will be 229 MW.

> Unit 6 will have ~~an~~ a maximum electric generating capacity of ~~215~~229 MW; therefore, the proposed project is a large energy facility. [footnotes omitted]

Page 13, Section 2.6 Other Permits and Approvals – State, first paragraph. The Minnesota River is listed on the MPCA *Inventory of Impaired Waters*. As such, increased stormwater treatment during and after construction will be required. These requirements will be included in the National Pollutant Discharge Elimination System/State Disposal System Construction Stormwater General Permit.

> Construction projects that disturb one or more acres of land require a general National Pollutant Discharge Elimination System (NPDES) / State Disposal System (SDS) construction stormwater permit from the Minnesota Pollution Control Agency

> (MPCA). This permit is issued to "construction site owners and their operators to prevent stormwater pollution during and after construction." Because the Minnesota River is an impaired waterway, additional increased stormwater treatment during construction and permanent treatment post construction would be required. The NPDES/SDS permit requires (1) use of best management practices; (2) development of a Stormwater Pollution Prevention Plan; and (3) adequate stormwater treatment capacity once the project is complete. [footnotes omitted]

Page 20, Section 3.2 Project Description – Evaporative Cooler, second sentence. Lowering the temperature of incoming air does not increase the efficiency of the turbine; rather, it increases the amount of power that can be achieved.

> Cooling incoming air increases ~~operating efficiency~~the amount of power that can be generated on hot days.

Page 20, Section 3.2 Project Description – Exhaust Stack. An exhaust gas silencer will be installed inside the exhaust stack.

> **Exhaust Stack**. The exhaust stack directs turbine exhaust into the atmosphere. It will exit the powerhouse near the rear of the turbine, and extend 65-feet above the roof. The stack will be constructed out of a steel alloy rated for the appropriate temperature and insulated for the majority of its height. It will be equipped with an exhaust gas silencer.

Page 21, Section 3.2. Project Description – Equipment Fin Fan Cooler, last sentence. The fin fan cooler will be mounted on underground cast footings as opposed to spread footings.

> It will be an elevated on steel columns mounted on underground cast footings.

Page 41, Section 4.2.8, fourth paragraph. The Black Dog Greenway portion of the Minnesota River Greenway Project will be subject to a use agreement between Dakota County, city of Burnsville, U.S. Fish and Wildlife Service, and Xcel Energy.

> In July 2015, construction began on the "Black Dog Greenway" portion of the Minnesota River Greenway Project. This paved, multi-use recreational trail will be a part of the larger Dakota County trail network. The trail is expected to be completed in fall of 2016, and will be managed by Dakota County and governed by the Metropolitan Council's *2040 Regional Parks Policy Plan* subject to a use agreement between Dakota County, city of Burnsville, USFWS, and Xcel Energy. The trail "will closely follow the Minnesota River through the Minnesota ~~v~~Valley ~~n~~National Wildlife Refuge, roughly following the Black Dog Road alignment." The trail will be constructed to withstand the frequent flooding in the Black Dog Lake area. [footnotes omitted]

Comments on Proposed Findings and Conclusions

Staff comments regarding the Applicant's proposed findings of fact and conclusions of law consist of two parts. Part one, below, explains substantive edits to the applicant's proposed findings. Not all substantive edits require an explanation. References to specific findings are numbered according to Attachment A unless otherwise noted. Part two, Attachment A, is an edited version (underline and strikethrough) of the Applicant's proposed findings. Many of these proposed edits are non-substantive, and are included to provide clarification or make minor word changes.

Public and Agency Participation

Staff proposes a new section be added to better differentiate between the procedural history and comments received.

Footnotes

EERA staff recommends that footnotes be provided for each fact (sentence) throughout the final findings of fact and conclusions of law. The applicant, in its proposed findings, has provided footnotes; however, these footnotes are not specific to each individual sentence. Staff has provided recommended edits to footnotes throughout the proposed findings to address this concern (see Attachment A).

Page-Specific Comments

Page 1, Statement of Issue. Proposed addition clarifies that the Commission must also determine if the EA prepared for the project and the record developed at the public hearing address the issues identified in the scoping decision.

Pages 1 and 2, Summary of Conclusions and Recommendation. Proposed edits made for brevity.

Page 2, Finding 3. Edit clarifies that 215 MW is the proposed project's summer capacity.

Page 3, Finding 5. Proposed edit removes language referencing Units 3 and 4. What was previously located in the existing powerhouse is not essential information within this finding.

Page 3, Finding 8b. Proposed edits expand upon the explanation provided for the required natural gas pipeline, specifically that the pipeline project will undergo separate environmental review.

Page 4, Deleted Finding 11. Proposed edit removes this finding. The approved price terms are not relevant to the procedural history of this docket.

Page 4, Findings 12 and 13. Proposed edit clarifies that the site permit applied for in this project is not an "alternative site permit" but is the "alternative review" process.

Page 6, Finding 26. Proposed edits clarifies that no public comments were gathered at the public information and scoping meeting; however, meeting presenters did answer public questions informally after the close of the meeting.

Page 7, Finding 36. Proposed edit clarifies that the purpose of the EQB Monitor Notice was to inform the public that the EA was published and available for review.

Page 12, Findings 45 and 46a. Proposed edits separate the requirement to obtain a site permit and the general policy regarding the siting of large electric generating facilities.

Page 11, Finding 46. Proposed clarification reiterates that while local zoning is superseded by a Commission site permit, local zoning must be considered when the Commission makes its permit decision.

Page 16, Finding 50. Proposed edit highlights that the proposed project is within a major metropolitan area.

Page 15, Finding 51. Proposed edit clarifies that the exhaust stack will be located outside the existing powerhouse building.

Page 21, Finding 67. Proposed edit adds noise impacts from the fin fan cooler to the finding.

Page 23, Finding 74. Proposed edit clarifies that the proposed project will not disproportionately impact minority or low-income populations.

Page 28, Finding 90b. Proposed edit highlights emission control strategies to be employed by the Applicant.

Page 29, Finding 93. Proposed edits identify groundwater use by the proposed project.

Page 31, Finding 101a. Proposed edit adds a discussion regarding the endangered Higgins eye pearlymussel and the threatened Prairie bush clover.

Section V, Subsection P. Multiple proposed edits to identify where cumulative potential effects are not anticipated.

Staff Recommendations

Staff recommends the Commission issue a site permit for the proposed project.

Comments on Proposed Site Permit Conditions

Staff recommends the following special permit conditions.

Coordination

As a part of its comments, the Lower Minnesota Watershed District requested the opportunity to review and comment on the SWPPP. The applicant indicated that should a SWPPP be required for the proposed project, a draft version can be shared with the District. Therefore, staff recommends a permit condition requiring that should a SWPPP be required for the Project, the Applicant will share a draft version with the District.

Peregrine Falcons

Per a request from the DNR, staff recommends a permit condition requiring that should peregrine falcons show signs of stress during project construction, for example, flying towards individuals or equipment or display other erratic flying behavior, the Applicant contact the DNR Nongame Program Region Specialist.

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IN THE MATTER OF THE APPLICATION FOR A SITE PERMIT FOR THE BLACK DOG UNIT 6 PROJECT

FINDINGS OF FACT, CONCLUSIONS, AND RECOMMENDATION ,

PREPARED FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
Docket No. E002/GS-15-834

Statement of Issues

Has Northern States Power Company – Minnesota (NSPM or the Applicant) satisfied the factors set forth in Minn. Stat. § 216E.04 and Minn. Rules Chapter 7850 for a site permit for a 215 megawatt (MW) simple cycle natural gas-fired combustion turbine unit (Black Dog Unit 6) at its existing Black Dog Generating Plant (Generating Plant) in the city of Burnsville, Dakota County, Minnesota?

Does the environmental assessment (EA) prepared under Minn. Rule 7850.3700 and the record created at the public hearing address the issues identified in the scoping decision?

Summary of Conclusions and Recommendation

Specific details regarding the proposed construction and operation of the Black Dog Unit 6 Project (Project) were presented in the Site Permit Application filed on October 15, 2015,[1] and in additional documents submittals by the Applicant letter filed by the Applicant on October 22, 2015.[2] as well as in Reply Comments filed by the Applicant on November 13, 2015.[3] The Project was analyzed within an environmental assessment (EA)[4] prepared by the Minnesota Department of Commerce, Energy Environmental Review and Analysis (EERA)Engineering Analysis and Review.[5] Based on the analysisinformation submitted by the Applicant and evaluated within the EAassessment, the potential impacts of the Project are anticipated to be minimal.[6]

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[1] Ex. 2, (Application).*In the Matter of an Application for a Site Permit for the Black Dog Unit 6 Project.* Docket No. E002/GS-15-834.
Hereafter, documents in this Docket will be referred by name and date only.
[2] Ex. 3, (Heritage Review); Ex. 6, (Reply Comments).Letter, October 22, 2015.
[3] Reply Comments, November 13, 2016.
[4] Environmental Assessment, May 25, 2016.
[5] Ex. 17, (EA).
[6] Ex. 17, at pages 74 -76 (EA).

~~to human settlement, public health and safety, land-based economies, archeological and historic properties, the natural environment, and rare and unique natural resources are expected to be minimal. Impacts are avoided or minimized by the location of the project and by permits other than the site permit. Design options that maximize energy efficiencies and mitigate adverse environment effects are well met.[7] The Project will emit combustion by-products that have the potential to impact air quality. However, with mitigation, emissions are anticipated to be within all state and federal standards. The Project is expected to facilitate an overall reduction in greenhouse gas emissions statewide. Potential impacts to air quality are expected to be minimal.[8] Based on the provisions of Minn. Stat. 216E.03, subdivision 7(b), and further listed under Minn. Rules Chapter 7850.4100, potential impacts of the Project would be mitigated by the location of the Project and conditions listed within the site permit[9].~~ The Commission concludes that the record demonstrates ~~that~~ the Applicant has complied with the requirements of Minn. Stat. § 216E and Minn. Rule 7850, and ~~.~~ ~~T~~the Project satisfies the site permit criteria for a large electric power generating~~on~~ plant ~~set forth in Minn. Stat. § 216E.04 and meets all other legal requirements~~.

Based on the record created in this proceeding, the Commission makes the following:

Findings of Fact

I. Applicant

1. Xcel Energy, doing business as ~~Northern States Power Company (~~NSPM~~)~~, is the Applicant requesting the site permit for the Black Dog Unit 6 Project.[10] The Black Dog Generating Plant, including the associated land, is owned and operated by NSPM.[11]~~.~~

2. Xcel Energy is a public utility that generates, transmits, distributes and sells electrical power to about 1.5 million customers within service territories located in parts of Minnesota, South Dakota and North Dakota.[12]

II. Description of the Proposed Project

~~[7] Environmental Assessment, May 25, 2016, at 74-75.~~
~~[8] Environmental Assessment, May 25, 2016, at 53.~~
~~[9] Environmental Assessment, May 25, 2016, at 74-75.~~
[10] Ex. 17, at page 2 (EA); *see also* Ex. 2, at page 9 (Application).
[11] Ex. 17, at page 18 (EA); *see also* Ex. 2, at page 9 (Application).~~Application for a Site Permit, October 15, 2015, at 9.~~
[12] Ex. 2, at page 9 (Application).~~Application for a Site Permit, October 15, 2015, at 9.~~

3. NSPM proposes to construct a 215 MW (summer capacity) simple-cycle natural gas-~~-~~fired combustion turbine ~~generating facility~~ and associated facilities at its existing Black Dog Generating Plant in the ~~C~~city of Burnsville, Dakota County, Minnesota.[13]

4. The Project is designed to provide 115 kilovolt (kV) electrical power supply to the Twin Cities metropolitan area using existing transmission infrastructure to serve existing distribution substations. ~~The service life of the Project is expected to exceed 35 years.~~[14]

5. The Project will be constructed within ~~the~~an existing powerhouse building ~~that formerly housed two dual-fuel boilers (Units 3 and 4).~~[15] ~~, although s~~ Several Project components ~~of the Project~~ will be located outside or attached directly to the powerhouse building.[16]

~~6. The Project will increase natural gas needs at the plant and a new pipeline will be constructed for this purpose. The gas supplier will be responsible for obtaining necessary permits and approvals to construct the pipeline.~~[17]

7. The Project is anticipated to begin commercial operation in March 2018.[18]

8. The construction cost for the Project is estimated to be ~~about~~ $100 million.[19]

8a. The service life of the Project is expected to exceed 35 years.[20]

8b. The Project will be fueled solely by natural gas.[21] As a result, the Project will increase natural gas needs at the Generating Plant.[22] A new natural gas pipeline

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[13] Ex. 17, at page 3 (EA); *see also* Ex. 2, at page 2 (Application).~~Application for a Site Permit, October 15, 2015, at 3.~~
[14] Ex. 17, at page 3 (EA); *see also* Ex. 2, at page 3 (Application).~~Application for a Site Permit, October 15, 2015, at 3.~~
[15] Ex. 17, at page 18 (EA); *see also* Ex. 2, at page 15 (Application).
[16] Ex. 17, at pages 19 – 21 (EA); *see also* Ex. 2, at page 15 (Application).~~Application for a Site Permit, October 15, 2015, at 15.~~
~~[17] Application for a Site Permit, October 15, 2015, at 11.~~
[18] Ex. 2, at page 10 (Application).~~Application for a Site Permit, October 15, 2015, at 10.~~
[19] Ex. 2, at pages 24, 25 (EA); *see also* Ex. 2, at page 10 (Application).~~Application for a Site Permit, October 15, 2015, at 10.~~
[20] Ex. 17, at page 3 (EA).
[21] Ex. 17, at page 21 (EA); *see also* Ex. 2, at page 15 (Application).
[22] Ex. 17, at page 21 (EA).

will need to be constructed to increase natural gas supplies to the Generating Plant.[23] The gas supplier will be responsible for obtaining necessary permits and approvals to construct the pipeline.[24] The pipeline project will undergo a separate environmental review process.[25]

9. Minn. Stat. § 216B.243 generally requires a Certificate of Need (CON) to construct a generation facility with a total capacity of 50 MW or more.[26] A CON is not required if the facility is selected in a competitive resource acquisition bidding process established by the Commission under Minnesota Stat. § 216B.2422, Subd. 5(b).[27]

10. The ~~Black Dog Unit 6~~ Project was selected in a competitive resource acquisition bidding process (Docket No. E002/CN-12-1240) established by the Commission; therefore, ~~and~~ a CON is not required for the Project.[28]

~~11. On February 5, 2015, the Commission issued an Order in Docket No. E002/CN-12-1240 approving price terms with Xcel Energy for the Black Dog 6 Project.[29]~~

III. Procedural History

12. On September 16, 2015, the Applicant filed notice of intent to apply for ~~an alternative~~ a site permit under Minn. Rules 7850.2800 – 7850.3900 for the ~~Black Dog Unit 6~~ Project.[30]

13. On October 15, 2015, the Applicant filed its site permit application with the Commission under the alternative ~~site~~ review~~permit~~ process ~~to the Minnesota Public Utilities Commission~~.[31]

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[23] Ex. 17, at page 21 (EA).
[24] Ex. 17, at page 21 (EA); *see also* Ex. 2, at page 15 (Application).
[25] Ex. 17, at pages 21, 22 (EA); *see also* Ex. 2, at page 11 (Application).
[26] Ex. 17, at page 6 (EA).
[27] Ex. 17, at page 7 (EA).~~Application for a Site Permit, October 15, 2015, at 10.~~
[28] Ex. 17, at page 7 (EA); *see also* Ex. 2, at page 10 (Application).~~Application for a Site Permit, October 15, 2015, at 10.~~
~~[29] *In the Matter of the Petition of Northern States Power Company for Approval of a Competitive Resource Acquisition Proposal and Certificate of Need.* Docket No. E002/CN-12-1240. ORDER APPROVING POWER PURCHASE AGREEMENT WITH CALPINE, APPROVING POWER PURCHASE AGREEMENT WITH GERONIMO, AND APPROVING PRICE TERMS WITH XCEL, ORDER POINT 3. February 5, 2015.~~
[30] Ex. 1, (Notice of Intent to File).~~Xcel Energy's Notification of Intent to File Site Permit Application, September 16, 2015.~~
[31] Ex. 2, (Application).~~Application for a Site Permit, October 15, 2015.~~

14. On October 22, 2015, the Applicant filed a letter that provided the results of the Natural Heritage Information System query conducted by the Minnesota Department of Natural Resources (DNR).[32]

15. On October 23, 2015, the Commission issued a notice for a comment period regarding whether the application contained the information required under Minn. Rules 7850.1900, whether there are any contested issues of fact, and whether there are any other related issues or concerns.[33]

16. On November 2, 2015, the Applicant filed a notice to landowners adjacent to the Project regarding the ~~Black Dog Unit 6~~ site permit application.[34]

17. On November 6, 2015 the Minnesota Department of Commerce, ~~Office~~ Energy Environmental Review and Analysis (EERA) unit, submitted ~~C~~comments on the completeness of the site permit application.[35] The EERA recommended that the Commission accept the application for the Project as substantially complete, with the understanding that the Applicant will provide supplemental information, and that~~. The EERA also recommended that~~ the Commission take no action on an advisory task force.[36]

18. On November 10, 2015 the Applicant filed an affidavit of a mailing to ~~Project~~ adjacent landowners and an affidavit of a public notice in the "Burnsville This Week" and "Minneapolis Star Tribune" newspapers regarding the Black Dog Unit 6 Project site permit application.[37]

19. On November 13, 2015, the Applicant filed ~~R~~reply ~~C~~comments providing additional ~~site permit application~~ information as suggested by the EERA in their November 6 comments.[38] The supplemental information included a listing of the equipment and associated facilities anticipated to be covered by the site permit, ~~additional~~ clarification regarding project construction and scheduled maintenance, and a listing of any unavoidable Project impacts.[39]

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[32] Ex. 3, (Heritage Review)~~Letter, October 22, 2015.~~ .
[33] Ex. 21, (Notice of Comment Period); Ex. 22, (Notice of Comment Period – Certificate of Service and Service Lists).~~Notice of Comment Period, October 23, 2015.~~
[34] Ex. 4, (Notice of Site Permit Application)~~, November 2, 2015~~.
[35] Ex. 12, (Comments and Recommendations on Application Completeness).
[36] Ex. 12, (Comments and Recommendations on Application Completeness)~~, November 6, 2015~~.
[37] Ex. 5, (Affidavit of Application)~~, November 10, 2015~~.
[38] Ex. 6, (Reply Comments).
[39] Ex. 6, (Reply Comments)~~, November 13, 2015~~.

20. On November 18, 2015, the EERA filed a letter in response to the Applicant's ~~R~~reply ~~C~~comments, which~~. The EERA~~ stated that the supplemental information provided was consistent with their expectations.[40]

21. On November 20, 2015, the Commission issued a notice that the site permit application would be heard at a Commission meeting on December 3, 2015.[41]

22. On November 24, 2015, the Commission filed briefing papers regarding completeness of the site permit application.[42]

~~23. On December 2, 2015, the U.S. Army Corps of Engineers filed a letter regarding the possible need for a Clean Water Act permit if the Project involves the discharge of dredge or fill material into the waters of the United States.[43]~~

22a. On December 3, 2016, the Commission considered the completeness of the site permit application at its regular agenda meeting.[44]

24. On December 10, 2015, the Commission issued an Order ~~finding~~ that found the site permit application ~~was~~ complete and requested that an Administrative Law Judge (ALJ) be appointed to preside over a public hearing as well as prepare a summary report of the comments received at the public hearing.[45]

25. On January 6, 2016, the Commission issued a notice regarding a Public Information and Scoping meeting to be held at the Burnsville City Hall on January 28, 2016.[46]

26. On January 28, 2016 a Public Information and Scoping meeting was held at ~~the~~ Burnsville City Hall~~ – Council Chambers~~.[47] Commission ~~and EERA~~ staff presented information about the site permit application process; EERA staff discussed the ~~and environmental assessment~~ EA scoping process and solicited public comment~~, as well as answer questions~~; ~~and gather comments from the~~

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[40] Ex. 13, (Reply Comments – Letter)~~, November 18, 2015~~.
[41] Ex. 24, (Notice of Commission Meeting); Ex. 25, (Notice of Commission Meeting – Certificate of Service and Service List)~~, November 20, 2015~~.
[42] Ex. 26, (Briefing Papers)~~, November 24, 2015~~.
~~[43] Letter, December 2, 2015.~~
[44] Ex. 32, (Minutes – December 3, 2015, Agenda Meeting).
[45] Ex. 27, (Order Finding Application Complete, Requesting Summary Report, and Granting Variance)~~. December 10, 2015.~~
[46] Ex. 29, (Notice of Public Information and Environmental Assessment Scoping Meeting)~~, January 6, 2016~~.
[47] Ex. 31, (Meeting Presentation); Ex. 14, (Public Meeting Summary).

~~public. A~~a representative of the Applicant presented information about the Project; and all were available to answer questions.[48]

~~27. On February 10, 2016, the Minnesota Department of Transportation filed comments regarding highway-related considerations including possible oversize or overweight hauling of equipment.[49]~~

28. On February 17, 2016, the Applicant filed an affidavit of publication that a notice of the scoping meeting to be held on January 28, 2016 was published in the "Burnsville/Eagan Sun This Week" on January 15, 2016.[50]

29. On February 18, 2016, the EERA filed a ~~transcript~~ summary of the scoping meeting held on January 28, 2016~~. Three members of the public were in attendance. No comments from the public were received~~.[51]

~~30. On February 25, 2016, the EERA filed a notice of an environmental assessment scoping decision regarding the site application permit for the Project.[52]~~

31. On February 25, 2016, the EERA filed its scoping decision regarding the issues that would be addressed and the information that would be provided in the ~~environmental assessment of~~EA for the Project.[53]

31a. On February 25, 2016, the EERA filed notice of its EA scoping decision.[54]

~~32. On May 3, 2016, the Minnesota Historical Society, State Historical Preservation Office (SHPO) filed a letter dated November 24, 2015 regarding its review of the Project. The SHPO concluded there are no properties listed in the National or State Registers of Historic Places and no known or suspected archaeological properties in the area that will be affected by the Project.[55]~~

33. On May 26, 2016, the EERA ~~filed~~ published the EA and ~~its~~ subsequent notice of availability~~ and environmental assessment regarding the Project~~.[56]

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[48] Ex. 31, (Meeting Presentation); Ex. 14, (Public Meeting Summary)~~January 8, 2016~~.
~~[49] Comments, February 10, 2016.~~
[50] Ex. 7, (Affidavit of Publication)~~, February 17, 2016~~.
[51] Ex. 14, (Public Meeting Summary).~~Public Comments – February 18, 2016.~~
~~[52] Notice of Environmental Assessment Scoping Decision, February 25, 2016.~~
[53] Ex. 15, (Environmental Assessment Scoping Decision)~~, February 25, 2016~~.
[54] Ex. 16, (Notice of Environmental Assessment Scoping Decision).
~~[55] Comments, May 3, 2016.~~
[56] Ex. 17, (Environmental Assessment); Ex. 18, (Notice of Environmental Assessment); Ex. 19, (Affidavit of

34. On June 3, 2016, the Commission filed a notice of a public meeting regarding the Project ~~environmental assessment~~ to be held on June 16, 2016 at the Burnsville City Hall. [57]

35. On June 7, 2016, the Commission filed its verification that a notice of the public meeting to be held on June 16, 2016 was sent to local units of government by U.S. certified mail.[58]

36. On June 16, 2016, the EERA filed verification that availability of the EA was published in the Environmental Quality Board Monitor on June 6, 2016~~of placing a notice of the public meeting to be held on June 16, 2016 in the June 13, 2016 Environmental Quality Board Monitor~~.[59]

37. On June 16, 2016, a public hearing was conducted by ~~Administrative Law Judge~~ ALJ James LaFave. Information related to the site permit process, the ~~environmental assessment~~EA, and the Project was provided by Mr. Cezar Panait on behalf of the Commission.~~,~~ Mr. Andrew Levi, on behalf of the EERA, and Mr. Mark Danberg, on behalf of the Applicant, were available to answer questions~~. Three members of the public offered comments. Two of three persons who spoke indicated support for the Project, and the third person indicated her comments would be submitted in writing prior to the end of the comment period.~~[60]

~~38. On June 29, 2016, the Comments from the City of Burnsville were filed. The City stated it believes the Project is beneficial to the residents of Burnsville and the region, as well as ratepayers.~~[61]

~~39. On June 30, 2016, Xcel Energy filed comments regarding the Project environmental assessment indicating it found the assessment to be a thorough and accurate summary of the potential environmental impacts of the Project. Xcel Energy indicated it intends to implement the mitigation measures deemed necessary and to comply with all permits and licenses that are required~~

Publication); Ex. 20, (Certificate of Mailing)~~May 25, 2016~~.

[57] Ex. 33, (Notice of Public Hearing); Ex. 34, (Notice of Public Hearing – Certificate of Service and Service Lists).~~June 3, 2016.~~

[58] Ex. 35, (LGU Certified Mail)~~, June 7, 2016~~.

[59] EERA (June 16, 2016) *EQB Monitor Notice*, eDockets No. 20166-122313-01.~~EQB Monitor Notice, June 16, 2016.~~

[60] Court Reporter (June 30, 2016) *Transcripts – Public Hearing June 16, 2016*, eDockets No. 20166-122844-01.

[61] ~~Public Comment, June 29, 2016.~~

~~following issuance of the Site Permit. The site permit application and environmental assessment identified potential permits or approvals.~~[62]

~~40. On June 30, 2016, the Minnesota Pollution Control Agency (MPCA) filed comments regarding the Project. The MPCA indicated that the Minnesota River is listed as an impaired waters that will dictate additional increased stormwater treatment during construction and required additional increased permanent treatment post-construction. The MPCA indicated it is the responsibility of the Project sponsor to secure any required permits and comply with any requisite permit conditions.~~[63]

41. On June 30, 2016, the ~~Administrative Law Judge –~~ Court Reporter filed sign-up sheets and a transcript of the public hearing ~~regarding the Project environmental assessment~~.[64]

~~42. On July 5, 2016, comments from two citizens and the Lower Minnesota River Watershed District regarding the Project were filed.~~[65]

~~43. On July 11, 2016, the Metropolitan Council filed comments regarding the Project.~~[66]

44. On July 15, 2016, Xcel Energy filed an affidavit verifying that a notice of the public meeting on June 16, 2016, was published June 10, 2016, in the Burnsville/Eagan Sun This Week.[67]

44a. On August 2, 2016, ALJ LaFave filed a report summarizing public comments received at the public hearing.[68]

IV. Public and Agency Participation

~~[62] Environmental Assessment Comments, June 30, 2016.~~
~~[63] Letter – Public Comment, June 30, 2016.~~
[64] Court Reporter (June 30, 2016) *Transcripts – Public Hearing June 16, 2016*, eDockets No. 20166-122844-01; Court Reporter (June 30, 2016) *Public Hearing Sign-in Sheets – June 16, 2016*, eDockets No. 20166-122845-01.~~Transcript – Public Hearing, June 30, 2016.~~
~~[65] Public Comment, July 5, 2016.~~
~~[66] Comments, July 11, 2016.~~
[67] Applicant (July 15, 2016) *Affidavit of Publication – June 16, 2016, Public Hearing*, eDockets No. 20167-123338-01.~~July 15, 2016.~~
[68] Office of Administrative Hearings (August 2, 2016) *Order*, eDockets No. 20168-123875-01.

44b~~23~~. On December 2, 2015, the U.S. Army Corps of Engineers filed a letter regarding the possible need for a Clean Water Act permit if the Project involves the discharge of dredge or fill material into the waters of the United States.[69]

44c. On January 28, 2016, a Public Information and Scoping meeting was held at Burnsville City Hall.[70] No public comments were received.[71]

44d. On February 10, 2016, the Minnesota Department of Transportation filed scoping comments regarding highway-related considerations including possible oversize or overweight hauling of equipment.[72]

44e. On February 11, 2016, the DNR filed scoping comments regarding an active peregrine falcon nest box.[73]

44f. On May 3, 2016, the EERA filed a letter dated November 24, 2015, from the Minnesota Historical Society, State Historical Preservation Office (SHPO) regarding its review of the Project, which concluded there are no properties listed in the National or State Registers of Historic Places and no known or suspected archaeological properties in the area that will be affected by the Project.[74]

44g. On June 16, 2016, a public hearing was conducted by Administrative Law Judge (ALJ) James LaFave.[75] Three persons provided comment.[76]

44h. Mr. James Swanson asked whether Xcel planned to use the current chimney or build a new chimney, and whether sufficient room for expansion exists.[77]

44i. Ms. Yvonne Shirk inquired about the construction permitting process with the City of Burnsville due to concerns regarding compliance with the Watershed District.[78]

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[69] Ex. 8, (Letter – Comments on Black Dog 6).
[70] Ex. 14, (Meeting Summary).
[71] Ex. 14, (Meeting Summary).
[72] Ex. 12, (Comments).
[73] Ex. 11, (Comments).
[74] Ex. 9, (Comments).
[75] Court Reporter (June 30, 2016) *Transcripts – Public Hearing June 16, 2016*, eDockets No. 20166-122844-01.
[76] Court Reporter (June 30, 2016) *Public Hearing Sign-in Sheets – June 16, 2016*, eDockets No. 20166-122845-01.
[77] Office of Administrative Hearings (August 2, 2016) *Order*, eDockets No. 20168-123875-01.
[78] Office of Administrative Hearings (August 2, 2016) *Order*, eDockets No. 20168-123875-01.

44j. Mr. James Samuelson, representing the International Brotherhood of Electrical Workers (IBEW) Local 160, supported construction of the Project.[79]

44k. On June 29, 2016, the city of Burnsville filed comments regarding the Project that stated the city believes the Project is beneficial to the residents of Burnsville and the region, as well as ratepayers.[80]

44l. On June 30, 2016, Xcel Energy filed comments regarding the EA prepared for the Project indicating it found the assessment to be a thorough and accurate summary of the potential environmental impacts of the Project.[81] Xcel Energy indicated it intends to implement the mitigation measures deemed necessary and to comply with all permits and licenses that are required following issuance of the Site Permit, which were identified in the EA.[82]

44m. On June 30, 2016, the Minnesota Pollution Control Agency (MPCA) filed comments regarding the Project that indicated that the Minnesota River is listed as an impaired waters that will dictate increased stormwater treatment during construction and required increased permanent treatment post-construction.[83] The MPCA also indicated it is the responsibility of the Project sponsor to secure any required permits and comply with any requisite permit conditions.[84]

44n. On July 5, 2016, Commission staff filed comments from one citizen and the Lower Minnesota River Watershed District received from its SpeakUp! online commenting tool.[85]

44o. Mr. William Harrison indicated support for the Project.[86]

44p. The Lower Minnesota River Watershed District requested the opportunity to review and comment on the Construction Stormwater Pollution Prevention Plan (SWPPP) should a plan be required.[87] Additionally, the District asked how groundwater appropriation permit No. 1961-0271—independently and in

[79] Office of Administrative Hearings (August 2, 2016) *Order*, eDockets No. 20168-123875-01.
[80] City of Burnsville (June 29, 2016) *City of Burnsville Comments – June 27, 2016*, eDockets No. 20166-122745-01.
[81] Applicant (June 30, 2016) *EA Comments*, eDockets No. 20166-122838-01.
[82] Applicant (June 30, 2016) *EA Comments*, eDockets No. 20166-122838-01.
[83] MPCA (June 30, 2016) *Black Dog Unit 6 Comment*, eDockets No. 20166-122852-01.
[84] MPCA (June 30, 2016) *Black Dog Unit 6 Comment*, eDockets No. 20166-122852-01.
[85] PUC (July 5, 2016) *Public Comment*, eDockets No. 20167-123007-01.
[86] PUC (July 5, 2016) *Public Comment*, eDockets No. 20167-123007-01.
[87] PUC (July 5, 2016) *Public Comment*, eDockets No. 20167-123007-01.

concert with other groundwater appropriation permits in the area—directly or indirectly impact the Black Dog Fen.[88]

44q. On July 11, 2016, Commission staff filed comments submitted June 30, 2016, by the Metropolitan Council, which stated an environmental impact statement for regional purposes was not required for the Project, and provided clarification regarding a regional trail.[89]

~~I~~V. Factors for a Site Permit

45. Minn. Stat. § 216E requires that a site permit ~~must~~ be obtained from the Commission in order to construct~~proceed with this~~ the proposed Project.~~ In addition, Minn. Stat. §216E.02, Subd. 1, states it is the policy of the state to locate large electric power facilities in an orderly manner compatible with environmental preservation and the efficient use of resources. In accordance with this policy the commission shall choose locations that minimize adverse human and environmental impact while insuring continuing electric power system reliability and integrity and insuring that electric energy needs are met and fulfilled in an orderly and timely fashion.~~[90]

46. Minn. Stat. § 216E.10~~9~~, Subd. 1, provides that site permits issued by the Commission shall "supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government."[91] Though zoning and land use rules are superseded, the Commission's site permit decision must be guided, in part, by impacts to local zoning and land use in accordance with the legislative goal to minimize human settlement and other land use conflicts.[92]

46a. Minn. Stat. § 216E.02, Subd. 1, declares it to be policy of the State of Minnesota "to locate large electric power facilities in an orderly manner compatible with environmental preservation and the efficient use of resources. In accordance with this policy the [C]omission shall choose locations that minimize adverse human and environmental impact while insuring continuing

[88] PUC (July 5, 2016) *Public Comment*, eDockets No. 20167-123007-01.
[89] Metropolitan Council (July 11, 2016) *Metropolitan Council Comments – June 30, 2016*, eDockets No. 20167-123150-01.
[90] ~~See~~ Minn. Stat. ~~§~~ 216E.03, Subd. 1~~9 (2015)~~.
[91] ~~See~~ Minn. Stat. ~~§~~ 216E.~~03~~ 10, Subd. 1~~(2015)~~.
[92] Ex. 17, at page 11 (EA).

electric power system reliability and integrity and insuring that electric energy needs are met and fulfilled in an orderly and timely fashion."[93]

47. Minn. Stat. § 216E.03, subdivision 7(b), states the 12 considerations the Commission must address when making a site permit application decision.[94] These considerations are expanded upon by Minn. Rule 7850.4100, which identifies 14 factors the Commission must consider.[95] The EA~~environmental assessment report~~ addressed each of these factors.[96]

48. Under Minn. Stat. § 216E.03, Subd. 7(b), the 12 considerations are as follows:

(1) evaluation of research and investigations relating to the effects on land, water and air resources of large electric power generating plants and high-voltage transmission lines and the effects of water and air discharges and electric and magnetic fields resulting from such facilities on public health and welfare, vegetation, animals, materials and aesthetic values, including baseline studies, predictive modeling, and evaluation of new or improved methods for minimizing adverse impacts of water and air discharges and other matters pertaining to the effects of power plants on the water and air environment;

(2) environmental evaluation of sites and routes proposed for future development and expansion and their relationship to the land, water, air and human resources of the state;

(3) evaluation of the effects of new electric power generation and transmission technologies and systems related to power plants designed to minimize adverse environmental effects;

(4) evaluation of the potential for beneficial uses of waste energy from proposed large electric power generating plants;

(5) analysis of the direct and indirect economic impact of proposed sites and routes including, but not limited to, productive agricultural land lost or impaired;

(6) evaluation of adverse direct and indirect environmental effects that cannot be avoided should the proposed site and route be accepted;

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[93] Minn. Stat. 216E.02, Subd. 1.
[94] Minn. Stat. 216E.03, Subd. 7(b).
[95] Minn. R. 7850.4100.
[96] *See generally* Ex. 17, (EA)~~Environmental Assessment, May 25, 2016, at 10~~.

(7) evaluation of alternatives to the applicant's proposed site or route proposed pursuant to subdivision 1 and 2;

8) evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;

(9) evaluation of governmental survey lines and other natural division lines of agricultural land so as to minimize interference with agricultural operations;

(10) evaluation of future needs for additional high-voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expansion in transmission capacity through multiple circuiting or design modifications;

(11) evaluation of irreversible and irretrievable commitments of resources should the proposed site or route be approved; and

(12) when appropriate, consideration of problems raised by other state and federal agencies and local entities.[97]

49. Under Minn. Rules 7850.4100, the 14 factors that the Commission shall consider are further clarified as follows:

A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;

B. effects on public health and safety;

C. effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;

D. effects on archaeological and historic resources;

E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;

F. effects on rare and unique natural resources;

[97] ~~See~~ Minn. Stat. ~~§~~ 216E.03, Subd. 7(b) ~~(2015)~~.

G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;

H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;

I. use of existing large electric power generating plant sites;

J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;

K. electrical system reliability;

L. costs of constructing, operating, and maintaining the facility which are dependent on design and route;

M. adverse human and natural environmental effects which cannot be avoided; and

N. irreversible and irretrievable commitments of resources.[98]

V~~I~~. ~~Environmental Assessment~~Application of Siting Factors

A. Environmental Setting

50. The existing generating plant is within the Minnesota River Valley~~, which was formed 11,600 to 9,200 years ago as River Warren drained glacial Lake Agassiz through the Minnesota River Valley~~.[99] ~~Today, t~~The river valley within the vicinity of the proposed project contains wetlands and floodplain forests of maple, cottonwood, and ash.[100] The Black Dog Power Plant is located on a natural isthmus with open, grassed areas and pockets of forested areas between Black Dog Lake and the Minnesota River.[101]

~~-~~The ~~Power Plant~~generating plant covers about 80 acres within a 1,900 acre facility boundary owned by the Applicant.[102] Of this amount, about 500 acres

[98] ~~See~~ Minn. R.~~ules~~ 7850.4100.
[99] Ex. 17, at page 30 (EA).
[100] Ex. 17, at pages 30, 31 (EA).
[101] Ex. 17, at page 31 (EA).
[102] Ex. 17, at pages 31, 32 (EA).

is covered by Black Dog Lake.[103] The remaining acres are managed as part of the Minnesota Valley National Wildlife Refuge under a long-term lease agreement with the U.S. Fish & Wildlife Service.[104][105]

The generating plant is located in the city of Burnsville, Minnesota, within the Minneapolis–St. Paul–Bloomington metropolitan statistical area. Approximately 3,524,583 people live in this urbanized environment that covers approximately 8,120 square miles.[106]

B. Impacts to Human Settlement

1. Aesthetics

51. The majority of the Project will be located within the existing powerhouse building.[107]~~, although portions of it such as the~~ The air inlet filter, main transformer, auxiliary transformer, exhaust stack, and fin fan cooler will be located outside either attached to the building or ~~located~~ within a short distance.[108] ~~The majority of this outdoor equipment will only be visible from the west or south.~~

51a. The powerhouse is part of the existing generating plant, which is surrounded by wildlife and recreational areas, as well as roads, railway, and extensive electrical transmission infrastructure.[109] Residents on nearby bluffs overlook the Project.[110]

52. Aesthetics impacts are anticipated to be long-term and minimal.[111] Impacts are of a relative small size compared to the generating plant as a whole.[112] The presence of the existing generating plant prevents the occurrence of a natural view.~~ The region of influence for aesthetics is one mile.~~[113]

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[103] Ex. 17, at page 32 (EA).
[104] Ex. 17, at page 32 (EA).
[105] ~~Environmental Assessment, May 25, 2016, at 30-32.~~
[106] Ex. 17, at page 32 (EA).
[107] Ex. 17, at page 18 (EA).
[108] Ex. 17, at pages 20, 21 (EA).
[109] Ex. 17, at page 33 (EA).
[110] Ex. 17, at page ~~Environmental Assessment, May 25, 2016, at~~ 33~~-35~~ (EA).
[111] Ex. 17, at page 35 (EA).
[112] Ex. 17, at page 35 (EA).
[113] Ex. 17, at page 35 (EA).~~nvironmental Assessment, May 25, 2016, at 35.~~

~~53. The powerhouse is located in an area with extensive electrical transmission infrastructure.~~ The introduction of a second exhaust stack protruding from the roof of the powerhouse will increase aesthetic impacts; however, this increase will be incremental and minimal.[114] The Unit 6 exhaust stack will be shorter than the Unit 5/2 stack and, unlike the Unit 5/2 stack, is not expected to create a water vapor plume.[115] The proposed project is not anticipated to be visible from I-35W or MN-77.[116]

54. Direct aesthetic impacts can cause indirect impacts to property values and recreational opportunities, ~~. B~~because direct aesthetic impacts are anticipated to be minimal, indirect impacts are anticipated to be negligible.[117]

55. Potential impacts to aesthetics can be minimized by choosing sites that are, to the extent practicable, consistent with the existing view shed or reduce viewer exposure.[118] Constructing Black Dog Unit 6 within an existing powerhouse building is consistent with these measures.[119] No mitigation is proposed.[120]

2. Cultural Values

56. Cultural values are learned community beliefs and attitudes.[121] Impacts to cultural resources are not anticipated.[122] The proposed project will not interfere with the work or leisure pursuits of residents in a way that interferes with their cultural values.[123] No mitigation is proposed.[124]

3. Displacement

57. Displacement is the forced removal of a residence or building to facilitate the construction and operation of the ~~proposed p~~Project.[125] The Applicant owns

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[114] Ex. 17, at page 35 (EA).
[115] Ex. 17, at page 35 (EA).
[116] Ex. 17, at page 35 (EA)~~nvironmental Assessment, May 25, 2016, at 35~~.
[117] Ex. 17, at page 35 (EA)~~Environmental Assessment, May 25, 2016, at 35~~.
[118] Ex. 17, at page 35 (EA).
[119] Ex. 17, at page 35 (EA).
[120] Ex. 17, at page 35 (EA)~~Environmental Assessment, May 25, 2016, at 35~~.
[121] Ex. 17, at page 35 (EA).
[122] Ex. 17, at page 36 (EA).
[123] Ex. 17, at page 36 (EA).
[124] Ex. 17, at page 36 (EA).~~Environmental Assessment, May 25, 2016, at 36.~~
[125] Ex. 17, at page 36 (EA).

the proposed site location; therefore ~~and~~ displacement will not occur.[126] No mitigation is proposed.[127]

4. Floodplain

58. The proposed project is located in an area subject to inundation by the 1-percent-annual-chance flood event.[128] ~~Impacts to the 100-year floodplain are not anticipated.~~ All outdoor equipment, including the equipment fin fan cooler~~,~~ and on-site natural gas pipeline, will be located above 720 feet mean sea level, which exceeds the 100-year flood level (715 feet mean sea level).[129] The remaining facilities will be within or upon the existing powerhouse. Construction activities will not result in placement of fill or alterations to the floodplain.[130]

58a. Impacts to the 100-year floodplain are not anticipated.[131] No mitigation is proposed.[132]

C. ~~Land Use and~~ Zoning and Land Use

58a. Land use is the use of land by humans, such as residential uses, and often refers to zoning.[133] Zoning is a regulatory tool used by local governments to promote or restrict certain land uses within specific geographic areas.[134]

58b. A site permit from the Commission supersedes local zoning, building, or land use rules.[135]

59. The ~~existing generating plant~~Project is located in an area of Burnsville zoned as Conservancy District.[136] Utility uses and the expansion of nonconforming existing uses may be allowed.[137] A conditional use permit is required for a structure that exceeds 35 feet in height. ~~The powerhouses building and the~~

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126 Ex. 17, at page 36 (EA).
127 Ex. 17, at page 36 (EA)~~Environmental Assessment, May 25, 2016, at 36~~.
128 Ex. 17, at page 36 (EA).
129 Ex. 17, at page 36 (EA).
130 Ex. 17, at page 36 (EA).
131 Ex. 17, at page 36 (EA).
132 Ex. 17, at page 36 (EA).~~Environmental Assessment, May 25, 2016, at 36.~~
133 Ex. 17, at page 36 (EA).
134 Ex. 17, at pages 36, 37 (EA).
135 Ex. 17, at page 37 (EA).
136 Ex. 17, at page 37 (EA).
137 Ex. 17, at page 37 (EA).

~~exhaust stack for Unit 5/2 are over 35 feet in height.~~ The exhaust stack ~~for Unit 6~~ will be 200 feet tall~~. This is about 15 feet shorter than the existing Unit 5/2 exhaust stack~~.[138]

60. The Project is within the Shoreland Overlay District and the Floodway District.[139]

General setback requirements for sewered properties within the Shoreland Overlay District are 50 feet from the ordinary high water mark to the closest point of the structure.[140] The powerhouse building is approximately 200-feet from Black Dog Lake.[141] The fin fan cooler is also expected to exceed the 50 foot setback.[142]

61. ~~Direct impacts are anticipated to be long-term and of a small size.~~ ~~Unit 6~~The Project will be constructed within an existing powerhouse building.[143] Outdoor construction activities will be limited to industrial areas on the site location.[144] On-site staging and storage of equipment will also be limited to these areas.[145] Unique resources will not be impacted~~. The overall impact intensity level is anticipated to be minimal.~~[146] .[147]

62. Direct impacts are anticipated to be long-term and of a small size~~.~~.[148] The overall impact intensity level is anticipated to be minimal.[149]~~Unit 6 will be constructed within an existing powerhouse building. Outdoor construction activities will be limited to industrial areas on the site location. On-site staging and storage of equipment will also be limited to these areas. As a result, impacts to land use are not anticipated.~~ No mitigation is proposed.[150]

D. Noise

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[138] Ex. 17, at page 37 (EA).~~Environmental Assessment, May 25, 2016, at 37.~~
[139] Ex. 17, at page 37 (EA).
[140] Ex. 17, at page 37 (EA).
[141] Ex. 17, at page 37 (EA).
[142] Ex. 17, at page 37 (EA).~~Environmental Assessment, May 25, 2016, at 37.~~
[143] Ex. 17, at page 37 (EA).
[144] Ex. 17, at page 37 (EA).
[145] Ex. 17, at page 37 (EA).
[146] ~~Environmental Assessment, May 25, 2016, at 37.~~
[147] Ex. 17, at page 37 (EA).
[148] Ex. 17, at page 37 (EA).
[149] Ex. 17, at page 37 (EA).
[150] Ex. 17, at page 37 (EA)~~Environmental Assessment, May 25, 2016, at 37~~.

63. Noise can be defined as an undesired sound.[151] The Project is located in an urban area.[152] Ambient noise levels in these locations are generally between 45 and 55 decibels during daytime hours, . Noise levels willand vary throughout the day due to vehicle traffic, emergency vehicle sirens, or passing aircraft, and other factors.[153]

64. Noise impacts will be associated with construction and operation of the proposed project. The region of influence for noise impacts is 1,600 feet. Several residences are within 1,600 feet of the site location.[154] The closest residence to the existing powerhouse is about 1,850 feet to the south. This residence is approximately 1,800 feet from the proposed location of the proposed fin fan cooler location.[155]

65. Noise impacts related to construction will be intermittent and short-term. The majority of construction will occur inside the existing powerhouse.[156] Outdoor construction activities will include installation of the fin fan cooler, step-up transformer, exhaust stack, and on-site natural gas pipeline.[157] Noise from heavy equipment, such as, cranes and excavating equipment, and increased vehicle traffic will occur during daytime hours.[158] Noise impacts related to construction will be intermittent and short-term. The size of the impact will vary depending upon the distance between the source and the receptor. This distance is expected to exceed 1,600 feet. The overall impact intensity level is expected to be minimal. These impacts may or may not surpass MPCA noise standards. Impacts are unavoidable, but can be minimized.[159]

66. Noise impacts related to construction will be intermittent and short-term.[160] The size of the impact will vary depending upon the distance between the source and the receptor.[161] The overall impact intensity level is expected to be minimal.[162] Commission site permits require that construction be limited to daytime hours. The majority of construction will occur inside the existing

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151 Ex. 17, at page 38 (EA).
152 Ex. 17, at page 32 (EA).
153 Ex. 17, at page 38 (EA).Environmental Assessment, May 25, 2016, at 38.
154 Ex. 17, at page 39 (EA).
155 Ex. 17, at page 39 (EA).Environmental Assessment, May 25, 2016, at 39.
156 Ex. 17, at page 39 (EA).
157 Ex. 17, at page 39 (EA).
158 Ex. 17, at page 39 (EA).
159 Ex. 17, at page 39 (EA).Environmental Assessment, May 25, 2016, at 39.
160 Ex. 17, at page 39 (EA).
161 Ex. 17, at page 39 (EA).
162 Ex. 17, at page 39 (EA).

~~powerhouse. Outdoor construction activities will include installation of the fin fan cooler, step-up transformer, exhaust stack, and on-site natural gas pipeline. Noise from heavy equipment, such as, cranes and excavating equipment, and increased vehicle traffic will be intermittent and occur during daytime hours.[163] The overall impact intensity level is expected to be minimal.~~ These impacts may or may not surpass MPCA noise standards.[164] Impacts are unavoidable, but can be minimized.[165] Commission site permits require that construction be limited to daytime hours.[166]

67. The Project will produce noise during operation.[167] The turbine will be located within the existing powerhouse.[168] ~~Noise surveys were conducted in 2002 while Unit 3 (coal-fired), Unit 4 (coal-fired), and Unit 5/2 (natural gas-fired) were in operation.~~ Noise impacts from the Unit 6 turbine are expected to be similar or less than noise associated with coal-fired generation~~measured during the 2002 survey~~.[169] Noise from the fin fan cooler will not exceed ambient noise levels at 1,600 feet from the source.[170]

68. ~~Construction noise is not anticipated to exceed state noise standards. However, intermittent noise impacts may occur from construction related activities. Commission site permits require compliance with state noise standards, and also require that construction be limited to daytime hours.~~ Operational noise impacts are mitigated by locating the turbine within an existing powerhouse.[171] Noise impacts are also mitigated by the fact that a coal-fired generating plant had been in operation for over 50 years at this location, including rail shipments of coal, and resident expectations regarding ambient noise levels are established and include electric power generating equipment.[172]

E. Property Values

~~[163] Environmental Assessment, May 25, 2016, at 39.~~
[164] Ex. 17, at page 39 (EA).
[165] Ex. 17, at page 39 (EA).
[166] Ex. 17, at page 40 (EA).
[167] Ex. 17, at page 40 (EA).
[168] Ex. 17, at page 40 (EA).
[169] Ex. 17, at page 40 (EA).~~Environmental Assessment, May 25, 2016, at 40.~~
[170] Ex. 17, at page 40 (EA).
[171] Ex. 17, at page 40 (EA).
[172] Ex. 17, at page 40 (EA).~~Environmental Assessment, May 25, 2016, at 40.~~

69. Potential impacts to property values are not anticipated.[173] The Project will be constructed within an existing powerhouse building, which is located inside an existing generating plant boundary.[174] Aesthetic impacts are anticipated to be minimal; health related impacts are not anticipated.[175] ~~Potential impacts to property values are not anticipated.~~ No mitigation is proposed.[176]

F. Recreation

70. Black Dog Park, operated by the city of Burnsville, is located about 1,900 feet from the existing powerhouse.[177] ~~The Park is operated by the City of Burnsville and consists of three baseball fields.~~ The Black Dog Preserve Unit of the Minnesota Valley National Wildlife Refuge is located on about 1,250 acres on land owned by the Applicant and leased to the Minnesota Valley National Wildlife Refuge.[178] The Black Dog Greenway is a paved, multi-use recreational trail that is expected to be completed in the fall of 2016.[179]

71. Impacts to recreation are anticipated to be minimal.[180] The proposed project will result in minimal aesthetic impacts,[181] and construction activities will be limited to previously impacted industrial areas on-site.[182] ~~and n~~No mitigation is proposed.[183]

G. Socioeconomics

72. The Project ~~will~~ may take ~~between 18 and~~up to 24 months to construct (including commission and start-up).[184] High-skilled workers including pipefitters, iron workers, millwrights, boilermakers, carpenters, electricians and other trades will be employed.[185] Once constructed, the proposed project will require workers for normal operations and routine maintenance activities.[186]

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173 Ex. 17, at page 40 (EA).
174 Ex. 17, at page 40 (EA).
175 Ex. 17, at page 40 (EA).
176 ~~Environmental Assessment, May 25, 2016~~Ex. 17, at page 40 (EA).
177 Ex. 17, at page 41 (EA).
178 Ex. 17, at page 41 (EA).
179 Ex. 17, at page 41 (EA)~~Environmental Assessment, May 25, 2016, at 41~~.
180 Ex. 17, at page 42 (EA).
181 Ex. 17, at page 35 (EA).
182 Ex. 17, at page 42 (EA).
183 Ex. 17, at page 42 (EA)~~Environmental Assessment, May 25, 2016, at 42~~.
184 Ex. 17, at page 43 (EA); *see also* Ex. 2, at page 16 (Application).
185 Ex. 17, at page 43 (EA).
186 Ex. 17, at page 43 (EA)~~Environmental Assessment, May 25, 2016, at 43~~.

73. Short-term, positive impacts are associated with project construction.[187] ~~Impacts will be positive.~~ Nearby communities and businesses can expect a short-term increase in revenues, for example, food and fuel purchases.[188] Construction will not disrupt these communities and businesses.[189] Construction will provide employment for high-skilled workers.[190] The applicant indicates that some materials may be purchased locally.[191] Long-term, positive impacts are associated with wages and increased tax revenues.[192]

74. Adverse impacts are not expected.[193] The proposed project will not displace minority or low-income populations.[194] No mitigation is proposed.[195]

H. Human Health and Safety

74a. Like any large construction project, there are risks associated to workers and visitors associated construction related activities.[196]

75. The Applicant is bound by federal and state Occupational Safety and Health Administration requirements for worker safety, and follows internal site safety requirements.[197] ~~Qualified workers will be trained in specific tasks, including safety procedures and equipment training, to reduce the likelihood of injury. The construction area will be restricted to those that have direct activities in the area.~~ Visitors will only be allowed onsite with an escort and may be restricted from entering certain areas.[198] With the use of standard construction practices, potential impacts to worker and visitor safety are not anticipated.[199] No additional mitigation is proposed ~~for worker and visitor safety~~.[200]

76. The Project ~~power generation equipment at the Black Dog plant and the equipment proposed for the Unit 6 project~~will combust natural gas at high

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[187] Ex. 17, at page 44 (EA).
[188] Ex. 17, at page 44 (EA).
[189] Ex. 17, at page 44 (EA).
[190] Ex. 17, at page 44 (EA).
[191] Ex. 17, at page 44 (EA).
[192] Ex. 17, at page 44 (EA)~~Environmental Assessment, May 25, 2016, at 44~~.
[193] Ex. 17, at page 44 (EA).
[194] Ex. 17, at page 44 (EA).
[195] Ex. 17, at page 44 (EA)~~Environmental Assessment, May 25, 2016, at 44~~.
[196] Ex. 17, at page 44 (EA).
[197] Ex. 17, at page 44 (EA).
[198] Ex. 17, at page 45 (EA).
[199] Ex. 17, at page 45 (EA).
[200] ~~Environmental Assessment, May 25, 2016~~Ex. 17, at page ~~44~~-45 (EA).

pressure and temperature, and convert this heat energy to electrical power.[201] There is an associated risk of fire or explosion and a risk of electrocution.[202]

77. Potential impacts to human health and safety from fire and electrocution are anticipated to be minimal.[203] Potential iImpacts will beare minimized by the use of safety systems and controls in place at the generating plant.[204] Access is controlled and the generating plant is relatively distant (three-tenths of one mile) from the closest residence.[205] Potential impacts to human health and safety from fire and electrocution are anticipated to be minimal. No mitigation is proposed.[206]

78. Voltage on a conductor creates an electric field that surrounds and extends from the wire.[207] Current moving through a conductor creates a magnetic field that surrounds and extends from the wire.[208] Similar to electric fields, the strength of a magnetic field decreases rapidly as the distance from the source increases; however, unlike electric fields, magnetic fields are not easily shielded or weakened by objects or materials.[209]

79. The Project will not result in the construction and operation of new transmission lines.[210] Impacts related to electric magnetic fields and electronic interference are not anticipated.[211] No mitigation is proposed.[212]

I. Public Services/Utilities

80. Two access roads will service the Project.[213] These roads are private roads owned and maintained by the Applicant.[214]

80a. Impacts to highways and local roads during construction will be short-term and intermittent.[215] Overall impacts are expected to be minimal. Long-term

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201 Ex. 17, at page 45 (EA).
202 Ex. 17, at page 45 (EA).Environmental Assessment, May 25, 2016, at 45.
203 Ex. 17, at page 45 (EA).
204 Ex. 17, at page 45 (EA).
205 Ex. 17, at page 45 (EA).
206 Ex. 17, at page 45 (EA).Environmental Assessment, May 25, 2016, at 45.
207 Ex. 17, at page 46 (EA).
208 Ex. 17, at page 46 (EA).
209 Ex. 17, at page 46 (EA).Environmental Assessment, May 25, 2016, at 46.
210 Ex. 17, at page 46 (EA).
211 Ex. 17, at page 46 (EA).
212 Ex. 17, at page 46 (EA).Environmental Assessment, May 25, 2016, at 46.
213 Ex. 17, at page 48 (EA).
214 Ex. 17, at pages 47, 48 (EA).

impacts will not occur.[216] Overall impacts are expected to be minimal.[217] Traffic delays along Black Dog Road may occur due to material delivery and worker transportation but these impacts will not impact local traffic.[218] ~~because Black Dog Road is a private road. Some material deliveries may require oversized load permits.~~ The Project will not impact a state trunk highway.[219]

81. Impacts to roads and vehicular traffic can be mitigated through coordination with appropriate state and local authorities, for example, ~~. This includes~~ obtaining all necessary load permits and following all permit stipulations.[220] ~~The Minnesota Department of Transportation has~~ MnDOT requested that the Applicant coordinate with the Department to ensure highway construction activities are incorporated into oversized and/or overweight route planning.[221]

82. Impacts to water utilities are not anticipated.[222] The generating plant utilizes an on-site well for domestic water uses.[223] Domestic wastewater/sanitary sewage flows to a lift station that ties into the Metropolitan Council Environmental Services main sewer line, and from there to the Seneca Wastewater Treatment Plant.[224] Construction of the proposed project will not result in an increase to sanitary sewer flows beyond current levels.[225] ~~Impacts to water utilities are not anticipated and n~~No mitigation is proposed.[226]

83. No impacts to electrical services are anticipated.[227] The Project will provide additional electrical generation for the existing 115 kV transmission system in Twin Cities Metropolitan Area.[228] Electrical power will be used in the project area or elsewhere in the region.[229] ~~No impacts to electrical services are anticipated and n~~No mitigation is proposed.[230]

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[215] Ex. 17, at page 48 (EA).
[216] Ex. 17, at page 48 (EA).
[217] Ex. 17, at page 48 (EA).
[218] Ex. 17, at page 48 (EA).
[219] Ex. 17, at page 48 (EA).~~Environmental Assessment, May 25, 2016, at 48.~~
[220] Ex. 17, at page 48 (EA).
[221] Ex. 17, at page 48 (EA)~~Environmental Assessment, May 25, 2016, at 48~~.
[222] Ex. 17, at page 48 (EA).
[223] Ex. 17, at page 48 (EA).
[224] Ex. 17, at page 49 (EA).
[225] Ex. 17, at page 49, 50 (EA).
[226] ~~Environmental Assessment, May 25, 2016~~Ex. 17, at page ~~49~~-50 (EA).
[227] Ex. 17, at page 50 (EA).
[228] Ex. 17, at page 50 (EA).
[229] Ex. 17, at page 50 (EA).
[230] ~~Environmental Assessment, May 25, 2016~~Ex. 17, at page 50 (EA).

84. No impacts to natural gas service in the Project area will occur.[231] The Project will use a dedicated natural gas source.[232] ~~No impacts to natural gas service in the Project area will occur and n~~No mitigation is proposed.[233]

J. Land-Based Economies

85. Impacts to land-based economies is not anticipated.[234] Agricultural, forestry and mining operations do not occur on the site location.[235] The proposed project is located in an industrial area and will not preclude public recreational activities; therefore, impacts to tourism-type activities is not anticipated.[236] ~~Impacts to recreation and tourism are anticipated to be minimal.~~ No mitigation is proposed.[237]

K. Archeological and Historic Resources

86. There are one archeological site and two historic properties within one mile of the Project.[238] The archeological site was destroyed in the 1960s.[239] The existing powerhouse building and a railway ~~Union Pacific Railroad~~ meet~~s~~ the eligibility requirements to be listed on the National Register of Historic Places.[240] The powerhouse is not eligible; however, the Union Pacific Railroad ~~and~~ is potentially eligible for designation.[241]

86a. Impacts to archaeological or historic resources are not anticipated.[242] The Project will not impact the eligibility of the Union Pacific Railroad.[243] ~~and n~~No mitigation is proposed.[244]

L. ~~Natural Resources –~~ Air Quality

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[231] Ex. 17, at page 50 (EA).
[232] Ex. 17, at page 50 (EA).
[233] Ex. 17, at page 50 (EA).~~Environmental Assessment, May 25, 2016, at 50.~~
[234] Ex. 17, at page 50 (EA).
[235] Ex. 17, at page 50 (EA).
[236] Ex. 17, at page 50 (EA).
[237] Ex. 17, at page 50 (EA).~~Environmental Assessment, May 25, 2016, at 50.~~
[238] Ex. 17, at page 50 (EA).
[239] Ex. 17, at pages 50, 51 (EA).
[240] Ex. 17, at page 51 (EA).
[241] Ex. 17, at page 51 (EA).
[242] Ex. 17, at page 51 (EA).
[243] Ex. 17, at page 51 (EA); *see also* Ex. 2, at page 42 (Application).
[244] Ex. 17, at page 51 (EA).~~Environmental Assessment, May 25, 2016, at 51.~~

87. The Project will be fueled entirely by natural gas.[245] The combustion of natural gas will emit combustion by-products that have the potential to impact air quality.[246] ~~With mitigation, emissions are anticipated to be within all state and federal standards. The Project is anticipated to facilitate an overall reduction in greenhouse gas emissions statewide. As a result, potential impacts to air quality are expected to be minimal.[247]~~

88. The Applicant conducted an air dispersion modeling analysis to determine whether emissions from the proposed project would cause or contribute to a violation of the Minnesota Ambient Air Quality Standards (MAAQS) and National Ambient Air Quality Standards (NAAQS).[248] This was done by modeling whether or not emissions from the proposed project alone would result in any predicted maximum ambient concentrations of criteria pollutants (sulfur dioxide (SO_2), carbon monoxide (CO), particulate matter less than 2.5 microns ($PM_{2.5}$), particulate matter less than 10 microns (PM_{10}), and Nitrogen Oxide (NO_x)) above a significant ambient impact level.[249] Modeled impacts did not exceed significant impact levels.[250] As a result, exceedance of MAAQS and NAAQS are not anticipated to occur and no further modeling is required.[251]

89. The existing generating plant (through Unit 5/2) currently meets the definition of a "major emitting facility."[252] As a result, the Project would require Prevention of Significant Deterioration (PSD) review if the emissions increase from the proposed project is greater than the PSD major modification threshold.[253] ~~However, i~~Increases and decreases from recent contemporaneous projects can be taken into account to determine if the Project is subject to PSD review when pollutants exceed PSD threshold limits from the proposed project alone.[254]

90. The Project will emit limited potential emissions of $PM_{2.5}$, NO_x, CO, and CO_{2e} that exceed the PSD major modification threshold for each pollutant.[255] ~~However, a~~After netting exercises which account for total facility creditable

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[245] Ex. 17, at page 53 (EA).
[246] Ex. 17, at page 53 (EA).
[247] ~~Environmental Assessment, May 25, 2016, at 53.~~
[248] Ex. 17, at page 53 (EA).
[249] Ex. 17, at page 53 (EA).
[250] Ex. 17, at page 53 (EA).
[251] Ex. 17, at page 53 (EA).~~Environmental Assessment, May 25, 2016, at 53.~~
[252] Ex. 17, at page 53 (EA).
[253] Ex. 17, at page 53 (EA).
[254] Ex. 17, at page 53 (EA).~~Environmental Assessment, May 25, 2016, at 53.~~
[255] Ex. 17, at page 53 (EA).

contemporaneous decreases associated with the decommissioning of Unit 3 and Unit 4, and increases associated with the addition of an auxiliary boiler, total significant net increases were found to be negative and a PSD does not apply to the Project.[256]

90b. The Applicant will employ the following emission control strategies: utilizing current combustion turbine technology; limiting fuel combustion to natural gas only; combusted fuel will be of consistent SO_2, composition; turbine will be equipped with dry low-NO_x burners to limit NO_x and CO formation; permitted annual capacity factor of less than 33 percent; and demonstrating compliance of capacity factor by maintaining monthly records of total annual rolling capacity factor.[257] With mitigation, emissions are anticipated to be within all state and federal standards.[258]

91. The Project will increase greenhouse gas emissions in Minnesota.[259] When considering the proposed project in isolation, these emissions will contribute to global climate change.[260] ~~However,~~

91a. ~~t~~The Project will serve several roles in the electric utility sector that, coupled with overall trends in the electric utility sector, will facilitate an overall reduction of greenhouse gas emissions.[261] As a result, the Project is anticipated to facilitate an overall reduction in greenhouse gas emissions statewide.[262]

91b. Potential impacts to air quality from construction and operation of the proposed project are expected to be minimal.[263] No mitigation is proposed.[264]

M. ~~Natural Resources –~~ Groundwater and Surface Water

92. Impacts to groundwater during project construction are not anticipated.[265] ~~Black Dog Unit 6~~ The Project will be constructed within an existing

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256 ~~Environmental Assessment, May 25, 2016,~~ Ex. 17, at pages 53-54 (EA).
257 Ex. 17, at page 55 (EA).
258 Ex. 17, at page 53 (EA).
259 Ex. 17, at page 55 (EA).
260 Ex. 17, at page 55 (EA).
261 ~~Environmental Assessment, May 25, 2016,~~ Ex. 17, at page 55 (EA).
262 Ex. 17, at page 55 (EA).
263 Ex. 17, at page 55 (EA).
264 Ex. 17, at page 55 (EA).
265 Ex. 17, at page 57 (EA).

powerhouse building.[266] Exterior structures such as support foundations will not reach groundwater.[267] Direct impacts to surface water are anticipated to be negligible and iIndirect impacts to groundwater are not anticipated.[268]

93. Groundwater will be used during operation.[269] The Applicant anticipates the Project will operate without water inputs over 80 percent of the time.[270] Groundwater use includes the evaporative cooler (28,280 gallons per day at full capacity);[271] fin fan cooler (10,000 to 20,000 gallons one-time fill);[272] off-line wash system (3,000 gallons per wash);[273] fire water mist skid (<5,000 gallons per discharge);[274] and other miscellaneous uses.[275]

93a. Groundwater appropriations are regulated by the stateDNR.[276] The Applicant currently operates under DNR Water Appropriations Permit No. 1961-0271, which allows withdrawal of up to 50 million gallons per year of well water at a peak of 250 gallons per minute (gpm), with a daily average of 200 gpm to be maintained.[277] No amendment to the Applicant's current water appropriations permit will be required to construct or operate the proposed project.[278] DNR requires annual reporting, which is used for a variety of purposes, including impact evaluation and water supply planning.[279]While groundwater will be used during operation, potential impacts are anticipated to be minimal.[280]

94. The Minnesota Department of Natural Resources requires annual reports that are used for a variety of purposes, including impact evaluation and water supply planning. Impacts to groundwater during project construction are not anticipated. Should impacts occur from operation of the Project, it is anticipated that they will be minimal.[281] Indirect impacts to groundwater can

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266 Ex. 17, at page 57 (EA).
267 Ex. 17, at page 57 (EA).
268 Ex. 17, at page 57 (EA).Environmental Assessment, May 25, 2016, at 57.
269 Ex. 17, at page 57 (EA).
270 Ex. 17, at page 57 (EA).
271 Ex. 17, at page 56 (EA).
272 Ex. 17, at page 58 (EA).
273 Ex. 17, at page 58 (EA).
274 Ex. 17, at page 59 (EA).
275 Ex. 17, at page 57 (EA).
276 Ex. 17, at page 56 (EA).
277 Ex. 17, at page 56 (EA).
278 Ex. 17, at page 57 (EA).
279 Ex. 17, at page 59 (EA).
280 Ex. 17, at page 57 (EA).Environmental Assessment, May 25, 2016, at 57.
281 Ex. 17, at page 59 (EA).

be mitigated by avoiding or minimizing impacts to surface waters.[282] No additional mitigation is proposed.[283]

95. The Project will not use surface water during construction or operation.[284] Any impact to surface water during construction would be short-term, of small size, and not impact a unique resource.[285] The overall impact intensity level is anticipated to be negligible.[286]

95a. Potential impacts to surface waters can be minimized by using best management practices to protect top soil and reduce soil erosion.[287] Commission permits require sediment control measures.[288]

N. Rare and Unique Resources

96. The ~~Minnesota Department of Natural Resources~~DNR conducted a Natural Heritage Inventory System query of rare and unique resources within about one mile of the Project; ~~. T~~the results identified peregrine falcons, the Northern long-eared bat, and several species of state-listed mussels.[289]

97. There are no known occurrences of Northern long-eared bat roosts or hibernacula within one mile of the Project, and ~~. Since~~ no tree clearing will occur as part of the Project; therefore, impacts related to the Northern long-eared ~~roosts~~ bat are not anticipated.[290]

98. ~~As part of a permitted remediation project, a~~ A peregrine falcon nesting box was removed from the existing Unit 3/4 exhaust stack in ~~preparation for demolition of the stack. Nesting box removal was~~ coordination~~ed~~ with the DNR and U.S. Fish and Wildlife Service ~~and occurred~~ prior to the 2016 nesting season.[291] The nesting box was not relocated.[292]

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282 Ex. 17, at page 59 (EA).
283 Ex. 17, at page 59 (EA).~~Environmental Assessment, May 25, 2016, at 59.~~
284 Ex. 17, at page 63 (EA).
285 Ex. 17, at page 63 (EA).
286 Ex. 17, at page 63 (EA).
287 Ex. 17, at page 63 (EA).
288 Ex. 17, at page 63 (EA).~~Environmental Assessment, May 25, 2016, at 63.~~
289 Ex. 17, at page 60~~Environmental Assessment, May 25, 2016, at 60~~ (EA).
290 ~~Environmental Assessment, May 25, 2016, at 61~~Ex. 17, at page 61 (EA).
291 Ex. 17, at page 62 (EA).
292 Ex. 17, at page 62 (EA).~~Environmental Assessment, May 25, 2016, at 62.~~

99. A peregrine falcon pair returned to the Black Dog Plant in 2016 and may be nesting on the roof of the boiler building.[293] If peregrines are nesting at the generating plant, chicks will be independent before a permit could be issued for the Project; therefore, . As a result, the Project will not impact nesting activities in 2016.[294]

100. If the falcon pair return in 2017, nesting may be impacted as construction on the roof is anticipated to begin in April 2017 due to the need to retain heat in the powerhouse building prior to that time.[295] Potential impacts cannot be determined at this time.[296] Should peregrines return and nesting activities be impacted in 2017, these impacts will not influence the overall peregrine falcon population.[297] As a result, potential impacts are anticipated to be minimal.[298]

101. Potential impacts to peregrine falcons are anticipated to be minimal.[299] Nesting in thins an industrial area indicates the peregrines are habituated to human influences.[300] IHowever, if peregrine falcons show signs of stress, for example, flying towards individuals or equipment or display other erratic flying behavior, the Applicant should contact the Minnesota Department of Natural Resources (DNR) Nongame Program Region Specialist.[301]

101a. Federally-listed Threatened and Endangered Species include the endangered Higgins eye pearlymussel and threatened Prairie bush clover.[302] Impacts to these species are not anticipated.[303]

O. Soils, Vegetation, Wetlands, Wildlife

102. Impacts to previously impacted soils will occur.[304] Impacts will be negligible.[305] Soil impacts will occur. However, affected soils are previously disturbed. As a result, impacts are negligible.Commission site permits require the Applicant to implement measures to minimize soil erosion and sedimentation by requiring

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[293] Ex. 17, at page 62 (EA).
[294] Ex. 17, at page 62 (EA).Environmental Assessment, May 25, 2016, at 62.
[295] Ex. 17, at page 62 (EA).
[296] Ex. 17, at page 62 (EA).
[297] Ex. 17, at page 62 (EA).
[298] Environmental Assessment, May 25, 2016, at 62.
[299] Ex. 17, at page 62 (EA).
[300] Ex. 17, at page 62 (EA).
[301] Ex. 17, at page 62 (EA).Environmental Assessment, May 25, 2016, at 62.
[302] Ex. 17, at page 60 (EA).
[303] Ex. 17, at pages 60, 61 (EA).
[304] Ex. 17, at page 63 (EA).
[305] Ex. 17, at page 63 (EA).

the use of perimeter sediment controls, promptly covering exposed soils, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking.[306] No mitigation is proposed.[307] ~~Commission site permits require the Applicant to implement measures to minimize soil erosion and sedimentation by requiring the use of perimeter sediment controls, promptly covering exposed soils, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking.~~[308]

103. The ~~majority of the~~ Project site~~area~~ is not vegetated or is covered by minimally maintained turf grass.[309] Impacts to vegetation will be negligible.[310] ~~and n~~No mitigation is proposed.[311]

104. Impacts to wetlands are not anticipated.[312] ~~Impacts to wetlands are not anticipated. No mitigation is proposed.~~ Outdoor construction activities and onsite material storage will be limited to a previously impacted industrial area at the site location.[313] No construction activities will occur within any floodplain, wetland complex, or waterbody surrounding the generating plant.[314] Indirect impacts from soil erosion and run-off are not anticipated to impact wetlands.[315] Commission site permits require the Applicant to implement measures to minimize soil erosion and sedimentation.[316] ~~Impacts to wetlands are not anticipated.~~ No mitigation is proposed.[317]

105. Impacts to wildlife are anticipated to be negligible, although individual animals may be disturbed or displaced.[318] ~~and i~~Impacts to wildlife habitat are not anticipated.[319] ~~No mitigation is proposed.~~ Potential wildlife impacts are minimized by the urban and industrial location of the Project.[320] No additional mitigation is proposed.[321]

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[306] Ex. 17, at page 63 (EA).
[307] Ex. 17, at page 63 (EA).
[308] ~~Environmental Assessment, May 25, 2016, at 63.~~
[309] Ex. 17, at page 64 (EA).
[310] Ex. 17, at page 64 (EA).
[311] Ex. 17, at page 64 (EA).~~Environmental Assessment, May 25, 2016, at 64.~~
[312] Ex. 17, at page 64 (EA).
[313] Ex. 17, at page 64 (EA).
[314] Ex. 17, at page 64 (EA).
[315] Ex. 17, at page 64 (EA).
[316] Ex. 17, at page 64 (EA).~~Environmental Assessment, May 25, 2016, at 64.~~
[317] Ex. 17, at page 64 (EA).
[318] Ex. 17, at page 64 (EA).
[319] Ex. 17, at page 65 (EA).
[320] Ex. 17, at pages 64, 65 (EA).~~Environmental Assessment, May 25, 2016, at 64-65~~.
[321] Ex. 17, at pages 64, 65 (EA).

P. Cumulative Potential Effects

106. Due to the retirement of Black Dog Units 3 and 4 in April 2016, various remediation activities at the Black Dog Plant have commenced and will continue concurrently during ~~the~~ construction and operation of the Project.[322] These remediation activities are designed to eliminate direct contact exposure to legacy coal yard and legacy ash pond material.[323] The activities have been separately approved and permitted through the Voluntary Investigation and Cleanup Program administered by the MPCA.[324]

107. Cumulative potential effects of the Project and remediation activities were analyzed.[325] The analysis assumes no new electrical generation projects will occur at the ~~Black Dog~~generating plant within the 35 year operational life of the Project.[326]

108. Short-term cumulative potential effects on aesthetics is anticipated to be minimal, and the long-term cumulative potential effects will be positive due to the removal of exhaust stacks and decommissioning of the coal yard and ash ponds.[327]

109. Cumulative potential effects related to noise impacts are anticipated to be minimal.[328]

110. Short-term cumulative potential effects on recreation are anticipated to be minimal and the long-term impacts are anticipated to be positive.[329]

110a. Cumulative potential effects are not anticipated on cultural values, displacement, land use, property values, or socioeconomics.[330]

111. Cumulative potential ~~impacts~~ effects on public and worker safety are anticipated to be minimal.[331]

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322 Ex. 17, at page 65 (EA).
323 Ex. 17, at page 65 (EA).
324 ~~Environmental Assessment, May 25, 2016,~~ Ex. 17, at pages 65, ~~-~~ 66.
325 Ex. 17, pages 65 – 71 (EA).
326 ~~Environmental Assessment, May 25, 2016,~~Ex. 17, at page 66 (EA).
327 ~~Environmental Assessment, May 25, 2016,~~Ex. 17, at page 67 (EA).
328 Ex. 17, at page 68 (EA).~~Environmental Assessment, May 25, 2016, at 68.~~
329 Ex. 17, at page 68 (EA).~~Environmental Assessment, May 25, 2016, at 68.~~
330 Ex. 17, at page 67 (EA).
331 Ex. 17, at page 68 (EA).~~Environmental Assessment, May 25, 2016, at 68.~~

111a. Cumulative potential effects from electric and magnetic fields, electronic interference, fire, and electrocution are not anticipated.[332]

112. Cumulative potential effects~~impacts~~ on emergency services, roads, and highways are anticipated to be minimal.[333]

112a. Cumulative potential effects on airports and utilities are not anticipated.[334]

113. Cumulative potential effects on land-based economies are not anticipated.[335]

114. Cumulative potential effects on archeological and historic resources are not anticipated.[336]

115. Short-term cumulative potential effects on air quality are anticipated to be minimal, and long-term impacts are not anticipated.[337]

116. Cumulative potential effects on rare and unique resources are anticipated to be long-term and minimal.[338]

117. ~~Long-term~~ Cumulative potential effects~~impacts~~ on soils are anticipated to be positive.[339]

118. Cumulative potential effects on surface water are anticipated to be positive.[340]

119. Cumulative potential effects on wildlife and wildlife habitat are anticipated to be positive and minimal.[341]

119a. Cumulative potential effects on geology, groundwater, vegetation, and wetlands are not anticipated.[342]

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332 Ex. 17, at page 68 (EA).
333 ~~Environmental Assessment, May 25, 2016, at 68-69~~Ex. 17, at pages 68, 69 (EA).
334 Ex. 17, at page 69 (EA).
335 Ex. 17, at page 69 (EA).~~Environmental Assessment, May 25, 2016, at 69.~~
336 Ex. 17, at page 69 (EA).~~Environmental Assessment, May 25, 2016, at 69.~~
337 Ex. 17, at page 70 (EA).~~Environmental Assessment, May 25, 2016, at 70.~~
338 Ex. 17, at page 70 (EA).~~Environmental Assessment, May 25, 2016, at 70.~~
339 Ex. 17, at page 71 (EA).~~Environmental Assessment, May 25, 2016, at 71.~~
340 Ex. 17, at page 71 (EA).~~Environmental Assessment, May 25, 2016, at 71.~~
341 Ex. 17, at page 71 (EA).~~Environmental Assessment, May 25, 2016, at 71.~~
342 Ex. 17, at page 70 (EA).

VII. Siting Factors

120. Of the 14 factors listed in Minn. Rule 7850.4100, the following three are not relevant to the Project: (1H) the use of existing rights-of-way, (2I) the use of existing infrastructure rights-of-way, and (3L) design or route dependent costs.[343] The first two factors apply solely to high voltage transmission lines; . Tthe third factor does not apply since the Project is the only design under review.[344]

121. The environmental assessmentEA concluded the Project will have minimal impact on the following factors with the application of the general conditions outlined in the Commission's generic site permit template:

- (A) Effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;
- (B) Effects on public health and safety;
- (C) Effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;
- (D) Effects on archaeological and historic resources;
- (E) Effects on the natural environment, including effects on air and water quality resources and flora and fauna; and
- (F) Effects on rare and unique natural resources. Additional mitigation is proposed in the form of state agency notification if peregrine falcons show signs of stress.[345]

122. The environmental assessmentEA concluded that there are no siting factors for which impacts are anticipated to be moderate, given the proper application of the general conditions found in the Commission's generic site permit.[346]

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[343] Ex. 17, at page 74 (EA).
[344] Ex. 17, at page 74 (EA).Environmental Assessment, May 25, 2016, at 74.
[345] Ex. 17, at pages 74, 75 (EA).Environmental Assessment, May 25, 2016, at 74-75.
[346] Ex. 17, at page 75 (EA).

Impacts are avoided or minimized by the location of the Project and by permits other than the site permit such as the MPCA air quality permit.[347]

123. The ~~environmental assessment~~EA concluded that the following three siting factors indicating~~e~~ the legislative intent for the efficient design and efficient use of resources have been well met:

- (G) Application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity,
- (I) Use of existing large electric power generating plant sites, and
- (K) Electrical system reliability.[348]

124. The ~~environmental assessment~~EA concluded that potential impacts associated with the Project are anticipated to be negligible to minimal but some impacts cannot be avoided.[349]

125. The ~~environmental assessment~~EA concluded that since the Project will burn natural gas to generate electricity, air emissions are unavoidable.[350] Cumulative aesthetic impacts are anticipated to be positive, but the exhaust stack and vapor plume are unavoidable.[351] Groundwater use and noise associated with the turbine, transformer and fin fan cooler noise are also unavoidable impacts.[352] ~~Finally, c~~Construction related impacts such as noise and increased traffic are unavoidable.[353]

126. The ~~environmental assessment~~EA concluded the land required to construct the Project is an irreversible resource commitment, along with the natural gas and groundwater used during Project operation.[354] Labor and fiscal resources for the construction and operation of the Project are also considered irretrievable resource commitments.[355]

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347 Ex. 17, at page 75 (EA).~~Environmental Assessment, May 25, 2016, at 75.~~
348 Ex. 17, at page 75 (EA).~~Environmental Assessment, May 25, 2016, at 75.~~
349 Ex. 17, at page 75 (EA)~~Environmental Assessment, May 25, 2016, at 75~~.
350 Ex. 17, at page 75 (EA).
351 Ex. 17, at page 75 (EA).
352 Ex. 17, at page 75 (EA).
353 Ex. 17, at page 75 (EA).~~Environmental Assessment, May 25, 2016, at 75.~~
354 Ex. 17, at page 76 (EA).
355 Ex. 17, at page 76 (EA).~~Environmental Assessment, May 25, 2016, at 76.~~

VII. Site Permit Conditions

126a. Should a SWPPP be required for the Project, the Applicant will share a draft version with the Lower Minnesota Watershed District.

126b. Should peregrine falcons show signs of stress during project construction, for example, flying towards individuals or equipment or display other erratic flying behavior, the Applicant must contact the Minnesota Department of Natural Resources (DNR) Nongame Program Region Specialist.

VII. Conclusions

1. The Commission has jurisdiction over the Application pursuant to Minn. Stat. § 216E.04.

2. The Project is exempt from Certificate of Need requirements.

3. The ~~Company~~ Applicant has complied with ~~the~~ all procedural requirements ~~of~~ required by Minn. Stat. § 216E and Minn. Rule 7850.

4. The Commission has complied with all procedural requirements required by Minn. Stat. § 216E and Minn. Rule 7850.

5. The Minnesota Department of Commerce, Energy Environmental Review Analysis, has complied with all procedural requirements and conducted an appropriate environmental assessment of the Project in accordance with Minn. Stat. § 216E.04, Subd. 5.

6. The ~~environmental assessment~~EA satisfies Minn. Rule 7850.3700. Specifically, the ~~assessment~~ EA and the record reasonably address the issues identified in the Scoping Decision including the items required by Minn. Rule 7850.3700, subp. 4. The ~~environmental assessment~~EA was prepared in compliance with the procedures in Minn. Rule 7850.3700.

7. A ~~Scoping Decision~~ scoping/public informational meeting was held near the site for the Project. Proper notice of the public meeting was provided. Members of the public were given the opportunity to speak and to submit written comments.

8. A~~n Environmental Assessment~~ public hearing was held near the site for the Project. Proper notice of the public hearing was provided. Members of the public were given the opportunity to speak and to submit written comments.

9. The Project satisfies the site permit criteria for a large electric power generation plant in Minn. Stat. § 216E.04, and meets all other legal requirements.