



Environmental Assessment of the Oak Creek CT Project

Application of Wisconsin Electric Power Company for a Certificate of Public Convenience and Necessity to Construct and Operate the South Oak Creek Combustion Turbine Project, Consisting of Five Natural Gas-Fired Single-Cycle Combustion Turbines Generating up to 1100 MW total at the South Oak Creek Facility in the City of Oak Creek, Milwaukee County, Wisconsin.

Public Service Commission of Wisconsin Docket 6630-CE-317

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Acronyms

§	Section
AC	Alternating current
AFUDC	Allowance for Funds Used During Construction
APE	Area of Potential Effects
BESS	Battery Energy Storage System
BMP	Best management practices
Btu	British thermal unit
CA	Certificate of Authority
CAA	Clean Air Act
CEII	Critical Energy Infrastructure Information
CH ₄	Methane
ch.	Chapter
CO	Carbon monoxide
CO ²	Carbon dioxide
CO _{2e}	CO ₂ equivalents
Commission	Public Service Commission of Wisconsin
CTH	County Trunk Highway
CUB	Citizens Utility Board
DATCP	Department of Agriculture, Trade, and Consumer Protection
dB	Decibel
dBA	A-Weighted Decibel
DNR	Department of Natural Resources
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ER	Endangered resources
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
GHG	Greenhouse gases
GIS	Geographic Information System
GWP	Global warming potentials
HAC	Hazardous Air Contaminants
HAP	Hazardous Air Pollutants
HDD	Horizontal directional drilling
HHV	Higher Heating Value
H ₂ SO ₄	Sulfuric acid
IRP	Integrated Resources Plan
kV	Kilovolt
Lead	Pb
LMP	Locational marginal prices
MACT	Maximum Achievable Control Technology
MISO	Midcontinent Independent System Operator, Inc.
MP	Measurement point

MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NEC	National Electric Code
NESC	National Electrical Safety Code
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHI	Natural Heritage Inventory
NO _x	Nitrogen oxides
NPV	Net present value
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSPS	New Source Performance Standards
N ₂ O	Nitrous oxide
NWI	National Wetland Inventory
OHWM	Ordinary High Water Mark
O&M	Operations and maintenance
O ₃	Ozone
PSC	Public Service Commission of Wisconsin
PM	Particulate Matter
PM ₁₀	Particulate matter less than 10 microns
PM _{2.5}	Particulate matter less than 2.5 microns
PSD	Prevention of Significant Deterioration
REC	Riverside Energy Center
RICE	Reciprocating Internal Combustion Engine
ROW	Right-of-way
RPM	Revolutions per minute
SCR	Selective Catalytic Reduction
SF ₆	Sulfur hexafluoride
SHPO	Wisconsin State Historic Preservation Office
SO ₂	Sulfur dioxide
SPCC	Spill Prevention, Control and Countermeasures
STH	State Highway
SWDV	Surface Water Data Viewer
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
US EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USH	U.S. Highway
VOC	Volatile organic compounds
WEPA	Wisconsin Environmental Policy Act
WEPCO	Wisconsin Electric Power Company
WHPD	Wisconsin Historic Preservation Database
WHS	Wisconsin Historical Society
WICCI	Wisconsin Initiative on Climate Change Impacts
Wis. Admin. Code	Wisconsin Administrative Code

Wis. Stat.	Wisconsin Statutes
WisDOT	Wisconsin Department of Transportation
WPDES	Wisconsin Pollutant Discharge Elimination System
WPL	Wisconsin Power and Light Company
WREC	West Riverside Energy Center
WSPS	Wisconsin Department of Safety and Professional Services

1. Introduction

On June 14, 2024, Wisconsin Electric Power Company (WEPCO or applicant), filed an application with the Public Service Commission of Wisconsin (Commission), to receive a Certificate of Public Convenience and Necessity (CPCN) for the authority to install and place in service one new natural gas-fired electric generating facility at an existing natural gas electric generating site in southeastern Wisconsin.¹ The new electric generating facility would include five Combustion Turbine (CT) generators, each generator having a nominal capacity of 220 megawatts (MW), for a total capacity of approximately 1,100 MW. The proposed project is known as the Oak Creek CT project (OCCT or project). The applicant's request to receive the CPCN was filed with the Commission pursuant to Wis. Stat. § 196.491 and Wis. Admin. Code chs. PSC 4 and 111.

The Commission requires project applicant to file applications according to Commission prescribed filing requirements. The requirements were created to ensure the Commission receives every piece of information it needs to assist in its comprehensive review and analysis of all of the merits of a proposed project, including environmental review. The requirements are based on statutory and administrative code, along with experience gained through prior project review.

1.1. Analysis for Wisconsin Environmental Policy Act Compliance

This is a Type II action under Wis. Admin. Code § PSC 4.10(2). Wisconsin Admin. Code § PSC 4.10(2), Table 2a, requires an environmental assessment (EA) for the review of an application to “[c]onstruct... a combustion turbine facility... at the site of an existing electric generation facility.” The construction of the facilities proposed in this docket meets the criteria of a Type II action and preparation of an EA is required. The Proposed Site for this facility is located at the existing Oak Creek Generating Site (OCGS), owned by Wisconsin Electric Power Company (WEPCO) in the City of Oak Creek, Milwaukee County, Wisconsin. The existing generation facilities at the site, and the infrastructure that supports them, meet the definition of “electric generation facility” in Wis. Admin. Code § PSC 4.05(6). The proposed project would be on the same WEPCO-owned parcel of land and use some of the facilities that support the existing energy infrastructure.

For a Type II action, the Commission must prepare an EA to consider and document the environmental impacts of the project. When the EA is complete a preliminary determination is made on whether to undertake a full EIS and comments on that determination are considered before a final determination is made. At the time of the preliminary determination, the Commission makes copies of the EA available to those persons that request it.

¹ [PSC REF#: 505447](#) 6630-CE-317 OCCT CPCN Application CONFIDENTIAL CLEAN (REDACTED COPY).

The EA is a written review of the potential impacts of the proposed project that would affect the quality of the human environment as described in Wis. Stat. § 1.11(2)(c). The EA also describes ways of mitigating or avoiding some of the expected impacts and concludes with the evaluation of ten items described in Wis. Admin. Code § PSC 4.10(2)(d).

In accordance with Wis. Admin. Code § PSC 4.20(1m), notification of the Commission's intent to prepare an EA, including a solicitation for comments on the environmental aspects of this proposed project, was sent to the mailing list for this docket on July 22, 2024.² The mailing list includes:

- Local residents and landowners potentially affected by the project
- Municipal officials in the towns and counties covered by the project area
- Local news media
- Libraries in the project area
- Regional Planning Commissions
- Legislators representing the affected area
- Any other persons with a demonstrated interest in the proposed project

Through the EA scoping period, Commission staff solicit public comments about the proposed project, and take any comments of concerns regarding the environmental assessment or review of the project into consideration during the analysis of the project.

1.2. Environmental Assessment Scope

Wisconsin Admin. Code § PSC 4.20(1) requires that an EA be a concise document that provides a factual investigation of the relevant areas of environmental concern in sufficient depth to permit a reasonably informed preliminary judgement of the environmental consequences of the proposed project. The EA must include a recommendation whether the proposed project is a major action significantly affecting the quality of the human environment, within the meaning of Wis. Stat § 1.11(2)(c), for which an EIS is required. An EIS is required if an EA determines there are significant impacts to the environment as a result of the project.

The scope of the EA includes the construction impacts that are likely to occur for the site under consideration. The scope of the EA also discusses impacts that could be expected during the operational life of the project.

The Commission's Division of Digital Access, Consumer, and Environmental Affairs prepared this EA in cooperation with the Department of Natural Resources (DNR) Office of Energy to determine if an EIS is necessary under Wis. Stat. § 1.11.

A preliminary determination was made on December 26, 2024, concluding that preparation of an EIS was not necessary.³

² [PSC REF#: 509590](#) Environmental Assessment Scoping Letter WEPCO-Oak Creek.

³ [PSC REF#: 528124](#) EA - Preliminary Determination Letter.

This EA is being submitted as an exhibit in the hearing for the docket.

1.3. Information Received During EA Process

Wisconsin Admin. Code § PSC 4.20(2)(f) requires that the EA include a list of other persons contacted and a summary of comments.

1.3.1 Contributors to This EA

No other persons besides staff at DNR and the Commission were contacted or involved in the preparation of this EA. The following DNR and Commission staff contributed to the EA:

- Dan Grant, PSC Public Service Engineer, assisted with EA sections on project purpose and need, and technical descriptions.
- Jordan Munson, DNR Air Management Engineer, Division of Environmental Management, provided information about air quality impacts and permit requirements and assisted with those EA sections.
- Geri Radermacher, DNR Energy Project Liaison, Bureau of Environmental Analysis and Sustainability, provided information about wetlands and waterway impacts and permit requirements and assisted with those EA sections.
- Stacy Rowe, DNR Conservation Biologist, Bureau of Environmental Analysis and Sustainability, provided information about potential impacts to endangered resources.
- Tyler Tomaszewski, PSC Environmental Analysis and Review Specialist, drafted and compiled EA sections on environmental impacts and created maps.

1.3.2. Summary of Public Comments

The Commission received 36 comments during regarding the proposed Oak Creek CT project under docket 6630-CE-317 during the EA notification/scoping period.

Several comments were received from members of the public and representatives from organizations such as Clean Wisconsin, Healthy Climate Wisconsin & Union of Concerned Scientists, National Association for the Advancement of Colored People, Renew Wisconsin, and Sierra Club in general opposition to the project. The concerns addressed include cost, energy burden, environmental justice, fossil fuel dependence, air pollution, water pollution, health impacts, greenhouse gas emissions, climate change, and cumulative environmental impacts as a result of the proposed project. Several studies and articles were cited within some of the comments, and they are addressed in applicable sections throughout this EA.

1.4. CPCN Hearing and Intervenors

The Commission issued a Notice of Proceeding for the docket on August 15, 2024, indicating

that a hearing would be held on the proposed project.⁴ On September 16, 2024, the Commission's Administrative Law Judge (ALJ), Michael E. Newmark, granted unopposed requests for intervention to the following entities:

- Advanced Energy United
- Citizens Utility Board (CUB)
- City of Milwaukee
- Clean Wisconsin
- Healthy Climate Wisconsin & Union of Concerned Scientists
- RENEW Wisconsin Inc.
- Sierra Club
- Walnut Way Conservation Corp.
- Wisconsin Industrial Energy Group (WIEG)
- Wisconsin Local Government Climate Coalition (WLGCC)⁵

The Commission's ALJ issued a scheduling order for the docket that confirms deadlines for milestones in the proceedings.⁶ The Commission will issue a Notice of Hearing that describes how the public can participate in the public hearings on the project.

⁴ [PSC REF#: 513642](#) Notice of Proceeding Signed and Served 7/13/2023.

⁵ [PSC REF#: 517033](#) Order on Requests to Intervene Served 8/31/2023.

⁶ [PSC REF#: 523284 Prehearing Conference Memorandum Served 11/5/2024.](#)

2. Project Description and Overview

In accordance with Wis. Admin. Code § PSC 4.20(2)(b), the EA includes an overview of the design of the facilities to be constructed, the construction process, and the project areas. Additionally, Wis. Admin. Code § PSC 4.20(2)(a) requires the EA to describe the purpose and need for the proposed projects.

2.1. Purpose and Need

The proposed project is to assist the applicant to meet its considerable load obligations for the 2026 timeframe, when significant new load in the applicant's service territory is expected.⁷ The applicant asserts that it is seeking to serve these loads and "to ensure balance between environmental, economic, reliability, resiliency, and market needs."⁸ The applicant indicates that resources such as solar photovoltaic (PV) electric generation units, wind electric generation units, and battery energy storage system (BESS) units have been an important part of meeting the applicant's environmental and economic goals, while those same resources can create complexities in ensuring reliability, resiliency, and transmission system stability.⁹

The applicant cited criteria for consideration in the development of its resource portfolio, which included:

- Resource dispatchability: Having fully dispatchable resources such as combustion turbines (CTs), reciprocating internal combustion engines (RICE), and BESS can help the applicant to ensure energy availability for customers at all hours when intermittent resources such as solar PV or wind may not be available.
- Resource diversity: Having a blend of varying resource types allows the applicant to more reliably serve load, utilizing the different operational attributes to collectively complement other resources as the applicant's generation fleet undergoes a transition.

In development of this portfolio, the applicant used Energy Exemplar's PLEXOS market simulation program to model capacity expansion and production cost for the applicant's system. The applicant notes that PLEXOS can simultaneously solve unit commitment and energy dispatch at the same time as considering capacity expansion.¹⁰ The applicant's utility holding parent company, WEC Energy Group, has similarly used PLEXOS in applications supporting a variety of different resource types, including solar PV and BESS hybrid projects, wind projects, and new dispatchable thermal resources.

In support of this application, the applicant developed four different planning futures and reviewed these futures over a 30-year time period, from 2023 to 2052.¹¹ These planning futures assume different input assumptions for variables, including demand and energy growth, natural

⁷ [PSC REF#: 505447](#) 6630-CE-317 OCCT CPCN Application_CONFIDENTIAL_CLEAN (REDACTED COPY), pp. 48.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid, p. 56.

¹¹ [PSC REF#: 496538](#) Volume III – Appendix B CONFIDENTIAL (REDACTED COPY), pp. 17-18.

gas pricing, inflation rates, carbon dioxide penalty costs, and renewable tax credits.¹² The applicant further designed two different resource planning approaches, a capacity assurance resource plan and an energy assurance resource plan.¹³ The capacity assurance resource planning approach focused on maintaining the requisite planning reserve margin (PRM) required by the Midcontinent Independent System Operator, Inc. (MISO) in each season, while the energy assurance resource planning approach also required that only the applicant's generation resources could provide energy and access to the MISO market is no longer available by 2026.¹⁴

Additionally, the applicant provided a number of sensitivities reviewing other variables, including accreditation of solar resource capacity, accreditation of BESS capacity, changes to project capital costs, and changes to demand and load forecasts. The applicant concludes that "With the significant near-term capacity and energy need, the Oak Creek Combustion Turbine (OCCT) Project provides considerable quantitative and qualitative benefits to Wisconsin Electric's customers in most scenarios and sensitivities analyzed."¹⁵

2.2. Cost and Ownership

The construction of the proposed project would cost approximately \$1.205 billion, with an additional Allowance for Funds Used During Construction (AFUDC) estimate of \$192.3 million.¹⁶ The applicant presents these estimated costs, which include engineering, procurement, and construction of the facilities, the equipment supplier costs, and owner's costs. The applicant would solely own and operate the proposed project facilities.

2.2.1. Commission Review of Economic Analysis

Commission staff reviewed the applicant's economic analysis as presented in the application. The modeling that informs this economic analysis was performed in PLEXOS. Commission staff does not currently have the PLEXOS model available to them in order to perform direct validation of the applicant's modeling claims. Commission staff requested additional information from the applicant to validate the model data and to better understand the input assumptions used in the modeling process.

Commission staff notes that with any modeled economic analysis, the conclusions depend on the range of inputs chosen and the quality of the information underlying those inputs. The applicant provided the results of the analysis of a base case scenario in which a range of Environmental Protection Agency (EPA) greenhouse gas (GHG) emission restrictions were considered.¹⁷ This analysis also included various levels of regulatory penalty costs associated with carbon emissions.¹⁸

¹² Ibid, p.17.

¹³ Ibid, pp. 14-16.

¹⁴ Ibid, pp. 14-16.

¹⁵ Ibid, p. 36.

¹⁶ [PSC REF#: 514564](#) Response-Data Request-PSC-Bushey-MR-2.41

¹⁷ [PSC REF#: 496538](#) Volume III – Appendix B CONFIDENTIAL (REDACTED COPY) p. 9

¹⁸ Ibid, pp. 20-21

Commission staff also requested modeling for a variety of alternatives to be “forced into” the model in place of the proposed project so direct comparisons could be made within the model for a variety of generation and storage alternatives.¹⁹ Among the alternative resources requested were solar PV and BESS hybrid units, RICE units, and combined cycle with carbon capture units in addition to the previously provided BESS alternative. This information helps to provide a contrast between the proposed project and potentially viable alternatives, which complements runs where the model could freely pick amongst a variety of resource types.

2.3. Location

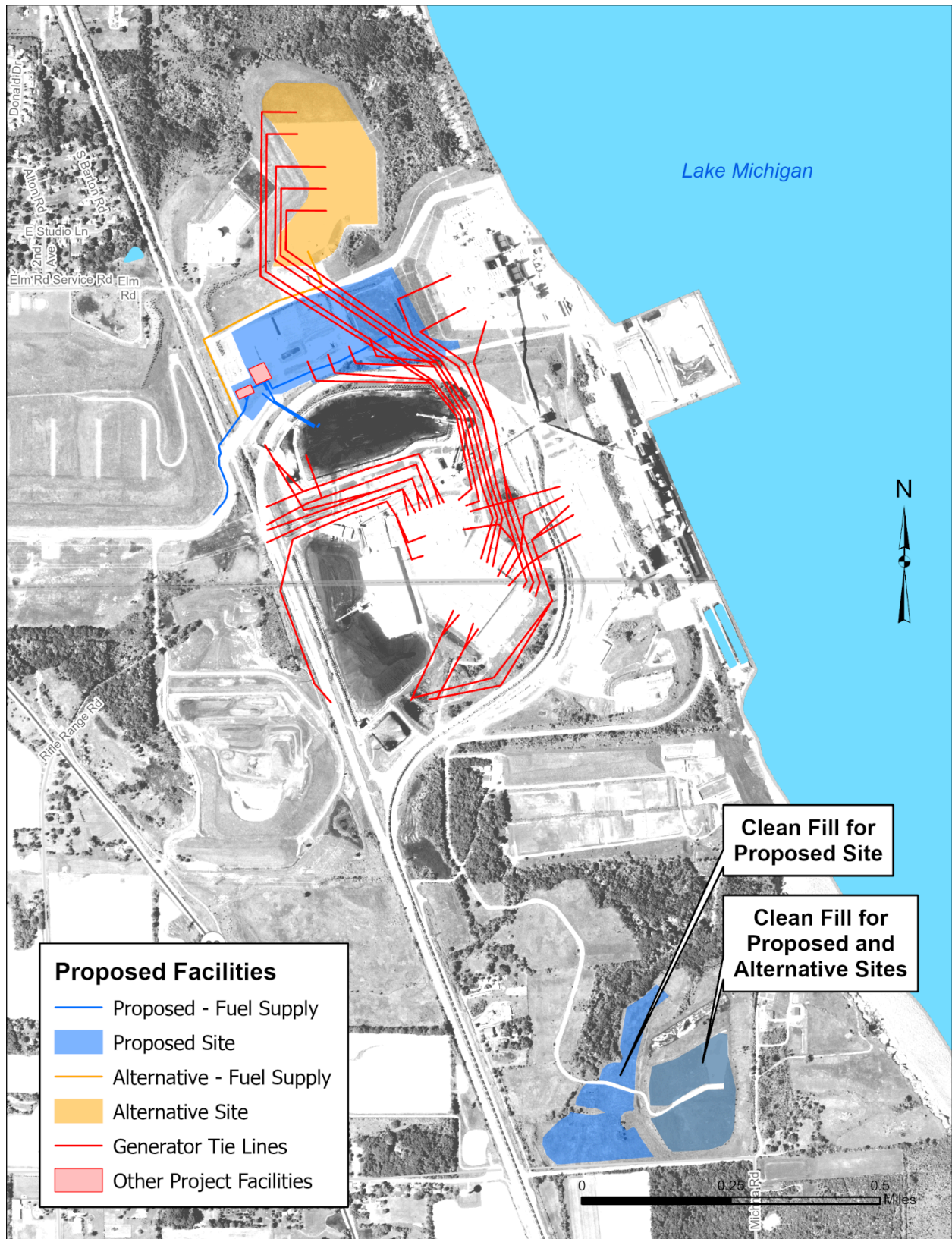
The project would be located on land currently owned by WEPCO, located in the City of Oak Creek, Milwaukee County, southeastern Wisconsin. The land is part of the existing OCGS, which has been utilized for power generation activities since the 1950’s. The OCGS is on approximately 1,000 acres of land, located the east side of State Highway (STH) 32 between Elm Road and 7 Mile Road. The Proposed and Alternative Sites for the CT facility are located at the northern end of the property near the proposed Oak Creek LNG Project²⁰ (OCLNG) with use of the existing clean fill sites to the southern end of the property.²¹ The 16-acre Proposed Site would locate the CT units west of the existing Elm Road Generating Site (ERGS) and would require both existing clean fill sites. The 19-acre Alternative Site would locate the CT units just north of the Proposed Site and would require only one of the two clean fill areas.

¹⁹ [PSC REF#: 510618](#) Data Request-PSC-Bushey-2

²⁰ Docket 6630-CG-140

²¹ See Figure 2-1.

Figure 2-1 Aerial imagery map of the proposed project area



2.3.1. Applicant's Siting Process

The application described the process and considerations used by the applicant in selecting the OCGS property for the proposed project. Reasons given for the selection of the OCGS include:

- Constructing the new facility on this property would provide support to the 138kV and 345kV transmission systems.
- Constructing the new facility on this property would make use of existing infrastructure and minimize need to construct additional laterals.
- The applicant would not need to acquire additional land for the proposed project.

The siting process used by the applicant appears to have minimized impacts compared to construction of facilities at a new site.

2.3.2. Brownfields

Under Wis. Stat. § 196.491(3)(d)8, the Commission shall consider whether brownfields are used to the extent practicable when evaluating large generation facilities. Brownfields, as defined by Wis. Stat. § ch. 238.13(1)(a) are defined as abandoned, idle, or underused industrial or commercial facilities or sites, the expansion or redevelopment of which is adversely affected by actual or perceived environmental contamination. The OCGS property is zoned as industrial, and the project area has previously housed industrial facilities. Therefore, the project is utilizing a brownfield site.

2.4. Schedule

The applicant provided a basic schedule of major project activities in the application, with a goal of starting the commercial operation of the project in January 2027. A detailed construction schedule for major construction activities is included in Table 2-1.

Table 2-1 Proposed project schedule with main construction activities.

Project Activity	Start Date
Field Mobilization	May 2025
Start Construction	May 2025
Begin Facility Testing	January 2027
Commercial Operation	July 2028

2.5. Permits and Approvals

The applicant submitted an application to the Commission for a CPCN, as required by Wis. Stat. § 196.491, for proposed electric generation facilities. The Commission will decide whether to approve, deny, or modify the project. The Commission must make a number of

determinations regarding construction projects in a short timeframe, without knowing whether other regulatory permits will be issued. The Commission typically includes language in an order authorizing a project that states an applicant is required to obtain all necessary federal, state, and local permits prior to starting construction as a practical way of mitigating that uncertainty. The reason for this requirement is to ensure the Commission does not approve, and the applicant does not begin work on, a project that would not be able to obtain permits from other regulatory agencies or begin construction in an area without following possible mitigation or construction requirements that are required by another regulatory agency permit. The application includes a preliminary list of some of the permits, approvals, and standards that are potentially necessary for the proposed project.²²

2.6. Technical Description and Design

The proposed project consists of constructing five General Electric F-class CT generating units fueled by natural gas. Each CT would have a nameplate capacity of 220 megawatts (MW), for a total installed nameplate capacity of 1,100 MW if the project is approved as proposed. While the proposed project could supply continuous service, the applicant anticipates the units would typically provide peaking service as required.

2.6.1. Combustion Turbine Units

The CT generator would also be capable of firing both natural gas with a capability for a hydrogen blend. An example image of the CT generator proposed for the project is shown in Figure 2-2.

Figure 2-2 An example of a General Electric 7F.05 CT engine similar to the ones proposed (image from General Electric product website)

²² [PSC REF#: 505447](#) 6630-CE-317 OCCT CPCN Application_CONFIDENTIAL_CLEAN (REDACTED COPY), pp. 32-35.



A simple-cycle CT works by igniting a mixture of compressed air and fuel inside its combustion chambers. The resulting hot air is forced through the turbine, rotating its drive shaft at 3600 revolutions per minute (RPM), which then turns an attached electric generator to produce electricity. Simple-cycle combustion generating facilities differ from combined-cycle generating facilities in that the waste heat resulting from the ignition process is not recovered for use in an additional power cycle, resulting in lower thermal efficiency. When using natural gas as its fuel, the CT facility would use dry-low Nox combustion technology to reduce the amount of Nox emissions exhausted. The exhaust would pass through a silencer and exhaust stack.

The CT would be installed outdoors. The facilities would include an evaporative cooler to increase air density in warm weather, a silencer and exhaust stack, and a closed-loop cooling system. The evaporative cooler would be used to increase air density during warm weather. Turbine bleed heat would be used for inlet air heating and anti-icing purposes. The closed-loop water system would use a mixture of propylene glycol and water to cool the CT and related equipment. The heated liquid from this system would be air-cooled with outdoor air by using a fin-fan cooler. For CT start-ups, the facility would use load commutated inverters. Overall, the Proposed Site would cover approximately 16 acres and the Alternative Site would comprise 19 acres of land used at the Oak Creek site.

2.6.2. Transmission and Fuel Facilities

In addition to the generating facilities, the project would require the installation of one new 19 kilovolt (kV) to 138 kV step up transformers that would connect two of the proposed CTs to the existing 138 kV switchyard. A new 19/345 kV step-up transformer would interconnect the remaining three proposed CTs to the existing 345 kV switchyard. New generation tie-line poles would also be installed to connect the transformers to the existing 138 kV and 345 kV switchyards.

The proposed facilities involve the construction and installation of the new Rochester Lateral, which is under consideration in docket 6630-CG-139. Additional new gas equipment including gas compressors, overpressure protection, coalescing filters, and dew point heaters would also be installed. The Rochester Lateral project seeks to include up to a 24-inch diameter pipe installed between the Rochester Lateral metering station and the proposed facility. Wisconsin Electric Gas Operations would own this new pipeline which would be used to supply gas to the facility. While no storage facility specific to the project is being proposed, a different proposed liquefied natural gas (LNG) facility proposed for the Oak Creek site could store up to two billion cubic feet (BCF) of LNG which could support approximately one week of full load operation of the proposed CT facility.²³

2.6.3. Water Supply

All water would be from the existing water sources at the OCGS. Potable water is currently supplied from the City of Oak Creek municipal water supply system. Service water is also supplied from the City of Oak Creek municipal water supply system.

2.6.4. Balance of Plant (BOS) Systems

In addition to the systems described above, the proposed project would also include:

- CT cooling system using a propylene/glycol water freeze resistant working fluid to cool the CT. The working fluid would flow through heat exchangers and have process heat rejected to the atmosphere through a fin-fan cooler.
- Compressed air system that is made up of air compressors and receivers to provide air service to control and protection equipment.
- Exhaust and emission control system that includes a silencer, exhaust stack, and continuous emissions monitoring system (CEMs), as well as dry low NOx combustors to minimize effects of process effluents.
- Lubricating oil system including an oil reservoir and lubrication oil pump to cool and lubricate the bearings of the CTs.
- Fire protection and detection system designed around National Fire Prevention Association (NFPA) standards NFPA 850, NFPA 37, and NFPA 30. The fire water supply system would be connected to the existing Oak Creek facility fire water system.

2.7. Construction Process

The proposed project would consist of the following construction activities:

²³ [PSC REF#: 501978](#) Response-Data Request-PSC-Chee-DG- 1.5.

- Site preparation activities include clearing and grading, construction of temporary laydown areas, construction storm water infrastructure, and site construction facilities.
- Major civil works activities include excavation and backfill of soils, forming and pouring foundations, and structural steel erection.
- Major equipment erection includes installation of the project CTs.
- Mechanical installation includes balance of plant equipment, including the CT ancillary systems, and commodities such as piping and valves.
- Electrical equipment and commodity installation includes installation of the new step-up transformers and interconnection to the respective switchyards.
- Startup and commissioning work includes flushing of systems, equipment testing, electrical testing and energization, performance testing, and emissions testing.

3. Environmental Effects

An EA must include “[a] description of those environmental factors the proposed action affects most directly;” evaluate “[e]ffects on geographically important or scarce resources, such as historic or cultural resources, scenic or recreational resources, prime farmland, threatened or endangered species and ecologically important areas;” and evaluate “[o]ther environmental matters the commission considers relevant.” Wis. Admin. Code § PSC 4.20(2)(c), (d)(1), (d)(11).

3.1. Air Quality

The potential for air quality impacts is an important consideration for a proposed power generation²⁴ and gas storage project²⁵. Though estimates still lack precision, direct, indirect, and cumulative effects of fossil fuel combustion have been shown to impact human health and mortality worldwide.^{26,27,28}

WEPCO’s parent company, We Energies, is proposing a series of projects planned for the OCGS, which would be covered under one DNR air permit. This series of projects covered by this permit consists of five natural gas-fired General Electric (GE) Model 7F.05 simple cycle CT generators, a two billion standard cubic foot (BSCF) Liquified Natural Gas (LNG) storage facility, natural gas-fired natural gas dew point heaters, and ancillary support equipment including natural gas piping systems, electric substation equipment, and natural gas space heating equipment. The broader plans at the OCGS include increasing the combustion of natural gas in the ERGS Units 1 and 2 to the full rated heat input capacity of these units of 6,750 million British thermal units per hour (MMBtu/hr).²⁹

We Energies states that it is undertaking a “Generation Reshaping Plan,” which will retire over 1,200 megawatts (MW) of older, less efficient coal-fired generation from its fleet and build 3,300 MW of renewable generation and battery storage. The retirement of this coal-fired capacity and the substantial shift to renewable generation makes it more difficult to provide a continuous and reliable energy supply. To help address the changing needs of the electric grid, WEPCO is proposing the OCCT project³⁰ with a total electric generating capacity of approximately 1,100 MW, at its OCGS. When completed, the OCCT facility, supported by WE-GO’s OCLNG storage facility, would provide the base load and peaking generation required as well as providing the system inertia and frequency response necessary to maintain electric grid stability. As part of the broader plans at the OCGS, We Energies will also permanently retire and remove

²⁴ Reviewed under PSC Docket 6630-CE-317.

²⁵ The Oak Creek LNG facility application and review is filed under PSC Docket 6630-CG-140 and will not be decided upon in 6630-CE-317.

²⁶ Pozzer, et. al. 2022. Mortality Attributable to Ambient Air Pollution: A Review of Global Estimates. GeoHealth.

²⁷ Murray, et. al. 2020. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet.

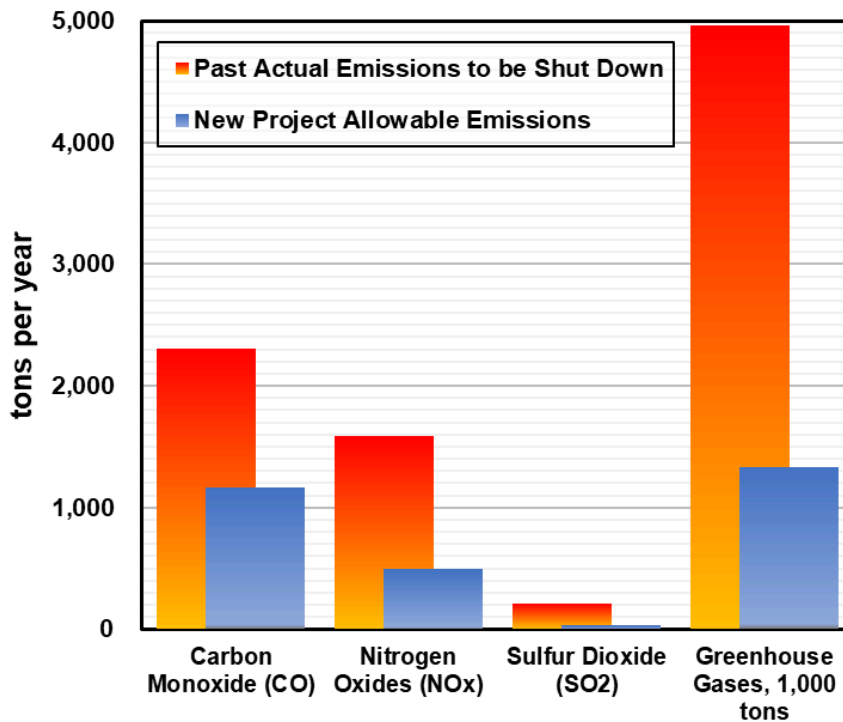
²⁸ Schraufnagel, et. al. 2019. Air Pollution and Noncommunicable Diseases: A Review by the Forum of International Respiratory Societies’ Environmental Committee, Part 2: Air Pollution and Organ Systems. Chest.

²⁹ Review and discussion on combustion increases for the ERGS units are not included elsewhere in this EA nor in any other PSC Docket, as that action would not require Commission approval.

³⁰ PSC Docket 6630-CE-317.

from operation the existing Oak Creek coal-fired Units 5, 6, 7, and 8.³¹ As shown in Figure 3-1, based on the proposed emission limits and operating requirements in this application and the permanent shutdown of the Oak Creek units, this project would result in significant, permanent reductions to emissions from the OCGS.

Figure 3-1 Comparison of the baseline actual emissions for the Oak Creek Units 5-8 to the allowable emissions for the new emissions units



Before commencing construction on its proposed electric generation project³² and gas storage project³³, We Energies must obtain an air pollution control permit from the DNR, which partners with the EPA for administering appropriate parts of the federal Clean Air Act (CAA). The DNR has responsibility for review of permit applications and issuance of air pollution control permits in accordance with federal CAA requirements and Wisconsin Statutes. The Commission must adhere to Wis. Stat. § 196.491(3)(d)3. and 4.:

“In its consideration of environmental factors, the Commission may not determine that the design or location or route is not in the public interest because of the impact of air pollution if the proposed facility will meet the requirements of ch. 285.”

Wisconsin Stat. ch. 285 is the chapter on “Air Pollution” and is enforced by the DNR.

³¹ Review and discussion on retirement of the Oak Creek coal-fired units 5-8 are not included elsewhere in this EA nor in any other PSC Docket, as that action would not require Commission approval.

³² [PSC Docket 6630-CE-317](#).

³³ [PSC Docket 6630-CG-140](#).

This section addresses the details and status of the DNR air pollution construction permit review process at the time of the Commission's EA preparation.

3.1.1. Pollutants and Controls

Unlike constructional air quality impacts that would depend on construction vehicles and equipment and fugitive dust, operational air quality impacts would depend largely on the fuel used in power generation rather than vehicles that would be on the property. The fuel proposed to be used in the electric generator units is natural gas.

In the DNR air permit, potential air pollutants or impacts to be examined include:

- CO
- NO_x
- Filterable PM
- Particulate matter less than 10 microns (PM₁₀) and less than 2.5 microns (PM_{2.5}) in diameter
- Sulfur dioxide (SO₂)
- Mercury
- VOCs
- Sulfuric acid (H₂SO₄)
- Lead (Pb)
- Opacity
- Greenhouse gases (GHG), including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and sulfur hexafluoride (SF₆)
- Hazardous air pollutants (HAP) regulated under the CAA and 40 CFR 63, and Wisconsin Hazardous Air Contaminants (HAC) regulated under Wis. Admin. Code ch. 445

Potential emission sources to be examined include:

- 100 percent natural gas combustion from existing coal boilers ERGS Units 1 and 2
- Five identical natural gas combustion turbines
- An LNG regeneration gas heater
- Four identical LNG vaporizer heaters
- Amine steam boiler
- LNG amine scrubber vent
- LNG maintenance venting
- LNG Commissioning
- LNG facility flare
- Two emergency generators
- Two natural gas dew point heaters
- Four natural gas conditioning heaters
- Natural gas pipe systems

The DNR air pollution control construction permit for this project is intended to include requirements for adherence to federal standards – including New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) – and to

assure compliance with National Ambient Air Quality Standards (NAAQS). The DNR air permit addresses, among other things:

- Permit conditions to address ambient air impacts and ensure the proposed project complies with NAAQS and allowable concentration increments.
- Permit conditions to protect against ambient air impacts of HACs as regulated under Wis. Admin. Code ch. NR 445 and HAPs as regulated by an emission standard promulgated under section 112 of the CAA (i.e., NESHAP). Most HAC emissions that would be generated by this project are exempt from regulation under ch. NR 445 because they are the result of the combustion of natural gas, which ch. NR 445 specifically exempts, or regulated by a NESHAP. For a discussion of applicable NESHAPs, see below in subsection 3.1.5.

The air pollution control construction permit application We Energies submitted to the DNR covers air impact possibilities of the proposed OCCT facility³⁴ and LNG storage facility³⁵. The DNR review of the air permit application is in process; the DNR review will verify or alter air impact expectations specified in the application.

3.1.2. Criteria Pollutants

Because of the adverse impacts of air pollutant emissions on health, welfare, and the environment, federal, and state laws are implemented to reduce emissions to levels that research has shown would protect the majority of individuals and reduce overall impacts on ecosystems.

The EPA has established National Ambient Air Quality Standards (NAAQS) to regulate the emissions of six “criteria” pollutants: CO, NO_x, ozone (O₃), lead (Pb), particulates (PM₁₀, PM_{2.5}), and SO₂. The standards are based on health impact research related to those pollutants. The EPA sets the NAAQS levels with the intent to protect not only the general population, but also susceptible populations, individuals with asthma, young children, and the elderly. To achieve this level of protection, the EPA requires that air dispersion modeling for new facilities’ air pollution control permits be performed at the maximum permitted emission level. Five years of meteorology data would also be required for the model to evaluate worst-case meteorological conditions.

The DNR has responsibility for review of permit applications and issuance of air pollution control permits in accordance with federal CAA requirements and Wisconsin Statutes. DNR air permits regulate the emissions of the six criteria pollutants and other classes of pollutants in Wisconsin. Some criteria pollutants require a different approach than the others. O₃ is generally controlled by controlling the emission of NO_x and VOCs that react in the presence of heat and sunlight to form O₃. PM_{2.5} particles are emitted directly from combustion sources and are also formed chemically in the atmosphere involving reactions of NO_x and SO₂.

The proposed units would emit all six criteria pollutants. Air impacts from Pb emissions are not

³⁴ [PSC Docket 6630-CE-317](#).

³⁵ [PSC Docket 6630-CG-140](#).

an issue for this project because Pb is not a pollutant emitted in large amounts by natural gas combustion. GHG emissions are being considered in the permit review as pollutants. Treatment of GHGs is discussed below in subsection 3.1.7.

3.1.3. Maximum Potential Emissions and PSD/Non-attainment area Thresholds

Combustion Turbines (6630-CE-317)

The proposed OCCT would consist of five simple cycle CT generators (P401-P405). Each CT has a maximum net electric generating capacity of approximately 220 megawatts (MW) when firing natural gas at International Standards Organization (ISO) conditions. The CTs are designed to have the capability to fire natural gas or natural gas blended with hydrogen. The permit would authorize these units to fire only natural gas.

The permittee provided the following specifications of the GE Model 7F.05 turbines. This table assumes ISO conditions.

Manufacturer	General Electric
Model Number	7F.05
Operating Mode	Simple Cycle
Design Fuels	Natural Gas with Hydrogen (H ₂) Blending Capabilities
Combustor Type	Ultra-Low NO _x Lean Premix Technology
Net Electric Output, MW	220
Maximum Nominal Heat Input, mmBtu/hr (HHV)	2,424
Net Efficiency, percent, LHV	38.5 percent
Ramp Rate, MW/minute	40
Startup Time, minutes	21
Design Gas Turbine Outlet NO _x Concentration, ppm _{dv} at 15 percent O ₂	9
Stack Height, feet	90
Stack Exit Diameter, feet	19.3

LNG Storage Facility (6630-CG-140)

As part of series of projects at the OCGS, WE-GO is proposing to construct and operate a new 2 BSCF LNG storage facility.³⁶ This facility would be operated as the OCLNG. LNG is created by purifying natural gas and cooling it to -259 °F (-161 °C). This reduces the natural gas to approximately 1/600th of its un-liquified volume. The LNG facility would include the following:

³⁶ [PSC Docket 6630-CG-140](#).

Regeneration Gas Heater	Process P410
Four (4) LNG Vaporizer Heaters	Processes P411, P412, P413, and P414
LNG Amine Steam Boiler	Process P415
LNG Amine Scrubber Regeneration Vent	Process P416
LNG Process Startup and Maintenance Venting	Process P417
LNG Facility Startup Commissioning Venting	Process P418
LNG Process Pressure Safety Valve Emergency Venting.	n/a
LNG Storage Tank Pressure Safety Valve Emergency Venting	n/a
LNG Tank Load-out to Trucks	n/a

Balance of Plant

The remaining projects WEPCO is proposing at OCGS include the construction and operation of two natural gas fired 1,500 kW Emergency Generators (P421 and P422), natural gas piping systems (P429), natural gas fired dew point heaters (P423 and P424), and natural gas fired gas conditioning heaters (P425-P428) that are included in the DNR air permitting application with OCCT³⁷ and OCLNG³⁸.

³⁷ [PSC Docket 6630-CE-317](#).

³⁸ [PSC Docket 6630-CG-140](#).

Facility Emissions Summary

The following table summarizes emissions from each proposed process under the DNR air permit for the new projects at OCGS:

Table 3-1 Total potential PSD regulated and federal hazardous air pollutant (HAP) emissions for the Natural Gas-Fired Electric Generation Project. All emissions are tons per year.

Pollutant		Two (2) Existing Boilers	Five (5) Combustio n Turbines	LNG Regenerati on Gas Heater	Four (4) LNG Vaporizer Heaters	Amine Steam Boiler	LNG Amine Scrubber Vent	LNG Mainten ance Venting
		B18 and B19	Processes P401 - P405	Process P410	Processes P411 - P414	Process P415	Process P416	Process P417
Carbon Monoxide	CO	152	952.0	3.31	31.3	2.94		
Nitrogen Oxides	NO _x	-	469.2	1.46	13.8	1.30		
Particulate Matter	PM	-	109.5	0.30	2.83	0.266		
Particulate Matter	PM ₁₀	-	109.5	0.020	0.19	0.018		
Particulate Matter	PM _{2.5}	-	109.5	0.017	0.16	0.015		
Sulfur Dioxide	SO ₂	-	6.4	0.024	0.22	0.021	0.00	0.00
Vol. Org. Cmpds	VOC	4.0	87.3	0.22	2.05	0.193	1.61	0.53
Sulfuric Acid Mist	H ₂ SO ₄	-	3.2	0.0024	0.022	0.0021		
Flourides (F)	F	-	0.000	0.0000	0.000	0.0000		
Lead	Pb	-	0.0053	0.000020	0.0002	0.000018		

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Carbon Dioxide	CO ₂	-	1,241,759.5	4,611.2	43,550.2	4,098.8	5,565.8	0.5	
Greenhouse Gases	CO ₂ e	-	1,243,042.0	4,616.0	43,595.2	4,103.1	5,793.3	490.5	
Total Reduced Sulfur	H ₂ S	-					4.30	0.0000	
Maximum Single HAP		-	2.70	0.07	0.67	0.06			
All HAPs Combined		-	6.16	0.08	0.71	0.07			
Pollutant	LNG Commissioning	LNG Facility Flare	LNG Vaporizer Emergency PSV Vents ³⁹	LNG Tank Emergency PSV Vents ⁴⁰	Two (2) Emergency Generators	Two (2) Natural Gas Dew Point Heaters	Four (4) Natural Gas Conditioning Heaters	Natural Gas Pipe Systems ²	Total Project
	Process P418	Control C418			Processes P421 - P422	Processes P423 - P424	Processes P425 - P428	Process P429	
CO		9.27			3.83	11.04	4.42		1,170.1
NO _x		1.20			1.92	4.86	0.64		494.3
PM		0.23			0.033	1.00	0.40		114.6
PM ₁₀		0.016			0.033	0.068	0.027		109.9
PM _{2.5}		0.013			0.033	0.057	0.023		109.8
SO ₂	0.00	0.02			0.002	0.079	0.032		6.8
VOC	1.51	0.17	8.06	6.25	0.96	0.72	0.29	3.67	103.5

³⁹ The LNG Vaporizer Emergency PSV Vents and the LNG Tank Emergency PSV Vents represent emergency venting and are malfunctions which are not expected to occur for any given year of operation. Emergency events (i.e. malfunctions) are not expected for any given year of operation and it is department policy to not include malfunctions in the permit or in the calculation of a facility's MTE and PTE. Therefore, these emissions are not included in the total project potential emissions.

⁴⁰ The natural gas piping systems include components such as valves, connection points, pressure relief valves that can leak and therefore result in fugitive emissions of VOCs and GHGs.

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H ₂ SO ₄		0.0018			0.0005	0.0079	0.0003		3.2
F		0.0000			0.0000	0.0000	0.0000		0.0000
Pb		0.00001			0.000002	0.000066	0.000026		0.0056
CO ₂	3,557.5	3,497.6	0.0006	0.0004	390.3	15,370.7	6,148.3		1,328,550. 3
CO ₂ e	4,876.4	3,501.2	7,021.0	5,446.6	390.7	15,386.5	6,154.6	4,298.6	1,336,248. 1
H ₂ S	0.0000		0.0055	0.0000					4.30
Single HAP					0.18	0.24	0.09		4.01
Total HAPs					0.25	0.25	0.10		7.62

The CAA requires more stringent regulation and control of emissions from a new major source of air contaminants, or a major modification of an existing major source located in area designated as attainment. The Prevention of Significant Deterioration (PSD) rules contain these more stringent requirements for major sources and major modifications. Any new major source or any major modification of an existing major source proposed for an attainment area in Wisconsin must apply for and receive a PSD permit from the DNR prior to commencing construction.

Nonattainment area new source review (NNSR) permitting applies to all new direct major source and all major modifications to direct major sources located in areas designated as nonattainment. Any new major source or any major modification of an existing major source proposed for a non-attainment area in Wisconsin must apply for and receive a NNSR permit from the DNR prior to commencing construction. The Oak Creek facility is located in an area designated as moderate nonattainment for ozone, therefore the DNR must evaluate the applicability of NNSR permitting for NO_x and VOCs.

WEPCO anticipates that the proposed project would be considered a minor modification under the PSD and NNSR rules. Based on the total potential emissions for the project as proposed in the permit application and the permanent shutdown of the Oak Creek Units 5, 6, 7, and 8, this project is not anticipated to result in a net emission increase of any regulated PSD or NNSR pollutant in excess of the applicable PSD and NNSR significant increase levels. Therefore, the project is not subject to review under the PSD or NNSR programs. Table 3-2 summarizes the net project emissions for the proposed project.

Table 3-2 Net emissions increase and PSD and NNSR applicability for the Natural Gas-Fired Electric Generation Project. All emissions are tons per year.

POLLUTANT		New Project Emission Units	Contemporaneous Emission Increases (Decreases)	Net Emissions Increase (Decrease)	PSD Significant Threshold	OVER?
Carbon Monoxide	CO	1,170.1	(2,301.3)	(1,131.3)	100	NO
Nitrogen Oxides	NO _x	494.3	(1,585.6)	(1,091.2)	40	NO
Particulate Matter	PM	114.6	(154.4)	(39.8)	25	NO
Particulate Matter	PM ₁₀	109.9	(155.2)	(45.3)	15	NO
Particulate Matter	PM _{2.5}	109.8	(156.0)	(46.2)	10	NO
Sulfur Dioxide	SO ₂	6.8	(209.3)	(202.5)	40	NO
Organic Compounds	VOC	103.5	(79.6)	23.9*	40	NO
Sulfuric Acid Mist	H ₂ SO ₄	3.2	(20.9)	(17.7)	7	NO
Fluorides	F	0.0	(2.6)	(2.6)	3	NO
Lead	Pb	0.0	(0.1)	(0.10)	0.6	NO
Carbon Dioxide	CO ₂	1,328,550.3	(4,919,727.8)	(3,591,178)	n/a	NO
Greenhouse Gases	CO ₂ e	1,336,248.1	(4,958,614.0)	(3,622,366)	75,000	NO

*Moderate NNSR thresholds for NO_x and VOC are 100 tons per year

Because the potential project emissions are below the PSD threshold for every regulated air contaminant, PSD permitting is not required for this project.

3.1.4. Air Quality Impacts

WEPCO performed a dispersion modeling analysis to assess the impact to ambient air of the emissions of particulate matter (PM₁₀), sulfur dioxide (SO₂), carbon monoxide (CO), and nitrogen oxide (NO_x) from proposed electric generation facility. An air dispersion modeling analysis is used to demonstrate that emissions from the proposed project at the facility in conjunction with emissions from other existing sources, would not cause or contribute to a violation of applicable NAAQS or PSD increment. Tables 3-3, 3-4, and 3-5 summarize the results of WEPCO analysis, which concludes that the proposed project would not cause or contribute to the violation of any NAAQS.

Table 3-3 Significant impact analysis modeling results.

Pollutant	Averaging Period	Maximum Impact, $\mu\text{g}/\text{m}^3$	Significant Impact Level, mg/m^3	Exceeds SIL?
NO ₂	1-hour	116	7.5	Yes
	Annual	3.1	1	Yes
PM ₁₀	24-hour	0.95	5	No
	Annual	0.08	1	No
CO	1-hour	422	2,000	No
	8-hour	216	500	No
SO ₂	1-hour	2.7	7.8	No
	3-hour	1.9	25	No
	24-hour	0.6	5	No
	Annual	0.05	1	No

Table 3-4 NAAQS modeling results. All concentrations are in $\mu\text{g}/\text{m}^3$.

Pollutant	Averaging Interval	Maximum Impact	Background	NAAQS	percent of NAAQS
NO ₂	1-hour	156	Included	188	83 percent
	Annual	47.6	Included	100	48 percent

Table 3-5 PSD Increment Modeling Results. All concentrations are in $\mu\text{g}/\text{m}^3$.

Pollutant	Averaging Interval	Maximum Impact	PSD Increment	percent of Increment
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NO ₂	Annual	3.1	25	12 percent
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Whether the predicted concentrations of air pollutants would be expected to create an adverse impact depends not only on whether they would cause or contribute to the violation of any NAAQS but also on whether they exceed the amount of PSD increment. The PSD increment is the maximum increase in concentration that is allowed to occur above a “baseline concentration” in an attainment area for a particular pollutant and averaging period. The baseline concentration is defined separately for each pollutant and relevant averaging period. According to the EPA, it is “the ambient concentration existing at the time that the first complete PSD permit application affecting the area is submitted.”

The maximum modeled concentrations of all modeled pollutants are less than their respective allowable PSD increments as seen in Table 3-5.

Regardless of whether the facility’s emissions reach the NAAQS or PSD increment, there is often a question of whether more sensitive individuals are adequately protected. In general, when air pollution levels increase, sensitive individuals might experience adverse respiratory symptoms. The most vulnerable members of a population are generally the young, the elderly, and the infirm. Members of the public who are most susceptible to environmental stress can often be found in hospitals, public schools, day care centers, and retirement homes. The purpose of the NAAQS, however, is to protect not only the general population but also susceptible or more vulnerable populations, such as individuals with asthma, young children, and the elderly.

3.1.5. Hazardous Air Pollutants

HAPs are a special classification of pollutants known also as toxic air pollutants or air toxics under the CAA. The CAA requires the EPA to reduce the routine daily emissions of air toxics first by a technology-based approach, and the EPA has created Maximum Achievable Control Technology (MACT) standards for each major type of facility within an industry group. The standards are based on emissions levels that are already being achieved by the better-controlled and lower-emitting sources in an industry (in this case, utility steam-electric generating units). Permittable emission levels under MACT are expected to be low enough to protect human health.

A major source of federal HAPs under the federal CAA⁴¹ is defined as one that emits at least 10 tons per year of any individual federal HAP or more than 25 tons per year of combined federal HAP emissions. The Oak Creek Power Plant, where WEPCO proposes to construct this project, is a major source of federal HAPs and would remain a major source of federal HAPs with the completion of this project.

In addition, ch. NR 445, Wis. Adm. Code, regulates many federal HAPs plus several “state-only” Hazardous Air Contaminants (HAC) that are not regulated under the federal standards. HAC emissions from the combustion of natural gas are exempt from regulation under ch. NR 445, Wis. Adm. Code.

⁴¹ Section 112(b) of the CAA.

40 CFR Part 63 Subpart YYYY, the NESHAP for regulation of HAP emissions from stationary combustion turbines at major sources of HAPs, would also apply to this project.

3.1.6. Dust and Diesel Exhaust from Equipment

Fugitive dust during construction of the proposed project is not anticipated to be substantial. As noted earlier, the project would be constructed at the existing Oak Creek Power Plant, which is an existing power plant and therefore would not involve the type of excavation and earth moving associated with an entirely new power plant.

No fugitive dust is expected to result from normal daily operation of the proposed project because the fuel would be natural gas. There would be no storage or movement of solid fuels. There would be occasional maintenance truck traffic associated with the project that would create small amounts of fugitive dust.

Diesel exhaust from trucks and construction equipment is composed of two phases, gas or particle. The gas phase is composed of several urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. Diesel particulates of greatest health concern are fine and ultra-fine particles. The fine and ultra-fine particles might be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals, and other trace elements. There is limited evidence indicating that inhalation of diesel exhaust causes acute and chronic health effects. Acute effects could include irritation to the eyes, nose, throat, and lungs, some neurological effects such as lightheadedness, and a cough or nausea or exacerbation of asthma. Human epidemiological studies have shown an association between diesel exhaust exposure and increased lung cancer rates in certain occupational settings. The expected increase in truck traffic at the Oak Creek Power Plant due to the proposed project is very small. The potential for impacts to nearby residents in the city of Milwaukee due to this increase is also very small.

3.1.7. Greenhouse gases

GHGs would be emitted by the electric generation project during operation. There also would be emissions that are released in the creation of units, the transport of the units, natural gas and fuel oil production and transport, and the decommissioning of the units. Additionally, while natural gas may burn cleaner than alternative fuels including coal and petroleum, the extraction and delivery of natural gas has a meaningful contribution to U.S. GHG emissions. In 2021, methane (CH₄), the largest component of natural gas, constituted 11.5% (793.4 MMT CO_{2e}) of the reported U.S. emissions total CO_{2e}. Natural gas systems were the second largest anthropogenic source for methane emissions and 2.9% total gross emissions⁴². While reported natural gas emissions have reduced dramatically from 1990's reports, methane emissions have come under especially high scrutiny due to their large GWP. Some of the most recent life-cycle research stemming from a collaboration at Brown University, Rocky Mountain Institute, Harvard University, NASA, and Duke University concluded that global gas systems that leak over 4.7% of their methane (20-year timeframe) or 7.6% (100-year timeframe) have life-cycle emission

⁴² U.S. Environmental Protection Agency (Last updated on August 25th, 2023), *Inventory of U.S. Greenhouse Gas Emissions and Sinks*. Retrieved from: [Inventory of U.S. Greenhouse Gas Emissions and Sinks | US EPA](#)

intensities that are equivalent to coal emissions⁴³. A complete assessment of all associated GHG emissions from all life cycle states is beyond the scope of this analysis, as it is difficult to locate and quantify extrinsic emissions. The overall natural gas and fuel production and transportation system is very complex and is impacted by many more factors than this proposed project alone.

Potential impacts of GHG emissions on global climate change and the potential effects of climate change are described in the reports of the Intergovernmental Panel on Climate Change, the scientific body set up by the World Meteorological Organization and the United Nations Environment Programme to provide information about global climate change.⁴⁴

Governor Evers' Executive Order 52⁴⁵ directed the Wisconsin Initiative on Climate Change Impacts (WICCI) to collect and update scientific data on the rate of climate change in Wisconsin and its impact on Wisconsin's natural environment. An earlier Executive Order 38⁴⁶ also contained a goal of all electricity consumed within the state of Wisconsin is carbon-free by 2050. The electric grid and system is highly complex, but if the projected life of this proposed project would extend past 2050, this project could conflict with this goal to some extent, although this particular project is only a small part of the overall state goal and it is unknown what the exact electric generating mix will be in 2050. The December 2020 report produced by Governor Evers's Task Force on Climate Change summarizes the human and economic costs of climate change on Wisconsin communities and emphasizes that the potential climate change impacts in Wisconsin would disproportionately impact Black, Indigenous, and other communities of color and low-income communities.⁴⁷ The Wisconsin Initiative on Climate Change Impacts (WICCI) has also reported on the how Wisconsin's climate continues to change and on the impacts of our warming climate on Wisconsin residents.⁴⁸

Global warming potentials of the various GHGs are widely different and are measured and calculated as CO₂ equivalents (CO_{2e}). For example, the global warming potential of N₂O emissions is 298 times that of CO₂, so N₂O emissions are also given as CO_{2e}. Table 3-5 shows the relative CO_{2e} multipliers for several GHGs associated with the project.⁴⁹

⁴³ Gordon, D., Reuland, F., Jacob, D. J., Worden, J. R., Shindell, D., & Dyson, M. (2023). Evaluating net life-cycle greenhouse gas emissions intensities from gas and coal at varying methane leakage rates. *Environmental Research Letters*, 18(8), 084008.

⁴⁴ For example, the website of the Intergovernmental Panel on Climate Change provides a source of information and reports about global climate change: <https://www.ipcc.ch/>.

⁴⁵ Wis. Governor's Office, Executive Order #52: Relating to the Creation of the Governor's Task Force on Climate Change (2019). Retrieved from: [Climate Change Task Force Executive Order \(wi.gov\)](https://www.wisconsin.gov/eo/52)

⁴⁶ Wis. Governor's Office, Executive Order #38: Relating to Clean Energy in Wisconsin (2019). Retrieved from: [Wisconsin Office of Sustainability & Clean Energy Executive Order 38](https://www.wisconsin.gov/eo/38)

⁴⁷ Governor's Task Force on Climate Change Report. December 2020, pp. 14-17.

⁴⁸ <https://wicci.wisc.edu>.

⁴⁹ Global warming potential given in Table 3-5 are from 40 CFR part 98, Subpart A, Appendix A, Table A-1

Table 3-5 **Relative CO_{2e} impacts multiplies for GWP of GHG components**

GHG component	Multiplier
CO ₂	1
CH ₄	25
N ₂ O	298
SF ₆	22,800

CO₂ would comprise most of the GHGs emitted from project, and these emissions would come mostly from the turbine units. Potential annual GHG emissions from the project based on the maximum capacity of each emissions unit under its physical and operational design, would equate to an approximate decrease of 3,622,366 tons CO_{2e} per year compared to the current facility.

Additionally, it is important to note that operating a natural gas-fueled electric generation facility requires the production, transport, and storage of natural gas, which is mostly composed of CH₄ that has 25 times the potency of CO₂ as a GHG. The EPA produces estimates on CH₄ emissions as a result of these processes, but the actual values may be ~60 percent higher due to abnormal operating conditions in the supply chain.⁵⁰

In May 2023, the EPA established 40 CFR Part 60 Subpart TTTTa, the NSPS for GHG emissions for modified coal-fired steam electric generating units and new or reconstruction stationary combustion turbine electric generating units. Upon promulgation of 40 CFR Part 60 Subpart TTTTa, stationary combustion turbines that commence construction or reconstruction after May 23, 2023, and meet the relevant applicability criteria are subject to 40 CFR Part 60 Subpart TTTTa. For new and reconstructed fossil fuel-fired combustion turbines, the EPA has created three subcategories based on the function the combustion turbine serves:

1. Low load (“peaking units”) subcategory that consists of combustion turbines with a capacity factor of less than 20 percent;
2. Intermediate load subcategory for combustion turbines with a capacity factor that ranges between 20 percent and a source-specific upper bound that is based on the design efficiency of the combustion turbine;
3. Base load subcategory for combustion turbines that operate above the upper-bound threshold for intermediate load turbines.

A low load combustion turbine is defined as “*a stationary combustion turbine that supplies 20 percent or less of its potential electric output as net-electric sales on both a 12-operating month and a 3-year rolling average basis*”⁵¹.” With their application, WEPCO proposed to limit the heat input of each turbine to less than 20 percent capacity factor so that they can be classified as low load combustion turbines.

3.2. Endangered

⁵⁰ Alvarez, et. al. 2018. Assessment of Methane Emissions from the U.S. Oil and Gas Supply Chain. Science.

⁵¹ [40 CFR s. 60.5580a “Low load combustion turbine.”](#)

Resources

The state's Endangered Species Law, Wis. Stat. § 29.604, makes it illegal to take, transport, possess, process, or sell any wild animal that is included on the Wisconsin Endangered and Threatened Species List. In addition, it is illegal to remove, transport, carry away, cut, root up, sever, injure, or destroy a wild plant on the Wisconsin Endangered and Threatened Species List on public lands. Although utility practices are exempted from the taking prohibitions of listed plant species on public lands, it may still be prudent for the applicant to actively avoid activities in certain areas that are known to host rare plants. The Federal Endangered Species Act (ESA) protects all federally listed animals from direct killing, taking, or other activities that may be detrimental to the species. Federally listed plants have similar protection, but the direct killing or taking prohibitions are limited to federal lands or when federal funds/permits are necessary. In addition, there may be other state and federal laws protecting rare species including the federal Migratory Bird Treaty Act, the federal Bald and Golden Eagle Protection Act, and the Protected Wild Animals (NR 10.02 WI Admin Code).

A Certified Endangered Resources (ER) review was completed by the DNR's ER Energy Liaison on April 5, 2024, for the project area. The review is based off information from the Natural Heritage Inventory (NHI) database, maintained by the DNR Bureau of Natural Heritage Conservation, to identify any endangered, threatened, or special concern species, natural communities, and animal concentration sites within the project area and within a one- and two-mile buffer of the project area.

The NHI database contains known records for endangered resources which includes federal, and state listed species as well as special concern species, natural communities, and animal concentration sites. However, most areas of the state have not been surveyed extensively or recently, so the NHI data should not be solely relied upon, particularly in areas dominated by private lands. In areas where suitable habitat exists for protected species, but occurrences have not been recorded in the NHI database, there may be recommended activities that could mitigate or avoid potential impacts to protected species.

If approved, this project may begin construction over a year from the ER review date. DNR regularly updates the NHI database as new species records are discovered and when previous records are checked to determine if the species is still present. If the project is approved, the applicants should conduct an updated review closer to the construction start date to determine if any change to the ER review would create the need for additional actions to avoid impacts to protected species.

The ER review for the proposed project determined there are twelve endangered resources within the search buffers of the proposed project, and five of these may be affected if actions are not put into place. They include:

- Two special concern bee species including one that is federally endangered
- One endangered bird species
- One natural community
- One special concern plant species

The DNR provided required and recommended actions for each species. ‘Required actions’ represent the DNR’s best available guidance for complying with state and federal endangered species laws based on the project information provided by the applicant and the endangered resources information and data that is available. ‘Recommended actions’ are those the Department strongly encourages to help prevent future endangered resources listings and protect Wisconsin’s biodiversity for future generations.

Based on the information available from the DNR and USFWS, the proposed project layout, and planned activities as described in the application, this project is not expected to have a significant impact on endangered, threatened or special concern species as well as the natural community if the following actions, which the applicant is committed to, are implemented⁵²:

- The project overlaps the federal Rusty Patched Bumble Bee (RPBB) High Potential Zone and may contain suitable nesting and foraging habitat for the bee. Voluntary guidance provided by the U.S. Fish and Wildlife Service include the use of native trees, shrubs and flowering plants in landscaping provide plants that bloom from spring through fall and remove and control invasive plants in any habitat used for foraging, nesting or overwintering. These measures would also apply to the other special concern bee species.
- The endangered bird species is known to nest at the Oak Creek Generating Station. Required actions are listed for this species in the ER Review but the Applicant has indicated that all project related activities would be greater than 300ft from the known nest site and therefore, no impacts are expected.
- A forested natural community is known to be present immediately adjacent to the proposed project area. Natural communities may contain rare or declining species and their protection should be incorporated into the project design as much as possible. Therefore, recommended actions include minimizing impacts to, implementing invasive species BMPs, and/or conducting work under frozen ground conditions when working adjacent to this natural community.
- Suitable habitat for a special concern plant species may be present within the project area, north of Service Road. If suitable habitat would be impacted, recommended actions may include:
 - Site surveys to confirm presence/absence of species and avoiding areas of occupied habitat. Survey results should be submitted to the ER Utility Liaison.
 - Conduct work during the plant's dormant season (August - May). Ideally, this would involve frozen, snow-covered ground.

DNR regularly updates the NHI database as new species records are discovered and when previous records are checked to determine if the species is still present. If the project is approved, and construction starts more than a year from the date of the ER Review, the applicant

⁵² [PSC REF #: 505447](#) 6630-CE-317 OCCT CPCN Application_CONFIDENTIAL_CLEAN (REDACTED COPY)

should conduct an updated review closer to the construction start date to determine if any actions are needed to avoid impacts to protected species.

3.3. Archaeological and Historic Resources

Compliance with Wis. Stat. s. 44.40

The Commission is required to request the Wisconsin State Historic Preservation Office (SHPO) to review and comment if a Commission action would affect a historic property, as stated in Wis. Stat. s. 44.40 and the PSC-SHPO Interagency Programmatic Agreement (PSC-SHPO Agreement or PA). According to the Appendix of PSC Authorization Actions Subject to Wis. Stat. s. 44.40, the Oak Creek CT project is categorized as Type II(a) electric generation facility siting and construction or expansion, therefore, Commission authorization of the project is subject the review of historic properties under Wis. Stat. s. 44.40.

Commission Review of WHPD Properties

The Commission's Historic Preservation Officer (HPO) reviewed and evaluated the project application materials related to historic properties, which were provided by the applicant and its consultant, UWM-CRM, as part of the PSC Application Filing Requirements. The Commission HPO also reviewed and evaluated property records using the Wisconsin Historic Preservation Database (WHPD or database) online portal and its associated GIS data. As stated in the PSC-SHPO Agreement (3), the WHPD contains all listed property, the Wisconsin inventory of historic places, and the list of locally designated historic places. These recorded properties comprise all relevant "historic properties" for the purpose of this review.

Area of Potential Effect (APE)

The APE is the area where WHPD properties may be affected by the proposed activity. The PSC-SHPO Agreement (7g), requires the Commission HPO to determine the APE. The Agreement classifies the APE as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The scale and nature of the undertaking influence shape and extent of the APE, resulting in delineated areas of effects that may be different depending on the kinds of effects caused by the undertaking. The direct APE is determined as the area where physical ground-disturbance occurs. Examples of ground disturbing activity include but are not limited to excavation, soil grading, and the compression of soils through heavy machinery movement and material staging. The indirect APE is determined as the distance from the project where visual disturbance reasonably occurs (e.g. line of sight).

WHPD Archaeological Site Inventory (ASI) Properties in the APE

The project area has changed during the PSC application process. Originally, the WHPD records indicated there would be 12 ASI properties coincident with the proposed project location. All sites were defined precontact Native American affiliation isolated finds, lithic scatters, and/or campsite/village sites; none were codified as burial sites. Previous investigations found nine of

the WHPD ASI properties lacked the materials and/or integrity of historic property criteria in Wis. Stat. s. 44.36(2). Three of the WHPD ASI properties were recommended for further investigation to determine whether significant resources are present in the project area that may be affected by the project. Additional Phase I field survey investigations were recommended for ASI properties 47RA0295, 47RA0296, and 47RA0297 to assess whether significant resources are present in the project area that may be affected by the project. Previous investigations found 47RA0294 and 47MI0542 lack the materials and/or integrity for listing as historic properties (Zweig and Daniels 2024). Based on additional investigations conducted in June 2024, as described in the report, site 47RA0295 also lacks the materials and integrity necessary. The archival and literature review further confirmed that the entirety of the project area has been subjected to prior archaeological survey.

In May 2024, the project area was modified resulting in only three previously reported archaeological sites remaining coincident with the project APE: 47RA0294, 47RA0295 and 47MI0542. As documented in Zweig and Daniels (2024), no further work is warranted at 47RA0294 and 47MI0542, however, they recommended additional investigations at 47RA0295. On May 31, 2024, staff from UWM-CRM conducted Phase I archaeological survey of the project area coincident with 47RA0295. No cultural materials or features were located within the survey area. No evidence of the site was located during the survey. Based on these data, the WHPD ASI property lacks the materials and integrity necessary to be considered a historic property.

None of the WHPD ASI properties are codified as burial sites; therefore, no further work is required under Wisconsin Statute §157.70. The applicant should follow its Unanticipated Archaeological Discoveries Plan if any inadvertent disturbance of previously unidentified archaeological materials occurs during construction.

WHPD Architecture History Inventory (AHI) Properties in the APE

The archives and literature research found that there are no WHPD AHI properties within the project area. Five WHPD AHI properties were identified as adjacent to or in the immediate vicinity of the project area. Of these, two are not extant (AHI# 12464 and 133026), two TMER&L Co. pipe culverts were confirmed to be outside of the APE (AHI# 237209 and 237208), and one property was previously evaluated and determined to not meet the historic property criteria (AHI# 149922). Commission staff asked the applicant to review two new WHPD properties, AHI 246707 (Oak Creek Power Plant - North Plant) and AHI 546708 (Oak Creek Power Plant - South Plant). The review found that these AHI properties would not meet any of the historic criteria under Wis. Stat. § 44.36(2).

Unanticipated Archaeological Discoveries

The applicant provided a detailed Unanticipated Archaeological Discoveries Plan. The plan states that if any inadvertent burial-related or non-burial related discoveries are encountered, construction activities shall immediately stop, and the site area shall be protected. The treatment of burial-related discoveries shall comply with provisions contained in Wisconsin Statute §157.70. Any activity that might further disturb resources at the site would not resume until authorized by appropriate law enforcement officials and/or the WHS.

Conclusion

The Commission HPO reviewed the project for affects to historic properties in accordance with the PSC-SHPO Agreement. There would be no historic properties in the APE. Therefore, the Commission has fulfilled its obligations as required by Wis. Stat. s. 44.40.

3.4. Environmental Justice and Sensitive Receptors

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Historically, communities of color and low-income communities have been disproportionately impacted by adverse human health and environmental impacts associated with pollution and developments. The first step towards evaluating whether a project may have disproportionate impacts is by evaluating the population in a project area. For the proposed project, local census data was reviewed to determine whether any identifiable groups of minority or low-income persons are in the communities near to the project area. The information is shown in Table 3-6 (Population and Income) and Table 3-7 (Racial and Ethnic Distribution) which follow.

The entirety of the proposed project would occur within the limits of the City of Oak Creek, Milwaukee County, near the border of Racine County. In general, the areas surrounding the project area are industrial with some residential development.

Table 3-6 Population and income (2024 data from census.gov)

Location	City of Oak Creek	Milwaukee County	Racine County
Population	37,156	916,205	196,613
Median Household Income	\$86,4048	\$59,319	\$72,658
Poverty Rate	4.7 percent	17.4 percent	9.6 percent

Table 3-7 Estimated Racial or Ethnic Distributions (2024 data from census.gov)

Race or Ethnic Group	City of Oak Creek	Milwaukee County	Racine County
White, not Hispanic or Latino	80.4 percent	63.2 percent	82.6 percent
Hispanic or Latino	11.0 percent	17.2 percent	15.4 percent
Multiracial	7.6 percent	3.3 percent	3.2 percent
Black or African American	3.2 percent	27 percent	11.8 percent
Asian	6 percent	5.4 percent	1.5 percent
American Indian & Alaska Native	0.2 percent	1.1 percent	0.7 percent
Native Hawaiian & Other Pacific Islander	0 percent	<0.1 percent	0.1 percent

For the purposes of this analysis, a minority population consists of any geographic area in which minority representation is greater than the national average of 30 percent. As of 2022, the

median household income⁵³ in Wisconsin was \$72,458. The State of Wisconsin poverty rate is 10.7 percent.⁵⁴ Through a review of the population details available, there are no disproportionately high minority populations or low-income populations identified near the proposed project that would be adversely impacted by the proposed project. In addition, the analysis in this EA finds there are no significant adverse impacts expected to occur to human health or communities, and therefore no disproportionate impacts to minority or low-income populations are anticipated.

Sensitive receptors are mainly those individuals that are very young, elderly, or infirm. Local day care facilities, schools, hospitals, and elderly care facilities could have a greater potential to be affected by construction impacts such as fugitive dust, increased noise, and increased traffic hazards. The nearest residences are located approximately 1,500 feet away from the project area and there are no sensitive receptors located within one half mile of the proposed project. As discussed elsewhere in this EA, air pollution impacts can, in general, have disproportionate impacts on certain individuals, such as those with pre-existing health conditions, the young, elderly, or infirm. Regardless, the applicant should ensure that contractors are taking actions to mitigate noise and dust impacting adjacent communities. Overall, the construction or operation of the proposed project is not anticipated to cause significant impacts to sensitive receptors in the wider project area or nearby residences.

3.5. Geology, Topography, and Soils

The project is located west of Lake Michigan, in the City of Oak Creek, Milwaukee County, in southeastern Wisconsin. Geology of the project area includes consolidated sedimentary rock deposited as sequences of sandstone, limestone, or dolomite. This makes up the current sedimentary rock aquifer and confining bed. Beneath the consolidated sedimentary rock is Silurian rock. Blasting is not expected to be used, and based upon the depth of soil to bedrock, there are no anticipated impacts to bedrock.

The project land is generally flat with slight sloping towards the lake. The applicant does not anticipate significant impacts to the overall site topography. Soils in the area are comprised of Blount silt loam, Ozaukee silt loam, and Ashkum Silty Loam. Soils are predominantly well drained silt and clay over calcareous silty clay loam till. There are no mapped hydric soils in either within the proposed project site.

Some unconsolidated materials would be impacted during site grading and excavating for structure foundations for either of the site options. Impacts to the unconsolidated materials would be minimized by grading and excavating only to the extent necessary for construction, and through implementation of a storm water pollution prevention plan and associated best management practices (BMP). Any excavated topsoil would be kept separate from subsoils and

⁵³ For 2022, in 2022 dollars, from U.S. Census Bureau QuickFacts. (2022). Education Survey. U.S. Census Bureau. <https://www.census.gov/quickfacts> (Accessed on July 29, 2024).

⁵⁴ U.S. Census Bureau QuickFacts (2022) Education Survey. U.S. Census Bureau. <https://www.census.gov/quickfacts> (Accessed on July 29, 2024).

replaced after construction to restore disturbed areas, and any compacted soils would be disked prior to final stabilization.

3.5.1 Soil Erosion and Storm Water Management

The project proposes more than one acre of land disturbing construction activity, defined as “any man-made alteration of the land surface resulting in a change in topography or vegetative or non-vegetative soil cover, that may result in runoff and lead to an increase in soil erosion or the movement of sediment into waters of the state.” Therefore, the project must meet Wisconsin Pollutant Discharge Elimination System (WPDES) storm water regulations as established by the Clean Water Act and regulated by the DNR. The DNR’s Storm Water Discharge Permit Program is administered under the authority of Wis. Admin. Code ch. NR 216. Chapter NR 216 also lists the minimum information required in a notice of intent required to apply for coverage under the construction site storm water runoff general WPDES permit and references performance standards for construction projects in Wis. Adm. Code ch. NR 151. DNR technical standards used to meet the performance standards are provided on the DNR website.

The project would require a finalized, site-specific erosion and storm water control plan when a DNR Wis. Admin. Code § NR 216 permit is obtained for the construction phase of the project. Some details may be developed in the plan that are not reflected in the analysis in this EA.

Construction activities can create disturbed or loose soils that can be washed out during precipitation events. These eroded soils, carried by storm water runoff, can increase sediment loads to local streams, wetlands, or onto adjacent properties. Storm water can carry pollutants such as oils, phosphorus, and litter into nearby waterways or properties. The following actions are examples of BMPs that should be taken to reduce the impacts of soil erosion and storm water runoff during construction:

- Preserve existing vegetation as much as possible on site and limit the amount of grading done to reduce soil disturbance.
- Installation of temporary erosion control measures such as wattles, silt fences, or erosion control matting.
- Seeding or stabilization of areas of bare soil after site grading or topsoil stockpiling. The time of year may require use of mulches or other stabilizers if seeds would not germinate and establish in time to stabilize soils.
- Establish stabilized construction entry/exits including rock/aggregate vehicle pads.
- Monitoring of erosion control measures every seven days or within 24 hours of a rain fall event of 0.5 inches or greater.

The applicant describes the use of erosion and sediment control BMPs including silt fences, inlet protection and soil stabilization to limit soil erosion and storm water runoff resulting from construction. The majority of the area for the proposed project is currently situated on vacant lands or land developed by existing structures or concrete surfaces. Vacant areas are vegetated

with turfgrass species. No change to the surface material would be made after construction of the facility. The anticipated increase in storm water runoff would be managed by additional storm water management features in conjunction with existing storm water management facilities on site.

3.6. Hazardous Materials and Solid Waste

During construction and operation of the proposed project, there would be a range of hazardous materials used, and hazardous or solid waste produced. Wastewater management is another potential impact of the project during operation. This section of the EA discusses the potential materials, impacts, and treatments. DNR regulates many topics relating to wastes and hazardous materials, and the project is subject to DNR and EPA reporting requirements.

3.6.1. Hazardous Materials

There would be hazardous materials, predominately chemicals, used in the construction and operation of the proposed power plant. These would be used regardless of the site selected for the CT units. Tables 3-8 and 3-9 list some of the anticipated hazardous materials and storage methods for both construction and operational phases of the project.

Table 3-8 Typical chemicals stored during construction

Material	Storage Method
Oxygen	Stored in separate tanks onsite
Surfactant	Stored in containers onsite
Corrosion inhibitor	Stored in containers onsite
Paint	Stored in containers onsite
Solvents and cleaners	Stored in containers onsite
Concrete curing compound	Stored in containers onsite
Fuel oil and gasoline	Stored in separate tanks onsite
Glycol	Stored in tank onsite
Chlorine	Stored in containers onsite
Lube oil	Stored in reservoir and/or tanks and drums onsite
Hydraulic oil	Stored in reservoir and/or tanks and drums onsite

Table 3-9 Typical chemicals stored for operation

Material	Use
Glycol	Anti-freeze chemical used in closed loop cooling
Lube oil	Turbine Lubrication

The proposed project would have a Spill Prevention, Control, and Countermeasure (SPCC) Plan that defines roles, responsibilities, and actions for oil spill containment and cleanup. The construction superintendent would report spills and supervise cleanup and disposal of any contaminated soil and spill cleanup materials for any significant volume (defined as 55 gallons or

more) of chemicals such as lubricants, fuel, grease, or other oil. Diesel and gasoline fuel would be temporarily stored at the project site during construction in aboveground tanks. Preventative measures would be implemented during re-fueling or transfer of these fuels to reduce the risk of spills. Lubricating oils and certain other industrial chemicals required for the project would be stored in specially designed and covered containment areas. Also, equipment would be kept in good working condition through routine inspections and service to reduce the risk of leaks of transmission, hydraulic, or brake fluid. Chemical storage areas would be well marked and include eye wash stations, first aid kits, safety showers, hose stations, and spill kits with absorbent pads and/or material.

Larger spills would be removed from the containment area using a vacuum tank truck or would be pumped into a suitable container for cleanup. Contaminated soil and/or absorbent pads or products used to cleanup a spill would be immediately removed, stored, and disposed of in accordance with Wisconsin State regulations. Absorbent pads or other manufactured absorbent products would be used to cleanup minor spills. These pads and absorbent products would be stored on maintenance trucks and/or in a dedicated area that is readily accessible.

The requirements for hazardous waste spill planning through disposal are found in Wis. Admin. Code Ch. NR 700 through 754, and information is also found on the DNR website. The applicant states that equipment would be kept in good working condition and inspected regularly to reduce hazardous fluid leaks, and hazardous materials would be stored in specially designed and labeled containment areas.

3.6.2. Solid Waste

The project would generate solid waste during construction and operation in the form of construction debris and employee-generated waste. Wastes would be disposed of at a local landfill. Recycling pickup services would be provided by a local disposal company. No substantial quantities of waste by-products such as ash would be generated through operation of the proposed facility.

3.6.3. Wastewater

Wastewater from the water wash drain tanks would be collected through the existing onsite treatment system. Due to the existing onsite treatment system discharge to surface waters of the State, the existing WPDES permit would need to be modified or a separate permit may be required for operation.

Process wastewater, which may contain suspended solids and oil & grease from operation of the facility, would be hauled to the existing onsite treatment system or offsite for treatment, as required. The facility may discharge some process wastewater to the existing onsite treatment system, which discharges to surface waters of the State. All sewage would be discharged to the City of Oak Creek municipal sewer system for offsite treatment.

Stormwater runoff from the facility would discharge to a new onsite detention basin, which would discharge to the existing storm water conveyance infrastructure on site, which discharges to surface waters of the State.

3.7. Invasive Species and Disease Organisms

Construction activities may allow for or cause the spread and establishment of invasive species. Construction equipment traveling from infested to non-infested areas could spread noxious or invasive weed seeds and propagules. The removal of existing vegetation and disturbance of soils during construction could create conditions that allow the spread and establishment of noxious and invasive weeds. Much of the project area is already heavily disturbed developed into hard surfaces that are not able to support vegetation. Generally, areas with established populations of invasive plants can include field edges, road ROWs, wetlands and waterways, and potentially fallow fields or areas not in active management.

There are a range of actions that can be taken before, during, and after construction to prevent the introduction and spread of invasive species. The Wisconsin Council on Forestry has BMPs⁵⁵ on controlling invasive species for a range of industries and activities, including for transportation and utility rights-of-way. The use of these BMPs can assist in complying with the “reasonable precaution” intentional actions under NR 40. The applicant states that during construction of the project, the potential to introduce or spread invasive species would be mitigated in compliance with requirements of NR 40. The applicant states that some of the planned actions to control the introduction and spread of invasive species during construction of this project include:

- Requiring construction equipment brought on site to be cleaned before and after its use on site.
- Revegetating disturbed areas with weed-free turf or native grass seed.
- Flagging identified invasive species populations for avoidance.
- Monitoring areas where disturbance has taken place and implementing control measures to avoid seed development and further dispersal of identified invasive species.

These actions are consistent with some of the recommended BMPs discussed in the WI Council on Forestry document. If these and other BMPs are followed during construction activities, there is not likely to be a significant increase in invasive species populations in the area.

3.8. Land Cover Impacts

Vegetation observed in temporary impact zones such construction/laydown areas include Kentucky bluegrass (*Poa pratensis*), false meadow rye grass (*Schedonorus pratensis*), smooth brome (*Bromus inermis*), Canada goldenrod (*Solidago canadensis*) and spreading bent (*Agrostis*

⁵⁵ Wisconsin Council on Forestry. Invasive Species Best Management Practices for Transportation and Utility Rights-of-Way. Version: January 6, 2010. Accessed at: <https://councilonforestry.wi.gov/Documents/InvasiveSpecies/ROW-Manual.pdf> on 7/1/2024.

stolonifera). The trailer area immediately south of the Proposed Site is predominately developed with small patches of grassland, dominated by smooth brome, Kentucky bluegrass and false meadow rye grass, scattered throughout.

The Proposed and Alternative Sites are located on land that has been disturbed by the previous development and operations of the OCGS facilities. The Proposed Site includes approximately 19.38 acres of turf grass, nine acres of developed area, 0.67 acres of grassland, and 0.64 acres of wetland. A majority of the Alternative Site, approximately 18.62 acres, is developed, meaning paved or built with structures. The remaining 5.67 acres of the Alternative Site includes grassland. Approximately 0.5 acres or 0.62 acres of woodland would be permanently cleared as a result of construction on the Proposed Site or the Alternative Site, respectively. Both sites have limited vegetative growth and animal species likely only occasionally pass through the sites when moving between habitats located elsewhere on or adjacent to the property. While the project area is surrounded by some forested and open grassland areas, there is little to no wildlife habitat anticipated to be impacted.

Regardless of whether the Proposed Site or Alternative Site is approved, the project would permanently disturb an area on the southern end of the OCGS. This area has historically been used to dispose of clean fill generated by various projects at the Oak Creek Power Plant (OCPP). It would be used to dispose of clean fill for the proposed project. Some of the area is bare or exposed soil due to recent addition of clean fill; other areas are currently in grassland community dominated by Kentucky bluegrass, false meadow rye grass, smooth brome and Canada goldenrod. There was also one wetland observed within the disturbance limits, a fresh wet meadow. The applicant anticipates less fill being generated if the Alternative Site would be selected. Therefore, there would be less acreage needed to dispose of the clean fill associated with the Alternative Site.

3.9. Local Government

Potential impacts to different parts of local government operations or requirements are discussed in this section of the EA.

3.9.1. Land Use Plans

The proposed project lies completely within land zoned for manufacturing and industrial use, and therefore would be in keeping with the City of Oak Creek's zoning and land use plans. Future Land Use designation for the project area is categorized as manufacturing/industrial, which is compatible with the development associated with the proposed project. There should be no Land Use conflicts in the project area.

3.9.2. Municipal Services

The proposed project would need certain local government services in order to exist and operate. The proposed project would be connected to the City of Oak Creek municipal water treatment system to discharge sanitary waste. Emergency medical services would be provided by the Fire Departments of the City of Oak Creek and the Village of Caledonia, with the closest hospital being Aurora Health Center. Fire and police protection would be provided by both the City of

Oak Creek and the Village of Caledonia, with stations as close as 0.7 miles of the OCGS. The proposed project would require minor construction of water pipelines to connect with the municipal water supply and sewerage systems. There would be no change in capacity needed because the existing municipal sewer water systems have sufficient capacity. The proposed project would have fire suppression measures of its own, as well as facilities for storage of hazardous materials. This storage would require coordination activities with local fire departments.

3.9.3. Shared Revenue

One part of the Wisconsin's shared revenue program distributes money annually to municipal and county governments for land used by public utilities. Public utilities are exempt from local taxation, but shared revenue monies are paid to compensate local governments for costs they incur in providing services to the public utility. In this case, under Wis. Stat. § 79.04(6), shared revenue to Milwaukee County and the City of Oak Creek would be tied to the MW capacity of the new proposed project. It's estimated that Milwaukee County would receive approximately \$1,470,000 and the City of Oak Creek would receive approximately \$730,000 annually through this state program.

3.10. Local Infrastructure

Potential impacts to local transportation infrastructure, as well as existing utilities and communication towers, are discussed in this section of the EA.

3.10.1. Airports and Air Traffic

The nearest public use airport to the proposed project is the Batten International, located approximately six miles south of the proposed project in Racine, Wisconsin. The second airport located in the project vicinity is General Mitchell International, located approximately seven miles north in Milwaukee, Wisconsin. The closest heliport to the site is approximately eight miles south at St. Mary's Medical Center.

The project facilities would be built in an area with existing transmission line towers and other utility infrastructure. Construction of the proposed project is anticipated to require structures over 200 feet in height which can be considered hazards to navigable airspace operation. There are no anticipated construction limits related to structure height, but the applicant states that proper notifications will be made to the FAA and WisDOT Bureau of Aeronautics. The FAA would evaluate whether the proposed project facilities are obstructions to navigable airspace. Cranes used during construction may also need to be evaluated by the FAA for airspace obstructions as well.

3.10.2. Communication Facilities

There were no communication towers licensed by the Federal Communications Commission (FCC) identified within one-half mile of the proposed project area. It is not expected that communications in the area would be interrupted by the proposed project. If needed, the applicants would work with the licensees near the project site to mitigate any potential interference as applicable.

3.10.3. Existing Utilities

Existing utility services in the area around the property include electric, natural gas, and sewer. Service water and potable water would be provided by the existing water sources on the OCGS, which is the City of Oak Creek municipal water supply system for potable water. Service water is supplied from an existing service water storage tank that is fed from the Lake Michigan offshore intake, with the City of Oak Creek municipal water supply system available as a backup supply. The proposed project would not be anticipated to require construction of water pipelines offsite and no change in the City of Oak Creek existing water or sewer utility facilities would be anticipated.

The existing Oak Creek switching station consists of 138 kV ATC switchyard and 345 kV transmission facilities. There are seven 138 kV transmission lines connected to ATC switchyard in addition to two 345kV transmission lines, and one 230 kV transmission line.

3.10.4. Railroads

A Union Pacific rail line that extends through the central portion of the OCGS property. This rail line is connected to the existing rail spur at the OCGS. No additional connections would be required by the proposed project.

3.10.5. Roads and Traffic

Construction traffic would access the project area and the existing permanent access roads via Elm Road. This access point would consist of a material delivery entrance and main construction entrance utilizing existing roads and craft check-in gatehouse.

Road users near STH 32 may experience increased amounts of traffic from workers driving to and from the site or additional deliveries. The applicant estimates that daily workforce automobile traffic to the site would increase by approximately 100 vehicles throughout construction. The applicant estimates that between five and fifteen material or equipment delivery trucks would arrive at the site per day. These material deliveries would likely arrive at the local area via STH 32. No upgrades or planned changes to local roads are anticipated according to the application materials.

The applicant states that these deliveries would try to avoid times of peak local traffic to minimize disruption to local traffic patterns. The applicant would coordinate with the appropriate county authority on potential traffic congestion that may develop due to construction.

The CT unit would weigh several tons once installed and would require specialized delivery trucks if delivered by road. An increase in heavy truck traffic can accelerate deterioration of local roads, requiring the need to repair or replace road surfaces sooner than otherwise expected. The use of heavy goods or overweight vehicles for delivery of some project components would be done after obtaining any necessary permits from WisDOT or local road authorities. The applicant does not anticipate damage to local roads as a result of construction traffic or project deliveries. The applicant states that as a precaution, the condition of local roads would be assessed prior to the start of construction. Any documented adverse impacts to local roads as a result of construction would be addressed by consultation with local road authorities and repaired

as necessary by the applicant. Overall, although some local impacts are expected, no significant impacts to local traffic patterns or road infrastructure are anticipated as a result of the proposed project.

3.11. Local Jobs

The applicant projects that construction of project facilities would create up to 500 jobs, including staff in skilled trades, engineering, and construction management. It is unknown how many of the construction jobs would be sourced from the local population or local construction or engineering firms. The applicant plans to select contractors through a competitive bid process, and they may be sourced from local or nationwide companies. The proposed project would require up to eight additional full-time permanent employee positions for operation. The workforce for construction and operation of the facility may be sourced from different locations locally or nationwide.

3.12. Noise and Sound

Noise is unwanted sound considered unpleasant, loud, or disruptive to hearing. Noise is measured in units of decibels (dB) on a logarithmic scale. Because the human ear is not equally sensitive to sounds throughout the range of hearing frequencies, a weighted scale is commonly used, with the A weighted scale (dBA) most often used for sound measurements affecting human hearing. Due to the logarithmic scale of sound measurements, a change of 3 dBA is considered barely perceptible, while a change of 10 dBA is perceived as a doubling/halving of noise. For reference, the sound level of normal breathing is about 10 dBA, normal conversation at three feet is about 60 dBA, and emergency vehicle sirens are about 115 dBA. Impacts associated with noise can be subjective and vary from person to person, based on factors such as loudness, time of day, frequency, or duration, and the amount of other background noise audible to the listener.

A Pre-Construction Sound Emissions Survey and Project Modeling Analysis (Noise Study) was conducted by Hessler Associates, Inc. (Hessler) on behalf of the applicant, and the final results were provided in a response to a Commission staff data request. The study objectives were to identify sound level requirements that are applicable to the project, collect noise measurements of the existing ambient environments, develop a noise model to estimate sound emitted by the project, and to determine any required mitigation for the project to meet any identified noise requirements. The study was done in compliance with the Commission's Measurement Protocol for Sound and Vibration Assessment of Proposed and Existing Electric Power Plants, available on the Commission's website.⁵⁶

3.12.1. Standards for Noise Levels

There are no specific state or federal noise level limits or regulations that apply to the proposed project. Milwaukee County Code of Ordinance does not include any quantitative noise level threshold. The City of Oak Creek and applicant have agreed, under Ordinance No. 2250 approving the rezoning of the property associated with the OCGS, that the noise emissions associated with operations activities on the property, measured at monitoring location adjacent to the residence nearest to the proposed project, must be less than the limits agreed upon in an

⁵⁶ See <https://psc.wi.gov/SiteAssets/ConventionalNoiseProtocol.pdf>.

executed conditional use permit.

3.12.2. Pre-construction Phase

The Noise Study used estimated sound power levels for the CT generator units proposed to be used for the project. Noise modeling was done to estimate the sound levels at the facility property line, as well as residential properties near the power plant. Existing sound level measurements were collected at identified measurement points (MP) on properties around the Proposed Site. The MPs were selected to represent the closest residential properties or noise sensitive areas around the project location. Identified existing sound in the area includes vehicular traffic from nearby roads and highways (including large trucks) and wildlife noise such as birds and insects. The range of measured existing sound levels at the 4 MPs (A-D) at the extents of the proposed and alternative facility footprints ranged from 40.8 to 74.9 dBA. The range of measured existing sound levels at the six nearest residence MPs (1-6) within and at the extents of the project site boundary ranged from 38.3 to 64.5 dBA.

3.12.3. Construction Phase

A range of equipment, vehicles, and machinery would create noise during construction of the project facilities. Most of this would come from diesel engine powered construction equipment such as dozers, excavators, dump trucks, cement trucks, and cranes. Employee and delivery traffic would increase in the area but is not anticipated to be a substantial source of increased noise. Construction noise impacts would vary with the time of day, stage of construction, and location of nearby receptors. Table 3-10 shows some of the typical noise levels at 50 feet for commonly used construction equipment.

Table 3-10 Average Maximum Sound Levels from Common Construction Equipment⁵⁷

Equipment	Sound level at 50 feet (dBA)
Dozer	86
Grader	79
Excavator	87
Flat Bed Truck	74
Pile Driver	105
Crane	79
Roller	82

At this time, the applicant does not anticipate construction of project facilities to regularly occur at night. Keeping construction predominantly during the day would decrease noise impacts to nearby residences. Another way to mitigate noise impacts during construction is to ensure that diesel engine mufflers on machinery or equipment are kept in good working order.

3.12.4. Post-Construction Operational Phase

Once constructed, the project could operate at all hours of the day. The Noise Study modeled the operational noise impacts to nearby residences. General Electric provided Hessler with sound

⁵⁷ Sound levels taken from Washington State DOT Biological Assessment Training Manual, updated August 2020. Accessed at: https://wsdot.wa.gov/sites/default/files/2021-10/Env-FW-BA_ManualCH07.pdf, 7/1/2024.

data for the gas turbines. The sound levels for the auxiliary equipment from past projects of similar size and scope were used to estimate proposed project sound levels. The model also incorporated assumptions about the sound reduction elements that would be used for the project, including radiators, concrete acoustical walls for the Alternative Site to maintain compliance at the northern boundary of the ERGS property.

The nearest residential property and reference point for the existing CUP limits are located approximately 1,500 feet west across Elm Road and a section of UP railroad ROW. The sound modeling done in the study predicted maximum sound levels for the Proposed Site at this location at 49 dBA. The sound modeling done in the study maximum predicted sound levels for the Alternative Site with a 16-foot sound barrier would reach 50 dBA at the nearest residence.

Impacts to nearby residences as a result of operational noise from the facility would be marginally greater if the Alternative Site is used. However, the noise modeling results demonstrate that sound levels generated by the proposed project for either facility location, as designed, are not expected to result in a significant change to the existing environment or exceed the 50 dBA in the CUP.

During the operational phase of the project, there are no anticipated increases in train deliveries, meaning no corresponding increase in noise to residences as a result of increased rail traffic.

There are no anticipated fuel delivery trucks or ash removal trucks. The project facilities do not produce steam, and no noise from steam blows or cooling towers would occur. No noise would be generated from these types of facilities, as can occur at other types of fossil fuel generation facilities.

The Commission's Noise Measurement Protocol requires post-construction sound and vibration measurements as well as measurements before the project is built, so that impacts can be better determined and improved mitigation could be incorporated. Post-construction measurements are required within 12 months of the date when the project is fully operational and within two weeks of the anniversary date of the required pre-construction ambient noise measurements. The Noise Study stated that differences in as-built sound levels from those determined from the historic data provided by HDR may require specific mitigation to meet noise limits. If data from post-construction measurements show that sound levels are substantially higher than predicted, or if local residents file complaints about noise with the applicant or Commission, there may be ways to further mitigate noise. Concrete noise walls, vegetation plantings between the noise source and residential areas, and improved mechanical noise control components may be some ways to further mitigate any noise impacts.

3.13.Landowner Impacts

The area surrounding the OCGS property is in industrial use with residential areas. There are several residences located within 0.5 miles of the OCGS property. Potential impacts to these landowners are discussed in this section of the EA.

3.13.1. Nearby Residences

The applicant provided an analysis of the nearest residences to the proposed project. The analysis considered the proximity of residences to the construction area boundary, made up of locations that would be either temporarily or permanently impacted by the proposed project. The nearest residences are located approximately 1,500 feet west of the project area across Elm Road and a section of UP railroad ROW. Construction of the facilities on the Alternative Site may be marginally less visible to the residences near the project area.

3.13.2. Existing Easements

The OCGS property is crossed by existing infrastructure including electric transmission lines and natural gas pipelines owned and operated by the applicant, which is supplied by ANR, Guardian, and Northern Natural Gas interstate pipeline networks. The applicant and selected contractors should ensure there is coordination with any entity that has infrastructure and any associated easement in the project area. There are no areas with conservation easements or managed forest law land that would be impacted by the proposed project.

3.13.3. Property Values

Property values can be influenced by a complex interaction of factors specific to individual parcels. These factors can include, but are not limited to, property condition, improvements, acreage, or neighborhood characteristics, as well as proximity to schools, parks, and other amenities. In addition, local and national market conditions often influence property values. Without conducting detailed, long-term studies, it is not possible to provide a specific assessment of potential impact on property values. Some aspects of the project may negatively influence property values, such as an industrial appearance, noise, lights, and emissions generated by the project facilities. However, those must be considered in the context of the overall project site.

The OCGS site has been operational since the 1950's and many of the impacts that would be expected from the CT facility are already occurring due to the operational electric generation facilities. As a result, it does not appear likely that the addition of the CT facility, within the overall footprint of the existing OCGS property, would negatively impact local property values.

3.14. Public Lands and Recreation

There are no significant impacts to public lands or recreation opportunities anticipated as a result of the proposed project. The construction activities would all occur on land owned by the applicant and that is already utilized as a generation site. Starting on the Northside of E Oakwood Road is Bender Park a county park and is approximately 0.2 mile from Alternative Site and 0.5 mile from the Proposed Site. Haas Park is located south of East Elm Road and west of the Union Pacific rail line on WEC property. Hass Park is a small neighborhood park with a playground and baseball field approximately 0.2 miles from the Proposed Site and 0.3 mile from the Alternative Site. To the south of the OPGS property is Cliffside Park a county park approximately 1.5 mile from the Proposed and Alternative Sites. There are no anticipated impacts to recreation areas and therefore no short or long-term mitigation measures are proposed.

3.15. Visual and

Aesthetic Impacts

The existing visual landscape of the project site is the existing power plant facilities at the OCGS. As with other potential impacts of the project, some temporary impacts would be experienced during construction and more permanent impacts during the operational life of the facility.

3.15.1. Aesthetics

The property surrounding the proposed facilities is made up of industrial facilities, including the existing generating station main buildings, emissions stacks, some electric transmission line structures, and substations. Outside of this area, there are upland and residential areas. The construction of the industrial warehouse type buildings necessary to house the proposed facilities would have varying aesthetic impacts based on the viewer and the surroundings of the project. As the proposed project would be located on the existing OCGS property, the aesthetic impacts are likely to be less for most viewers when compared to construction on a site that does not already host these types of industrial facilities.

Construction of project facilities can cause aesthetic impacts as sites are prepared by clearing vegetation, moving soils, and bringing equipment and machinery to a site. During construction, heavy equipment and industrial materials delivered to the site can alter a landscape, dust from dry disturbed soils can create a nuisance, and lights used during any nighttime construction can be an annoyance to viewers. These impacts are anticipated to be lessened for work done in this project at the OCGS, as it is located within a property with existing industrial power plant operations. Existing facility lights and machinery operating on site currently impact viewers of the property.

The applicant provided simulations of what the CT facility would look like in photo simulations of the facility from outside the OCGS property in Volume I Appendix Z of the application. Images from this appendix are shown in Figure 3-1 and Figure 3-2 to provide views of the proposed project as it would appear when constructed. Generally, the aesthetic impacts are not anticipated to be a significant impact to the environment, as they are not being introduced to a neighborhood or community for the first time, since there already is an existing facility, and cumulatively do not substantially change the views into the OCGS property.

Figure 3-1 Photo simulation of the project constructed on the Proposed Site from Elm Road



Figure 3-2 Photo simulation of the project constructed on the Alternative Site from Elm Road



3.15.2. Facility Lighting

Some increases in facility lighting would occur during both the construction and operation of the project facilities. Construction lighting impacts would be minimized by scheduling most activities during daylight hours. For construction operations that need to take place outside of daylight hours, local lighting would be provided to ensure personnel safety. This local lighting would be applied to equipment laydown areas, craft parking areas, construction roadways, and work areas. Lighting for operation and security for the facility would be consistent with existing site perimeter and building lighting, and any new or modified lighting would comply with local ordinances.

3.16. Water Resources

The project would likely increase the amount of impervious surface on the site. A series of new storm water management features would be installed in conjunction with the existing storm water management system for the OCCT to mitigate post-construction runoff. The exact amount of increased impervious surface would be determined in final engineering design of the site and discussed in the Storm Water Management Plan submitted to the DNR as part of the permit application under Wis. Stat. § 30.025 and Wis. Admin. Code ch. 216.

3.16.1. Wetlands

Wetlands provide vital functions that benefit society. Wetlands detain storm water runoff, enabling the slow recharge of groundwater resources and lowering downstream peak flood levels; filter sediments and pollutants from the air, precipitation, and upstream sources which results in higher water quality downstream; provide food, cover, and nesting habitat for many species of fish and wildlife; provide a recreational opportunity for bird watching and other wildlife viewing, hiking, and enjoying the aesthetics of the surrounding landscape. It is estimated that between one-quarter and one-third of all rare species in Wisconsin are found in wetlands.

Wetlands are a dynamic ecosystem and provide different functions depending on the type of wetland. The same wetland may even provide different functions from year to year and season to season. There are many different types of wetlands, typically characterized by the size, type of vegetation and amount of soil saturation or surface water found within them.

Wetland Identification and Quality

The applicant conducted a wetland field delineation of the proposed project area. Field verification was conducted between September 2023 and March 2024. The wetland delineation included a 620-acre study area which included all components associated with this project including the Proposed Site, Alternative Site, laydown yards, soils disposal area, transmission line connection areas, and trailer areas. Wetland delineations were based on the criteria and methodology described in the United States Army Corps of Engineers (USACE) Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. Wetland delineations included offsite evaluation of U.S. Geological Survey (USGS) topographic maps, Natural Resources Conservation Service (NRCS) soil survey data, DNR Wisconsin Wetland Inventory (WWI) and Surface Water Data Viewer (SWDV) mapping, U.S. Fish & Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping, recent aerial imagery, county GIS LiDAR and contour mapping, and client data.

Ninety-three wetlands, totaling approximately 53.6 acres, were identified within the larger wetland delineation study area. These wetland types were identified as floodplain forest, fresh wet meadow, shrub swamp and hardwood swamp. Of these 93, 15 wetlands totaling 1.76 acres were identified that intersect with the Proposed Site and associated facilities. Sixteen wetlands

Table 3-11 Proposed Site wetlands

Table 3-12 Alternative Site wetlands

totaling 3.28 acres were identified that intersect with the Alternative Site and associated facilities.

Based on the wetland delineation, the following is a summary of the wetland types and dominant vegetation within the Proposed and Alternative Sites:

- W-1 is a detention pond (open water, deep marsh, shallow marsh and fresh wet meadow) dominated by narrow leaved cattail, common reed grass, and reed canary grass.
- W-11 and W-52 are fresh wet meadows dominated by common reed grass and reed canary grass.
- W-2 and W-50 are shallow marsh and fresh wet meadow dominated by narrow leaved cattail, common reed grass, and reed canary grass.
- W-14 is a fresh wet meadow dominated by common reed grass, foxtail barley, red top, and Torrey's rush.
- W-15 is a fresh wet meadow dominated by reed canary grass and woolly sedge.
- W-16 is a fresh wet meadow dominated by reed canary grass, common reed grass, red top, and salt spurrey.
- W-17 is a fresh wet meadow dominated by reed canary grass, red top, Kentucky bluegrass, and narrow leaved cattail.
- W-18 is a detention pond (open water, deep marsh, shallow marsh and fresh wet meadow) dominated by narrow leaved cattail, common reed grass, soft stemmed bulrush, and reed canary grass.
- W-19 is a shallow marsh and fresh wet meadow dominated by narrow leaved cattail, common reed grass, foxtail barley, red top, annual saltmarsh aster, Torrey's rush, and reed canary grass.
- W-29, W-30, and W-31 are fresh wet meadows dominated by reed canary grass, common reed grass, and narrow leaved cattail.
- W-49 is a shrub swamp and fresh wet meadow dominated by common buckthorn, common reed grass and reed canary grass.
- W-53 is a detention pond (open water, deep marsh, shallow marsh and fresh wet meadow) dominated by narrow leaved cattail, common reed grass, and reed canary grass.
- W-65 is a fresh wet meadow and shrub swamp dominated by reed canary grass, Kentucky bluegrass, and eastern cottonwood.
- W-66 is a fresh wet meadow and shrub swamp dominated by Kentucky bluegrass and eastern cottonwood.
- W-93 is a fresh wet meadow dominated by reed canary grass, narrow leaved cattail, path rush, and Kentucky bluegrass.

Generally speaking, the wetlands within both the Proposed and Alternative Sites are considered to have low functional value as they have been heavily impacted by human disturbance and are

dominated by non-native species. These wetlands may support limited wildlife foraging/habitat, storm and flood storage, groundwater recharge and provide water quality protection. These wetlands are not designated as Areas of Special Natural Resource Interest (ASNRI).

Potential Impacts to Wetlands

Construction and maintenance of generation facilities and associated transmission facilities can impact wetland functional values or can cause wetlands to be converted into another wetland type. The degree and nature of impacts to wetlands depend on factors such as the type of wetland, quality of the wetland, ground conditions at the time of construction, and the type and duration of construction activities. Short-term wetland impacts can become long-term impacts if the construction phase is not well managed, or if restoration techniques are not properly applied.

Construction in wetlands can have the following adverse effects:

- Heavy machinery can crush wetland vegetation, cause soil mixing and rutting, and can cause soil compaction, which reduces the water holding capacity of the soil, increasing runoff and changing surface water flow.
- Construction access through wetlands can lead to the transport of invasive species.
- Soil disturbance has the potential to cause sedimentation into wetlands.
- Clearing of wetlands dominated by woody vegetation results in a conversion from shrub or forested wetland into herbaceous wetland and can impact wildlife habitat, impair wetland functional values, and increase the occurrence of invasive species. Wood chips and brush should not be left piled or spread in wetland areas as they can spread invasive species, obstruct water flow, and minimize the re-growth of vegetation. Clearing can also lead to fragmentation of wetland complexes may impact wildlife habitat. Removing riparian wetland vegetation may decrease shoreline protection and may lead to increased sedimentation to wetlands and waterways.

Wetland Impact Avoidance and Minimization

All attempts should first be made to avoid impacting wetlands. Impacts to wetlands can be avoided by using existing roads whenever possible to access work locations and siting project components, such as storage facilities, transmission lines, disposal areas, and laydown yards outside of wetlands.

Where complete wetland avoidance is not possible due to engineering constraints, existing infrastructure, or other factors, wetland impacts should be minimized as much as possible.

This project should utilize the following construction methods to minimize impacts to wetlands:

- Using adjacent roadways and existing off-ROW access roads for access when possible.
- Siting structures and access roads outside of wetlands or on the edges of wetlands rather than in the middle of wetland to avoid fragmenting wetland complexes.

- Installing site-specific sediment and erosion control measures and devices prior to construction activities and inspecting and maintaining them daily throughout all construction and restoration phases.
- Implementing a construction sequencing plan that minimizes the amount of land disturbed or exposed (susceptible to erosion) at one given time across the project.
- Marking the boundary of wetlands to alert construction crews.
- Minimizing the amount of vegetation clearing in wetland and conversion of wetland types.
- Removing all brush piles, wood chips, and woody debris from wetlands following clearing activities.
- Preparing and implementing an invasive species management plan that identifies known areas of invasive species populations, addresses site restoration activities, and includes specific protocols to minimize the spread of invasive species. Best management practices (BMP's) should be used, including cleaning construction vehicles and using construction matting. To minimize the introduction of new invasive species populations, equipment and matting should be cleaned before entering this site or moved between sites.
- Preparing and implementing dewatering practices that prevent sedimentation into wetlands.
- Scheduling construction to avoid disrupting sensitive species.
- Limiting the amount of time necessary to complete construction.

Site restoration consists of the activities required to return the areas impacted by the construction of an approved project back to their original condition, if not better. Restoration typically occurs in any disturbed areas within easements or ROW, temporary construction areas, staging areas or laydown yards, off-ROW access roads, and any other areas used for project related activities. Site restoration, including re-vegetation, of the disturbed areas should be completed as soon as possible following construction. Sediment and erosion control devices would be installed before ground disturbance occurs to reduce erosion and trap sediment from entering sensitive resources and would be in place until vegetation is re-established.

Proposed Wetland Fill and Wetland Fill Permitting

Wetland impact would occur for the project construction activities. Approximately 27,698 square feet (0.63 acres) of permanent wetland fill would occur for the siting of the new CT facility at the Proposed Site.

- W-16 – Permanent fill is associated with the CT facility and square footage of impact is 3,518.
- W-17 – Permanent fill is associated with the CT facility and square footage of impact is 2,393.
- W-18 – Permanent fill is associated with the CT facility and square footage of impact is 12,365.

- W-19 – Permanent fill is associated with the CT facility and square footage of impact is 8,962.
- W-30 – Permanent fill is associated with the CT facility and square footage of impact is 460.

Permanent wetland fill would not occur with the siting of the CT facility at the Alternative Site.

Permanent wetland fill would occur at the shared soils disposal site of both the Proposed and Alternative Sites. The following wetland would be permanently filled to utilize the proposed shared soils disposal site:

- W-93 – Permanent fill is associated with utilizing the clean fill soils disposal area and square footage of impact is 1,702.

Permanent wetland fill would occur for the projects proposed laydown yards. Approximately 14,760 square feet (0.34 acres) of permanent wetland fill would occur for the laydown areas associated with the Proposed Site and 41,998 square feet (0.96 acres) of permanent wetland fill would occur for the laydown yards associated with the Alternative Site.

The following wetlands would be permanently filled for laydown yards associated with the Proposed Site:

- W-14 – Permanent Fill is associated with the improvements needed for the laydown area and square footage of impact is 573.
- W-65 – Permanent Fill is associated with the improvements needed for the laydown area and square footage of impact is 3,263.
- W-66 – Permanent Fill is associated with the improvements needed for the laydown area and square footage of impact is 10,924.

The following wetlands would be permanently filled for laydown yards associated with the Alternative Site:

- W-16 – Permanent fill is associated with the improvements needed for the laydown areas and the square footage of impact is 3,518.
- W-17 – Permanent fill is associated with the improvements needed for the laydown areas and square footage of impact is 2,393.
- W-18 – Permanent fill is associated with the improvements needed for the laydown areas and square footage of impact is 12,365.
- W-19 – Permanent fill is associated with the improvements needed for the laydown areas and square footage of impact is 8,962.
- W-14 – Permanent Fill is associated with the improvements needed for the laydown areas and square footage of impact is 573.
- W-65 – Permanent Fill is associated with the improvements needed for the laydown areas and square footage of impact is 3,263.

- W-66 – Permanent Fill is associated with the improvements needed for the laydown areas and square footage of impact is 10,924.

The disturbance footprint for the transmission area (associated with either the Proposed or Alternative Sites) overlaps wetlands W-1, W-2, W-11, W-29, W-30, W-31, W-49, W-50, W-52, W53, however neither temporary nor permanent impacts are proposed to these wetlands.

The permanent fill impacts to wetlands are summarized in Tables 3-13 and 3-14. Approval of the Proposed Site would result in 44,160 ft² of permanent impacts to wetlands. Approval of the Alternative Site would result in 43,700 ft² of permanent impacts to wetlands.

Table 3-13 Proposed Site wetland impacts Table 3-14 Alternative Site wetland impacts

3.16.2. Waterways

Waterways in the form of creeks, streams, rivers, and lakes are abundant throughout Wisconsin, and provide for many recreational activities, as well as habitat for aquatic species. Wisconsin has more than 12,600 rivers and streams that meander their way through 84,000 miles of varying terrain. About 32,000 miles of these streams perennially or continuously run throughout the year, while the remainder flow intermittently during spring and other high-water times.

Waterway Identification

Five waterways are within the larger project study area. Three are perennial waterways and two are intermittent. All five waterways are mapped in the 24K hydro layer of the DNR's Surface Water Data Viewer. These waterways are within the Oak Creek-Frontal Lake Michigan Watershed. Although they are within the larger study area, none of these waterways are located within proposed project disturbance areas.

Potential Impacts to Waterways

Construction and operation of storage facilities adjacent to waterways may have both short-term and long-term impacts. The type and significance of the impact is dependent on the characteristics of the waterway and the construction activities proposed. Physical features of the waterway are considered when assessing potential impacts to water quality, water quantity, habitat, recreational use, and the scenic quality of the waterway.

Construction activities conducted near waterways has the potential to impact water quality and aquatic species habitat. Forested and shrub areas along waterways provide a natural corridor for wildlife movement, help maintain soil moisture levels in waterway banks, provide bank stabilization, filter nutrient-laden sediments and other runoff, maintains cooler water temperatures, and encourages a diversity of vegetation and wildlife habitats. The removal of riparian vegetation can cause water temperatures to rise and negatively affect aquatic habitats, especially cold-water systems. Removing riparian wetland vegetation may decrease shoreline protection and may lead to increased sedimentation to waterways. Vegetation disturbance along the waterway can also lead to the infestation by invasive and nuisance species. The removal of vegetative buffers from riparian zones can raise the water temperature, which can be harmful to cold water systems.

Waterway Impact Avoidance and Minimization

All attempts should first be made to avoid impacting waterways. Impacts to waterways can be avoided by siting the energy generating facility away from waterways and routing the transmission routes to avoid riparian corridors, and utilizing alternate access, including off-ROW access roads, and installation methods to avoid equipment access across waterways.

Waterway impacts should be avoided and minimized as much as possible. This project should utilize the following construction methods to minimize impacts to waterways:

- Marking the location of waterways to alert construction crews if obscured from vegetation growth or snow cover.
- Minimizing the number of potential vehicle crossings of waterways by accessing the ROW on either side of the stream or from adjacent roads.
- Installing site-specific sediment and erosion control measures and devices prior to construction activities and inspecting and maintaining them daily throughout all construction and restoration phases.
- Implementing a construction sequencing plan that minimizes the amount of land disturbed or exposed (susceptible to erosion) at one given time across the project.
- Existing vegetative buffers should be left undisturbed whenever possible, or vegetation clearing should be kept to a minimum in riparian zones.
- Revegetating disturbed areas and areas of exposed soil as soon as possible.
- Landscaping to screen the structures from the view of waterway users.
- Maintaining shaded stream cover.

- Avoiding the use of herbicides near waterways, or utilizing herbicides approved for use in aquatic environments.
- Preparing and implementing dewatering practices to prevent sedimentation into waterways.
- Avoiding the withdrawal of water from surface waters.
- Scheduling construction to avoid disrupting sensitive species.
- Limiting the amount of time necessary to complete construction.

Proposed Waterway Impacts

The project has been sited to avoid direct impacts to waterways from project infrastructure. Site disturbance for project construction would be temporary. Site restoration, including revegetation, should be completed as soon as possible following construction. Sediment and erosion control devices would be installed before ground disturbance occurs to reduce erosion and trap sediment from entering sensitive resources and would be in place until vegetation is re-established.

The applicant states they would conduct regular inspections during active construction, including areas where construction is occurring adjacent to water resources and other sensitive resources, to monitor re-vegetation and restoration activities. The applicant would monitor each work location and access route to ensure stabilization and re-vegetation occurs.

DNR is responsible for regulating direct impacts to navigable waterways and waterbodies under Chapter 30, Wisconsin Statutes, and Wisconsin Administrative Code. Some of the state legal protections and permitting requirements for activities affecting public waterways include, but are not limited to:

- Wis. Stat. § 30.12 and NR 329, Wis. Admin. Code, requires permits for structures placed below the ordinary high-water mark and/or on the bed of navigable waters;
- Wis. Stat. § 30.123 and NR 320, Wis. Admin. Code, requires permits for bridges placed over navigable waters;
- Wis. Stat. § 30.20 and NR 345, Wis. Admin. Code, requires permits for removing material from the bed of navigable waters;
- Wis. Stat. § 30.29 prohibits the operation of motor vehicles in navigable waters unless it qualifies under one of the exemptions or is approved through a permit authorization.

3.16.3. State Wetland and Waterway Permitting

DNR participates in the joint review process with the Commission, as detailed in Wis. Stat. § 30.025, with respect to wetlands, navigable waterways, and stormwater management. Wisconsin Stat. § 30.025 describes the DNR process for reviewing and permitting utility projects that require authorization from the Commission and DNR.

The applicant filed a formal artificial wetland exemption request with WDNR pursuant to Wis. Stat. § 281.36 (4n). The WDNR determined all wetlands that would be impacted met the artificial wetland exemption standards and therefore would be exempt from WDNR wetland permitting.

DNR is responsible for regulating the discharge of dredge and fill material into wetlands under Chapter 281.36, Wisconsin Statutes, and Wisconsin Administrative Code. As currently proposed, the project would not require wetland permit coverage from the DNR as the wetland impact is limited to wetlands determined to be exempt from DNR permitting. However, wetland fill permit coverage may be required from the U.S. Army Corps of Engineers under Section 404 of the federal Clean Water Act.

DNR is responsible for regulating impacts to navigable waterways and waterbodies under Chapter 30, Wisconsin Statutes, and Wisconsin Administrative Code. As currently proposed, the project would not require a waterway permit.

The USACE and/or U.S. Fish and Wildlife Service (USFWS) might also require additional permits and approvals.

CPCNs granted by the Commission are often contingent upon an applicant's ability to secure all necessary permits from state and federal agencies. Likewise, any permit granted by DNR or USACE could be contingent on the implementation of all mitigation procedures ordered by the Commission in its CPCN authorization.

3.17.Wildlife

The location of all proposed project facilities would be on the existing OCGS property. The project areas are made up of pavement and vegetated areas. Lights, noise, and scents from the existing power plant and associated facilities and infrastructure impact the project area. Any wildlife found in the area to be impacted by construction and operation of the proposed facilities are likely to be species that tolerate high levels of human activity and disturbance. Once the project is constructed, there would be new buildings in the area, but these would not have large windows, areas of glass, or lit towers that could impact birds. With the lack of natural habitats, the existing levels of disturbance, the area of construction activities, and eventual project facilities, the project is not anticipated to have significant impacts on wildlife species in the area.

Wisconsin Admin. Code § PSC 4.20(2)(e) requires an EA evaluate the reasonable alternatives to the proposed project and significant environmental consequences of the alternatives, including those alternatives that could avoid some or all of the proposed project's adverse environmental effects and the alternative of taking no action.

1.1. No Action Alternative

A No Action alternative could consist of a denial of the application by the Commission, or the applicant having never filed the application with the Commission, the latter which is considered in some of the discussion below in the discussion of other alternative actions. The potential environmental impacts described in this EA that are anticipated if the project is constructed and operated would not occur. No electric power would be generated by the proposed CTs. If this No Action alternative occurs, and the applicant has a need for the power that would be generated by this project, it would need to be obtained from a different source. The applicant notes that a No Action alternative may eschew benefits associated with the project such as enhanced reliability and resiliency and diversifying the applicant's resource portfolio. Further, the No Action alternative would not provide a hedge against MISO market price uncertainty as the broader MISO market shifts away from traditional generation resources to more intermittent resources.

Taking No Action on this proposed project may result in the applicant needing to develop an alternate source of energy and may result in a subsequent application to the Commission or other alternative actions that would have their associated, but at this time unknown, environmental impacts.

1.2. Alternative Sites

The applicant provided information on an Alternative Site for the proposed project. The Alternative Site is located east of the proposed LNG facility and had previously been used as a construction laydown area during previous construction projects at the Oak Creek site.

Of the two facility locations presented by the applicant and evaluated in this EA, the applicant-Proposed Site offers benefits of avoiding additional costs associated with generation tie-lines, onsite gas pipelines, and removal of buried ash underneath the Alternative Site, all of which would cost \$38 million more compared to the Proposed Site.

1.3. Other Alternative Actions

Alternative actions to the proposed project could consist of the construction and operation of a different type of generation facility or facilities, potentially interconnected at different locations outside of the Oak Creek site. Each type of facility would have its own set of impacts during construction and operation. The applicant has attempted to minimize direct impacts to communities, wildlife, and natural habitats by siting the proposed facility on an existing generation site. Some impacts, such as those to air emissions, would be different based on the type of generation that might be selected.

The applicant considered different technologies as alternatives in its analysis, including BESS, solar PV and BESS hybrid, RICE units, and natural gas fired combined cycle with carbon sequestration. Depending on the selected alternative, it is not certain if the alternate resources could be sited at the Oak Creek facility or would have to be interconnected across one or more different locations. The modeling analysis provided by the applicant demonstrates that the various alternatives cost more on a net present value (NPV) basis when compared against the proposed project in a head-to-head comparison. The associated environmental impacts cannot be evaluated with much or any specificity since, as noted above, it may not be feasible to construct the various alternatives only at the Oak Creek site.

Wisconsin Environmental Policy Act Determination

When determining whether an EIS is warranted for a given Commission action, the Commission must consider ten broad factors listed in Wisconsin Admin. Code § PSC 4.20(2)(d). Based on the analysis provided in this EA, the following subsections provide Commission staff's conclusions regarding each of the ten factors with respect to the proposed project.

1.4. Effects on Geographically Important or Scarce Resources

The Commission must consider a proposed action's "[e]ffects on geographically important or scarce resources, such as historic or cultural resources, scenic or recreational resources, prime farmland, threatened or endangered species and ecologically important areas." Wis. Admin. Code § PSC 4.20(2)(d)1.

As discussed above, the applicant would construct the project on part of an existing generation plant property, limiting disturbance of natural habitats. No significant impacts to endangered resources, historic resources, or other geographically important resources are anticipated. No substantial impacts to water resources, including groundwater or local surface waters are anticipated.

1.5. Conflicts with Federal, State, or Local Plans or Policies

The Commission must consider a proposed action's "[c]onflicts with federal, state or local plans or policies." Wis. Admin. Code § PSC 4.20(2)(d)2.

The proposed project would be located on land zoned as industrial in the local communities and as such, construction and operation of the CT facilities does not appear to conflict with any local or federal plans or policies related to land use. The proposed project's relation to Governor Evers' Clean Energy Plan⁵⁸ is described in the GHG Emissions section 3.1.7 above. While the proposed facilities would produce greenhouse gas emissions likely beyond stated goals, it is also contemplated in energy transition plans that some level of greenhouse gas emitting sources would still be in existence for some period of time, while renewable energy resources and other technologies, programs, and efforts are still continuing to come online and be implemented.

⁵⁸ Wisconsin Office of Sustainability & Clean Energy (n.d.) *Clean Energy Plan*, retrieved from: [Wisconsin Office of Sustainability & Clean Energy Clean Energy Plan](#)

1.6. Significant Controversy Associated with the Proposed Project

The Commission must consider any “[s]ignificant controversy associated with the proposed action.” Wis. Admin. Code § PSC 4.20(2)(d)3.

The Commission received several public comments on the proposed project during the EA scoping period regarding general concerns about rate increases, fossil fuel dependence, air emissions, and climate change. Comments such as these are typical during proceedings for fossil fuel electric generation projects. There is no known significant controversy associated with the proposed project.

1.7. Irreversible Environmental Effects

The Commission must consider “[i]rreversible environmental effects.” Wis. Admin. Code § PSC 4.20(2)(d)4.

There would be few truly irreversible environmental effects of the proposed action in the project area. If the project is approved, there would be concrete laid and metal buildings constructed to house the CT units and ancillary facilities. Each of the concrete installations and project infrastructure could be reversed by demolition and decommissioning actions, although significant time and cost could be involved. Oils and fuels used during construction would be irreversibly committed and could not be used for other purposes.

Fossil fuels would be used during construction, and natural gas would be used during operation of project facilities, and this proposed project would cause emissions during its operational phase, and these things could not be reversed. As discussed above, the extraction and combustion of these carbon-based fuels would add to the greenhouse gas buildup in the atmosphere and to the potential for global climate change. While discussions about potential global climate change impacts have been included to certain extents in some Commission environmental documents, global climate change impacts encompass very complex considerations that are greater in scope than this project review. It is not clear if the effects of global climate change may at some point become reversible.

1.8. New Environmental Effects

The Commission must consider “[n]ew environmental effects.” Wis. Admin. Code § PSC 4.20(2)(d)5.

No new environmental effects that have not been previously evaluated or considered by the

Commission in prior project reviews are anticipated to occur as a result of this project. No new environmental effects would occur at this project site beyond those similar to what already exists. The construction and use of natural gas-fueled power plant facilities is common in Wisconsin and the Upper Midwest. The types of units proposed in this project have been used in other nearby states for power generation and the anticipated effects are well understood. Any emissions that would be produced by these facilities would be new environmental effects as they would be new facilities.

This proposed project would be placed at an existing power plant site. A portion of this property would contain the new facilities. The views of this project site would be slightly different than they are today, but not significantly different, or new.

1.9. Unavoidable Environmental Effects

The Commission must consider “[u]navoidable environmental effects.” Wis. Admin. Code § PSC 4.20(2)(d)6.

As discussed in this EA, construction of the project would result in a range of environmental effects that could not be avoided by site selection or construction methods. Some effects may be reduced or minimized but would not be entirely eliminated as a result of project activities.

Some of the unavoidable environmental effects that would occur during construction include:

- Impacts to local traffic patterns and roads, particularly if heavy/oversized vehicles are delivering building materials;
- Soil and vegetation disturbance during grading and excavation work;
- Noise, vibration, and light impacts due to project machinery and construction activities;
- Air quality impacts as a result of diesel fumes and dust during construction;
- Soil erosion, storm water runoff during precipitation events, particularly if there are loose soils from construction; and
- Disturbance to wildlife, anticipated to be minor.

There would be some unavoidable impacts caused by the proposed project that would be longer-term due to the operation of the generation facilities. These are anticipated to include:

- Noise, light, and aesthetic impacts from the industrial facilities and engine operations;
- Impacts to air quality from greenhouse gas and other pollutants, regulated by state and federal permitting; and

- Production of oil-contaminated water that would need treatment and safe disposal.

1.10. Precedent-Setting Nature of the Proposed Project

The Commission must consider “[t]he precedent-setting nature of the proposed action.” Wis. Admin. Code § PSC 4.20(2)(d)7.

There are no precedents being set by the proposed project. The Commission has reviewed a range of electric generation projects in the past, and the type of project proposed falls within a similar scope to utility infrastructure projects previously reviewed and authorized, and there are already operating power plants at the OCGS property that includes the proposed project sites.

1.11. Cumulative Effects of the Proposed Project

The Commission must consider “[t]he cumulative effect of the proposed action when combined with other actions and the cumulative effect of repeated actions of the type proposed.” Wis. Admin. Code § PSC 4.20(2)(d)8.

This proposed electric generation project is one of multiple related construction applications that are currently under review by the Commission related to the overall planning changes at this facility. In addressing the need to add generation capacity to support significant electric load growth in southeastern Wisconsin and to support the transition to renewable energy in the coming years, WEPCO has proposed the RICE project⁵⁹ and this OCCT project. WEPCO states that these facilities would require firm natural gas services to ensure reliability while meeting new, pending and anticipated MISO resource adequacy requirements and pending anticipated changes to the USEPA Clean Air rules.⁶⁰ Firm capacity need as a result of operation of the proposed generation facilities directly contributes to aspects of need analysis for the proposed Rochester Lateral Project (RLP)⁶¹. Wisconsin Electric – Gas Operations (WE-GO) states in the RLP application that the RLP is required to serve WEPCO’s proposed OCCT project and ERGS after enhancements are made to allow ERGS to operate while fueled completely by natural gas⁶². WE-GO also states that RLP is required regardless of supply source (ANR, Guardian, NNG) as there is not currently sufficient distribution infrastructure to meet this significant natural gas load associated with operation of these two generation projects. It is unclear whether the RLP would be needed if one or both of the aforementioned generation projects were not constructed. All of those other dockets are undergoing their own WEPA reviews and documentation.

As a result of the operation of these new natural gas generation facilities in the area, additional capacity would be needed above and beyond what RLP could provide on its own. To provide

⁵⁹ [PSC Docket 6630-CE-316](#).

⁶⁰ [PSC REF#: 498474](#) 6630-CG-140 Oak Creek LNG Application, p. 47.

⁶¹ [PSC Docket 6630-CG-139](#).

⁶² [PSC REF#: 496207](#) 6630-CG-139 Rochester Lateral Project CA Application CONFIDENTIAL (REDACTED COPY), p. 17.

peaking capacity for system reliability on the coldest winter and highest load days of the year, WE-GO has also proposed construction of the Oak Creek Liquefied Natural Gas project (OCLNG)⁶³. The environmental impacts and need analyses associated with Paris RICE, RLP and OCLNG projects are described in EA's and other materials submitted to their respective dockets.

The air emissions produced by the OCCT power plant would, along with all of the other carbon emissions in the world, be a contributor to the overall effect of global climate change. Other than the detailed emissions projections of this project described earlier, the exact effect of this single project on overall climate change effects is unknown. There has been a recent trend in the United States to lower overall carbon emission as part of an overall energy transition. The energy transition at this time largely involves increasing the use of renewable energy sources along with the continued use and construction of some traditional carbon-emitting facilities such as the proposed project, to still allow for a reliable electric system.

Noise, dust, light, and visual impacts already present from the existing power plant facilities would increase with the cumulative effects of adding additional power generation from the CT units. Storm water runoff may have an additional cumulative effect when added to existing runoff from the site. The ongoing impacts at the OCGS site are difficult to predict in terms of any potential closure and decommissioning of any existing units, and what the site restoration or reuse may be in the future.

1.12.Foreclosure of Future Options

The Commission must consider “[t]he foreclosure of future options.” Wis. Admin. Code § PSC 4.20(2)(d)9.

The construction of the project facilities, at either the Proposed or Alternative layouts, would remove the land in that area from other potential uses, environmental or developed. The overall acreage is small, but it would prevent WEPCO from installing other utility infrastructure in the area of the CT units and their associated buildings, or leaving them undeveloped, as well as limiting the use of land near the gas pipeline and electric tie-line.

As the proposed project would occur at an already existing and operating power plant site, there would be no new effect of this project related to future land use options at this site. There are current, and would be ongoing, restrictions as to the land use options at this site until the time when all of the facilities would be retired and abandoned.

The extraction of natural gas and emissions produced by using a fossil fuel energy source would contribute to global climate change. The scale of climate change is anticipated to have impacts that would foreclose ecological, commercial, and community options due to landscape level changes, to which this proposed project would be a partial contributor.

1.13.Direct and Indirect

⁶³ [PSC Docket 6630-CG-140](#).

Environmental Effects

The Commission must consider “[d]irect and indirect environmental effects.” Wis. Admin. Code § PSC 4.20(2)(d)10.

As discussed above, the construction and operation of this project would cause a range of direct and indirect effects.

Direct effects would be the disturbance of soils, installation of buildings and project facilities, and the noise, vibration, and other common impacts associated with large construction projects. There would be direct effects on local traffic and roads, particularly during the delivery of the oversize/overweight engines if done by road. The direct effects of construction would cease when work is complete. The direct effects of new impervious surfaces, visual effects of the buildings and lights, and noise effects from engine operation would be ongoing during the operation of the project. There would be direct effects to air quality through the emission of pollutants, including greenhouse gases, from the operation of the power plant, and the direct contribution to the overall effect of climate change, as discussed above.

Indirect effects of the project would include the environmental impacts and air emissions of extracting and shipping natural gas as the fuel source for the proposed power plant, the construction and transportation system inputs for making and transporting all of the materials and ongoing fuel needed for this proposed project, and other similar activities, which are also discussed in more detail previously in this EA. All carbon emissions from these activities would also contribute to climate change. There are a range of indirect environmental impacts such as the mining of frac sand and impacts to water and air from the process of fracking natural gas, if that is how the natural gas would be extracted. If invasive species best management practices are not followed during construction, new populations of invasive plants could establish on the OGCS property, potentially moving into more natural habitat areas on or outside of the property.

2. Recommendation

This EA informs the Commissioners, the affected public, and other interested people about the OCCT project and its potential environmental and social impacts. Through data requests, additional analyses, and a review of public comments, Commission staff has provided thorough, factual, and up-to-date information about the project, potential impacts of the proposed project, and the mitigation measures that could address some of those potential impacts. The EA concludes that construction and operation of the project would be likely to have a range of environmental effects. Commission staff has not identified any potential environmental effects of the proposed project that could be considered significant. This evaluation is arrived at assuming that some, if not all, of the mitigation measures proposed by the applicant and Commission or DNR staff are used.

Where no disagreements or controversies otherwise exist in relation to the proposed construction plans and BMPs, prior Commission orders for projects include a condition that the applicant construct the project according to the application and all data requests and responses, including any environmental mitigation strategies. There are no current disagreements or controversies relating to the proposed mitigation measures proposed by the applicant, and it is therefore reasonable to assume they would enact these as described if the project is approved.

The potential impacts of the project are described so that members of the public who read it can use it to better inform their comments upon the Preliminary Determination and so that the Commission can address the potential impacts and mitigation possibilities in its deliberations about project certification. Because potential impacts and major concerns can be substantially addressed through construction and operational mitigation measures and strategies committed to by the applicant or are expected to be regulated according to established air quality, land and water use standards designed to protect public health, no significant impacts on the human environment are expected to occur as result of this project.

This assessment finds that approval and construction of this project is unlikely to have a significant impact on the human environment as defined by Wis. Stat. § 1.11, therefore the preparation of an EIS is not required.

 X

Environmental review complete. Preparation of an environmental impact statement is not necessary.

Prepare an environmental impact statement.

Submitted by:

Tyler Tomaszewski Environmental Analysis and Review Specialist

Date: December 16 2024

This environmental assessment complies with Wis. Stat. § 1.11, and Wis. Admin. Code § PSC 4.20.

Adam Ingwell
Environmental Affairs (WEPA) Coordinator – Supervisor

Date: