

STATE OF WISCONSIN

CIRCUIT COURT
BRANCH 3

LA CROSSE COUNTY

TOWN OF HOLLAND,

Petitioner,

Case No. 15-CV-219

30607 Administrative Agency Review

v.

Honorable Judge Todd Bjerke

**PUBLIC SERVICE COMMISSION
OF WISCONSIN,**

Respondent.

**RESPONSE BRIEF OF INTERVENOR-RESPONDENTS AMERICAN TRANSMISSION
COMPANY LLC AND ATC MANAGEMENT, INC., DAIRYLAND POWER
COOPERATIVE, NORTHERN STATES POWER COMPANY – WISCONSIN, SMMPA
WISCONSIN, LLC, AND WPPI ENERGY**

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I. SUMMARY OF THE ARGUMENT

The Town of Holland (Petitioner) is seeking judicial review of the Public Service Commission of Wisconsin's (Commission) decision to issue a Certificate of Public Convenience and Necessity (CPCN) to construct a 345-kilovolt (kV) electric transmission line known as the Badger Coulee Project (Project). The Petitioner's initial brief is chock-full of hyperbole, but light on references to the facts in the record and the applicable law. In its initial brief, the Petitioner ignores vast portions of the evidence from the proceeding below, cites facts and presents arguments not in the record, makes sweeping legal assertions without any citations, misstates the standard of review, and largely ignores the Wisconsin Supreme Court's seminal decision in *Clean Wisconsin v. Pub. Serv. Comm'n*, 2005 WI 93, 282 Wis. 2d 250, 306, 700 N.W.2d 768, which directly addresses many questions at issue in this case. Moreover, the Petitioner is raising an argument that neither the Petitioner nor any other party raised during the proceedings below and that directly contradicts a position the Petitioner took in the proceedings below.

On appeal, Petitioner challenges three aspects of the Commission's final decision: (1) its finding that the Project "satisfies the reasonable needs of the public for an adequate supply of electric energy," *see* Wis. Stat. § 196.491(3)(d)2.; (2) the adequacy of the environmental impact statement (EIS) that the Commission prepared; and (3) the routing and siting determination for the Project around the Briggs Road Substation, which limited the distance that the Project can be co-located with other transmission lines. None of these challenges has any merit.

The Petitioner's first "adequate supply" argument is an improper use of the process by which courts review administrative decisions. It is a basic tenet of administrative law that one must raise an issue with an agency before it can argue that issue on appeal. *See United States v.*

L.A. Tucker Truck Lines, Inc., 344 U.S. 33, 37 (1952) (“Simple fairness to those who are engaged in the tasks of administration, and to litigants, requires as a general rule that courts should not topple over administrative decisions unless the administrative body not only has erred but has erred against objection made at the time appropriate under its practice.”). Thus, “[a]s a general rule, claims not presented to [an] agency may not be made for the first time to a reviewing court.” *Omnipoint Corp. v. Fed. Comm. Comm’n*, 78 F.3d 620, 635 (D.C. Cir. 1996).

Here, the Petitioner is arguing—for the first time—that, when determining whether the Project “satisfies the reasonable needs of the public for an adequate supply of electric energy,” *see* Wis. Stat. § 196.491(3)(d)2., the Commission only should have considered whether the Project is needed for electric reliability purposes, and that the Commission failed to confine its analysis accordingly. In other words, the Petitioner seems to argue that, when making a finding under Wis. Stat. 196.491(3)(d)2., the Commission may only consider whether the project is necessary to keep the lights on.

By failing to raise this issue in the proceedings below (and, in fact, arguing the opposite position), the Petitioner has waived this argument on appeal. But setting aside this procedural deficiency, the Petitioner is simply wrong on both the facts and the law. There are literally hundreds of pages of evidence in the record—including numerous studies conducted over the last decade—delineating the Badger Coulee Project’s reliability benefits and showing that the Project is needed for reliability, economic and public policy purposes. The statute at issue—Wis. Stat. § 196.491(3)(d)2—is broadly worded, calling on the Commission to make a legislative-type policy decision when determining whether a project “satisfies the *reasonable* needs of the public for an *adequate* supply of electric energy.” (emphasis added). The Supreme Court has recognized that the Commission can consider the economic impacts of a project under this statutory criteria. *See*

Clean Wisconsin, 2005 WI 93 at ¶ 141. Moreover, in at least three prior decisions interpreting this exact provision, the Commission has considered the economic and public policy benefits of a transmission line project. That is because, when determining the *reasonable* needs of the public and whether the electric supply is *adequate*, the Commission must consider (among other things) a project's costs and its economic and public policy benefits.

The Petitioner's arguments concerning the adequacy of the EIS are likewise misplaced. The Petitioner has the burden of showing that the Commission had no rational basis on which it could decide that the EIS was adequate. *Clean Wisconsin*, 2005 WI 93, ¶ 190. The Petitioner has failed to meet this burden. As explained below, the Commission reasonably concluded that the 600-page EIS thoroughly examined the environmental impacts of the Project and the alternatives to the Project.

Finally, the Petitioner's challenge to the Commission's routing and siting determination likewise falls flat. Transmission lines have impacts, no matter where they are placed. That's why transmission line cases, like the one at issue here, can be some of the largest, most contentious proceedings on the Commission's docket. Simply because a transmission line will impact local communities does not mean the Commission cannot approve it. Rather, these impacts are only unacceptable where they will "unreasonably interfere with the orderly land use and development plans for the area involved." Wis. Stat. § 196.491(3)(d)6 (emphasis added). In this way, the Legislature has called on the Commission to exercise its expertise when deciding where to site a high-voltage transmission line, recognizing that such a decision will necessarily have some impacts on local communities, but that those impacts are permissible so long as they are not "unreasonable."

In this case, the Commission was presented with multiple plausible routes for the Project—one of which ran through the Town of Holland and another through the City of Onalaska (which has intervened in this proceeding). Neither of these parties wanted the Commission to route the Project through their municipality. The Commission considered and weighed the evidence presented and ultimately selected the route that is located in portions of the Town of Holland; the Commission found that, although the Project would impact the Town and other communities, the impacts were not unreasonable. (R. 91, at 23-25).

Moreover, the Commission explicitly recognized the Petitioner's concerns regarding the cumulative impact of the Project and other transmission lines in the Town of Holland. Weighing reliability, environmental, and economic considerations, as dictated by Wisconsin's Siting Priorities Law, Wis. Stat. § 1.12(6), the Commission required that these transmission lines be triple-circuited (i.e., strung across the same transmission towers) for a distance of up to one mile. The Commission declined to require that the lines be triple-circuited for more than a mile because this would violate national electric reliability criteria. The Commission's conclusion on this point was sound and supported by substantial evidence in the record, including the testimony of two highly qualified transmission planning engineers, which was unrebutted.

The Badger Coulee Project has been studied for more than a decade. The Applicants and numerous other parties (including the Midcontinent Independent System Operator, Inc. (MISO), a multi-state, regional organization that operates the electric grid and that has intervened in this proceeding), have all determined that the Project is needed and in the public interest. The Commission's technical staff and all three Commissioners independently reviewed and verified this determination. The record supporting these determinations comprises literally thousands of pages and years of work. Twenty-seven parties participated in what was more than a year-long

proceeding, with discovery, depositions, hundreds of pages of pre-filed written testimony, and an almost week-long trial-like administrative hearing. Based on this record, the Commissioners unanimously agreed that the Project is needed and appropriately selected a route for the Project that is consistent with Wisconsin law. This Court should uphold the Final Decision.

II. BACKGROUND

This case concerns the Commission’s decision to grant American Transmission Company LLC and ATC Management, Inc. (ATC), Northern States Power Company, a Wisconsin corporation (NSPW), Dairyland Power Cooperative (DPC), WPPI Energy (WPPI), and SMMPA Wisconsin, LLC (SMMPA Wisconsin)¹ a CPCN to construct the Badger Coulee Project, an approximately 180-mile, 345-kV electric transmission line that will run from La Crosse County to Dane County, Wisconsin (the Final Decision). To provide the Court with context regarding the Commission’s Final Decision, this section will provide a brief overview of the electric power industry; state and federal regulatory authority over that industry; the Project; and the proceedings below.

A. Background on the Electric Power Industry and Its Regulation

Broadly speaking, there are three major components to the electric power system: generation, transmission, and distribution. In most cases, power is first generated at a large centralized power plant, then transmitted at a high-voltage over power lines (called transmission lines), and finally stepped down to a lower voltage to be distributed to customers over smaller power lines (called distribution lines, such as those that you would see on a residential street in a

¹ Appendix A to this Response Brief contains a short description of each of these parties and their relationship to the Project. For ease of reference, all of these parties are collectively referred to as “the Applicants” in this Response Brief. Three of the Applicants—DPC, WPPI, and SMMPA Wisconsin LLC—have a limited ownership stake in the Project and a limited role in developing and constructing the Project. Throughout the record from the proceedings below, these three parties may at times be referred to as “the Co-Applicants” or “the La Crosse Owners.”

neighborhood). The large centralized power plants are generally fueled by natural gas, coal, nuclear fission, or renewable energy. High-voltage transmission lines are typically connected to these plants and carry the electricity over long distances (often tens or hundreds of miles).² The electricity is then fed into a substation, where the voltage is stepped down (i.e., reduced) and routed onto the distribution network. Distribution lines then deliver the electricity directly to homes and businesses.

Both the states and the federal government have regulatory authority over the electric grid. The federal government regulates the transmission of electricity in interstate commerce, as well as wholesale sales of electricity in interstate commerce.³ *See* 16 U.S.C. § 824(b)(1). States, by contrast, have authority over all other aspects of the transmission, distribution and sale of electricity, including authority to regulate rates for retail sales of electricity and the approval and siting of power plants and transmission lines. *See* 16 U.S.C. § 824(b)(1).

In Wisconsin, public utility regulation has a long history. In 1905, Wisconsin created the Public Service Commission—one of the first of its kind. The Commission’s power was (and remains) very broad: “The railroad [now Public Service] commission of Wisconsin is vested with the power and jurisdiction to supervise and regulate every public utility in this state and to *do all things necessary and convenient in the exercise of such power and jurisdiction.*” *Id.*

(emphasis in original); *see also* Wis. Stat. § 196.02. Today, the Commission’s primary focus is

² A “high-voltage transmission line” means a conductor of electric energy exceeding one mile in length and designed for a nominal voltage of 100-kV or more. Wis. Stat. § 196.491(1)(f). The Project is a high-voltage transmission line because it is estimated to be approximately 180 miles in length and is designed for a nominal voltage of 345-kV.

³ Wholesale transactions involve the sale of electricity for resale, whereas retail transactions involve the sale of electricity to end-use consumers. *See* 16 U.S.C. § 824(d); *Fed. Energy Regulatory Comm’n v. Elec. Power Supply Ass’n*, 136 S. Ct. 760, 767-68 (2016).

to supervise and regulate public utilities, a term that encompasses companies that provide electricity, water, and heat to the public.

B. The CPCN Law

In the mid-1970s, the Legislature granted the Commission the authority to issue CPCN before large power plants or high-voltage transmission lines can be constructed and placed into operation in the state. *See* Wis. Stat. § 196.491(3). Under the CPCN Law, the Commission is required to review applications for these power plants and transmission lines to determine whether the proposed facility will, if constructed, serve the public convenience and necessity, based on the Commission’s consideration of several factors, many of which are specific to the proposed project. *See* Wis. Stat. § 196.491(3)(d); *Wis. Indus. Energy Group v. Pub. Serv. Comm’n of Wis.*, 2012 WI 89, ¶ 33, 342 Wis. 2d 576, 595. The Commission has promulgated regulations describing the type of information required in CPCN applications, which includes “all planning criteria, assumptions, historical outage data, stability, and power-flow studies.” Wis. Admin. Code § PSC 111.55. The Commission has a long history of using its technical expertise to weigh and consider the many factors that must be met before it can issue a CPCN, including impacts on landowners and local land use.⁴

⁴ *See, e.g., Joint Application of Dairyland Power Cooperative, Northern States Power Company-Wisconsin, and Wisconsin Public Power, Inc. for Authority to Construct the CapX Twin Cities-Rochester-La Crosse Project*, Docket No. 5-CE-136, Final Decision (Wis. PSC May 30, 2012) [hereinafter “CapX2020 Order”]; *Application of by American Transmission Co. to Construct the Pleasant Prairie to Zion Energy Center Project*, Docket No. 137-CE-161, Final Decision (Wis. PSC May 7, 2012) [hereinafter “Pleasant Prairie-Zion Energy Center Order”]; *Application by American Transmission Co. to Construct the Paddock-Rockdale Project*, Docket No. 137-CE-149, Final Decision (Wis. PSC Jun 13, 2008) [hereinafter “Paddock-Rockdale Order”]; *Application of American Transmission Company for Authority to Construct the Femrite-Sprecher Project*, Docket No. 137-CE-120, Final Decision (Wis. PSC July 19, 2005); *Joint Application of Minnesota Power Company and Wisconsin Public Service Corporation for Authority to Construct the Arrowhead-Weston Project*, Docket No. 05-CE-113, Final Decision (Wis. PSC Oct. 30, 2001); *Joint Application of Northern States Power Company-Wisconsin, Northern States Power Company-Minnesota, and Dairyland Power Cooperative for Authority to Construct the Chisago Transmission Project*, Docket Nos. 1515-CE-102 & 4220-CE-155, Findings of Fact, Conclusions of Law, Certificate, and Order (Wis. PSC June 19, 1999). For the Court’s convenience, Appendix B contains copies of these decisions.

C. The Project and the Proceedings Below

The Badger Coulee Project is an approximately 180-mile, 345-kV transmission line from the Briggs Road Substation in the town of Onalaska, Wisconsin to the North Madison Substation and then the Cardinal Substation in Dane County, Wisconsin. (R. 155(2), at 1). The Project was the product of years of study and analysis by the Commission, MISO,⁵ ATC, and other stakeholders. Since 1999, there have been at least a half dozen studies or initiatives evaluating the economic and/or reliability benefits of a transmission line between the La Crosse and Madison areas. (*See* R. 365(13), at 9:1 to 11:19; R. 365(19), at 16:2 to 17:24). Among the more important studies was MISO's evaluation of the Project as part of its Multi-Value Portfolio (MVP) of regional transmission projects.⁶ In December 2011, the MISO Board of Directors granted MVP project status to 17 transmission projects in the MISO region, including the Badger Coulee Project. MISO found that this Project "will be needed in order to ensure the continued reliable operation of the regional transmission system, including the NSPW and ATC transmission systems, while meeting the renewable energy mandates of the MISO footprint." (R. 365(13), at 12:15-23; R. 365(39), at 20r:14-23).

Like MISO, after years of study, the Applicants also found that the Project will produce substantial reliability and economic benefits.⁷ The Applicants conducted a comprehensive

⁵ MISO is a not-for-profit regional transmission organization (RTO) that was created under federal law and covers fifteen states. Among other things, MISO serves the critical function of planning, operating, and ensuring the reliability of the transmission system within its footprint, and coordinates with various transmission owners, public utilities, and other stakeholders to that end. (R. 365(39), at 3r:14 to 4r:19; R. 365(14), at 5:17 to 6:4).

⁶ An MVP project is a relatively new type of transmission project that MISO and its stakeholders have developed. Broadly speaking, MVP projects must be evaluated as part of a portfolio of MVPs, the benefits of which are spread across the MISO footprint, and must meet at least one of three planning criteria. (*See* R. 365(39), at 15r:8 to 17r:23).

⁷ In this context, "reliability" refers to the ability of the electric grid to meet the needs of end-use customers, even when sudden disturbances or unplanned equipment failures reduce supply. The North American Electric Reliability Corporation (NERC) establishes standards for reliability, which regional transmission operators and transmission owners must meet to ensure that the lights stay on, even in the event of unplanned contingencies (i.e.,

economic analysis of the Project, which found that its net economic benefits (i.e., even when accounting for the Project's costs) would be at least \$118 million and could be as high as \$702 million over its 40-year life span. (R. 365(13), at 6:1 to 7:2, 17:16 to 28:15). Moreover, as far as reliability is concerned, the Applicants' reliability analysis indicates that the Project would avoid the need to construct approximately 29 reliability projects at an avoided cost of approximately \$190 million. (R. 365(13), at 29:11-22; R. 156(124). The Applicants' studies likewise indicate that the Project will support future load growth⁸ in the La Crosse area. (*See* R. 155(90), at Ex. 2; R. 156(146): Data Request Response 10.01; R. 156(147): Data Request Response 10.02; R. 365(19), at 8:19 to 12:16).

Prior to filing their CPCN application with the Commission, the Applicants conducted a comprehensive routing and siting process, with the goal of developing two viable, permittable, and constructible route alternatives from which the Commission could choose. (R. 365(18), at 7:10-18). Specifically, the Applicants proposed a "Northern Route" and a "Southern Route" for the Project, with certain segments of the Project (Segments M, J, and G) being common to both routes.⁹ The Applicants' routing and siting process considered a wide variety of factors, including the siting requirements under Wis. Stat. § 1.12(6); input from the public, property owners, and public officials; consultation with federal and state agencies; and local land use and development plans. (R. 365(18), at 7:7 to 8:4). The Siting Priorities Law, Wis. Stat. § 1.12(6), was a particularly important consideration. It requires that, "consistent with economic and

failures of a transmission system element) that may occur on the transmission system. (*See* R. 365(19), at 5:1-11; R. 155(90), at Ex. 2, at 5).

⁸ "Load" is essentially synonymous with demand for electricity. Thus, the term "load growth" simply refers to an increase in demand for electricity over time.

⁹ An overview map of the Badger Coulee Project can be found in Appendix A to the CPCN Application. (*See* R. 155(3)). Maps for individual Project segments can be found through the remainder of Appendix A. (*See* R. 155(4) to 155(29)).

engineering considerations, reliability of the electric system and protection of the environment,” corridors for electric transmission facilities should be selected in the following order: first on existing utility corridors, then on highway and railroad corridors, then on recreational trails (subject to specific requirements), and lastly on new corridors. *See* Wis. Stat. § 1.12(6).

Using a project team with subject matter expertise in routing, permitting, and constructing transmission lines, as well as the environmental issues associated with those lines, a large area was studied for potential transmission line routes. (R. 365(18), at 3:7-14). The study area “encompassed over 4,200 square miles and extended from the Madison area on the east, to the La Crosse area on the west, to the Lower Wisconsin River Basin on the south, and to the Black River Falls and Arcadia areas to the north.”¹⁰ (*Id.*). From there:

Virtually any segment that reasonably accomplished the desired connection was considered as part of the initial evaluation. The Applicants used a multi-stage process that involved consulting with the PSCW, the Wisconsin Department of Natural Resources (“WDNR”), and the WisDOT; reviewing maps, digital and aerial photographs and other geographic information for potential segments; evaluating engineering, constructability and cost considerations of potential segments; performing field inspections of potential segments, where feasible; conducting an extensive public participation process; and following the transmission line siting priorities established by state law. . . . Through this process the team examined over 3,500 miles of potential right-of-way (“ROW”) that was divided into 925 individual segments. (*Id.* at 10:9 to 11:5).

The Applicants employed numerous outreach strategies to solicit and consider input from the public, holding 28 open house meetings, sending direct mailings to thousands of businesses and residences, and responding to phone calls and letters from individuals in affected areas. (*Id.*

¹⁰ It is worth noting that much of the initial routing and siting for the Project was done by ATC; once NSPW became a co-owner, its personnel were integrated into the routing and siting process, and it provided significant input and analysis in selecting the final routing alignments for the Project within its service territory. (R. 365(18), at 7:10-18).

at 4:9 to 5:22; *see also* R. 155(93)). The Applicants also reviewed and analyzed local land use plans and held extensive meetings with local public officials to incorporate their input and preferences into the routing and siting process, where feasible. (R. 365(18), at 6:1-20; *see also* R. 155(2), at Sections 5 and 7). As noted above, this comprehensive process led the Applicants to propose the Northern and Southern Routes described in the CPCN application and shown on the map in Appendix A. (*See also* R. 155(3)).

The CPCN application for the Project was filed with the Commission on October 22, 2013, and on April 30, 2014, the Commission found the CPCN application to be complete. (R. 91, at 1-2). Commission Staff and the Wisconsin Department of Natural Resources assumed the lead role in organizing and preparing the EIS, and other agencies—including the Wisconsin Department of Agriculture, Trade, and Consumer Protection, the Wisconsin Historical Society, and the Wisconsin Department of Transportation—provided input and assistance. (R. 365(48), at 3:3-10). In preparing the EIS, Commission Staff used information from the Applicants' CPCN application, the Applicants' data request responses (*see* R. 156), public comments, government offices, and advocacy organizations, as well as their own professional expertise and judgment. (R. 365(48), at 3:10-20). The Commission also held a series of scoping meetings to gather public input. (R. 337(1), at 9).

The Commission issued the draft EIS for the Project on August 18, 2014. (R. 91, at 3). The Applicants, eight parties to the proceeding, several other organizations and governmental units (including the Town of Holland), and many members of the public provided comments on the draft EIS. (R. 337(1): Appx. F). After incorporating suggested revisions and public comments, the Commission issued a final EIS for the Project in November 2014. (*See* R. 337(1)). The final EIS is more than 600 pages long and describes the Project in detail, itemizes

and discusses alternatives to the Project, and provides an in-depth examination of the Project's environmental impacts. (*Id.*).

After the CPCN Application was filed, a number of parties intervened to participate in the administrative proceedings on the application. Twenty-seven parties participated in those proceedings, 17 of which offered evidence or exhibits into the record. (*See* R. 365). These parties engaged in discovery and submitted three rounds of pre-filed testimony. (*Id.*). The Commission also held public and technical hearings on the application. The public hearings were held in Waunakee, Holland, Cashton, Warren, and Wisconsin Dells, Wisconsin on December 8, 9, 10, 11, and 15, 2014, respectively. (R. 91, at 3). After submitting pre-filed written testimony, the parties participated in a contested case technical hearing on the CPCN application, which is essentially a trial before an administrative law judge, *see* Wis. Stat. § 227.44; the technical hearing lasted four days, running from January 6 through January 9, 2015. (*Id.*).

In addition to the Applicants, MISO, the Clean Energy Intervenors, the Wisconsin Business and Labor Intervenor Group, and various other businesses and environmental entities indicated their support for the Project. (R. 91, at 4). During briefing, five entities contested the need for the Project; one of these entities was not a party to the proceeding, and two others were parties who submitted no testimony or written evidence during the course of the proceeding. (R. 5; R. 26; R. 33; R. 35; R. 37). A number of other parties raised issues concerning siting, routing, and environmental issues related to the Project. (R. 91, at 4). While some municipalities offered expert witnesses or testimony, the Town of Holland offered no written testimony during the proceedings (meaning it called no expert witnesses to support its positions). (*See generally* R. 365).

The Commission ultimately approved the Project, finding it satisfied the statutory criteria established in the CPCN Law. (R. 91, at 4-8). In particular, the Commission concluded that the Project was necessary to improve the reliability of the transmission grid in the La Crosse, Wisconsin/Winona, Minnesota area; that it will provide economic benefits—well in excess of its costs—for Wisconsin and the MISO region; and that it will increase access to renewable generation to the west of Wisconsin. (R. 91, at 8, 12-17). For the Project’s route, the Commission authorized the Applicants to construct the Project along the Northern Route, which includes segments P (with P-east), N, M, K, H (with H6-north), G, E, D, and A. (*Id.* at 23). It noted that 62 percent of the land area within this route is within existing right-of-way, and that the Project would therefore impact fewer acres of new right-of-way, cross less agricultural land, and impact fewer residences. (*Id.*).

In response to concerns raised by various parties—including the City of Onalaska, the Town of Middleton, and the Town of Holland—regarding the effect of the Project on land use and development, the Commission noted that, as with any major construction project, the Project will have impacts. The Commission did not believe these impacts would be unreasonable. (*Id.* at 25). Moreover, the Commission explicitly acknowledged and recognized the concerns raised by intervenors and members of the public regarding the impacts of the proposed Project in the area around the Town of Holland. (*Id.*) To that end, the Commission required that, just north of the Briggs Road Substation, the Project be triple-circuited with two existing transmission lines (a 365-kV and a 161-kV line) for up to one mile; however, the Commission declined to require that the lines be triple-circuited for more than a mile, finding that this would cause unacceptable violations of electric reliability criteria. (*Id.* at 25-26).

III. STANDARD OF REVIEW

The Wisconsin Administrative Procedure Act governs the scope of judicial review on appeal from an administrative agency's final action, such as the Commission's decision to issue the Applicants a CPCN for the Project. *See* Wis. Stat. § 227.57. The Supreme Court has previously discussed the scope of judicial review when reviewing a CPCN order. *See Clean Wisconsin v. Pub. Serv. Comm'n*, 2005 WI 93, 282 Wis. 2d 250, 306, 700 N.W.2d 768. In that case, the Commission granted Wisconsin Electric Corporation (WEC) the authority to construct a large power plant in Oak Creek, Wisconsin. In discussing the standard of review, the Supreme Court stated:

This is a review of an agency decision under Wis. Stat. § 227.52. The issue this court must decide is whether the PSC erroneously approved WEC's application for a CPCN. It is not the function of this court to determine this state's energy policy. Nor is it this court's place to decide whether the construction of the power plant at issue in this case is in the public interest. These are legislative determinations that the legislature has assigned to the PSC. Whether a given decision is in the public interest "is a matter of public policy and statecraft and not in any sense a judicial question." This court "cannot substitute its judgment for that of an administrative agency determining a legislative matter within its province." *Clean Wisconsin*, 2005 WI 93, at ¶ 35 (internal citations omitted).

Thus, the Court made clear that judicial review of a CPCN order is limited, given that the Commission's issuance of such an order represents an exercise of a quasi-legislative power that the Legislature has delegated to it.

That said, the specific standard of review that the Court must apply to the Commission's Final Decision will depend on the particular issue being challenged. *See* Wis. Stat. § 227.57(3) (the Court must separately evaluate disputed issues concerning the agency's procedure, its interpretations of law, its factual findings, and determinations of fact or policy that are within areas of the agency's exercise of delegated discretion). Moreover, the Court's review is confined

to the record developed before the Commission. Wis. Stat. § 227.57(1). Because different standards of review apply to each of the issues that the Petitioner has raised on appeal, the applicable standard of review for each issue is discussed below, in conjunction with the Applicants' response to each of the Petitioner's arguments.

IV. ARGUMENT

Although the Petitioner challenges various aspects of the Commission's Final Decision, it is essentially inviting the Court to substitute its judgment for that of the Commission on matters that are well within the Commission's discretion and expertise. The Court should decline this invitation. For one thing, the Petitioner has waived its right to assert any argument concerning the Commission's interpretation of the "adequate supply" criteria under the CPCN Law because it never made these arguments in the proceedings below. *See* Wis. Stat. § 196.491(3)(d)2. But regardless, the Court should uphold the Commission's finding that the Project satisfies the reasonable needs of the public for an adequate supply of electric energy because that finding is supported by substantial evidence and is consistent with both the language of the CPCN Law and the Commission's past practice. Likewise, the Commission had a rational basis for concluding that the EIS was sufficient and that the Badger Coulee Project's route should be triple-circuited with two existing transmission lines for a distance of less than one mile, north of the Briggs Road Substation.¹¹ Accordingly, the Court should deny the Petitioner's Petition for Judicial Review and uphold the Commission's Final Decision in its entirety.

¹¹ The Town's Petition contains a number of other claims which were not discussed in its brief. (*See, e.g.,* Pet'r's Pet. for Judicial Review, at ¶¶ 33-34, 36-38, 40, 42, 44, 45). As such, these claims are waived, and the Applicants do not discuss them here. *See Northeast Wholesale Lumber, Inc. v. Anderson*, 191 Wis. 2d 278, 294 n.11, 528 N.W.2d 502 (Ct. App. 1995) (noting that arguments not raised until reply brief are deemed waived); *Bd. of Regents of Univ. of Wash. v. Env'tl. Prot. Agency*, 86 F.3d 1214, 1223 (D.C. Cir. 1996) (same); *Commonwealth Edison Co. v. United States Nuclear Reg. Comm'n*, 830 F.2d 610, 621 n. 7 (7th Cir. 1987) (same).

A. The Court should dismiss the Petitioner's need-related arguments because the Petitioner has waived its right to assert them on appeal.

In its initial brief, the Petitioner appears to challenge two aspects of the Commission's Final Decision regarding the "need" for the Badger Coulee Project. First, the Petitioner alleges that the Commission should only have considered the reliability needs of the electric system when determining whether the Project satisfies "the reasonable needs of the public for an adequate supply of electric energy." Wis. Stat. § 196.491(3)(d)2. (*See generally* Pet'r's Initial Br., at 18-29). By reliability needs, the Petitioner means that the Commission could only consider whether and to what extent the Project was needed to keep the transmission system from failing. Second, and along the same lines, the Petitioner argues that substantial evidence did not support the Commission's determination that the Project produces such reliability benefits so as to satisfy "the reasonable needs of the public for an adequate supply of electric energy." As such, the Petitioner contends the Commission's Final Decision should be overturned.

As an initial matter, in the proceedings below, neither the Petitioner nor any other party argued that the Commission can consider only the reliability needs of the electric system when determining whether a project "satisfies the reasonable needs of the public for an adequate supply of electric energy." Wis. Stat. § 196.491(3)(d)2. In fact, the Petitioner offered no evidence at all during the proceedings below, (*see* R. 365), and its initial brief in the proceedings below focused almost exclusively on the routing and siting for the Project around the Town of Holland. (R. 37, at 2) ("This brief focuses on particular issues material only to the Town and the area that arise under the contingency that the PSCW approves the project."). When the Petitioner finally did address the "need" issue, it did so in a single paragraph of its reply brief to the Commission, and it affirmatively argued that the Commission not only should but must

consider the Project’s economic benefits when determining whether it is needed under the CPCN Law. (*See* R. 38, at 1) (“This line’s justification is economic. It must meet the standard the PSCW set out in the Paddock-Rockdale decision The project must clearly have economic benefits.”) (internal citations and quotations omitted).

Now, on appeal, the Petitioner argues the complete opposite. The Petitioner asserts that the Commission cannot consider the Project’s economic benefits and that it instead must focus only on the Project’s reliability benefits when determining whether the Project “satisfies the reasonable needs of the public for an adequate supply of electric energy” under section Wis. Stat. § 196.491(3)(d)2. (*See* Pet’r’s Initial Br., at 22-23). Thus, the Petitioner has adopted a position on the “need” issue that directly contradicts the position it took in the proceedings below, thereby forfeiting the right to assert this argument on appeal. Judicial review of an agency decision is confined to the record developed before the agency, *see* Wis. Stat. § 227.57(1), and “[i]t is settled law that to preserve an issue for judicial review, a party must raise it before the administrative agency.” *Bunker v. Labor and Indus. Review Comm’n*, 2002 WI App 216 ¶ 15, 257 Wis. 2d 255, 650 N.W.2d 864 (citations omitted).¹² The Petitioner’s skeletal treatment of the need issue in the proceedings below—which in fact contradicts the position it now takes on appeal—does not preserve its need-related arguments for judicial review. *See, e.g., United States v. Dunkel*, 927 F.2d 955, 956 (7th Cir. 1991) (“A skeletal ‘argument’, really nothing more than an assertion, does not preserve a claim. . .”).

¹² Granted, the Court of Appeals stated that this is a rule of “administration, not of power”—in other words, the Court of Appeals has said that courts do have the power to decide issues that were not raised before an administrative agency. *Bunker*, 2002 WI App 216 ¶ 15. However, a court can exercise its discretion to decline to hear an issue that was not raised below, as this “generally constitutes a waiver of the right to raise the issue before the reviewing court.” *Id.*

Moreover, nowhere in its initial brief does the Petitioner argue that the Commission did not have substantial economic and public policy evidence before it to approve the Project. Rather, the Petitioner only argues that the Commission should have ignored these other benefits when making its findings under the “adequate supply” criterion and focused solely on reliability evidence, which the Petitioner says was insubstantial. (*See* Pet’r’s Initial Br., at 19-21). This is an important point. Since the Petitioner has not challenged the sufficiency of the evidence for the Project’s economic and public policy benefits, it is therefore undisputed that there was substantial evidence to approve the Project on economic and public policy grounds (assuming the Commission can, in fact, consider those grounds under Wis. Stat. § 196.491(3)(d)2). Thus, if the Commission determines that the Petitioner’s first need-related legal argument is waived (i.e., if it finds that the Commission can consider economic and public policy benefits under the statute), the Petitioner’s second need-related argument is moot. This is because, as noted above, it is undisputed that the Project’s economic and public policy benefits are supported by substantial evidence, thereby providing the Commission with a rational basis for concluding that the Project “satisfies the reasonable needs of the public for an adequate supply of electric energy.” Wis. Stat. § 196.491(3)(d)2.

B. The Court should affirm the Final Decision because the Commission’s determination that the Badger Coulee Project is needed is consistent with the statutory language in the CPCN Law and is supported by substantial evidence in the record.

Regardless of what the Court decides regarding waiver, it should nonetheless uphold the Commission’s Final Decision.¹³ The Commission’s interpretation of the “adequate supply”

¹³ If the Court finds that the Petitioner has waived its need-related arguments, for the sake of judicial efficiency and because the Applicants believe the Petitioner’s underlying need claims are completely baseless, the Applicants also request that the Court use its discretion to address—and dismiss—them on the merits.

statute was entirely reasonable and lawful, and in any event, there was substantial evidence in the record showing the Project is needed for reliability purposes.

1. The Court should give great weight deference to and uphold the Commission's interpretation of the phrase "satisfies the reasonable needs of the public for an adequate supply of electric energy" because that interpretation is consistent with the statutory language and the Commission's past practice.

An agency's interpretation of law is entitled to one of three levels of deference: great weight deference, due deference, or no deference (i.e., *de novo* review). *Clean Wisconsin*, 2005 WI 93 ¶¶ 38-43. In this case, the Court should apply the great weight standard because the Wisconsin Supreme Court has already recognized that this is the appropriate standard to apply when a party challenges the Commission's interpretation of the statutory criteria under the exact statutory provision in this case: Wis. Stat. § 196.491(3)(d). *See id.* at ¶ 135-40. The Petitioner's assertion that no deference is due is false.

In *Clean Wisconsin*, the Supreme Court stated that the Legislature has specifically charged the Commission with interpreting Wisconsin Statutes chapter 196, that the Commission is the only agency charged with administering the CPCN Law, and that "the decision to issue a CPCN for a specific plant at a specific location calls for the PSC to utilize its expertise and make a variety of factual findings." *Id.* at ¶ 137. Finally, and perhaps most critically, the Supreme Court stated that the Commission's interpretation and application of the statutory criteria under the CPCN Law requires the Commission to make "a number of legislative-like policy determinations." *Id.* at ¶ 138. The Supreme Court noted that the specific statutory provision at issue here—Wis. Stat. § 196.491(3)(d)2.—requires the Commission to make a "quintessentially legislative policy choice," which is owed great weight deference by the reviewing court. *Id.* Therefore, this Court must apply great weight deference to the Commission's interpretation of

the CPCN Law and affirm that interpretation if it has a rational basis and is consistent with the statutory language. *Id.* at ¶ 140.

The Petitioner erroneously asserts that under the CPCN Law a transmission project can only be needed if supply is inadequate, and that adequacy of supply turns only on reliability benefits, not economic or public policy benefits. (Pet’r’s Initial Br., at 19-20). The Petitioner’s brief, however, is conspicuously devoid of references to any authority that directly supports its confined reading of the statute. The phrase “satisfies the reasonable needs of the public for an adequate supply of electric energy” is broad. The operative words in that phrase are “*reasonable* needs” and “*adequate* supply,” which can reasonably be interpreted to include economic and public policy considerations. There is simply no basis for the Petitioner’s narrow reading of the statute, especially given the broad degree of deference the Wisconsin Supreme Court has indicated the Commission is owed when interpreting the CPCN Law.

The Petitioner’s assertion that the Commission can only consider reliability when determining whether the Project “satisfies the reasonable needs of the public for an adequate supply of electric energy” also conflicts with other provisions in the CPCN Law. It is a basic canon of statutory construction that courts “may not read sections of a statute in a vacuum but must read them together in order to determine the plain and clear meaning of the statute.” *In Re Antonio M.C.*, 182 Wis. 2d 302, 309, 513 N.W.2d 662 (Ct. App. 1994). Here, the CPCN Law contains other criteria that explicitly apply to high-voltage transmission line projects “proposed to increase transmission import capability” and specifies factors the Commission should evaluate “consistent with achieving reasonable electric rates and economic benefits.” *See* Wis. Stat. §§

196.491(3)(d)3r and 3t.¹⁴ These criteria would be useless if the Legislature intended the Commission to consider only reliability when determining whether a project “satisfies the reasonable needs of the public for an adequate supply of electric energy” under Wis. Stat. § 196.491(3)(d)2.; that is, under the Petitioner’s interpretation, there would be no situation in which the Commission could apply these other parts of the CPCN Law, thereby rendering them meaningless. Additionally, if the Legislature had intended for the Commission to consider only reliability issues under the “adequate supply” criterion, it could have drafted the provision accordingly, as it did in Wis. Stat. § 196.491(3)(d)3t. However, the Legislature did not do so, which indicates that the CPCN Law is written for the Commission to consider more than just the need for a project from a reliability standpoint.

Taken to the logical extreme, the Petitioner’s position would mean that the Commission would be unable to approve a new transmission line or power plant, even if energy costs in the state were skyrocketing due to congestion on the transmission system or a lack of affordable, cost-effective generation resources. This is surely not what the Legislature intended when it enacted the CPCN Law. It is well within the Commission’s discretion and technical expertise to evaluate the economics and cost-effectiveness of a facility when determining whether that facility will provide the public with an “adequate” supply of electric energy. *See Clean*

Wisconsin, 2005 WI 93 at ¶ 141 (noting that, part of the calculus that goes into making a

¹⁴ “For a high-voltage transmission line that is proposed to increase the transmission import capability into this state, existing rights-of-way are used to the extent practicable and the routing and design of the high-voltage transmission line minimizes environmental impacts in a manner that is consistent with achieving reasonable electric rates.” Wis. Stat. § 196.491(3)(d)3r.

“For a high-voltage transmission line that is designed for operation at a nominal voltage of 345 kilovolts or more, the high-voltage transmission line provides usage, service or increased regional reliability benefits to the wholesale and retail customers or members in this state and the benefits of the high-voltage transmission line are reasonable in relation to the cost of the high-voltage transmission line.” Wis. Stat. § 196.491(3)(d)3t.

determination under the “adequate supply” criterion “is estimating the future energy needs of the state and forecasting the economic impact of proposed plans”) (emphasis added). It can hardly be said there is an “adequate supply” of electric energy that can meet the “reasonable needs” of the public if the costs to purchase that energy are exorbitant. At the same time, it is rational for the Commission to conclude that a project satisfies the public’s reasonable needs for an adequate supply of electric energy if that Project reduces energy costs. In short, the Commission must be permitted to consider economic factors to maintain a reliable and cost-effective supply of electricity for consumers in the state. If the Court limited the Commission to considering only reliability concerns, it would drastically change how CPCNs are issued in this state.

Indeed, in at least three previous transmission dockets, the Commission has interpreted “the reasonable needs of the public for an adequate supply” criterion to include economic and/or public policy benefits, not just local reliability needs. For example, in 2007, ATC submitted an application to construct a high-voltage transmission line between the Rockdale Substation in Dane County and the Paddock Substation in Rock County. *See Paddock-Rockdale Order*, Docket No. 137-CE-149, *Final Decision*, at 5 (Wis. PSC Jun. 13, 2008). The Commission noted that “the purpose of this project is primarily economic” because it was not needed solely to address a specific reliability issue. *Id.* at 5. Just as it did in the current proceeding, ATC analyzed the economic benefits of the Paddock-Rockdale Project against other alternative projects in seven plausible futures. (*Id.* at 8). The Commission found that the project had clear economic benefits and that it would improve wholesale competition in Wisconsin, and approved

the project, finding that “the reasonable needs of the public include the financial needs of electric utility customers.”¹⁵ *Id.* at 3.

Several years later, ATC proposed to construct a 345-kV line between the Pleasant Prairie switchyard in Kenosha County and the Zion Energy Center in Illinois. *See, e.g., Pleasant Prairie-Zion Energy Center Order*, Docket No. 137-CE-161, *Final Decision* (Wis. PSC May 7, 2012). Again, the Commission noted that the purpose of this project was “primarily economic” because it was needed to relieve transmission congestion in the southeastern Wisconsin/northern Illinois area and “enhance market economic performance for Wisconsin and the region.” *Id.* at 5. The Commission approved the project, again finding that the “reasonable needs of the public include the financial needs of electric utility customers.” *Id.* at 3.

The same year it authorized the Pleasant Prairie-Zion Energy Center Project, the Commission also approved the CapX line. *See CapX2020 Order*, Docket No. 05-CE-136, *Final Decision* (Wis. PSC May 30, 2012).¹⁶ In approving the CapX project, the Commission noted its obligation “to ensure that Wisconsin receives adequate and reliable electric service, now and going forward.” *Id.* at 7. As with the Badger Coulee Project, the purpose of the CapX project

¹⁵ The Petitioner also argues that the Commission should have promulgated a formal rule codifying the criteria that it adopted in the Paddock-Rockdale Order for projects that “will be constructed primarily for economic purposes.” (Pet’r’s Initial Br., at 27-28). The Legislature explicitly has recognized that a “rule” does not include “a decision or order in a contested case” and that Wis. Stat. § 227.10, (*See* Pet’r’s Initial Br., at 27), does not apply to agency actions in contested cases. *See* Wis. Stat. § 227.01(13)(b). The Commission did not reference or cite anything from the Paddock-Rockdale Order in the Badger Coulee Project’s Final Decision. It is therefore difficult to understand how this criteria—or whether the Commission should have adopted it as a rulemaking—should have any bearing on this case. In any event, if the Petitioner had an issue with the criteria that the Commission adopted in the Paddock-Rockdale Order, it should have filed a petition for judicial review when the Commission issued that decision in 2008.

¹⁶ The CapX line is a high-voltage transmission line that will run from the Wisconsin border at the Mississippi River west of Alma, Wisconsin, through Trempealeau County, to a new substation built in Holmen, Wisconsin. *See CapX2020 Order*, Docket No 05-CE-136, at 7-8. This line is part of a larger, multi-utility transmission line, which will extend from the Mississippi River westward toward Rochester, Minnesota, and then northward toward Hampton, Minnesota. *Id.* at 8. The Commission issued a CPCN for the Wisconsin portion of this project in May 2012. *Id.* at 48-53.

was to provide “local reliability and regional benefits.” *Id.* at 9. Again, the Commission credited the applicants’ economic analysis, which demonstrated that the CapX project would improve the transfer capability between Minnesota and Wisconsin, reduce wholesale prices, and increase access to renewable energy outside of the state. *Id.* at 15. The Commission noted that the project would provide hundreds of millions of dollars in economic benefits over its 40-year lifespan, and concluded that “given today’s electric industry structure, an analysis of the need for the proposed project should include not only local area needs, but also consider long-term regional benefits.” *Id.* at 17.

In these decisions, the Commission did exactly what the Legislature intended when it delegated authority to the Commission to implement the CPCN Law—namely, employ its technical expertise and experience to ensure that Wisconsin ratepayers have a reliable and cost-effective supply of electric energy that meets the state’s public policy objectives, now and in the future. The Commission thoughtfully considered how changes to the electric power sector would impact the cost of electricity in Wisconsin and authorized projects that would not only help the state adapt to this changing landscape, but would also reduce costs for ratepayers. These decisions demonstrate that the Commission has consistently—and reasonably—interpreted the “the reasonable needs of the public for an adequate supply” criterion to include reliability, economic and public policy factors. The Commission’s Final Decision in the current case simply furthers that practice. For these reasons, the Court should reject the Petitioner’s interpretation of the “adequate supply” criterion and defer to the Commission’s reasonable interpretation of the statute.¹⁷

¹⁷ The Petitioner also argues that the Court should vacate the Commission’s Final Decision because “there is no point in remand.” (Pet’r’s Initial Br., at 30). To be clear, the Applicants believe that the Court should affirm the Commission’s decision in its entirety. That said, what the Petitioner is proposing is unprecedented. We are not

2. Under either the Petitioner’s or the Commission’s interpretation of the statute, substantial evidence provided a rational basis for the Commission to determine that the Badger Coulee Project satisfies the reasonable needs of the public for an adequate supply of electric energy.

In this case, the Petitioner and the Applicants’ agree that the Court should apply the substantial evidence standard to review the Commission’s factual determination that the Project “satisfies the reasonable needs of the public for an adequate supply of electric energy.” (Pet’r’s Initial Br., at 11). The Wisconsin Supreme Court has summarized the substantial evidence standard as follows:

Substantial evidence does not mean a preponderance of evidence. It means whether, after considering all the evidence of record, reasonable minds could arrive at the conclusion reached by the trier of fact. “[T]he weight and credibility of the evidence are for the agency, not the reviewing court, to determine.” An agency’s findings of fact may be set aside only when a reasonable trier of fact could not have reached them from all the evidence before it, including the available inferences from that evidence. *Milwaukee Symphony Orchestra, Inc. v. DOR*, 2010 WI 33, ¶31, 324 Wis. 2d 68, 781 N.W.2d 674 (internal citations omitted).

As the Wisconsin Supreme Court has noted, it is not the province of the courts “to determine this state’s energy policy,” so judicial review of the Final Decision “is limited, pursuant to Wis. Stat. § 227.57, to whether the PSC *erroneously* approved [the CPCN Application].” *Clean Wisconsin*, 2005 WI 93 ¶ 35 (emphasis in original).

The Petitioner’s opening brief is littered with erroneous assertions that the Project “does not resolve, and never was directed at” resolving reliability issues, and that the Commission essentially admitted as much. (*See, e.g.*, Pet’r’s Initial Br., at 15, 18-19, 21). The record evidence demonstrates the complete opposite. The Applicants, MISO, and numerous other

aware of any case in which a Wisconsin court has vacated a Commission CPCN decision without remanding the case back to the Commission.

parties all agreed that the Project is needed to cost effectively address reliability issues on the transmission grid in western Wisconsin. And the Commission staff verified these parties' analyses. Since 1999, there have been at least a half dozen studies or initiatives by the Commission, MISO, ATC, and other stakeholders evaluating the economic and reliability benefits of a transmission line between the La Crosse and Madison areas. (*See* R. 365(13), at 9:1-11:19; R. 365(19), at 16:2-17:24). For example, in 2010, ATC and neighboring transmission owners (including DPC, SMMPA, and Xcel Energy, the parent company of NSPW) issued the Western Wisconsin Transmission Reliability Study (WWTRS), which identified a number of issues concerning the reliability of the transmission grid in western Wisconsin and concluded that the Badger Coulee Project could resolve many of those issues. (*Id.* at 10:1-15; *see also* R. 155(90), at 112).

Another important study of the Project came between 2010 and 2011, when MISO evaluated it as part of the Multi-Value Project (MVP) portfolio of transmission projects. (R. 365(13), at 11:20 to 14:4; R. 365(39), at 15r:7 to 22r:5). An MVP project is a relatively new type of transmission project that must be (1) studied within a portfolio of transmission projects that deliver benefits across the MISO region, and (2) meet one of three reliability and economic objectives. (R. 365(13), at 12:1-14; R. 365(39), at 15r:7 to 16r:19). MISO conducted an intensive study of the transmission projects in the MVP portfolio, dedicating almost 35,000 staff hours between 2008 and 2011 to this effort and holding over 200 public meetings during the same timeframe. (R. 365(39), at 19r:18-22).

In December 2011, the MISO Board of Directors granted MVP status to a portfolio of 17 projects from across the MISO footprint, including the Badger Coulee Project. (R. 365(13), at 12:15 to 13:4). MISO found that these transmission projects will enable states to reliably meet

their renewable energy mandates—that is, to keep the lights on, despite changes in where and how energy is produced— while also producing benefits to ratepayers that exceed project costs. (*Id.*; R. 365(39), at 17r:12-23). With respect to the Badger Coulee Project, MISO concluded that “the Badger Coulee Project will be needed in order to ensure the continued reliable operation of the regional transmission system, including the NSPW and ATC transmission systems, while meeting the renewable energy mandates of the MISO footprint.” (R. 365(39), at 20r:14-23). Thus, although MISO determined that the Badger Coulee Project is justified on economic grounds, it was also “reviewed and justified separately based on its reliability benefits.” (*Id.* at 21r:8).

The Applicants’ studies included in the record below likewise demonstrate that the Project will address reliability issues and provide substantial reliability benefits for Wisconsin ratepayers. The transmission network in western Wisconsin is not robust and consists mostly of lower voltage transmission facilities. (R. 365(13), at 28:16 to 29:22; R. 365(19), at 14:5-9). As noted above, the Applicants’ WWTRS demonstrated that the Project is a viable solution to reliability issues on the transmission system in and around this area. (R. 365(13), at 28:21 to 29:7; R. 365(19), at 17:18-24). Moreover, in response to requests from the Commission Staff, the Applicants conducted an updated reliability analysis, which found that the Badger Coulee Project would avoid the need to construct approximately 29 reliability projects at an avoided cost of approximately \$190 million. (R. 365(13), at 29:11-22; *see also* R. 156(124)). The Applicants’ studies likewise indicate that the Project will be able to more reliably support future load growth in the La Crosse/Winona area, which has been experiencing higher levels of load growth than the rest of the state. (*See* R. 155(90), at Ex. 2; R. 156(147), Data Request Response 10.02; R. 365(19), at 8:19 to 12:16).

In its Initial Brief, the Petitioner cites none of this evidence. Rather, the Petitioner speciously argues that the Commission “confirmed that the project is not needed to ensure ‘adequate supply’” based on the Commission’s statement that “the record does not support the need for the proposed Badger Coulee project solely on the basis of the La Crosse area load serving needs” (*See* R. 91, at 16). The Petitioner is incorrect and is taking statements from the Commission’s Final Decision out of context. In the very next sentence, the Commission noted that “the record clearly establishes that the proposed project will provide substantial reliability benefits to the La Crosse area electric grid” and that these benefits, in addition to the economic and public policy benefits noted above, “more than substantiate” the need for the Project. (*Id.*) (emphasis added). In other words, the Commission believed that, although load growth in the La Crosse area did not, *in and of itself*, justify a need for the Project, the Project’s other reliability benefits (discussed above and elsewhere in the Commission’s Final Decision) are substantial enough to justify the need for the Project (*See, e.g., id.* at 14-16). This finding demonstrates that the Commission carefully considered and weighed the evidence to make a determination on an important statutory factor in the CPCN Law—the reasonable needs of the public for adequate electric supply.

Thus, notwithstanding the Petitioner’s baseless assertions to the contrary, there was a wealth of evidence in the record below indicating that the Project is needed to resolve reliability concerns on the transmission grid in western Wisconsin. The Petitioner may disagree with this evidence or believe that the Commission should not have relied on it, but that is no basis for overturning the Commission’s decision. *See* Wis. Stat. § 227.57(10) (“[T]he court shall not substitute its judgment for that of the agency as to the weight of the evidence on any disputed finding of fact.”); *Wis. Prof’l Police Ass’n v. Pub. Serv. Comm’n of Wis.*, 205 Wis. 2d 60, 67,

555 N.W.2d 179 (Ct. App. 1996) (noting that, when reviewing an administrative agency's decision, it is not a court's job to "judge the credibility of witnesses or weigh the evidence"); *Wis. Ass'n of Mfrs. & Commerce, Inc. v. Pub. Serv. Comm'n*, 94 Wis. 2d 314, 324, 287 N.W.2d 844 (Ct. App. 1979) ("[I]f two conflicting views may be sustained by the evidence, it is for the agency to determine which view of the evidence it wishes to accept."). Moreover, it is undisputed that the Project will produce substantial economic and public policy benefits for Wisconsin. Therefore, under either the Petitioner's or the Commission's interpretation of the statute, the Commission's finding that the Project "satisfies the reasonable needs of the public for an adequate supply of electric energy" is supported by substantial evidence and should be upheld.¹⁸

C. The Court should affirm the Commission's determination that the EIS was adequate and reasonable because the Commission had a rational basis for its conclusion.

Under Wisconsin law, all state agencies must consider the environmental impacts of "major actions" that could significantly impact the quality of the human environment. *See* Wis. Stat. § 1.11; *Wis. Environmental Decade, Inc. v. Dept. of Natural Resources*, 94 Wis. 2d 263, 267, 288 N.W.2d 168 (Ct. App. 1979). The Commission's regulations implementing this law provide that an environmental impact statement, or EIS, must be prepared for all "Type I Actions," a term that is defined to include the construction of an electric transmission line that has a nominal voltage of 345-kV, if the line is longer than 10 miles and if any related construction activity takes place outside the area of an existing transmission line right-of-way.

¹⁸ The Petitioner also asserts that the Commission's argument before a proceeding at the Federal Energy Regulatory Commission (FERC) also amounted to an admission that the "long term needs of the La Crosse area had been wholly addressed by the CapX line." (Pet'r's Initial Br., at 21). The excerpt quoted by the Petitioner, however, says nothing of the sort. There is simply nothing in the FERC decision that "reconfirm[s] the lack of necessity" for the Badger Coulee Project. (*Id.*).

See Wis. Admin. Code § PSC 4.10(1). The purpose of an EIS is to enable an agency to take a “hard look” at the environmental consequences of a proposed action. See, e.g., *Wis.*

Environmental Decade, 98 Wis. 2d at 298.

1. The Court’s review of an EIS is narrow, and the Commission’s decision on the EIS must be upheld if it had a rational basis.

In *Clean Wisconsin*, the Wisconsin Supreme Court explained the standard of review that applies when a party alleges that an environmental impact statement is inadequate:

This Court’s review of an EIS is narrow. The PSC’s determination that an EIS is adequate is a conclusion of law to which this court accords great weight deference. As such, it is not our role to evaluate the adequacy of the EIS; we instead evaluate whether the PSC’s determination that the EIS was adequate was reasonable. [Petitioner] bears the burden of demonstrating that the PSC’s determination that the EIS was adequate was without rational basis. *Clean Wisconsin*, 2005 WI 93 at ¶ 190 (internal citations omitted).

The Court noted that, no matter how exhaustive an EIS is, “a challenger can always point to a potentiality that was not addressed.” *Id.* at ¶ 191 (internal quotation marks and citations omitted). The Court acknowledged that an EIS must consider reasonable alternatives, but also stated that “every potentiality need not be evaluated.” *Id.* Rather, courts must review the adequacy of an EIS “in light of the ‘rule of reason,’ which requires an EIS ‘to furnish only such information as appears to be reasonably necessary under the circumstances for evaluation of the project rather than to be so all-encompassing in scope that the task of preparing it would become either fruitless or well nigh impossible.’” *Id.* (internal citations omitted); see also *Citizens’ Utility Board v. Pub. Serv. Comm’n*, 211 Wis. 2d 537, 552-54, 565 N.W.2d 554 (Ct. App. 1997).

In its brief, the Petitioner admits that the EIS should be reviewed using the great weight deference standard. (Pet’r’s Initial Br., at 12). But the Petitioner fails to note that it bears the burden of showing that the Commission’s determination on the EIS was without a rational basis.

See, e.g., Clean Wisconsin, 2005 WI 93, ¶ 190; *Citizens' Utility Bd.*, 211 Wis. 2d at 553. In this proceeding, the Petitioner seems to attempt to satisfy that burden by arguing that the EIS itself was insufficient, (Pet'r's Initial Br., at 31-42), but the Petitioner's argument is misplaced. As explained below, the Commission reasonably concluded that the EIS thoroughly examined the environmental impacts of the Project and alternatives to it. The Petitioner has failed to demonstrate that the Commission's determination lacked a rational basis.

2. The Commission had a rational basis to conclude that the EIS adequately considered alternatives to the Project.

The Petitioner's arguments regarding the inadequacy of the EIS blur several concepts, but the Petitioner's primary objection appears to be that the EIS did not adequately consider alternatives to the Badger Coulee Project. (*See* Pet'r's Initial Br., at 31, 34-35, 38); *see also Citizens' Utility Bd.*, 211 Wis. 2d at 553 (analyzing a similar argument in another case and noting that "[Petitioner's] challenge is more that the [Commission's] determination of adequacy lacks a rational basis because the EIS does not 'go far enough' in addressing" alternatives). Although the EIS must examine reasonable alternatives, it need "furnish only such information as appears to be reasonably necessary under the circumstances for evaluation of the project. . . ." *Clean Wisconsin*, 2005 WI 93, ¶ 191.

The EIS at issue in this proceeding is over 600 hundred pages long, examines more than a half-dozen alternatives and contains a detailed analysis of the potential social and environmental impacts of the Project. (R. 337(1), at 83-398). The EIS examines in detail various transmission system alternatives and non-transmission alternatives to the Project, and analyzes various potential impacts, including aesthetics, agricultural lands, airports and airstrips, archaeological and historic resources, cultural concerns, electric and magnetic fields, endangered/threatened and protected species, highway impacts, invasive species, noise and light impacts, property owner

issues, radio and television reception, recreation, safety, stray voltage and dairy livestock, water resources, wetland resources, and woodlands. (*Id.* at 93-124). This is exactly the sort of “hard look” that the Legislature intended agencies to take when preparing an EIS. The EIS also contains an extensive discussion on non-transmission alternatives to the Project, including a “no build” alternative, implementation of energy efficiency and load reduction,¹⁹ and construction of generation and distributed resources. (*Id.* at 74-81).

In *Citizens’ Utility Board*, the Court of Appeals discussed a challenge similar to the current one, where the petitioner argued that an EIS did not “go far enough” in evaluating alternatives. In that case, the Commission approved Wisconsin Electric Power Company’s application to construct and operate an independent spent fuel storage installation at its Point Beach Nuclear Power Plant (PBNPP). *See Citizens’ Utility Board*, 211 Wis. 2d at 540. The Citizens Utility Board petitioned for judicial review of this order, arguing that the EIS did not adequately consider “alternative sources of power” if PBNPP shut down in 1998. *Id.* at 557. To assess whether the Commission reasonably determined that an EIS adequately considered alternatives, the Court of Appeals relied on the Commission’s analysis of the feasibility of those alternatives relative to the proposed project. *Id.* at 557-560. The Court of Appeals found it “significant” that the Commission had determined that the storage facilities would be necessary, regardless of whether the PBNPP shut down in 1998. *Id.* In other words, the Commission’s conclusion that the alternative (shutting down the PBNPP) was technically infeasible (because additional storage facilities would be needed, regardless of the operational status of the PBNPP) meant that the EIS adequately addressed alternatives.

¹⁹ The goal of energy efficiency and load reduction is to reduce the amount of energy that consumers use, which in turn reduces the need for new energy resources.

Likewise, in this case, the Commission determined that energy efficiency, conservation, generation, and distributed resources were not cost effective or technically feasible alternatives to the transmission project. (R. 91, at 6). Simply because the Commission found those alternatives were not cost effective or technically feasible does not mean it shirked its responsibilities. Indeed, it is important to remember that the purpose of an EIS is not to dictate any particular conclusion, but to inform decision-making and public participation. *See, e.g., Habitat Education Center, Inc. v. U.S. Forest Service*, 593 F. Supp. 2d 1019, 1024-25 (E.D. Wis. 2009). As the Wisconsin Supreme Court has stated, “[we] emphasize that the EIS is an informational tool that does not compel a particular decision by the agency or prevent the agency from concluding that other values outweigh the environmental consequences of a proposed action.” *Clean Wisconsin*, 2005 WI 93, ¶ 203. An EIS need not include an exhaustive discussion of every alternative imaginable.

Here, the Commission had a rational basis for concluding that the EIS’ treatment of alternatives to the Project was adequate. In particular, in their planning analysis, the Applicants evaluated numerous transmission and non-transmission alternatives (including energy efficiency, distributed generation, and load reduction programs) and concluded that these alternatives could not “feasibly and cost effectively provide the same package of diverse benefits as Badger Coulee.” (R. 155(90): Ex. 1, at 102-105 & Tables 12, 13, & 15; R. 156(108): Data Request Response 4.06; R. 365(13), at 33-37). The EIS reflects this analysis and these conclusions, giving the Commission a rational basis on which to find the EIS’ discussion of alternatives to be adequate. (R. 337(1), at 74-76). The Court should uphold the Commission’s determination that the EIS adequately examined alternatives.

3. There was a rational basis for the Commission to conclude that the EIS adequately considered the Project's need.

In addition to taking issue with the EIS' evaluation of alternatives, the Petitioner argues that the EIS is insufficient in its discussion of the "purpose and need" for the Project. (Pet'r's Initial Br., at 36-40). According to the EIS, the purpose of the Project is to "1) improve electric system reliability locally and regionally; 2) deliver economic savings for Wisconsin utilities and electric consumers; and 3) expand infrastructure to support the public policy of greater use of renewables." (R. 337, at 1). Once again, the relevant question is not whether the EIS itself was insufficient in its discussion of the purpose of, and need for, the Project, but whether the Commission had a rational basis for determining that the EIS' discussion of this topic was adequate.

The section of the EIS discussing the purpose of and need for the Project contains information supplied by the Applicants, including information provided in response to the Commission Staff's data requests, as well as a discussion of the Commission Staff's analysis of the need for the proposed project. (R. 337 at 39-81). The EIS also describes the extensive modeling analyses MISO and the Applicants performed to analyze electric system reliability (locally and regionally), the Project's potential economic savings, and Project alternatives under a variety of hypothetical future scenarios. (*Id.*) These detailed and technical analyses provided a rational basis for the Commission to conclude that the EIS was adequate with regard to its discussion of the Project's purpose and need.

Petitioner also claims that the EIS was not "objective" because it referenced the CPCN application, and Petitioner chastises the EIS for relying upon information obtained from the Applicants. (*See, e.g.*, Pet'r's Initial Br., at 38-40) ("[T]he FEIS three times uses the phrase 'the applicants state' (FEIS, p. 55) to discuss the system.") However, the Petitioner is ignoring the

fact that the Commission's rules explicitly require the EIS to contain information developed by the Applicants. *See* Wis. Admin. Code § PSC 4.30(3). The regulations direct an EIS to include "information obtained from the project applicant" to develop the EIS' content, including the following:

- (a) A description of the proposed action and the affected environment and other relevant information.
- (am) A description of the purpose of the proposed action and of the need for the proposed action....
- (c) An evaluation of the reasonable alternatives to the proposed action and significant environmental consequences of the alternatives. . . . *Id.*

Lastly, Petitioner makes a convoluted argument in which it seems to imply that the CapX transmission line is an alternative to the Badger Coulee Project that should have been explored more in the "need" section of the EIS. (*See* Pet'r's Initial Br., at 39-40). The Petitioner's argument on this issue, however, completely misses the mark. The Commission authorized construction of the CapX project nearly four years ago. *See CapX2020 Order*, Docket No. 05-CE-136, *Final Decision* (Wis. PSC May 30, 2012). The CapX project and the Badger Coulee Project are not mutually exclusive, and there is no indication in this record, or any other record, to the contrary. The CapX project will connect to the Badger Coulee Project and is not a replacement for it.

- 4. The Petitioner misstates the law regarding the requirements for the Commission's EIS because the Commission is not required to examine a separate "environmentally preferred" alternative.

Petitioner argues that the EIS suffers from a "categorical" failure because it did not separately examine an "environmentally preferred" alternative, nor did the Commission create a "record of decision." (Pet'r's Initial Br., at 3, 31, 34, and 41). There is no requirement for the EIS in this proceeding to separately examine an "environmentally preferred" alternative or for the Commission to issue a document entitled "record of decision." In any event, from a practical

perspective, the Commission did examine an “environmentally preferred” alternative and it issued a “record of decision.”

This is a construction project, and by its very nature, construction causes some level of environmental impacts. The EIS examined a “no build” alternative and many non-transmission alternatives, which, regardless of what they are called, are “environmentally preferred” alternatives because they do not involve construction of any high-voltage transmission project. In addition, the Commission’s Final Decision on the Project after the technical hearing—which approved the Project and selected the route—is the Commission’s “record of decision.” The Petitioner’s legal arguments on these points are therefore moot.

In any event, the Wisconsin Environmental Policy Act (WEPA) requires the lead agency to prepare an EIS “substantially following” the guidelines issued by the United States Council on Environmental Quality (CEQ) under P.L. 91-190, 42 U.S.C. § 4331. *See* Wis. Stat. § 1.11(2). The CEQ guidelines state that agencies shall “[i]dentify the agency's preferred alternative or alternatives, if one or more exists . . . unless another law prohibits the expression of such a preference.” 40 C.F.R. § 1502.14(e). Wisconsin law, in turn, provides that the Commission Staff “appear neither in support of nor in opposition to any cause” and must only “discover and present, if necessary, information pertinent to the docket.” Wis. Admin. Code § PSC 2.03.

Indeed, at the direction of the Governor and following passage of WEPA, agencies in Wisconsin crafted their own rules interpreting WEPA. *See e.g., Larsen v. Munz*, 167 Wis. 2d 583, 590-91, 482 N.W.2d 332 (1992); Note to Wis. Admin. Code ch. PSC 4 (“Chapter PSC 4 establishes procedures to provide the public service commission of Wisconsin with adequate information on the short-term and long-term environmental effects of its actions, as required by the Wisconsin Environmental Policy Act, ch. 274, section 1, laws of 1971 and s. 1.11, Stats.”).

Like the CEQ guidelines, the Commission's rules specify the content of information that needs to be included in an EIS. *See* Wis. Admin. Code § PSC 4.30(3). The Commission's rules do not require any explicit examination of an "environmentally preferable" alternative. Instead, the Commission's rules state that an EIS shall include:

An evaluation of the **reasonable** alternatives to the proposed action and significant environmental consequences of the alternatives, including those alternatives that could avoid some or all of the proposed action's adverse environmental effects and the alternative of taking no action.

Wis. Admin. Code § PSC 4.30(3)(c) (emphasis added). The EIS met that requirement, and Petitioner's arguments regarding an "environmentally preferable" alternative are inapposite.

Similarly, there is no requirement in Wis. Admin. Code ch. PSC 4 for the Commission to prepare a document titled the "record of decision." The Final Decision under review in this proceeding contains the Commission's determinations regarding its analysis of the environmental impacts of the Badger Coulee Project and the EIS. The fact that the words "record of decision" are not present does not detract from the Commission's findings. Thus, the Court should uphold the Commission's determination that the EIS was adequate because it meets the applicable statutory and administrative requirements, and because there was a rational basis for the Commission to conclude that the EIS was adequate.

D. The Court should apply great weight deference to the Commission's interpretation of the Siting Priorities Law and uphold the Commission's routing and siting determinations near the Town of Holland.

In the Final Decision, the Commission required that, north of the Briggs Road Substation, the Applicants triple-circuit the Project with two existing transmission lines for a distance of less

than a mile because this is “consistent with North American Electric Reliability Corporation^[20] (NERC) reliability criteria and will avoid violations of NERC reliability planning criteria for contingencies involving multi-circuiting of transmission lines.” (R. 91, at 25). The Petitioner has a two-fold challenge to this very narrow part of the Commission’s routing and siting decision. (*See* Pet’r’s Initial Br., at 44-53). On the one hand, the Petitioner alleges that the Commission violated the CPCN Law and the Siting Priorities Law by not requiring a longer length of the Project to be triple-circuited with the CapX line and a 161-kV line in this area. (*Id.* at 44-46). At the same time, the Petitioner argues that the Commission’s decision in this regard is “unsupportable under any standard, or plain logic.” (*Id.* at 46).

Thus, the Petitioner appears to be challenging both the evidentiary support for the Commission’s decision, as well as its interpretation of the relevant siting laws. With respect to the former challenge, the Court should apply the “substantial evidence” test; with respect to the latter, the Court should apply great weight deference to the Commission’s interpretation of the Siting Priorities Law and the NERC reliability criteria.

1. The Commission’s decision to triple-circuit the Project in this area with existing transmission lines for less than a mile is supported by substantial evidence.

The Commission used its technical expertise when it decided to not co-locate the Project with two other transmission lines for a distance of about eight miles north of the Briggs Road Substation, as the Petitioner had advocated in the proceedings below. In addition to its other reliability benefits, the Badger Coulee Project will also benefit the reliability of the high-voltage

²⁰ NERC is a not-for-profit corporation selected by FERC whose primary role is to assure the reliability of the country’s bulk electric system. The bulk electric system includes transmission lines, including the Badger Coulee Project, that are capable of operating above 100-kV. NERC assures the reliability of the bulk electric system by issuing and enforcing reliability requirements, which transmission owners (including the Applicants) are required to comply with when planning and operating the bulk power system. (R. 365(19), at 18:1-14; R. 337(1), at 150).

electric system in the La Crosse/Winona areas by providing a second 345-kV line into those areas. (R. 91, at 14-15; R. 365(19), at 9:19 to 11:14). The recently completed CapX project provides a 345-kV line into the area and can serve the energy needs of the area until peak demand reaches 750 megawatts (MW).²¹ (R. 365(19), at 8:19 to 10:9). Beyond 750 MW, a second 345-kV line is needed. (*Id.*). NSPW's transmission planner estimated that a new 345-kV line could be needed as soon as 2026²² in the La Crosse/Winona area, depending on how fast electrical load grows in this area. (R. 91, at 15; R. 365(19), at 11:6-14; R. 155(90): Appx. D, Ex. 2, at § 2.4). The Badger Coulee Project provides this necessary additional 345-kV line to meet future electrical needs in the La Crosse/Winona areas. (R. 365(19), at 12:10-16). However, for these local reliability benefits to be credited by NERC, the Project's configuration must comply with NERC planning criteria.

The NERC reliability requirements, which became mandatory after a major blackout struck the east coast in 2003, dictate that the transmission system must be planned to reliably meet customer's energy demands under a variety of circumstances, including contingency conditions. (*Id.*, at 18:2-14). A contingency condition occurs when certain elements of the system, such as a transmission line, are out-of-service because of planned events (such as maintenance) or unplanned events (such as storm damage). (*Id.*). NERC is required to file its reliability standards with FERC and can penalize transmission owners that violate any such standard that FERC approves. *See* 16 U.S.C. §§ 824o(d), (e).

²¹ Peak demand is the maximum electrical demand that is experienced during a year. NERC requires that utilities plan the transmission system to meet projected peak demand. (R. 365(19), at 5:1-11).

²² While 2026 might seem like a long time away, it is right around the corner when it comes to utility planning. The planning, permitting and constructing of a high-voltage transmission line can easily take eight to ten years from start to finish. *Cf. Clean Wisconsin*, 2005 WI 93 at ¶¶ 12, 141 (noting that, due to the long lead time associated with constructing new power generation facilities, the Commission recommends planning at least five years into the future, and that "part of the calculus" in making factual determinations under the CPCN Law is "estimating future energy needs of the state").

Mr. Donald Neumeyer, an Advanced Engineer who works at the Commission, and Ms. Amanda King-Huffman, a Senior Regional Transmission Planner for NSPW, were the only witnesses who provided testimony in the record analyzing the NERC criteria in relation to triple-circuiting the Project with existing transmission lines. (R. 156(108): Data Request Response 4.04; R. 365(19), at 18:1 to 19:7; R. 375: Neumeyer Hearing Tr. at 114:19 to 115:23). These two transmission planners independently examined this issue and both determined that co-locating the Badger Coulee Project and the CapX line for more than one mile could not be accommodated without violating NERC criteria. (*Id.*). The testimony of these two transmission planners was unrebutted during the proceeding.

The Petitioner attempts to claim that the NERC planning criteria are already implicated because the CapX line and another 161-kV line are already double-circuited in this area. (Pet'r's Initial Br., at 48-51). The Petitioner essentially states that there is no problem triple-circuiting the Badger Coulee Project with these two lines because "[t]he applicants already have to have a plan that can include interrupting customers because *such plans are part-and-parcel of studying a Category C Contingency.*" (*Id.* at 49). This argument misses the mark entirely. The NERC criteria would be violated because there would be two 345 kV lines on the same structure for more than one mile; the 161 kV line's presence is not material to this issue. In other words, if the two 345-kV lines were co-located for more than a mile, NERC would not consider the Badger-Coulee Project a second 345-kV source to the La Crosse/Winona area, and would not credit any of the Project's reliability benefits to the area. Rather, if these two 345 kV lines were co-located, NERC would require a plan to interrupt service to customers in the event that these two lines are out of service to maintain acceptable loadings and voltages on the transmission system. (*Id.*; R. 156(108): Data Request Response 4.04).

The Petitioner is essentially asking this Court to substitute its judgment for that of two experts on a highly technical aspect of the Commission's decision. Again, simply because the Petitioner does not agree with the Commission's conclusion does not mean that warrants overturning the Commission's routing and siting decision. As discussed above, substantial evidence supports the Commission's decision to co-locate the Badger Coulee Project and the CapX line for less than one-mile. Indeed, given that the Petitioner submitted no evidence regarding this issue in the proceedings below, this evidence is un rebutted. There is simply no evidentiary basis on which this Court could overturn the Commission's decision to limit triple-circuiting of the Project to less than a mile in the Town of Holland.

2. The Commission's routing and siting decision in the area of the Town of Holland complied with the Siting Priorities Law and the CPCN Law.

As for the Commission's legal interpretation of the CPCN Law, the Siting Priorities Law (Wis. Stat. § 1.12(6)), and the NERC reliability criteria, the Wisconsin Supreme Court has said great weight deference is appropriate for interpretations of the CPCN Law, but no court has explicitly examined the standard of review that should apply to the other two. However, the Wisconsin Supreme Court has determined the standard of review for a law similar to the Siting Priorities Law. And the Commission's interpretation of that similar law, the Energy Priorities Law, *see* Wis. Stat. § 1.12(4),²³ met the four elements that must be satisfied for great weight deference to apply. *Clean Wisconsin*, 2005 WI 93 at ¶¶ 111-119. Those elements include:

²³ The Energy Priorities Law states, in relevant part:
In meeting energy demands, the policy of the state is that, to the extent cost-effective and technically feasible, options be considered based on the following priorities, in the order listed:

- (a) Energy conservation and efficiency;
- (b) Noncombustible renewable energy resources;
- (c) Combustible renewable energy resources;
- (d) Nonrenewable combustible energy resources . . .

(1) the agency was charged by the legislature with the duty of administering the statute; (2)[] the interpretation of the statute is one of long-standing; (3)[] the agency employed its expertise or specialized knowledge in forming the interpretation; and (4)[] the agency's interpretation will provide uniformity and consistency in the application of the statute. *Clean Wisconsin*, 2005 WI 93 at ¶ 39 (internal citations omitted, brackets in original).

The Siting Priorities Law and the Energy Priorities Law are similar, in terms of their structure and the Commission's experience and authority implementing them. The Legislature granted the Commission substantial discretion to determine, in the case of the Energy Priorities Law, what types of energy resources should be constructed in the state, and, in the case of the Siting Priorities Law, where transmission corridors should be located. The Commission's interpretation of the Siting Priorities Law also meets the four requirements for great weight deference.²⁴

As to the Commission's interpretation of the NERC reliability standards, it is hard to imagine a set of standards that require more technical expertise to review than these. Clearly, the

Wis. Stat. § 1.12(4).

²⁴ The first element of great weight deference is easily satisfied, since the Legislature has explicitly charged the Commission with applying the Siting Priorities Law in its CPCN determinations. *See* Wis. Stat. § 196.025(1m) ("Transmission Corridors. The commission shall implement the policy specified in s. 1.12(6) in making all decisions, orders, and rules affecting the siting of new electric transmission facilities."). Second, the Commission has frequently and consistently interpreted the Siting Priorities Law in light of its obligations under the CPCN Law. For example, in *Application of ATC to Construct the Gardner Park-Central Wisconsin 345 kV Transmission Project*, 2006 Wisc. PSC Lexis 309, Docket Nos. 137-CE-122 and 137-CE-123, *Final Decision* (Wis. PSC Jun. 30, 2006), the Commission examined ATC's proposal to construct transmission facilities through multiple counties in northeastern Wisconsin. The third requirement for great weight deference is also met because, as noted above, the Siting Priorities Law requires the Commission to interpret the phrase "consistent with economic and engineering considerations, reliability of the electric system, and protection of the environment." *See* Wis. Stats. §§ 1.12(6), 196.025(1m). This, in turn, calls for the Commission to "rely on its expertise of highly technical subjects such as economic modeling and technical feasibility." *Clean Wisconsin*, 2005 WI 93 at ¶ 117. Finally, by interpreting the provisions of the Siting Priorities Law in light of the requirements under the CPCN Law, the Commission has provided an interpretation of the Siting Priorities Law that will promote uniformity in the application of the law as it relates to CPCN determinations. *Id.* at ¶ 118. As such, the fourth requirement for the great weight deference standard is also satisfied.

Commission, its technical experts, and the Applicants' technical experts are in the best position to interpret technical electric reliability standards.

Moving to the merits of the Petitioner's statutory interpretation claims, the Siting Priorities Law and the CPCN Law do require transmission lines to be sited along existing utility corridors, where feasible. In other words, these laws grant the Commission considerable discretion when making routing and siting determinations. The CPCN Law requires the Commission to find that a high-voltage transmission line uses existing rights-of-way "to the extent feasible" and to find that it will not "unreasonably interfere with the orderly land use and development plans for the area involved." Wis. Stat. §§ 196.491(3)(d)3r., 6. (emphasis added). The Siting Priorities Law establishes existing utility corridors as the preferred location for transmission lines, but this is by no means an absolute mandate. Rather, the Commission is obligated to site transmission lines in existing corridors "to the greatest extent feasible that is consistent with economic and engineering considerations, reliability of the electric system, and protection of the environment." *See* Wis. Stat. § 1.12(6). These are phrases that require the Commission to use its experience and technical expertise to weigh a variety of factors and make what is fundamentally a legislative-type policy decision as to the appropriate location for a transmission line.

Moreover, although the Commission determined that co-locating the Badger Coulee Project, the CapX line, and the 161-kV line could not be accommodated for more than one mile without violating NERC reliability criteria, this portion of the route selected by the Commission did use existing utility and highway corridors to the greatest extent feasible. Specifically, after leaving the Briggs Road Substation, the approved route for the Badger Coulee Project will be triple-circuited with the CapX line for 3,975 feet, and will parallel at a safe distance both the

double-circuit structures with the CapX and 161-kV lines and US Highway 53 for approximately eight miles. The Project therefore follows the Siting Priorities Law's highest priority corridors in this area. Accordingly, the Commission fully complied with Wis. Stat. § 196.491(3)(d)3r and the Siting Priorities Law in selecting this portion of the route for the Project.

Finally, the Petitioner's citation to the Paddock-Rockdale Order, (Pet'r's Br., at 44-45), in which the Commission triple-circuited a portion of that project with existing transmission lines, can be distinguished. The Siting Priorities Law and the CPCN Law require the Commission to weigh a variety of factors when making routing and siting determinations, many of which are specific to the facts of a given case. Simply because triple-circuiting was suitable in one case does not mean it is appropriate in another. As discussed above, the Commission had a rational basis for concluding that triple-circuiting the Project and the CapX line for a full eight miles north of the Briggs Road Substation was infeasible. The Court should therefore defer to and uphold the Commission's decision regarding the routing and siting for the Project in and around the Town of Holland.

E. The Commission's decision to not grant the rehearing petitions filed in this proceeding is not subject to judicial review and, even if it were, the decision should be upheld.

After the Commission issued its Final Decision, two parties to the proceeding below, the Clean Energy Task Force and Save Our Unique Lands, filed petitions for rehearing, which the Commission denied. (*See* R. 78-80, 107). On appeal, the Petitioner argues that the Commission's decision not to grant rehearing was an abuse of discretion. (Pet'r's Initial Br. at 31). The Commission's decision not to grant rehearing, however, is not reviewable by this Court:

[C]ircuit courts lack jurisdiction to review discretionary decisions to reopen. Section 227.15, Stats., only authorizes judicial review of administrative "decisions." No jurisdiction exists to review an

order that is not a “decision” within the meaning of the statute. Section 227.15 envisions review of a decision that is supported by a record based on findings of fact and conclusions of law. Because the decision to reopen is not necessarily based on a record or factual and legal findings, it is not judicially reviewable.

Village of Prentice v. Transp. Comm’n of Wis., 123 Wis. 2d 113, 121, 365 N.W.2d 899 (Ct. App. 1985) (internal citations omitted).

Alternatively, to the extent the Court disagrees and decides to review the decision not to grant rehearing, it should do so using the “abuse of discretion standard.” *Cf. Schwartz v. Wis. Dep’t of Rev.*, 2002 WI App 255, ¶ 40, 258 Wis. 2d 112, 653 N.W. 2d 150 (citing *Village of Prentice* for the proposition that decisions on rehearing are not reviewable under Chapter 227, noting that limitation does not apply to decisions and orders of the Tax Appeals Commission under Wis. Stat. § 73.015, and applying the abuse of discretion standard to the Tax Appeals Commission’s decision to deny a rehearing request). A petition for rehearing will only be granted on the basis of (a) some material error of law; (b) some material error of fact; or (c) the discovery of new evidence sufficiently strong to reverse or modify the order, and which could not have been previously discovered by due diligence. Wis. Stat. § 227.49(3).

In its order dismissing the rehearing requests, the Commission found that the requests “largely re-litigate issues that have already been addressed by record evidence and the Final Decision.” (R. 107, at 3). The Commission also found that neither rehearing request identified a material error of law or fact, that the “new evidence” put forward did not negate evidence already present in the record, and that the new evidence was not strong enough to warrant reversing or modifying the Final Decision. (*Id.* at 3-19). The Commission did not abuse or misuse its discretion in that determination.

V. CONCLUSION

For the reasons stated above, the Applicants request that the Court dismiss the Petitioner's Petitions for Judicial Review and affirm the Commission's Final Decision issuing a CPCN for the Badger Coulee Project.

Respectfully submitted this 15th day of August, 2016.

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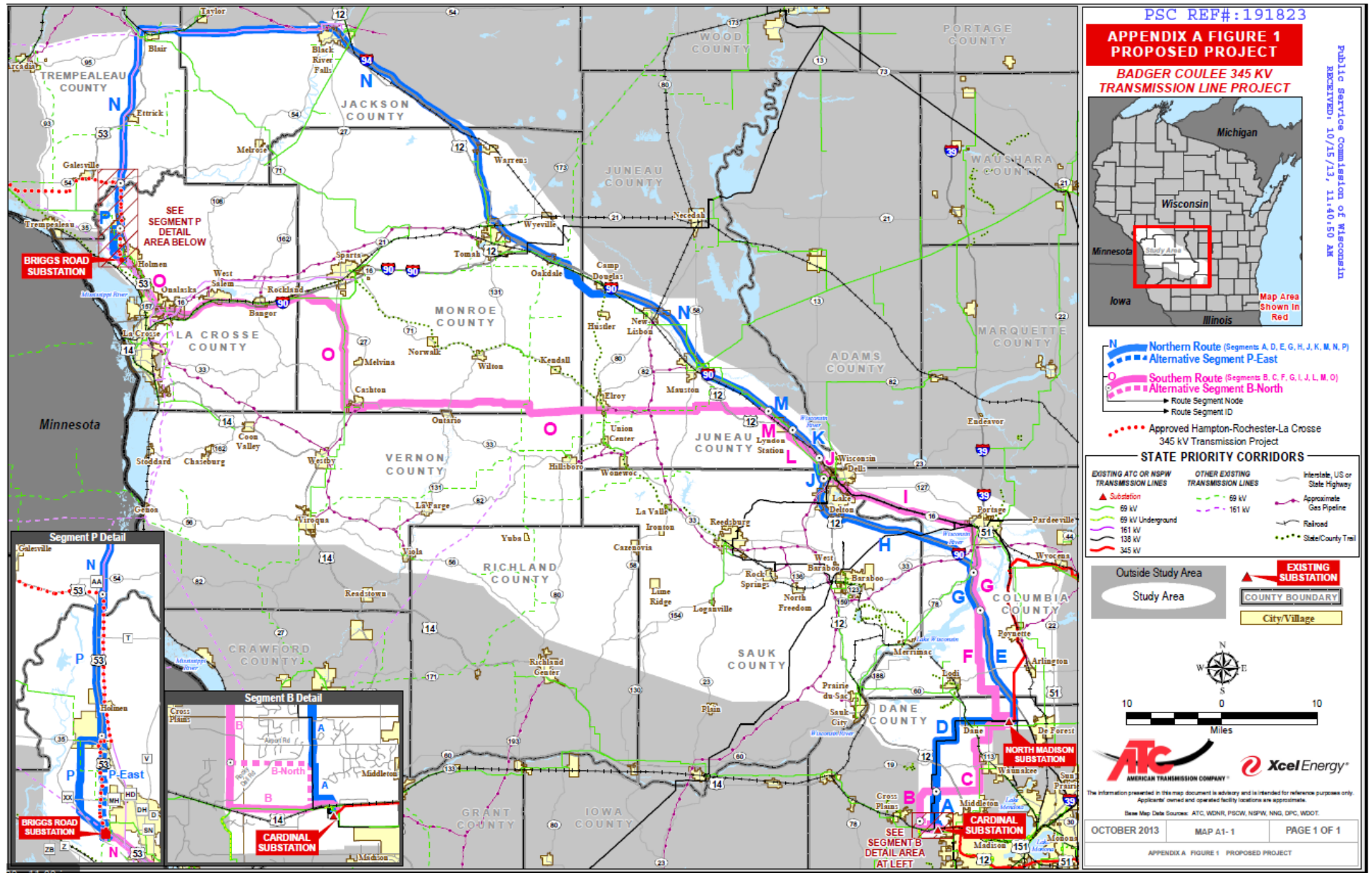
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APPENDIX A

Overview Map of the Badger Coulee Project (R. 155(3))



Overview of the Co-Owners of the Badger Coulee Project

ATC is a Wisconsin transmission-only public utility that owns and operates much of the high voltage transmission network throughout central and eastern Wisconsin. (R. 155(1), at 6).

NSPW is a vertically integrated utility that generates, transmits, distributes, and sells electricity to approximately 253,000 retail electric customers in northwest Wisconsin and the western tip of the Upper Peninsula of Michigan. (*Id.* at 7; R. 365(22), at 3:11-14).

DPC is a not-for-profit generation and transmission electric cooperative that provides wholesale power to 25 electric cooperatives in southern Minnesota, western Wisconsin, northern Iowa, and northern Illinois. (R. 155(1), at 7). Through its member cooperatives, DPC serves sparsely populated and widely separated farms, businesses, and communities. (R. 365(35), at 3:15 to 4:3).

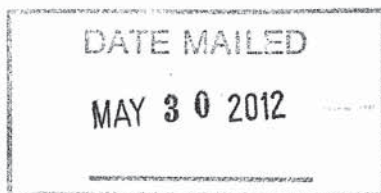
WPPI Energy is a not-for-profit regional municipal power company serving 51 customer-owned electric utilities in Wisconsin, Iowa, and the Upper Peninsula of Michigan. (R. 155(1), at 7). It develops and owns generation resources, negotiates and holds power purchase agreements, and arranges for various transmission services on behalf of its members. (R. 365(60), at 2:9 to 3:2).

SMMPA¹ is a nonprofit political subdivision and a joint action agency headquartered in Rochester, Minnesota. It is comprised of 18 municipal members, most of which are located in southern and central Minnesota, and it owns transmission and generation assets meant to serve these members. (R. 155(1), at 7; R. 365(50), at 3:11 to 7:8).

ATC alone will own an approximately 20-mile stretch of transmission line facilities between the North Madison and Cardinal substations, and will also have sole ownership over those substation facilities. (R. 365(14), at 4:21 to 5:2). NSPW alone will own the substation facilities at the Briggs Road substation. (*Id.* at 4:21 to 5:2). All five co-owners will own the Badger Coulee Project between the Briggs Road Substation and North Madison Substation as tenants-in-common. (R. 155(2), at 6-7; R. 365(23), at 3; R. 156: Data Request Response No. 1.87). ATC will own 50 percent of this portion of the Project, NSPW will own 37 percent of this portion of the Project, and DPC, WPPI Energy, and SMMPA Wisconsin, LLC will own the remaining 13 percent. (R. 156: Data Request Response No. 1.87).

¹ SMMPA is the owner of SMMPA Wisconsin, LLC, which is a Wisconsin public utility that will have a direct stake in the Badger Coulee Project. (R. 365(22), at 6:13-18).

APPENDIX B

**PUBLIC SERVICE COMMISSION OF WISCONSIN**

Joint Application of Dairyland Power Cooperative, Northern States Power Company-Wisconsin, and Wisconsin Public Power, Inc., for Authority to Construct and Place in Service 345 kV Electric Transmission Lines and Electric Substation Facilities for the CapX Twin Cities-Rochester-La Crosse Project, Located in Buffalo, Trempealeau, and La Crosse Counties, Wisconsin

5-CE-136

FINAL DECISION

On January 3, 2011, pursuant to Wis. Stat § 196.491 and Wis. Admin. Code chs. PSC 4 and 111, Northern States Power Company-Wisconsin (NSPW), Dairyland Power Cooperative (DPC), and WPPI Energy (WPPI) (together, applicants) filed with the Commission an application for a Certificate of Public Convenience and Necessity (CPCN) to construct new 345 kilovolt (kV) electric transmission facilities. The project, known as the CapX2020 Alma-La Crosse Transmission Project, includes construction of a 345 kV transmission line crossing the Mississippi River at Alma, Wisconsin, which will then continue to a new substation near Holmen, Wisconsin. The CPCN application is APPROVED subject to conditions and as modified by this Final Decision.

Introduction

The Commission found the application in this docket to be complete on June 9, 2011. A Notice of Proceeding was issued on June 20, 2011. Wisconsin Stat. § 196.491(3)(g) requires that the Commission take final action within 180 days after it finds a CPCN application complete unless the Commission receives an extension from the Dane County Circuit Court. On July 13,

2011, the Circuit Court granted the Commission a 180-day extension. The Commission must take final action on or before June 4, 2012, or the application is approved by operation of law.

A prehearing conference was held on December 5, 2011. Requests to intervene in the docket were granted to American Transmission Company LLC, and its corporate manager, ATC Management, Inc. (collectively, ATC), Citizens' Energy Task Force (CETF), Citizens Utility Board (CUB), Clean Wisconsin (Clean WI), Ms. Patricia Conway, Midwest Independent Transmission System Operator, Inc. (MISO), NoCapX 2020, and Wisconsin Department of Transportation (WisDOT). As a result of requests by the Commission for additional information regarding CETF's intervenor compensation application, NoCapX 2020 and CETF participated in the docket together as NoCapX 2020/CETF.

The parties, for purposes of review under Wis. Stat. §§ 227.47 and 227.53, are listed in Appendix A.

The Commission issued a draft environmental impact statement (EIS) on November 8, 2011. With publication of the draft EIS, a 45-day comment period began and was scheduled to end December 23, 2011. During this original comment period, Commission staff added extra comment days, extending the comment period to January 23, 2012, to allow time for comment by members of the public who were inadvertently left off of the original Commission project mailing list. On January 31, 2012, the Commission issued its final EIS regarding the project, pursuant to Wis. Stat. § 1.11 and Wis. Admin Code chs. NR 150 and PSC 4.

The Commission held hearing sessions in Madison on March 5, 6, and 8, and in Alma and Centerville on March 13, and 14, 2012, respectively. At the technical sessions, expert witnesses offered testimony and exhibits on behalf of the applicants, ATC, MISO, CUB,

Clean WI, and WisDOT. The Commission conducted its hearings as Class 1 contested case proceedings, pursuant to Wis. Stat. §§ 196.491(3)(b), 227.01(3)(a), and 227.44. The Commission also requested and received comments from members of the public through its Internet website.

At the public hearing sessions in Alma and Centerville, the Commission accepted both oral and written testimony from members of the public.

The issues for hearing, as determined during the December 5, 2012, prehearing conference, were:

1. Is a 345 kV transmission line needed to satisfy the reasonable needs of the public for an adequate supply of electric energy?
2. Does the proposed project provide usage, service or increased regional reliability benefits to wholesale and retail customers in Wisconsin that are reasonable in relation to its cost?
3. Does the proposed project comply with the requirements of Wis. Stat. §§ 196.49(3)(b) and 196.491(3)(d)?
4. What is a reasonable cost for the proposed project?
5. What route for the proposed project is in the public interest, considering the requirements of Wis. Stat. §§ 1.12(6), 196.025(1m), and 196.491(3)(d)?
6. Should all or any part of the construction be subject to other specific design requirements or other conditions and, if so, how will they be enforced?
7. Has the proceeding complied with the requirements of Wis. Stat. § 1.11 and Wis. Admin. Code § PSC 4.30?

Initial and reply briefs were filed on March 30 and April 6, 2012, respectively. Initial briefs in support of the project were filed by the applicants, ATC, and MISO. Initial briefs opposing the project, or aspects of it, were filed by CUB, Clean WI, NoCapX 2020/CETF, and WisDOT. Reply briefs were filed by the applicants, CUB, Clean WI, NoCapX 2020/CETF, and WisDOT.

The Commission discussed the record in this matter at its May 10, 2012, open meeting. At that time, the Commission requested a delayed exhibit and comments on the delayed exhibit.

Findings of Fact

1. NSPW is a public utility, DPC is a generation and transmission cooperative, and WPPI is a municipal joint action agency organized as a municipal electric company under Wis. Stat. § 66.073, all engaged in providing electric service in Wisconsin. Pursuant to Wis. Stat. § 196.491(3), these entities are subject to the Commission's jurisdiction over their application for a CPCN for the proposed project.

2. The applicants' project consists of constructing new transmission line facilities, as described in the final EIS and Ex.-Applicants-Hillstrom-23, and as modified by this Final Decision, at an estimated cost of \$211,100,000.

3. Construction and operation of the facilities at the estimated cost will not impair the efficiency of the applicants' service, will not provide facilities unreasonably in excess of probable future requirements, and when placed in operation, will not add to the cost of service without proportionately increasing the value or available quantity thereof.

4. The facilities approved by this Final Decision are necessary to provide adequate and reliable service to present and future electric customers.

5. The facilities approved by this Final Decision will adequately address the present needs of the applicants' electric systems and are necessary to satisfy the reasonable needs of the public for an adequate supply of electrical energy.

6. The facilities approved by this Final Decision provide usage, service or increased regional benefits to the wholesale and retail customers or members in this state and the benefits of the facilities are reasonable in relation to their cost.

7. The facility design, location, and route approved by this Final Decision are in the public interest considering alternative sources of supply, alternative locations or routes, individual hardships, engineering, economic, safety, reliability, and environmental factors.

8. The facilities approved by this Final Decision will not have undue adverse impacts on environmental values including ecological balance, public health and welfare, historic sites, geological formations, aesthetics of land and water, and recreational use.

9. The facilities approved by this Final Decision will not unreasonably interfere with the orderly land use and development plans for the area.

10. The facilities approved by this Final Decision will not have a material adverse impact on competition in the relevant wholesale electric service market.

11. Energy conservation, renewable resources, or other energy priorities listed in Wis. Stat. §§ 1.12 and 196.025 are not cost-effective, technically feasible, or environmentally sound alternatives to the proposed facilities.

12. The approved transmission line route utilizes priority siting corridors listed in Wis. Stat. § 1.12(6) to the greatest extent feasible, consistent with economic and engineering considerations, reliability of the electric system, and protection of the environment.

13. The approved transmission line route will affect local farmland, and the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) will be issuing an agricultural impact statement.

14. The approved transmission line route will affect state highways and will require permits from WisDOT.

15. The approved transmission line route will affect waterways and wetlands, and will require permits from the Wisconsin Department of Natural Resources (DNR) for construction in waterways and wetlands, construction site erosion control, and storm water handling.

16. The approved transmission line route may affect endangered and threatened species, and the applicants will need to consult with the DNR Bureau of Endangered Resources to ensure compliance with the state's endangered species law.

17. The approved transmission route may affect historic properties listed with the Wisconsin Historical Society (WHS), and in accordance with Wis. Stat. § 44.40, its direction will be required to avoid or minimize adverse impacts to archeological resources.

18. The facilities approved by this Final Decision are not located in the Lower Wisconsin State Riverway.

19. Approval of the project is in the public interest and is required by the public convenience and necessity.

Conclusions of Law

The Commission has jurisdiction under Wis. Stat. §§ 1.11, 1.12, 44.40, 157.70, 196.02, 196.025, 196.395, and 196.491, and Wis. Admin. Code chs. PSC 4 and 111, to issue a CPCN authorizing the applicants to construct and place in operation the proposed electric transmission

facilities described in this Final Decision and to impose the conditions specified in this Final Decision.

Opinion

The Commission has a responsibility to ensure that Wisconsin receives adequate and reliable electric service, now and going forward. The applicants' proposed project addresses the need to improve the transmission service to avoid serious reliability problems in the La Crosse local area in the near future, while also providing important regional benefits.

The Commission's proceeding on this CPCN application developed an extensive record from the public and parties on all of the issues that the Commission must consider in reviewing a proposed project. Members of the public commented both in writing and through appearances at the public hearing about the impact that this line may have on them and their communities. Parties representing a variety of interests intervened in the proceeding to present expert testimony on issues ranging from the need for the project to the environmental impacts. These intervenors included ATC, MISO, Ms. Patricia Conway, Clean WI, CUB, NoCapX 2020/CETF, and WisDOT. The Commission acknowledges the thoughtful and helpful testimony from both the public and intervenors. This information assisted the Commission in its review of the application, understanding the different perspectives toward the proposed project, and making its determinations on this application.

Project Description, Purpose, and Cost

The applicants propose to construct a new 345 kV electric transmission line and substation. The 345 kV line extends from the Wisconsin border at the Mississippi River west of Alma, Wisconsin, in Buffalo County, through Trempealeau County to a new

345/161 kV substation to be built on the southwest side of Holmen, Wisconsin, in La Crosse County. The new substation will be referred to as the Briggs Road Substation.

The proposed project is part of a larger multi-utility project called the “Hampton-Rochester-La Crosse 345 kV Transmission Project.” The Hampton-Rochester-La Crosse project, in turn, is part of the CapX2020 Transmission Expansion Initiative (CapX2020), which will serve the state of Minnesota and parts of Iowa, the Dakotas, and Wisconsin.

The CapX2020 Alma-La Crosse Transmission Project requires construction of a new 345 kV electric transmission line and a new 345/161 kV substation. The proposed route alternatives for the new 345 kV transmission line are from 40 to 55 miles long. The proposed route alternatives mostly follow existing 161 or 69 kV transmission line corridors. The new line begins at the Mississippi River crossing, where it will connect with the Minnesota portion of the Hampton-Rochester-La Crosse 345 kV line, and terminate at the new Briggs Road Substation. In most places, the line in Wisconsin will carry the new 345 kV circuit plus the existing 161 or 69 kV circuit on single poles. The right-of-way (ROW) will be widened to about 150 feet. ROWs wider than 150 feet will be necessary for specialty poles such as those for the Mississippi River crossing or those needed for supporting long spans between hilltops in the coulee landscape. The Briggs Road Substation comprises the eastern endpoint of the project and would have a 69 kV line and other facilities linking it to the existing DPC North La Crosse substation. The link would address future projected overloading of the Briggs Road-Mayfair 161 kV line and French Island voltage limitations following construction of the Briggs Road station.

The Hampton-Rochester-La Crosse project will serve the following purposes:

- Local reliability – to serve increasing electric demand in the La Crosse, Wisconsin, and Winona and Rochester, Minnesota, areas.

- Regional reliability – to maintain the reliability of the regional electrical system.
- Generation support – to provide a means for getting local electric generation output onto the electric grid.
- Regional benefits – to enhance power transfers from states located west of the Mississippi River, access to more economical generation, and access to sources of renewable generation.

The primary basis of the need for the Wisconsin portion of the proposed project is local reliability and regional benefits.

The La Crosse local area includes La Crosse, Onalaska, Holmen, Sparta, Arcadia, Trempealeau, Buffalo City, Cochrane, and the surrounding rural areas in Wisconsin, and the areas of Winona/Goodview, La Crescent, Houston, and Caledonia in Minnesota. The area is currently served by the Alma-Marshland-La Crosse Tap, Alma-Tremval-La Crosse, Genoa-Coulee, and Genoa-La Crosse Tap 161 kV transmission lines. In addition, the existing power plants shown in Table 1 provide or could provide electric generation capacity in the local area.

Table 1 Power plants serving the La Crosse local area

Plant	Capacity (MW)	Fuel Type	Distance from La Crosse (miles)
John P. Madgett	395	Coal	40
Alma Units 1-5	208	Coal	40
Genoa Unit 3	377	Coal	20
French Island Units 1 and 2	26	Refuse	Within the city of La Crosse
French Island Unit 4	70	Oil	Within the city of La Crosse
French Island Unit 3	70	Oil	Currently not operational

Normal transmission system operation requires that an outage of a single transmission element or equipment component (transformer, transmission line, or generator) not imperil the transmission system. This operating mode is based on the N-1 criterion, or the ability of the transmission system to sustain operation with the failing of one element. The sudden unplanned failure of a transmission system element is called a contingency event. NERC¹ Operating

¹ NERC stands for North American Electric Reliability Corporation.

System Guidelines require that an area transmission system continue to operate successfully in the event of the failure of two transmission system elements. Such a failure of two elements is called an N-2 contingency. The applicants identified an N-2 critical contingency that limits load serving capability to 430 megawatts (MW) in the La Crosse local area. The applicants state that additional electric infrastructure is needed to provide local area load serving capability for local area customer loads greater than 430 MW.

The applicants evaluated several transmission system alternatives to serve local area need. These alternatives are compared in Table 2. The costs included in the table are planning level costs used primarily for comparison purposes.

Table 2 Cost and performance comparison of transmission line alternatives based on 2010 dollar planning level estimates

Alternatives	La Crosse/Winona Area Load Serving Capability (MW)	Minnesota Portion Project Cost (\$ million)	Wisconsin Portion Project Cost	Transmission Losses Cost (\$ million)	Total Project Cost (\$ million)*
Proposed 345 kV Project	750 MW	258	135	0	393
Reconductor Option	600 MW	47	151	36	234
Transmission Line Option: 161 kV Red Wing-La Crosse	750 MW	189	260	3	452
Transmission Line Option: Single-Circuit 161 kV North Rochester-La Crosse	550 MW	192	65	32	289
Transmission Line Option: Double-Circuit 161 kV North Rochester-La Crosse	600 MW	224	94	23	341
Transmission Line Option: Single-Circuit 230 kV North Rochester-La Crosse	550 MW	214	89	18	321

* For this comparison, Total Project Cost = Minnesota Portion Project Cost + Wisconsin Portion Project Cost + Transmission Losses Cost. Costs of transmission losses were calculated using the proposed 345 kV project as a basis. The costs for transmission losses shown in the table are over and above the estimated cost of transmission losses for the proposed 345 kV project.

The applicants developed the following route alternatives for the proposed project:

- Q1-Highway 35
- Q1-Highway 35 with STH 88 Connector Option A

- Q1–Highway 35 with STH 88 Connector Option B
- Q1–Galesville
- Q1–Galesville with STH 88 Connector Option A
- Q1–Galesville with STH 88 Connector Option B
- Arcadia
- Arcadia–Ettrick
- Original Q1

The applicants also developed several alignment changes in response to WisDOT permitting concerns.

The proposed project cost estimated as the sum of year of occurrence dollars ranges from about \$195 million to about \$234 million, depending upon the transmission line route. These costs were estimated by the applicants from 2010 dollar costs escalated to represent 2014-15 construction years. They include the new substation cost, existing transmission and distribution line relocation cost, and allowance for funds used during construction (AFUDC).

Project Need

Existing La Crosse Local Area Critical Load Level

An existing N-2 critical contingency limits load serving capability to 430 MW in the La Crosse local area. Above 430 MW, the area will experience low voltages under an N-2 contingency. NERC standards require that load be interrupted after the first outage to put the system in a condition where it can withstand the next contingency. The La Crosse area local load has surpassed 430 MW every year since 2003, with the exception of 2004. As such, additional electric infrastructure is needed to reliably provide local area load serving capability above this critical load limit of 430 MW. The proposed project will meet local area load levels up to 750 MW.

The applicants did not consider French Island Units 3 and 4 as available resources in the critical load limit analysis. Although NSPW has allocated \$1.9 million for the repair of the mothballed French Island Unit 3 in order to make it operational, this repair is neither scheduled nor planned with certainty. French Island Unit 4 has numerous operational problems which result in its reduced availability. If French Island Unit 3 is included, the critical load limit could increase to 500 MW calculated consistent with NERC standards.

The Commission finds the critical load limit for the La Crosse local area to be 430 MW. Because the applicants observed a peak level of 465 MW in 2011, the critical load level has already been exceeded. In addition, MISO's analysis shows line loadings and voltages more than 10 percent out of design range without the proposed project as load levels approach 500 MW. The Commission acknowledges that the applicants, intervenors, and Commission staff differ in their estimates of the local area critical load level. Even at the most conservative estimate of annual load growth (0.7 percent), line loadings and voltages will be out of tolerance within the five- to ten-year planning horizon without the proposed project.

Future Load Forecasts

The applicants' load forecast for the La Crosse local area was developed from anticipated load growth estimates at individual substations for NSPW and at individual member cooperatives for DPC. These individual increases were based on distribution planners' knowledge of each location. Using these individual load growth estimates, the applicants arrived at estimated average annual load growth rates of 1.46 percent for the period 2011 to 2020, and 1.24 percent for the period after 2020.

MISO took the position that demand in the area is likely to be very close to, or exceed, the critical load level before the project is placed in service, and concluded that the project should commence as soon as possible. Further, MISO considered the applicants' expected average annual load growth rates to be reasonable.

CUB witness Richard Hahn found that a reasonable load growth rate for the La Crosse area for the entire study period would be 1.0 percent. In addition, Mr. Hahn did not consider the applicants to have adequately explained the higher load growth rate used for the period 2011 to 2020. NoCapX 2020/CETF argued that the original CapX 2020 transmission plan is predicated on a 2.49 percent annual demand increase, which is more than double the applicants' growth projection. It contended that since the CapX 2020 transmission plan was first developed, load growth has slowed dramatically due to economic conditions, and that the need for the proposed project is based on a past, higher growth projection which is now too high, and as a result does not support the need for the project.

Commission staff witness Dr. Julie Urban found a reasonable range of average annual load growth rates to be from 0.78 to 1.28 percent. Dr. Urban further testified that this range was based on the MISO scenarios developed for transmission planning for MISO Transmission Expansion Plan 2011 (MTEP11). She also pointed out that for the relatively similar years of 2002 and 2010, when the peak temperature was 94°F in both years, the historical average annual growth rate was 0.75 percent.

Similar to the critical load level, the Commission acknowledges that the applicants, intervenors, and Commission staff differ in their estimates of annual average load growth rates.

Yet even at the lower projected annual growth rates, it is undisputed that the La Crosse local area needs require additional electric infrastructure to provide adequate system reliability.

Local Area Load Serving Alternatives

The applicants evaluated several project alternatives, and considered the proposed project as the best solution to meet La Crosse local area needs for the long-term, as well as to provide regional benefits.

Intervenors CUB and NoCapX 2020/CETF argued that the proposed project is excessive to meet La Crosse local area needs, and that either a hybrid 345/161 kV project including a new 345/161 kV substation at Alma and a new 161 kV transmission line from Alma to La Crosse, or reconductoring existing transmission lines serving the area would meet the long-term needs of the area.

Commission staff witness Dr. Udaivir Singh Sirohi analyzed local load serving alternatives over a 20-year planning period. Based on this analysis, the following are the least-cost alternatives for serving the La Crosse local area need for the 20-year planning period:

- Reconductor Option, for a local area load growth rate of 0.78 percent.
- Reconductor Option, for a local area load growth rate of 1.0 percent.
- Alma-La Crosse 345 kV Transmission Line Option (proposed project), based on MTEP11 load growth rate of 1.28 percent.
- Alma-La Crosse 345 kV Transmission Line Option (proposed project), for the local area load growth rate described by the applicants.

As mentioned previously, even at the lower projected annual growth rates, it is undisputed that the applicants need to take action to address La Crosse local area needs. The Commission also notes that at the MTEP11 load growth rate of 1.28 percent, the proposed project is the least-cost alternative for serving the La Crosse local area need for a 20-year planning period. The Commission finds that neither the lower-voltage alternatives nor the hybrid

alternative meet the long-term needs of the La Crosse local area. As such, the Commission finds the proposed 345 kV project to be the best alternative to address the long-term needs of the La Crosse local area, while also providing regional benefits.

Regional Benefits

The applicants state that the proposed 345 kV project is the best solution for providing regional efficiency, reducing wholesale prices, and increasing access to renewable energy while supporting the La Crosse local area need. The project reduces electrical system losses by 10 MW, which represents a present value savings of about \$45 million over the life of the project. The project by itself will increase transfer capability by 800 MW, and, if the 345 kV transmission network is extended to the east, the transfer capability will rise to 1,200 MW. A 161 kV local alternative, however, has a negative transfer capability if the 345 kV network is extended to the east.

Using MISO's regional models, the 345 kV project has superior performance compared to a 161 kV alternative. Using the PROMOD market modeling software over the 20 to 40 years beginning in 2019, the project will provide approximately \$354 to \$445 million in present value benefits. The value of accessing additional wind resources with the increased transfer capability is estimated to be from \$130 to \$250 per kW based on the wind resources in Minnesota compared to those in Wisconsin.

MISO forecasts that without the proposed project, 23 different transmission facilities will overload or load to near their emergency capability for any of 17 single contingencies, and 24 events could occur involving forced outages as a result of a prior outage of another facility.

With the proposed project in service, all of these transmission facilities would operate within applicable ratings.

ATC supports the proposed project crossing into western Wisconsin and running toward the La Crosse area. The proposed project will provide significant reliability and service benefits to Wisconsin customers and a continuous 345 kV interconnection for potential future projects such as the possible Badger-Coulee 345 kV project.

The increased transfer capability has a positive impact that will facilitate commerce and not adversely affect competition in the wholesale electric market. The transfer capability and design of the project match long range plans for the area and are not in excess of probable future requirements.

CUB disagrees that the local benefits to Wisconsin ratepayers justify the cost of the proposed project into the La Crosse area, and CUB proposed a hybrid alternative that would not only bring new 161 kV facilities to La Crosse, but preserve the attributes of a continuous 345 kV network for later connection if and when desired. NoCapX 2020/CETF argues that the 345 kV project is not needed for regional reliability and that transfer capability and congestion relief are market, not reliability issues. NoCapX 2020/CETF argued that the proposed project would, instead, bring system instability, voltage and dynamic issues, and require the addition of a line to Madison to stabilize the system. NoCapX 2020/CETF contended that the local load can be reliably served by reconductoring existing transmission in the area.

The proposals of CUB and NoCapX 2020/CETF, however, fail to provide the level of regional benefits, including transfer capability and the equivalent local reliability benefits, offered by the proposed project.

When considering the regional benefits of the project, the Commission concludes that sufficient need exists for the proposed project to be constructed at 345 kV for its entire length from the crossing of the Mississippi River to the proposed Briggs Road Substation near Holmen, Wisconsin. The Commission also finds that, given today's electric industry structure, an analysis of the need for the proposed project should include not only local area needs, but also consider long-term regional benefits.

Energy Efficiency and Conservation and Alternative Sources of Electric Supply

In making this decision, the Commission considers whether there are technically feasible and environmentally sound alternatives to building the proposed project, per Wis. Stat. §§ 1.12(4) and 196.025(1). Specifically, the Commission must consider whether energy efficiency and conservation are reasonable alternatives to the proposed project.

The applicants stated that the availability of energy efficiency and conservation, load management, and generation were studied as alternatives to meet the need for the proposed project. The applicants concluded that these alternatives would not accomplish this goal.

As alternatives to the proposed project, the applicants evaluated renewable and non-renewable generation alternatives. The renewable alternatives evaluated were wind, photovoltaic, biomass, and landfill gas. The applicants concluded that wind is not a feasible alternative because its variability prevents it from providing capacity support. Photovoltaic was determined not to be a feasible alternative, not only due to its cost, but also because voluntary construction of new systems would likely not provide sufficient capacity within the required timeframe to ensure transmission grid reliability. The applicants also concluded that multiple

biomass plants would be needed to ensure reliability, would not be cost-effective, and that there is not sufficient available landfill gas in the study area to ensure reliability.

The applicants' analysis of the ability of load reduction to meet the needs identified an immediate need to reduce peak load in the study area by 3 MW. Load growth would need to remain stagnant until 2020, which would require a 98 MW load reduction based on the applicants' load forecast.

Commission staff witness Carol Stemrich conducted an independent analysis of the ability of energy efficiency and conservation to alleviate the need for the project. Ms. Stemrich's analysis indicated that an approximate 8 percent reduction in peak load is needed immediately. This is in addition to the approximate 0.5 percent annual reduction to be achieved by Focus on Energy programs that are already reflected in the forecast submitted by the applicants. It is unlikely that this level of load reduction can be achieved through energy efficiency and conservation. This level of load reduction is substantially higher than the annual potential identified in the August 2009 *Energy-Efficiency and Customer-Sited Renewable Resource Potential in Wisconsin Study* conducted by the Energy Center of Wisconsin. It is also substantially higher than the annual savings goals established by various Midwestern states, which range from 1.0 to 2.0 percent.

The Commission finds that energy efficiency and conservation and other sources of electric supply are not technically feasible, cost-effective alternatives to the project.

Routing

Project Permitting by Other Wisconsin State Agencies

WisDOT

The Commission recognizes the scenic value and importance of the Great River Road National Scenic Byway to the state of Wisconsin. Further, WisDOT has permitting authority if a utility wishes to cross a state highway with utility facilities. However, the Commission must balance scenic value with many other values also in the public interest. WisDOT advanced several arguments to support its conclusion that it cannot permit the transmission line along the Great River Road due to aesthetic reasons. The Commission did not agree with any of WisDOT's arguments.

First. The Commission is not persuaded by WisDOT's arguments that its scenic easements, which allow for "electric lines" as a permitted use, prohibit transmission line construction. WisDOT provided no persuasive reason as to why a transmission line is not encompassed in the more general term "electric line." The scenic easements at issue generally state that a permitted use within the scenic easement is "[t]elephone, telegraph, electric or pipe lines or micro-wave relay structures for the purpose of transmitting messages, heat, light or power." The plain reading of this portion of the easement permits a transmission line such as the one proposed by the applicants since they are seeking an "electric . . . line . . . for the purpose of transmitting . . . power."

WisDOT, however, argued that "electric" is different from "transmission" and that, based on this interpretation, it has authority to withhold permits. This is a narrow and incorrect interpretation that WisDOT does not support with case law or previous WisDOT interpretations

of similar scenic easements. “Electric line” is a generic term that encompasses both distribution and transmission lines and, furthermore, the fact that the easements also use the term “transmitting” bolsters the argument that “electric” encompasses a transmission line such as the one proposed by the applicants as a permissible use.

WisDOT also argued that the general intent of the easements controls over the specific language in the easements. In other words, WisDOT argued that despite the specific language permitting certain activities, of which electric lines are one, use of electric lines should not be permitted because the general intent of the easements is to ensure the continuing view from the Great River Road. This, on its face, is an illogical conclusion, defies the plain meaning and defies well-established rules in both contract law and statutory interpretation that if a general provision conflicts with a specific provision, the specific provision controls. *Goldmann Trust v. Goldmann*, 26 Wis. 2d 141, 131 N.W.2d 902 (1965). See *Pertzsch v. Upper Oconomowoc Lake Ass’n*, 2001 WI App 232, ¶ 17, 248 Wis. 2d 219, 635 N.W.2d 829 (2001). When an express activity is permitted in a restrictive covenant, the language permitting the use controls.)

The case cited by WisDOT as support for its position that the general intent of the restrictive covenant is paramount, *Zinda v. Krause*, 191 Wis. 2d 154, 165-166, 528 N.W.2d 55 (1955), does not apply to the facts of this case because in *Zinda*, the reviewing court was not asked to interpret a restrictive covenant that had both a general intent, followed by specific language, as is the case here. Rather, the restrictive covenant in that case only expressed a general intent, leaving to interpretation what actions or uses were allowable. Such is not the case here.

Only four of the myriad easements at issue in this case do not contain a provision allowing for “electric lines.” The applicants indicated that, of these four easements, one of the

easements appears to not cover the land in question for the applicants' line; for two of the easements, the crossings are located along the Q1 line where DPC already has easements; and, for the last easement, the alignment of the line could be changed to avoid the easement. The applicants are largely un-rebutted on this point.

Although WisDOT suggested undergrounding the transmission line, placement of the line underground is not a feasible option. At a cost of roughly \$20 million per mile, compared to the \$2 million per mile for an above-ground line, this option is prohibitively expensive.

Second. WisDOT argued that Wis. Stat. §§ 84.30, 86.16, and 182.017(2) provide it with the authority to refuse to permit along the Great River Road solely for aesthetic reasons. However, these statutes do not provide WisDOT with this authority. For example, WisDOT asserted that it has authority to withhold overhead permits under Wis. Stat. §182.017(2), which states that “no such line or system or any appurtenance thereto shall at any time obstruct or incommode the public use of any highway, bridge, stream or body of water.” WisDOT interpreted this to mean that a line cannot disturb or inconvenience. Such an interpretation is not only unreasonably narrow, it conflicts with the Wisconsin Supreme Court’s interpretation of this statute. In *Weiss v. Holman*, 58 Wis. 2d 608, 619, 207 N.W.2d 660 (1973), the court held that this statute is “concerned with the safety of those traveling upon the highways who are subject to injury should a utility pole or similar appurtenance be placed on the highway.”

Third. WisDOT further pointed to Wis. Stat. §§ 84.30 and 86.16 as sources of its authority to withhold permits. However, Wis. Stat. § 84.30 applies to restrictions on outdoor advertising signs, not utility facilities; Wis. Stat. § 86.16 is a grant of agency police powers to protect against the obstruction of highways by utility facilities; that is, it is essentially concerned

with highway safety. Furthermore, WisDOT's witness Ms. Jane Carolla offered an opinion that seemed at odds with WisDOT's opinion of aesthetic impacts in this proceeding. She conducted two empirical analyses of the visual impacts of the line to the Great River Road and concluded that the area along the Great River Road with which WisDOT is most concerned is a nice stretch of road, but that it also has several manmade structures already impacting it, including power plants, transmission lines, and railroads.

Fourth. WisDOT also asserted that the CPCN law, in conjunction with the Siting Priorities Law (Wis. Stat. §§ 1.12(6) and 196.025(1m)), prevents the Commission from finding that any of the Q1-Highway 35 Routes or the Q1-Galesville Route is in the public interest because of the public interest in preserving the aesthetic value of the Great River Road. However, the Commission's authority over route determinations is broad, and its decisions in this realm are generally afforded great weight by reviewing courts. Wisconsin Stat. § 1.12(6) is clearly not a bar to the Q1-Highway 35 Route; of all the route alternatives, the Q1-Highway 35 has the highest percentage of shared ROW, a fact that would seem to favor it, given the statutory preference for using existing ROW. Furthermore, the Q1-Galesville Route is, after the Q1-Highway 35, the shortest and least expensive alternative. If in fact DNR does not permit the Q1-Highway 35 alternative, there are both economic and environmental justifications for choosing the Q1-Galesville alternative, also consistent with the Commission's obligations under the CPCN and Siting Priorities Laws.

To be clear, the Great River Road is in an area of scenic value. However, this designation does not immunize it from all activities that may impact any aspect of its appearance, especially in areas of this extensive road network that have already been impacted by man-made

infrastructure. WisDOT and some other intervening parties discussed the economic benefits that the Great River Road brings to Wisconsin. However, nothing in the record substantiates that the economic benefits, including tourism-related dollars and federal dollars, would disappear or even diminish if the 345 kV line was placed near the Great River Road.

DNR

The Commission recognizes DNR's statutorily-granted jurisdiction over granting permits in this case. Wisconsin Admin. Code § NR 103.08(4)(a) requires a project applicant to show that "no practicable alternative exists which would avoid adverse impacts to wetlands" in order to receive a permit. Under Wis. Admin. Code § NR 103.07(2), "practicable alternatives" means available and capable of being implemented after taking into consideration cost, available technology and logistics in light of overall project purposes. If no practicable alternative exists, an applicant must demonstrate that all practicable measures to minimize adverse impacts to the affected wetlands are taken and, finally, DNR must also find that the permitted activity will not have significant adverse impacts to wetland functional values or water quality, or have other significant environmental consequences.

DNR built a strong record as to the value of the Van Loon State Wildlife Area (Van Loon), not only to Wisconsin residents, but to a broader community. The Van Loon is, in DNR staff's professional opinion, a valuable resource that will be irrevocably harmed by a new line north of Highway 35. The Clean WI expert agreed. As early as 2010, DNR made it clear to the applicants that it would not permit the line through the Van Loon. It has remained constant in this opinion, and there is no reason to believe it will change its view on this issue. Therefore, if DNR does not issue a permit, the line cannot go down the Q1-Highway 35 Route.

Besides the Q1-Highway 35 Route, all of the routes under consideration have the potential for construction in wetlands to some degree, as discussed in the EIS. Although the potential impacts to wetlands and endangered or threatened species along the other routes would likely be less than on the Q1-Highway 35 Route, the applicants will still need to obtain appropriate DNR permits for construction in wetland and waterways, construction site erosion control, and storm water control. Under Wis. Stat. § 30.025(4), these permits must be issued within 30 days of the issuance of this Final Decision.

Connected with these permits, the applicants must consult with the Bureau of Endangered Resources regarding state-listed threatened or endangered species to determine whether the habitat assessments and surveys that were completed and summarized in the Rare Species and Natural Communities Analysis and Survey Summary Report (Rare Species Report) of January 2011 are adequate. The Bureau will determine whether additional consultation is needed to ensure compliance with the state's endangered species law, Wis. Stat. § 29.604, and to define appropriate avoidance and minimization measures. Potentially affected species may include the wing-snaggletooth terrestrial snail, red-shouldered hawk, great egret, Acadian flycatcher, Bell's vireo, Blanding's turtle, Eastern Massasauga Rattlesnake, Pecatonica River Mayfly, various mussel and fish species, or other state listed threatened or endangered species that the Bureau determines are reasonably likely to be impacted by the project.

In addition, the applicants must consult with the Bureau of Endangered Resources and the U.S. Fish and Wildlife Service (USFWS) to determine appropriate measures to avoid or minimize impacts to the bald eagle and to determine the location and type of bird diverters to be placed on portions of the route to minimize bird collisions with the transmission line. The

Commission also finds it reasonable for the applicants to consult with the Bureau to determine any additional assessments, surveys, and measures needed to avoid or minimize impacts to the timber rattlesnake and rare plant species.

WHS

The Commission must comply with Wis. Stat. § 44.40 for protection of archeological, historic, and cultural resources. As discussed in the EIS, the applicants have stated that they will locate transmission structures outside of the historic properties listed with WHS and avoid impacts by spanning them. In compliance with Wis. Stat. § 44.40, the Commission must also require that the applicants employ qualified archeologists to conduct field investigations of the identified sites in the ROW along the approved transmission line route to assess each site's location and boundaries and its current integrity.

In addition, where human remains are involved, it is in the public interest for the applicants to comply with the Wisconsin Burial Sites Preservation Law, Wis. Stat. § 157.70.

Substation Site

The applicants proposed two sites for the Briggs Road Substation, an East Site and a West Site. Two of the four main 161 kV lines serving the La Crosse area converge near the intersection of U.S. Highway (USH) 53 and Briggs Road. The existing DPC 69 kV North La Crosse Substation is also located near this intersection. The new Briggs Road Substation will require a fenced area of approximately 700 feet by 900 feet, totaling approximately 15 acres, with a total site area of about 1,100 feet by 1,300 feet, approximately 32 acres, to include space for grading, driveways, storm water ponds, property line setbacks, and sufficient space to route transmission lines into the substation. The two Briggs Road sites are each about 40 acres in area.

The West Site is currently cropland and would require less grading and woodland clearing. It is also the lower-cost alternative. The applicants ask that the West Site be selected.

DNR noted that the East Site contains habitat that may be suitable for rare plant or bird species while the West Site does not. Some members of the public indicated that both proposed sites are too close to Holmen residences, a park, and proposed building sites.

Based on this record, the Commission finds that the Briggs Road Substation at the West Site is the better alternative and is in the public interest.

Mississippi River Crossing

The applicants identified four potential crossings of the Mississippi River in the vicinity of the project area, three of them places where existing electric transmission lines already cross. In order to locate a crossing place, the applicants worked with USFWS and DNR to determine if obstacles existed. As described in the project application and summarized in the joint final EIS, the applicants worked with those agencies to winnow the four potential crossings of the Mississippi River to one crossing at the city of Alma. The application showed how the crossings were evaluated and how the applicants worked with the two agencies. Once it became the sole remaining crossing location, the Alma crossing was accepted by cooperating state agency staff in Minnesota and Wisconsin for the purpose of route application review in each state. The applicants, in developing their Wisconsin and Minnesota applications, developed details of the Alma crossing for agency review.

Clean WI and NoCapX 2020/CETF argued that the process for choosing the crossing location was inadequate for the Wisconsin CPCN process and, therefore, the crossing location is not legal or viable. They asserted that the coverage of the process in the final EIS did not

comply with the requirements of the Wisconsin Environmental Policy Act (WEPA) and Wis. Admin. Code chs. NR 150 and PSC 4. Both intervenors indicated that the four crossing alternatives originally examined by the applicants and USFWS should have been evaluated anew in the Wisconsin process. NoCapX 2020/CETF pointed out that the Minnesota Certificate of Need proceeding² considered four potential crossings and that the U.S. Department of Agriculture Rural Utilities Service draft EIS initially addressed the four river crossings and narrowed them to three. NoCapX 2020/CETF did note that the four crossings were evaluated early on by the USFWS.

The Wisconsin CPCN application includes a history and analysis of the four crossings, and the joint Wisconsin EIS includes an appropriate summary of that analysis and history. The Commission needs to cooperate with Minnesota so that the Minnesota and Wisconsin projects join at the same location on the river. The application and the EIS both discuss this effort to agree.

The agreed-upon location of the river crossing provides the western endpoint for the proposed 345 kV electric transmission line in Wisconsin as well as the eastern endpoint for the proposed 345 kV electric transmission line in Minnesota. The Commission finds that it is reasonable for all the Wisconsin routes to share the same river crossing segment at that project endpoint.

Transmission Line Route

As noted previously, the Commission analyzed nine route alternatives, including three proposed in the original application, five resulting from suggestions by WisDOT or DNR, and the original route of DPC's Q1 161 kV transmission line. The applicants stated that the Q1 line

² The Minnesota Certificate of Need proceeding and decision both precede the Minnesota routing process.

must soon be rebuilt regardless of the route chosen for the proposed project. The nine route alternatives are described below.

Q1-Highway 35, Q1-Galesville, and Arcadia Routes

In the project application, the applicants proposed three transmission route alternatives: the Q1-Highway 35, Q1-Galesville, and Arcadia Routes. Each would connect the Mississippi River crossing and the Briggs Road Substation.

Two of the routes, the “Q1 Routes,” follow the existing DPC Q1 161 kV transmission line corridor southeastward from Alma. Portions of the existing Q1 Route run roughly parallel to the Great River Road. Both the Q1-Highway 35 and Q1-Galesville Routes share common route segments from the Mississippi River crossing southeastward to a point east of the Trempealeau River, where the routes diverge. Both Q1 Routes would include the reconstructed DPC Q1 161 kV transmission line on 345/161 double-circuit, single-pole, steel structures along these segments.

The Q1-Highway 35 Route continues along the existing Q1 ROW to a point east of the village of Trempealeau, then turns east and parallels State Highway (STH) 35 through the Black River bottomlands. STH 35 along these segments is also designated as the Great River Road. Near the intersection of STH 35 and USH 53, the Q1-Highway 35 Route turns south and follows the USH 53 corridor south to the Briggs Road Substation site. The Q1-Highway 35 Route would include the reconstructed DPC Q1 161 kV transmission line on 345/161 double-circuit, single-pole, steel structures along these segments.

The Q1-Galesville Route separates from the existing Q1 ROW east of the Trempealeau River. From that point, it extends east parallel to STH 54. Along the way, it passes to the south

of the city of Galesville and north of the Van Loon and the Black River bottomlands. The line would be constructed as a single-circuit, 345 kV line on single-pole steel structures along these segments. The route then turns south along an existing 161 kV electric transmission line ROW to a point east of the intersection of STH 35 and USH 53. The line would be constructed on 345/161 double-circuit, single-pole, steel structures along these segments. At that point, the Q1-Galesville Route would leave existing electric transmission ROW and proceed south along a combination of new cross-country segments and existing road ROW to the Briggs Road Substation sites. The line would be constructed as a single-circuit, 345 kV line on single-pole steel structures along these segments.

The Arcadia Route runs eastward from the Mississippi River crossing along an existing DPC 161 kV line to a point northeast of the village of Arcadia. The route then turns southward along an existing DPC 69 kV transmission line ROW to STH 54. The line would be constructed on 345/161 or 345/69 double-circuit, single-pole, steel structures along these segments. The Arcadia Route then turns eastward along new ROW to a point where it proceeds along the same segments as the Q1-Galesville Route to the proposed Briggs Road Substation.

Q1-STH 88 Routes

A set of alternatives to the Q1 Routes, the “STH 88 Connector” segments, were developed by the applicants in response to a suggestion from WisDOT to use the STH 88 corridor to avoid the Great River Road south of Alma. The STH 88 segments would utilize one of two optional paths in the Waumandee Creek valley through which STH 88 runs. Option A follows the winding STH 88 from its intersection with the existing 161 kV transmission line ROW that would be used for the Arcadia Route in the north to the Q1 Routes in the south.

Option B is a straighter route proposed by the applicants that would be easier to design and construct than Option A. The STH 88 segments were intended to be used with either the Q1-Highway 35 Route or the Q1-Galesville Route. Combinations of the two STH 88 Connector Options and the two Q1 Routes result in four additional route alternatives:

- Q1-Highway 35 with STH 88 Connector Option A
- Q1-Highway 35 with STH 88 Connector Option B
- Q1-Galesville with STH 88 Connector Option A
- Q1-Galesville with STH 88 Connector Option B

Arcadia-Ettrick Route

Another route alternative using the “Ettrick Connector” segment, was provided by the applicants in response to DNR’s suggestion to provide the Commission with a second route alternative that avoids the Black River bottomlands and the Van Loon. This alternative diverges from the Arcadia Route where the existing 69 kV line crosses Fox Coulee Lane. From this point, it follows an existing DPC 69 kV transmission line ROW from its tap at Fox Coulee Lane eastward to an existing north-south DPC 161 kV transmission line ROW west of the village of Ettrick. At that point, it turns south along the existing 161 kV transmission line ROW to a point north of the Black River. The line would be constructed on either 345/161 or 345/69 double-circuit, single-pole, steel structures along these segments. From the point north of the Black River, the route would share common segments with the Q1-Galesville and Arcadia Routes southward to the Briggs Road Substation site.

Original Q1 Route

During development of the CPCN application, the applicants considered a route that would follow the original existing DPC Q1 161 kV ROW the entire distance from Alma to the new Briggs Road Substation site. This route was not included in the application as a proposed

route, but information characterizing the route was included in an appendix to the CPCN application. Many members of the public from the Holmen area submitted comments favoring the Original Q1 Route, because it was the only route alternative that did not pass through the village of Holmen. Information regarding this route was included in the application, and the Commission's draft EIS characterized the route. In comments on the draft EIS, USFWS indicated that it would not renew the recently-expired Q1 line permit through the Upper Mississippi River National Wildlife and Fish Refuge (Refuge). For this reason, even though the Original Q1 Route remained in the final EIS for the project, it is no longer under consideration as a route for the project.

Authorized Project Route

Although nine routes were considered during the preparation of the EIS, the Commission finds that several are not appropriate. The Q1-Highway 35 Route, which otherwise appears reasonable, includes a large route segment that crosses the Black River bottomlands and wetlands associated with the Van Loon. The Commission acknowledges that DNR will not permit construction in these wetlands under Wis. Admin. Code ch. NR 103, because it has concluded practicable alternative routes exist in the Q1-Galesville, Arcadia, and Arcadia-Ettrick Route alternatives. The Commission also finds that the four route alternatives using the STH 88 connector segments are not appropriate because the environmental, agricultural, social, and aesthetic impacts of those segments would be too great. The Commission finds that the Arcadia Route and the Arcadia-Ettrick Route are longer, more costly, and have greater potential adverse impacts on rural lands and farmlands. In addition, the Commission finds the Original Q1 Route

cannot be considered because USFWS will not renew the permit to utilize the existing Q1 ROW through the Refuge.

The Commission finds that the Q1-Galesville Route, with the modifications described in this Final Decision to avoid unreasonable adverse impact on the orderly land use and development plans for the village of Holmen, and to mitigate impacts in the village, is the most reasonable route. In selecting this route for the proposed project, the Commission notes that of all the route alternatives (excluding the Original Q1), the final EIS lists the Q1-Galesville Route as the one with the second lowest impacts in each of the following categories: total length, acres of new ROW, agricultural acres crossed, stream crossings, new upland forest area cleared, and estimated total construction cost. The final EIS also lists the Q1-Galesville alternative as having the fewest new woodland acres affected and the third lowest amount of wetland area affected. With any route selected in this case, the appropriate DNR permits and associated work on endangered and threatened species will be necessary. There will also be a need for field examinations by a qualified archeologist as directed by WHS. Nevertheless, this route, with the modifications in Holmen, is still the most reasonable.

Holmen Area Route Adjustment

Wisconsin Stat. § 196.491(3)(d)6. requires the Commission to determine that a proposed project requiring a CPCN not unreasonably interfere with orderly land use and development plans for the area involved. The applicants acknowledged that the proposed project will have some impact on existing land use and development plans, but state that none of the route alternatives would unreasonably interfere with such plans.

Some members of the public provided comments regarding the impacts of the proposed project on local land use plans. Nancy Proctor, representing the village of Holmen, submitted comments regarding the possible effects of the project on the village of Holmen's tax incremental financing district. Many members of the public provided comments stating that route alternatives through or near the developed areas of the village of Holmen should be avoided. Route alternatives that pass through developed areas of Holmen include all of the proposed route alternatives except the Original Q1 Route.

The Commission finds that some route segments through the village of Holmen would unreasonably interfere with local land use and development plans, and would have unreasonable impacts on the village, and that those route segments should be avoided. Specifically, the Commission finds that Segments 18B, 18C, 18D, 18E, 18F, and 18G, as included in the Q1-Galesville Route alternative, should not be used. Instead, the Commission finds that the authorized route shall transition from Segment 18A of the Q1-Galesville Route alternative to Segment 8C of the proposed Q1-STH 35 Route at a point north of the USH 53-STH 35 interchange. The authorized route shall then use Segments 9 and 18H to pass through the developed areas of the village of Holmen. (Segment designations are identified in the record in this proceeding.) The Commission intends this route adjustment to minimize interference by the project with local land use and development plans. This route also complies with higher priority routes in the siting priority statute.

Using Segment 9 will take the transmission line past the New Amsterdam Grasslands. The Commission finds it reasonable for the applicants to consult with the Mississippi River

Valley Conservancy to determine appropriate measures to avoid or minimize impacts to the New Amsterdam Grasslands.

The new route segments to make the transition from Segment 18A to Segment 9 are designated route Segments 19 and 20. Segment 19 begins about 300 feet north of the node between Segment 18A and Segment 18B. From that point, it extends westward about 0.4 miles along property lines to a point just west of USH 53. Segment 20 runs about 0.2 miles between that point and the node between Segment 8C and Segment 9. The new segments and route adjustment are illustrated in Ex.-Applicants-Stevenson-22.³

In addition to the Holmen area adjustment, the applicants proposed several small alignment changes during the proceeding. These changes were offered by the applicants in response to WisDOT's assertion that it would not be able to permit any of the new transmission that overlapped scenic easements held by WisDOT for the Great River Road. They have been detailed in exhibits from the applicants' witness Tom Hillstrom.⁴ The alignment changes are identified in Mr. Hillstrom's exhibit. They include route Segments 2A3R, 2A4R, 2BR, 2CR, and 2DR.

Final Authorized Route Description

The Commission finds that the Q1-Galesville Route, as modified by this Final Decision, is reasonable, appropriate, and in the public interest. With the Holmen area adjustment and the realignments related to the Great River Road, the approved route is identified by the following

³ By order dated May 10, 2012, the Commission directed the applicants to provide a delayed exhibit that included information characterizing a short connecting segment north of Holmen between the Q1-Galesville and the Q1-STH 35 Routes. On May 18, 2012, the applicants filed exhibit Ex.-Applicants-Stevenson-22. Parties in the docket were provided an opportunity to file comments regarding the exhibit, which were filed with the Commission on May 24, 2012.

⁴ Ex.-Applicants-Hillstrom-23 and 24. Maps showing the revised alignments are found in Ex.-Applicants-Hillstrom-23 and also in the final EIS, Figure Vol. 2-48.

route Segments: 1, 2A1, 2A2, 2A3R, 2A4R, 2BR, 2CR, 2DR, 2E, 2F, 2G, 2H, 2I, 6, 12, 13B2, 13C, 13D, 13E, 17A, 17B, 18A, 19, 20, 9, and 18H.

Underground Construction

Several intervenors and members of the public expressed a preference for the line to be installed underground in various places along the proposed routes. Some members of the public requested that the line generally be placed underground to avoid aesthetic impacts. WisDOT stated that, except for short segments of certain route options, it intends to withhold the utility permit for any new overhead transmission construction along the Great River Road as part of the Q1-Highway 35 Route, the Q1-Galesville Route, and any crossings of the Great River Road by the line. NoCapX 2020/CETF preferred that the segment crossing the Mississippi River, route Segment 1, be installed underground. It argued that the cost of undergrounding Segment 1 would be reasonable in light of the applicants' proposed cost of overhead construction. It maintained that the cost of the overhead Segment 1 is already higher than the cost of other overhead segments of the project, and that the incremental cost to construct the Mississippi River crossing in an underground configuration would be minimal.

The applicants opposed underground construction of any portion of any of the routes under consideration as being too expensive. In response to WisDOT's stated intentions, they noted that underground construction of transmission crossings of the Great River Road would still create aesthetic impacts from the transition stations needed on either side of the road ROW. The applicants disagreed with WisDOT's stated authority for managing scenic easements along the Great River Road, stating that WisDOT has the authority and discretion to issue permits for the proposed construction, but not to withhold permits or require underground installation. In

response to NoCapX 2020/CETF's argument, the applicants argued that, while underground construction of Segment 1 would not add overhead facilities in the Mississippi flyway, it would create impacts in the river bed and would not remove the transmission lines already overhead across the flyway.

The Commission finds in general that underground construction is expensive, has its own environmental impacts, and is not a viable transmission construction option unless engineering considerations require it or circumstances leave no other reasonable option available. As noted earlier, the Commission disagrees with WisDOT about the potential aesthetic impacts of the overhead line on the Great River Road in the project area and finds that the transition stations required for underground crossings of the Great River Road would present undesirable aesthetic impacts of their own. It also finds that the underground construction of Segment 1 in the Mississippi River would be too expensive, create unnecessary impacts in the river bed, and would not remove the overhead transmission line that exists there now. The Commission agrees with the applicants that the cost of an underground line in this case is too high and not justified.

Environmental Factors

Independent Environmental Monitors

Commission and DNR staff, DATCP, and Clean WI each request employment of an independent environmental monitor (IEM) for this project to ensure compliance with Commission order conditions, other state agency permits, farmland protection agreements, property rights, and practices agreed to by the applicants. DATCP has pointed out that there will be an agricultural monitor to oversee construction through farmland under an agreed-upon Agricultural Impact Mitigation Plan, but that the agricultural monitor will not have stop-work

authority and will need to “work in coordination with the independent environmental monitor” that has such authority. Clean WI stated, “An independent monitor who reports to the Commission will ensure that natural resources are protected.”

The applicants have agreed that environmental monitors are needed, but argue that the monitors would not need stop-work authority and that independent monitors would add unnecessary costs to the project.

An IEM has been utilized successfully during the construction of three recent 345 kV electric transmission projects in Wisconsin. The IEM has been compensated by, but independent of, the applicants and their contractors, answerable instead to the Commission, DNR, and DATCP. The IEM has had the authority to stop work on the project until a problem is rectified at places where a concern arises.

The Commission finds that, because the proposed project includes a number of locations with environmental and agricultural issues and because of the complexity of the project, it is reasonable to employ an IEM on the proposed project. Places where special attention might be required could include but would not be limited to the various locations where threatened or endangered species’ habitat may potentially be affected, wetlands, vulnerable farmlands or farm crops, and the New Amsterdam Grasslands administered by the Mississippi River Valley Conservancy.

It is also reasonable that the IEM have stop-work authority and be contracted through the Commission, but compensated by the applicants.

Minor Routing Flexibility

Whether the applicants should be granted minor routing flexibility was uncontested during the proceeding. Commission staff and the applicants each proposed that the Commission allow a process for minor route adjustments after the project is approved based on the processes used for other recent 345 kV construction cases. Any modification to the approved transmission line route must be submitted to the Commission by the applicants via a formal letter describing:

1. The nature of the requested change.
2. The reason for the requested change.
3. The incremental cost difference from that of the approved route.
4. The incremental difference in any environmental impacts.
5. The applicants' communications with the potentially-affected landowners.

The requests will be reviewed by Commission staff knowledgeable about the project, and Commission staff will decide whether to grant or deny the change.

The Commission finds that it is reasonable that the applicants be granted minor routing flexibility. The Commission also finds that the applicants shall follow the described process.

Environmental Impact Fees

Wisconsin law imposes a one-time environmental impact fee and an annual impact fee for construction of high voltage lines with a nominal voltage of 345 kV or more. Wis. Stat. § 196.491(3g)(a). Under Wis. Stat. § 16.969(2), the applicants must pay the Department of Administration (DOA) 0.3 percent of the cost of the approved line annually for the annual impact fee and 5 percent of the cost of the approved line for the one-time environmental impact fee. DOA distributes these fee payments among cities, towns, villages, and counties through which the transmission line passes, allocated proportionate to the number of miles of transmission line that will be built within each municipality. The Commission is responsible for determining the base

cost from which the impact fees will be calculated and the percentage of the high-voltage line cost that will be attributed to the affected municipalities and counties. Wis. Stat. § 196.491(3)(gm).

The statute defines “high voltage transmission” as “a conductor of electric energy . . . together with associated facilities,” but does not specifically define “associated facilities.” The question is whether the relocation of lower-voltage transmission and distribution lines and the lower-voltage components at Briggs Road Substation should be included in the cost basis for calculating the high-voltage impact fees. The applicants argued that all lower-voltage costs should be excluded.

The Commission finds that for the proposed project, the cost basis for the environmental impact fees is \$179,461,000. This includes the estimated \$33,665,000 for 345, 161, and 69 kV substation components at the Briggs Road Substation. It does not include the estimated costs for relocating the lower-voltage transmission and distribution lines (\$2,532,000 and \$1,820,000, respectively), or the estimated \$9,771,000 in costs for constructing the 161 kV and 69 kV lines along segments that will be built using double-circuit configurations.

To verify the appropriate distribution of the impact fees, the applicants shall work with Commission staff to determine the percentage of the route that passes through each municipality. The applicants shall provide adequate information to determine the distribution of impact fees within 30 days after the date this Final Decision is issued. Commission staff shall then provide to DOA the base cost from which the impact fees will be calculated and the percentage of the high voltage line cost that will be attributed to the affected municipalities and counties.

Impact on Wholesale Competition

In making its decision, the Commission must consider whether the proposed project will have a material adverse impact on competition in the relevant wholesale electric service market under Wis. Stat. § 196.491(3)(d)7. Dr. Urban of Commission staff testified that a transmission line that expands transfer capability will facilitate commerce and promote, not adversely affect, competition in electric markets in Wisconsin. The proposed line should both increase transfer capability and provide a higher voltage path into the service area. No parties provided evidence of a material adverse impact on competition from construction of the project. Therefore, the Commission finds that the addition of the proposed project by the applicants will not have a material adverse impact on competition in the relevant wholesale electric service market.

Siting Conditions and Individual Hardships

Effects of Herbicide Treatment in ROW on Certified Organic Farms and Agri-Tourism Businesses

Several operators of organic farms and agri-tourism businesses submitted public comments expressing concern that application of herbicides in the project ROWs could affect organic certification or agri-tourism crops. A member of the public, Lynita Docken, submitted in public comments a paper that stated that airborne drift of certain herbicides can “injure grapes half a mile (sometimes up to ten miles) away from the application site.”

For electric transmission lines designed for operation at a nominal voltage of 100 kV or more, Wis. Stat. § 182.017(7)(d) states:

The utility shall control weeds and brush around the transmission line facilities. No herbicidal chemicals may be used for weed and brush control without the express written consent of the landowner. If weed and brush control is undertaken by the landowner under an agreement with the utility, the landowner shall receive from the utility a reasonable amount for such services.

This provision applies only to landowners with whom the utility holds an easement. Some of the members of the public that submitted comments in this regard do not have properties that would be under easement, and consequently would not normally have the opportunity to consent to herbicide application under Wis. Stat. § 182.017(7)(d).

The Commission notes that pesticide application (including herbicides) is a highly regulated activity at both the state and federal levels, and that DATCP rules prohibit pesticide overspray and significant pesticide drift. Wis. Admin. Code § Ag 29.50(2). The Commission finds it reasonable to require that the applicants work with operators of organic farms and agri-tourism businesses to minimize the likelihood of injury to crops or loss of organic certification from herbicide application within the authorized route ROW. The Commission further finds that the applicants should work with the operators to determine the most effective techniques for minimizing the likelihood of injury to crops or loss of organic certification.

Radio and Other Communications Interference

Members of the public provided comments regarding possible interference with radio communications services, such as Emergency Medical Services communications, cellular telephone services, and AM radio reception.

State law requires utilities to control this kind of interference. For electric transmission lines designed for operation at a nominal voltage of 100 kV or more, Wis. Stat. § 182.017(7)(g) states:

The utility shall employ all reasonable measures to ensure that the landowner's television and radio reception is not adversely affected by the high-voltage transmission lines.

Also, Wis. Admin. Code § PSC 113.0707(3) states:

Each utility shall, upon notification or detection of the presence of radio and/or television interference, survey its lines and equipment for possible sources of radio and television interference. When significant interference is found,

reasonable measures shall be taken to locate the source and, if on the utility's system, to mitigate the interference. Where the magnitude and nature of the interference is found to be so small, intermittent or insignificant that it affects only a few customers or a particular, unique piece of customer equipment that may have limited capabilities to receive weak signals, it may be necessary to limit the utility's responsibility for mitigation to reasonable, cost-effective measures.

Wisconsin Stat. § 182.017(7)(g) applies only to landowners with whom the utility holds an easement. The Commission has the authority to interpret and enforce Wis. Admin. Code § PSC 113.0707(3), and does so frequently.

The Commission finds that the requirements included in Wis. Stat. § 182.017(7)(g) and Wis. Admin. Code § PSC 113.0707(3) adequately protect any radio communications services that experience interference from the proposed project.

Conservancies

Several members of the public submitted public comments regarding properties that are currently under conservation easement. A representative of the Mississippi Valley Conservancy provided a comment regarding the properties it has sought to protect. A representative of West Wisconsin Land Trust, Inc., submitted a comment that stated that the easement terms for the Salwey-White property prohibit new structures and improvements, including utility poles. Several properties in the project area are known to be under conservation easements.

The Commission finds it reasonable to require that the applicants work with the Mississippi River Valley Conservancy and the landowners and holders of conservation easements regarding facilities placement to minimize the effects on properties under conservation easement. Along the Q1-Galesville Route with modifications, these would include the Dairyland Power Cooperative and New Amsterdam Grasslands properties managed by the Mississippi River Valley Conservancy.

Placement of Project Facilities on Individual Landowners' Properties

Two members of the public, Frank Allen and John Scheidegger, submitted public comments regarding specifics of project facilities' placement on their properties, and requesting that the proposed placement be altered. The properties are affected by Segments 3 and 2G, respectively.

The Commission finds it reasonable to require the applicants work with all landowners, to the extent practicable, regarding the placement of facilities on their properties.

Drinking Water Well Protection

A member of the public, Susan Suhr, submitted a comment expressing her concern regarding well contamination resulting from construction of the proposed project. Ms. Suhr's property is affected by Segment 88E which is not a part of the approved transmission line route. However, the Commission finds it reasonable to require the applicants to use best construction practices to avoid impacts to drinking water wells.

Center Pivot Irrigation

A member of the public, Steven Wright, submitted a comment expressing concern that the proposed project would affect operation of center pivot irrigation systems on his properties. Mr. Wright's properties are affected by Segment 13A, which is not a part of the approved transmission line route. However, the Commission finds it reasonable to require the applicants to work with operators of any center pivot irrigation systems that lie along the approved route, to the extent practicable, to avoid impacts from project facilities on operations of those systems.

Stray Voltage

There are numerous confined animal operations in the area in which the proposed project would be located. Since it is unclear whether the project would have any effect on such operations, it is reasonable for the applicants to coordinate testing on those operations before and after the project is placed in service. It is also reasonable for the applicants to provide to Commission staff reports of the results of the testing. If, as a result of the testing, it is noted that problems have developed as a result of the project, it is reasonable for the applicants to work with the applicable distribution utility and affected owners to resolve the problems. Specifically, the applicants shall coordinate tests for stray voltage at all dairy operations along the approved route prior to construction and again after the project is energized. Applicants shall work with the distribution utilities and farm owners to rectify any stray voltage problems arising from the construction and operation of the project. Prior to any testing, the applicants shall work with the applicable distribution utility and Commission staff to determine the manner in which stray voltage measurements will be conducted and on which properties.

Public Health and Welfare

As the Wisconsin Supreme Court has declared, issuing a CPCN is a legislative determination involving public policy and statecraft. *Clean Wisconsin*, 282 Wis. 2d 250, ¶ 35, 700 N.W.2d 768 (2005). Wisconsin Stat. § 196.491 assigns to the Commission the role of weighing and balancing many conflicting factors. Applying Wisconsin's Siting Priority Laws requires a similar weighing and balancing. In order to choose a transmission line route that is reasonable and in the public interest, the Commission must not just apply the priority list in

Wis. Stat. § 1.12(6), but also must examine the conditions written into that law and consider the purpose of the legislation.

These statutes demand that when the Commission reviews a CPCN transmission line application, it must consider the reasonable needs of the public for an adequate supply of electric energy, alternative routes, individual hardships, engineering, economics, safety, reliability, a host of environmental factors, the use of existing ROW, corridor sharing, the effect on electric rates, any interference with orderly local land use and development plans, and potential impacts to wholesale electric competition. Ultimately, the Commission must determine whether granting or denying a CPCN applicant's request will promote the public health and welfare. After weighing all of these factors and all of the conditions it is imposing, the Commission finds that issuing a CPCN for this project promotes the public health and welfare and is in the public interest.

Compliance with WEPA

Wisconsin Stat. § 1.11 requires all state agencies to consider the environmental impacts of "major actions" that could significantly affect the quality of the human environment. In Wis. Admin. Code ch. PSC 4, the Commission has categorized the types of actions it undertakes for purposes of complying with this law.

The Commission has fulfilled its requirements under WEPA through the preparation and issuance of the EIS and the creation of the record of the technical and public hearings held in the project area. The joint EIS was prepared by the staffs of the Commission and DNR.

NoCapX 2020/CETF indicated that the Commission's review has not complied with WEPA requirements. Clean WI stated that the review "violates the PSC's duty under WEPA" in part because it did not adequately and publicly examine the four crossings of the Mississippi River

that were originally considered. NoCapX 2020/CETF argued that it is “not sufficient under WEPA for the Commission to have only one route crossing of the Mississippi River under consideration.” As described previously in this Final Decision, the Commission finds that it is reasonable for all the Wisconsin routes to share the same river crossing segment at that project endpoint.

Clean WI also stated that a lack of adequate description of wetland impacts and mitigation potential for each route alternative has resulted in a lack of “clear basis for choice among options” as required for an EIS under Wis. Admin. Code § PSC 4.30(1)(a). WisDOT witness Jay Waldschmidt stated that the discussion of the indirect and cumulative effects on environmental resources in the final EIS, particularly regarding route Segment 8B, was inadequate and failed to comply with the National Environmental Protection Act and WEPA. DNR witness Cheryl Laatsch, however, stated that the EIS was adequate in this regard.

The Commission finds that its review of the proposed project is adequate in both of these respects.

Project Cost and Construction Schedule

The applicants estimate the total gross project cost of the proposed project as modified by this Final Decision, including AFUDC, to be \$211,100,000. The estimated total gross project cost is detailed as follows:

Estimated Project Cost

Line Construction
Material

Poles	\$24,740,000
Wire	5,770,000
Other Material	13,780,000

Labor

ROW Prep	2,380,000
Foundations	19,230,000
Line	21,170,000

Other

Real Estate	4,210,000
Technical Support Services	13,200,000
Environmental	1,440,000
Removal	1,890,000
Distribution Relocations	1,820,000
Escalation	19,579,000
Overheads	7,380,000
AFUDC	20,410,000

Subtotal

 \$156,999,000

Substation

Briggs Road 345/161 kV Substation	\$27,285,000
Briggs Road 69 kV Substation	5,340,000
North La Crosse 69 kV Substation	1,040,000

161 kV Re-Routes to Substation

Material	\$646,000
Labor	998,000
Other	1,267,000

Subtotal

 \$36,576,000

Other Costs

Pre-Certification Costs	\$7,476,000
One-Time Environmental Impact Fee	8,973,000
Annual Impact Fees (Three Year Construction Period)	1,076,000

Subtotal

 \$17,525,000

Total Gross Project Cost

 \$211,100,000

The applicants intend to begin construction of the proposed project in January 2013, and place the facilities in service by December 2015.

Certificate

The Commission grants the applicants a CPCN for construction of the CapX2020 Alma-La Crosse Transmission Project using the Q1-Galesville Route, as described in the final EIS and Ex.-Applicants-Hillstrom-23, and as modified by this Final Decision, at an estimated cost of \$211,100,000.

Order

1. The applicants are authorized to construct the facilities as approved by this Final Decision at a total estimated cost of \$211,100,000.
2. The applicants shall construct the proposed project using the Q1-Galesville Route, as described in the final EIS and Ex.-Applicants-Hillstrom-23, and as modified by this Final Decision.
3. The West Site for the Briggs Road Substation is approved.
4. The applicants shall demonstrate to the Commission by a subsequent filing that they can acquire, by easement or condemnation, the connector between segments 8C and 18A at a reasonable price. If the applicants do not make this demonstration within one year from the date this order takes effect, the CPCN application is denied.
5. If the applicants cancel the project or enter into any arrangement with another party regarding ownership or operation of the proposed facilities, the applicants shall provide prior notice to the Commission. All of the applicants' commitments and all conditions of this Final Decision apply to the applicants and to their successors, assigns, agents, and contractors.
6. All necessary federal, state, and local permits shall be secured by the applicants prior to beginning construction.

7. The applicants shall work with the applicable distribution utility to test for stray voltage at each agricultural, animal confinement operation along the approved route, prior to construction and after the project is energized. The applicants shall work with the distribution utility and farm owner to rectify any identified stray voltage problem arising from the construction or operation of the project. Prior to testing, the applicants shall work with the applicable distribution utility and Commission staff to determine where and how it will conduct the stray voltage measurements. The applicants shall report the results of its testing to Commission staff.

8. The applicants shall consult with the Bureau of Endangered Resources and follow its direction regarding the potential effects on endangered and threatened species to ensure compliance with the state endangered species law, as discussed in this Final Decision. The applicants shall also seek mutual agreement with the Bureau on assessments, surveys, and measures to employ to minimize impacts to the timber rattlesnake and rare plant species.

9. The applicants may propose minor adjustments in the approved route for the protection of social, cultural, or environmental resources, but any changes in alignment from the approved centerline may not affect resources or cause impacts not discussed in the EIS, nor may they affect new landowners who have not been given proper notice and hearing opportunity. For each proposed minor centerline adjustment, the applicants shall submit, for Commission staff review and approval, a letter describing the nature of the requested change, the reason for it, the incremental cost and environmental impact differences based on the approved route, and the applicants' communications with the affected landowners.

10. The applicants shall assist Commission staff in preparation of a request for proposals to hire an IEM that shall report directly to Commission staff. The request for proposals shall include the scope of duties, responsibilities, and authority of each position. The applicants shall fund the salaries and expenses of the monitor. The IEM shall have the authority to stop work at any construction spread if a violation of this Final Decision or any regulatory permit condition is identified. The applicants and their contractors shall promptly stop work on a construction spread if directed to do so by the IEM.

11. The applicants shall work cooperatively with staffs of the Commission, DNR, DATCP, and WisDOT to provide information regarding construction scheduling and help formulate a plan to utilize the IEM most effectively. The applicants shall provide monthly statements to the Commission related to the costs of the IEM.

12. This authorization is for the specific project as described in this Final Decision at the stated cost. Should the scope, design, or location of the project change significantly, or if it is discovered or identified that the project cost, including *force majeure* costs, may exceed the estimated cost by more than 10 percent, the applicants shall promptly notify the Commission as soon as they become aware of the possible change or cost increase.

13. The applicants shall consult with DATCP and use DATCP's agricultural impact statement as guidance in resolving farm operators' construction issues. The applicants shall document results and status in their monthly reports to the Commission.

14. The applicants shall work with operators of organic farms and agri-tourism businesses to minimize the likelihood injury to crops or loss of organic certification from herbicide application within the authorized route ROW. The applicants shall work with the

operators to determine the most effective techniques for minimizing the likelihood of injury to crops or loss of organic certification.

15. The applicants shall work with operators of center pivot irrigation systems, to the extent practicable, to avoid impacts from project facilities on operations of those systems.

16. The applicants shall consult with the Mississippi River Valley Conservancy and the landowners hosting the Dairyland Power Cooperative and New Amsterdam Grasslands conservancies to determine appropriate measures to avoid or minimize impacts. The applicants shall document the results of this consultation to the Commission.

17. The applicants shall work with all landowners, to the extent practicable, regarding the best placement of facilities on their properties.

18. The applicants shall use best construction practices to avoid impacts to drinking water wells.

19. The applicants shall identify the location of each transmission structure using global positioning system technology and transfer this data to a geographic information systems database, using software compatible with state government standards. The applicants shall provide this data to the Commission as soon as it becomes available.

20. Not more than 30 days from the date of this Final Decision, the applicants shall provide to Commission staff adequate information to determine the distribution of environmental impact fees. Commission staff shall then provide to DOA the base cost from which the impact fees will be calculated and the percentage of the high voltage line cost that will be attributed to the affected municipalities and counties.

21. Beginning with the quarter ending June 30, 2012, and within 30 days of the end of each quarter thereafter and continuing until the facilities are fully operational, the applicants shall submit quarterly progress reports to the Commission that include all of the following:

- a. The date that construction commences.
- b. Major construction and environmental milestones, including permits obtained, by agency, subject, and date.
- c. Summaries of the status of construction, the anticipated in-service date, and the overall percent of physical completion.
- d. Actual project costs segregated by line item as reflected in the cost breakdown listed in this Final Decision.
- e. Once each year, a revised total cost estimate for the project.
- f. The date that the facilities are placed in service.

22. Upon completion of the project, the applicants shall notify the Commission and report the actual costs segregated by plant account and comparable to the cost breakdown included in this Final Decision. For any account or category where actual cost deviates significantly from those authorized, the final cost report shall itemize and explain the reasons for the deviation.

23. The CPCN is valid only if construction commences no later than one year after the latest of the following dates:

- a. The date this Final Decision is mailed.

- b. The date when applicants have received every federal and state permit, approval, and license that is required prior to commencement of construction under the CPCN.
 - c. The date when the deadlines expire for requesting administrative review or reconsideration of the CPCN and of the permits, approvals, and licenses described in par. (b).
 - d. The date when the applicants receive the Final Decision, after exhaustion of judicial review, in every proceeding for judicial review concerning the CPCN and the permits, approvals, and licenses described in par. (b).
24. This Final Decision takes effect the day after the date of mailing.

Dated at Madison, Wisconsin, this 30th day of May, 2012.

By the Commission:



Sandra J. Paske
Secretary to the Commission

SJP:JAL:jlt:DL:00569726

See attached Notice of Rights

PUBLIC SERVICE COMMISSION OF WISCONSIN
610 North Whitney Way
P.O. Box 7854
Madison, Wisconsin 53707-7854

**NOTICE OF RIGHTS FOR REHEARING OR JUDICIAL REVIEW, THE
TIMES ALLOWED FOR EACH, AND THE IDENTIFICATION OF THE
PARTY TO BE NAMED AS RESPONDENT**

The following notice is served on you as part of the Commission's written decision. This general notice is for the purpose of ensuring compliance with Wis. Stat. § 227.48(2), and does not constitute a conclusion or admission that any particular party or person is necessarily aggrieved or that any particular decision or order is final or judicially reviewable.

PETITION FOR REHEARING

If this decision is an order following a contested case proceeding as defined in Wis. Stat. § 227.01(3), a person aggrieved by the decision has a right to petition the Commission for rehearing within 20 days of mailing of this decision, as provided in Wis. Stat. § 227.49. The mailing date is shown on the first page. If there is no date on the first page, the date of mailing is shown immediately above the signature line. The petition for rehearing must be filed with the Public Service Commission of Wisconsin and served on the parties. An appeal of this decision may also be taken directly to circuit court through the filing of a petition for judicial review. It is not necessary to first petition for rehearing.

PETITION FOR JUDICIAL REVIEW

A person aggrieved by this decision has a right to petition for judicial review as provided in Wis. Stat. § 227.53. In a contested case, the petition must be filed in circuit court and served upon the Public Service Commission of Wisconsin within 30 days of mailing of this decision if there has been no petition for rehearing. If a timely petition for rehearing has been filed, the petition for judicial review must be filed within 30 days of mailing of the order finally disposing of the petition for rehearing, or within 30 days after the final disposition of the petition for rehearing by operation of law pursuant to Wis. Stat. § 227.49(5), whichever is sooner. If an *untimely* petition for rehearing is filed, the 30-day period to petition for judicial review commences the date the Commission mailed its original decision.⁵ The Public Service Commission of Wisconsin must be named as respondent in the petition for judicial review.

If this decision is an order denying rehearing, a person aggrieved who wishes to appeal must seek judicial review rather than rehearing. A second petition for rehearing is not permitted.

Revised: December 17, 2008

⁵ See *State v. Currier*, 2006 WI App 12, 288 Wis. 2d 693, 709 N.W.2d 520.

APPENDIX A

In order to comply with Wis. Stat. § 227.47, the following parties who appeared before the agency are considered parties for purposes of review under Wis. Stat. § 227.53.

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Docket 5-CE-136

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NOCAPX 2020 and
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Docket 5-CE-136

WISCONSIN DEPARTMENT OF TRANSPORTATION

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PUBLIC SERVICE COMMISSION OF WISCONSIN

(Not a party, but must be served)

610 North Whitney Way

P.O. Box 7854

Madison, WI 53707-7854

Please file documents using the Electronic Regulatory Filing (ERF) system which may be accessed through the PSC website: <https://psc.wi.gov>.

John Lorence

Diane Ramthun

William Fannucchi

James Lepinski

Wisconsin Public Service Commission of Wisconsin

PO Box 7854

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**PUBLIC SERVICE COMMISSION OF WISCONSIN**

Application by American Transmission Company to Construct a New 5.8-Mile 345 kV Transmission Line from the Existing Pleasant Prairie Switchyard in the Village of Pleasant Prairie, Kenosha County, Wisconsin, to the Existing Zion Energy Center in the City of Zion, Lake County, Illinois

137-CE-161

FINAL DECISION**Introduction**

On October 19, 2011, American Transmission Company LLC (ATC) filed an application for authority under Wis. Stat. § 196.491(3) and Wis. Admin. Code § PSC 111.53 to construct, own, and operate a new 345 kilovolt (kV) electric transmission line. The project, known as the Pleasant Prairie-Zion Energy Center Project (PLP-ZEC), is approximately 5.3 to 5.8 miles long and is proposed to be constructed from the existing Pleasant Prairie switchyard located in the village of Pleasant Prairie, Kenosha County, Wisconsin, to the existing Zion Energy Center in the city of Zion, Lake County, Illinois. The total proposed project cost is estimated to be \$30.9 million to \$31.6 million, depending on the transmission line route selected. The estimated cost of transmission line construction work in Wisconsin for Route 1 is \$11.8 million; for Route 2 it is \$12.3 million. The primary purpose of the project is to provide benefits to customers by relieving congestion in the project area and by allowing for the most economic dispatch of generation while also improving reliability in southeastern Wisconsin and northeastern Illinois. The application was accepted as complete on November 18, 2011.

The Commission issued a Notice of Proceeding and Prehearing Conference on December 22, 2011. A prehearing conference was held in this docket on January 18, 2012. The village of Pleasant Prairie and Wisconsin Electric Power Company requested to intervene in this docket and were granted party status. The issue for hearing, as determined at the prehearing conference, was whether the project complies with the standards that apply to a high-voltage transmission line as set out in Wis. Stat. §§ 1.11, 1.12, 196.025, and 196.491 and Wis. Admin. Code chs. 4, 111, and 112.

An Environmental Assessment (EA) was prepared by Commission staff in cooperation with the Department of Natural Resources (DNR) and the final EA was issued on February 27, 2012. The EA concluded that preparation of an Environmental Impact Statement was not warranted. The Notice of Hearing was mailed on January 31, 2012. The public hearing was held on February 23, 2012, in Pleasant Prairie, Wisconsin, while the technical hearing was held on March 1, 2012, in Madison. The Notice of Hearing solicited testimony and comments on the proposed project from members of the public.

The parties, for purposes of review under Wis. Stat. §§ 227.47 and 227.53, are listed in Appendix A.

The Commission considered this matter at its open meeting on April 20, 2012. The application is GRANTED subject to conditions.

Findings of Fact

1. ATC is an electric public utility engaged in rendering electric service in Wisconsin, pursuant to Wis. Stat. § 196.01(5)(a).

2. ATC's project consists of constructing 5.3 to 5.8 miles of 345 kV transmission line, as described in its application, at a total estimated cost of \$30.9 million to \$31.6 million. The Wisconsin portion of the proposed 345 kV transmission is 3.5 to 4.1 miles, with an estimated cost of \$11.8 million to \$12.3 million.

3. The facilities approved by this Final Decision are necessary to provide adequate and reliable service to present and future electric customers.

4. The facilities approved in this Final Decision will adequately address the present needs of ATC's electric system and are necessary to satisfy the reasonable needs of the public for an adequate supply of electrical energy. The reasonable needs of the public include the financial needs of electric utility customers.

5. Energy conservation, renewable resources, or other energy priorities listed in Wis. Stat. §§ 1.12 and 196.025 are not technically feasible alternatives to the proposed facilities.

6. Construction and operation of the facilities at the estimated cost will not impair the efficiency of ATC's service, will not provide facilities unreasonably in excess of probable future requirements and, when placed in operation, will not add to the cost of service without proportionately increasing the value or available quantity thereof.

7. The facility design, location, and route approved by this Final Decision are in the public interest considering alternative sources of supply, alternative locations or routes, individual hardships, and engineering, economic, safety, reliability, and environmental factors.

8. The facilities approved by this Final Decision will not have undue adverse impacts on environmental values such as ecological balance, public health and welfare, historic sites, geological formations, aesthetics of land and water, and recreation.

9. The facilities approved by this Final Decision will not unreasonably interfere with the orderly land use and development plans for the area.

10. The facilities approved by this Final Decision will not have a material adverse impact on competition in the relevant wholesale electric service market.

11. The approved transmission line route utilizes priority siting corridors listed in Wis. Stat. § 1.12(6) to the greatest extent feasible, consistent with economic and engineering considerations, reliability of the electric system, and protection of the environment.

12. Construction of the facilities to satisfy the reasonable needs of the public for an adequate supply of electrical energy is necessary and appropriate.

13. The general public interest and public convenience and necessity require completion of the proposed project.

14. The proposed project will not have a significant impact on the human environment as defined by Wis. Stat. § 1.11.

Conclusions of Law

The Commission has jurisdiction under Wis. Stat. §§ 1.11, 1.12, 196.02, 196.025 and 196.491, and Wis. Admin. Code chs. PSC 4, 111, and 112 to issue a Certificate of Public Convenience and Necessity (CPCN) authorizing ATC to construct and place in operation the proposed electric transmission facilities described in the project application, subject to the conditions stated in this Final Decision.

Opinion

Project Purpose and Need

Unlike most previous transmission line projects, the purpose of this project is primarily economic. That is, the proposed transmission line is not, as a primary focus, needed to address a specific reliability issue. ATC asserts that the transmission system in the southeastern Wisconsin–northern Illinois area is in need of infrastructure improvements to enhance market economic performance for Wisconsin and the region. There has been chronic historical market congestion for thousands of hours each year, and transmission congestion is forecasted for the area. The PLP-ZEC 345 kV project was developed by ATC to provide benefits to its customers by relieving congestion in the area while allowing the most economic dispatch of generation and providing additional reliability-related benefits.

Although the transmission system in southeastern Wisconsin is adequate in regard to North American Electric Reliability Corporation reliability standard compliance, the performance of the network is increasingly affected by regional transmission system flows of power primarily from the west to the east across the Eastern Interconnection. The transmission infrastructure was originally built to meet the generation to load requirements of the individual transmission line owners. Over the years, the transmission system and how it is used has changed significantly. With increased load growth, the generation profile of the area has also changed. Base load generating units were added in southeastern Wisconsin, and the Zion nuclear units in northeastern Illinois were decommissioned. As a result, congestion within the corridor has been identified in both the Pennsylvania–New Jersey–Maryland Interconnection (PJM) and

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Midwest Independent Transmission System Operator, Inc. (MISO) markets. Based on its analysis, ATC testified that the proposed project would provide substantial net economic and reliability benefits to its customers and to the region.

Differences Between the Proposed Project and Typical Reliability Projects

The PLP-ZEC project is proposed to be constructed primarily for economic purposes. As such, the standards applied in considering whether to approve, modify, or deny the project are different than those that would be applied to typical projects that are needed for reliability purposes. In particular, the Commission determined in its order in docket 137-CE-149 (Paddock–Rockdale transmission line), dated June 13, 2008, that the following requirements must be met for it to authorize construction of projects for economic purposes:

- The project must clearly have economic benefits.
- If the project also has reliability benefits, those benefits should be clearly identified in the application.

Multi-Value Project Status of Proposed Project

Like all transmission line decisions, this is an important case. It is a relatively small dollar amount and the line is relatively short. However, it is the first MISO Multi-Value Project (MVP) line that this Commission is taking up, and one of the first multi-state MVP lines within MISO to face final approval by state regulators.

The Commission's statutory scheme requires regulatory rigor before the Commission can issue a CPCN, and this Commission consistently takes a hard look at all CPCN applications. Here it is important for an additional reason. For this line, Wisconsin ratepayers will be picking

up only about 15 percent of its cost and ratepayers throughout the Midwest will be paying the other 85 percent of the cost. While this Commission has approved transmission lines in the past that are cost-shared, that was under a different MISO formula, and the costs paid by ratepayers in other states was only approximately 20 percent of the project cost.

In this case, the Commission is applying its regular CPCN statutes, but with the knowledge that it is passing on a significant percentage of the costs to ratepayers in the entire MISO footprint, from Montana to Indiana. For MISO MVP projects like this one, this Commission, like every regulatory agency in the region, needs to resist the temptation to soften standards or to lower approval requirements under the false premise that state ratepayers are only paying for a small portion of a line, as ratepayers will not only pay for 15 percent of this specific line, but will share in the costs of other lines.

Perhaps of more long-term importance to Wisconsin ratepayers, this Commission wants regulators in the other MISO states to feel that same pressure when they are voting on MVP lines. In the long-run, Wisconsin ratepayers will be paying for their *pro rata* share of MVP lines across the region, even when this Commission has no role in decisions made in other states. Therefore, the best way to ensure that the MVP concept works as planned is for this Commission to be rigorous in the application of Wisconsin laws, and to ask that counterparts in other states do the same.

Proposed Transmission Facilities and Routes

ATC proposes to construct the new PLP-ZEC overhead 345 kV transmission line on single-circuit steel vertically-configured monopoles on caisson foundations in new right-of-way

(ROW), except for the first 0.5 mile of the line. The first three spans (0.5 mile) of the new 345 kV transmission line exiting PLP would be installed as a double-circuit configuration with existing 345 kV Circuit 611 on existing ROW. If soil conditions are suitable, ATC may choose to direct embed the poles, use vibratory caissons, or use other suitable foundation systems, provided they are more economical. On average, pole heights are expected to range from 120 to 155 feet above ground, depending on the terrain and the number of circuits, with an average span length of 700 feet. The new 345 kV line would have single-circuit TP-1113 kcmil 45/7 ACSR "Bluejay" conductor (or equivalent). It would also include a 7/16" EHS shield wire and an optical ground wire to protect the line from lightning strikes and to provide for relaying.

ATC proposed two alternative routes in Wisconsin for the transmission line. Alternative Route 1, which is 3.5 miles long, primarily follows an existing railroad and transmission line ROW. Alternative Route 2, which is 4.1 miles long, primarily parallels State Highway (STH) 31 (Green Bay Road), but has cross-country sections near its north and south ends. Both routes share a common segment for the first 0.5 mile from the PLP switchyard. The poles of the north/south portion of Route 1 would typically be placed 30 feet from the edge of the Union Pacific Railroad ROW, with the arms pointed away from the tracks. The part of Route 2 that follows STH 31 would have poles placed approximately six feet outside of road ROW, with the arms pointed towards the highway.

Estimated Project Costs

ATC estimates the total proposed project cost would vary from \$30.9 million to \$31.5 million, depending on the transmission line route. The cost of transmission line construction work in Wisconsin for Route 1 is \$11.8 million; for Route 2 it is \$12.3 million.

System Alternatives Analysis

Under Wis. Stat. § 196.491(3)(d)3., in order to grant a CPCN for the project, the Commission must find that the proposed project is in the public interest considering alternative sources of supply and engineering, economic, safety, and reliability factors.

ATC considered several different transmission project alternatives. A pre-screening process was used to eliminate potential project alternatives. The two transmission project alternatives that were ultimately selected to be evaluated in detail are:

- **PLP-ZEC 345 kV:** A 345 kV line from Pleasant Prairie, Wisconsin to Zion, Illinois;
- **Low Voltage:** Transmission upgrades consisting of upgrades to existing 138 kV facilities located in Wisconsin and Illinois (Low Voltage).

Routes Alternatives Considered

Major corridors in the proposed project area considered by ATC included:

- The existing 345 kV transmission line 611 ROW near the PLP Switchyard;
- The existing 138 kV transmission line 63141 ROW from the eastern terminus of the initial route segment south to County Trunk Highway (CTH) ML;
- The existing 345 kV transmission lines 2221 and 2222;
- The existing 138 kV transmission line ROW from Lakeview Substation to the state line;
- CTH H;
- STH 31;
- Union Pacific Railroad;
- Various village and city roads, and property lines.

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In addition to investigating the major corridors, ATC also investigated new cross-country corridors, generally following existing features such as field and section lines, to minimize landowner impacts. In general, cross-country route corridors were chosen for evaluation where they would reasonably intersect with higher priority corridors.

For this project, the primary north-south corridor-sharing options are the Union Pacific Railroad/existing transmission line ROW and STH 31 corridors.

The CTH H corridor was dropped from further consideration because of numerous residences and a daycare facility that would have been impacted by the proposed new transmission line. The 80th Avenue corridor was dropped because there was insufficient ROW to expand to a triple-circuit configuration, and a crossing of existing 345 kV lines would be necessary. STH 131 in Illinois was eliminated due to a planned road widening project that would prohibit locating the line in highway ROW.

Route 1 (transmission/railroad) and Route 2 (STH 31) selected by ATC for this project use existing railroad and road corridors to a major extent in Wisconsin and minimize environmental impacts.

Economic Analysis

ATC calculated the local economic benefits of each transmission alternative over a range of six plausible futures. With cost sharing via the MISO candidate MVP allocation, PLP-ZEC showed positive net benefits in four out of the six futures analyzed over the 50-year economic life of the project. PLP-ZEC showed positive net benefit for ATC customers in three out of six

futures if the project is not cost shared and ATC customers pay for the full cost of the project. The Low Voltage alternative is not considered eligible for MVP cost sharing and showed net positive benefits in only one out of the six futures analyzed.

Although economic benefit is the focus of the proposed project's justification, the project alternatives were also evaluated to determine associated reliability benefits. Each alternative provided different benefits depending upon the interconnection point. The studies determined that the PLP-ZEC project would provide significant improvements to the generation angular stability margins and power transfer capability in southeastern Wisconsin and northeastern Illinois.

At the time the application was submitted to the Commission, MISO had identified the PLP-ZEC project as a candidate for MVP status that would be compatible with other potential transmission system improvements. The analyses showed that the PLP-ZEC project would work well with future transmission expansion to provide benefits above and beyond those of PLP-ZEC alone. The PLP-ZEC project received final MVP status in December 2011. As such, Wisconsin ratepayers are currently estimated to pay not more than 15 percent of the cost of the project.

Potential Impacts on Wholesale Competition

A transmission project that expands transfer capability will facilitate, not adversely affect, commerce and promote competition in electric markets in Wisconsin. The record in this docket shows that the proposed PLP-ZEC transmission project will enhance the 345 kV transmission connections between Wisconsin and Illinois. As such, the PLP-ZEC 345 kV transmission line will not adversely affect competition in the electric markets in Wisconsin.

Routing Process

ATC's routing process complied with Wis. Stat. §§ 1.12(6) and 196.025(1m). ATC's process included coordination with Commission staff and DNR, and a public review phase, including public information meetings and detailed environmental studies. Several existing linear corridors in the project area were investigated as potential routes.

Compliance with Wisconsin Environmental Policy Act

This is a Type II action under Wis. Admin. Code § PSC 4.10(3). Most of the temporary and permanent environmental and social effects of the proposed project would be relatively minor. The Commission finds that no significant impact to the human environment is likely. Therefore, an environmental impact statement is not required.

Environmental Review

In Wisconsin, the routes for the proposed transmission line head south from the switchyard at the Pleasant Prairie Power Plant to the Illinois border, through an industrial and semi-rural area of the village of Pleasant Prairie. Agricultural land is more common on the southern parts of the routes, near the Illinois border.

Both routes cross seven waterways, two of which would require temporary clear span bridges for equipment access. Route 1 encompasses 7.6 acres of wetland within its proposed ROW. Of this wetland acreage, 1.6 acres are wooded wetland. Four poles would be placed in wetlands and one pole would be placed immediately adjacent to a wetland. Route 2 encompasses 5.1 acres of wetland within its proposed ROW. Of this wetland acreage, 0.2 acre is wooded wetland. One pole would be placed in a wetland. The majority of wetlands potentially

impacted by the project are low-quality emergent/wet meadows dominated by fast-growing invasive species, primarily located in railroad and roadside ditches within the proposed transmission line ROW or adjacent to the proposed routes. In discussions with Commission staff, DNR staff communicated that both routes are permissible.

Route 1 would require the clearing of 3.0 acres of woodland from the new ROW. Wooded wetland comprises 1.6 acres of this total. Route 2 would require the clearing of 4.1 acres of woodland from the ROW. Wooded wetland comprises 0.2 acres of this total. Part of the clearing that would take place for Route 2 is along the 800-foot frontage of Pleasant Prairie's proposed Momper's Woods Park along STH 31. Most of the grasslands identified along the routes consist of railway and roadway ditches or open fields not in agricultural production. Route 1 contains prairie/grassland for a total length of 4,488 feet, consisting of 0.9 acres in existing ROW and 8.0 acres in new ROW. Route 2 contains prairie/grassland for a total length of 3,043 feet, consisting of 2.4 acres in existing ROW and 3.5 acres in new ROW.

Because the proposed routes tend to run through agricultural land or follow railway and road edges which are subject to frequent disturbance, habitat quality for threatened or endangered species is generally poor. Habitat for four state-listed threatened plant species exists along the proposed routes, and the existence of a state-listed threatened turtle may occur within the project area.

Route 1 crosses 0.8 mile of cropland, and its ROW encompasses 8.3 acres of cropland. No mid-field crossings of cropland would be required. Route 2 crosses 1.6 miles of cropland, and cropland within its ROW is divided between 6.9 acres of existing ROW and 10.3 acres of

new ROW. Two mid-field crossings are planned just north of the Illinois state line, placing one pole within a field, away from the field edge. The potential agricultural impacts that could result from the project include removing land from production due to the placement of transmission line structures, crop damage, soil compaction, and impacts to efficient tillage due to structure placement. In general, access to structure locations would be along the ROW or from public roadways that parallel or cross the line route, unless alternative access methods that would result in lower impacts are available.

There are no known archeological sites along Route 1, and two along Route 2. The first is in a wooded parcel owned by the village of Pleasant Prairie on the west side of STH 31, south of 108th Street. The Jambau Trail, a Native American trail, crosses the route at this location. A second site, consisting of both historic and prehistoric materials, is also located on the west side of STH 31, north of 116th Street.

A transmission line built on Route 2 could reduce the amount of developable land and constrain the layout of lots along the route near the Wisconsin-Illinois state line. Route 1 would have less aesthetic impact than Route 2, due to its location adjacent to a rail line and existing transmission line corridor. Much of the route also lies along the rear of industrial lots in the LakeView Corporate Park. Few homes are nearby.

The village of Pleasant Prairie has adopted three neighborhood plans for the project area. Route 1 fits better with these plans because it follows the existing rail and transmission line corridor through the rear of the industrial lots in the industrial park, rather than running across the front of the industrial and residential lots, as Route 2 does. One neighborhood plan designates a mix of residential and conservancy uses for the area crossed by both routes between

CTH ML and the state line. Route 2 would be more disruptive to these uses, because it does not follow the existing rail corridor, but proceeds cross-country on the new corridor. It bisects an area planned for single-family residential development, and may reduce the number of lots that could be developed.

ATC stated a preference at the hearing for Route 1 for the following reasons:

1. Its entire length shares the ROW with existing infrastructure.
2. It has no cross-country segments on new ROW.
3. It has minimal impact to the future development plans of the village of Pleasant Prairie.
4. It impacts the least number of property owners.
5. It is approximately \$1.1 million less expensive.

The village of Pleasant Prairie supports the selection of Route 1. The village is concerned with the impact the selection of Route 2 would have on its community, the financial impact on its commercial and residential developments, and the impact on a historic trail and the Momper's Woods community park. Properties along Route 2 have a greater highest and best use, a higher current zoning designation, greater visibility, and higher traffic counts. A transmission line running along the frontage of these properties would create a new visual landscape. The village believes that a corresponding loss in property tax revenue would go on year after year, diminishing the village's ability to retire the debt for public improvements that have been installed. Any transmission line impact to property values along Route 1 has already occurred because a high-voltage line is already there. Route 1 is predominantly adjacent to properties with a lesser highest and best use, is already encumbered by similar easements for an

existing transmission line, and the proposed easement is located at the rear of the properties, limiting any negative impact on future building or infrastructure placement.

Pleasant Prairie's Village Engineer has concerns with the placement of the transmission line poles and road crossings in relation to other existing and planned ROWs at STH 165, 116th Street, and what is currently Springbrook Road. Sections of Route 2 are in close proximity to the village's sanitary sewer, water, and storm water infrastructure. The village is concerned that the location of the pole foundations may interfere with these facilities, especially during maintenance and reconstruction of the village's mains. Poles along Route 2 would negatively affect the already-designed storm water retention basins along the east side of STH 31 north of STH 165. It may be necessary for the village to redesign the storm water retention basins to accommodate the transmission line. The village has safety concerns associated with the number of roadway crossings needed for Route 2 and that not all crossings would be right-angles.

The village's Community Development Director believes Route 2 would conflict with the development of and access to the planned prime commercial and industrial land along both sides of the STH 31 corridor. The transmission line wires and poles would create physically restrictive barriers for the development of commercial buildings, parking lots, access driveways, signage, berming/landscaping, and storm water retention basins, and would lower property values due to the negative visual impacts of the poles and lines. Visually, the transmission lines would detract from the appearance and marketability of the LakeView Corporate Park and commercial development at STHs 31 and 165. Route 1 would not negatively impact the LakeView East Neighborhood planned development because the plan has already identified the

land to be used for the existing railway and utility transmission line corridor. Route 2 would have a significant negative impact on future residential development south of CTH ML, splitting existing residential parcels and leaving uneconomic remnants.

The Kenosha County Executive sent the Commission a letter supporting Route 1. The Kenosha County highway commissioner testified at the hearing as to the county's preference for Route 1, due to the potential traffic safety hazard of poles located adjacent to STH 31 along Route 2. With proper direction from the county, poles along Route 1 would not interfere with the relocation of CTH ML to a more east/west alignment.

Representatives of several owners of industrial and commercial properties stated a preference, both at the hearing and in correspondence, for Route 1, citing aesthetic impacts and concerns about impacts to future development and property values from a line built on Route 2. Route 2 crosses the middle of property owned by SuperValu and would prevent any expansion of its grocery warehouse in a southerly direction.

Two landowners object to the transmission line being located on the east side of the railroad track, and request that the line be placed on the west side of the Union Pacific Railroad track along Route 1. CenterPoint Properties believes that a line on the east side would negatively impact its existing building and inhibit the future development of its property, including rail access, and that an existing transmission line lies on the west side that could be put on the same poles with a new line. ATC testified at the technical hearing that there is not enough room on the west side of the railroad to allow for the required safety clearances between existing buildings, the various railroad tracks, and the new line. A

temporary line would also need to be constructed to avoid an outage of the Spring Valley Substation and the project would be more expensive, if constructed on the west side of the railroad ROW. Given the siting constraints described by ATC, the Commission does not require ATC to locate the project on the west side of the railroad ROW.

Selected Transmission Route

The Commission finds that Route 1, which primarily follows an existing railroad and transmission line ROW, is in the public interest as it fully complies with the siting priorities in Wis. Stat. § 1.12(6), does not unduly interfere with land use and development plans in the area, and has strong community support.

Environmental Requirements

The village of Pleasant Prairie requests that ATC obtain the proper wetland and floodplain impact permits. All disturbed land areas should be protected with erosion control measures and be promptly restored. ATC should therefore follow the state requirements for erosion control and construction site management. Wetland protection and erosion control are subject to DNR permitting. To preserve public peace, heavy equipment operation should be restricted to 7:00 a.m. to 10:00 p.m. daily.

Transmission line construction should be done in a manner that will protect the village's infrastructure from direct damage and avoid degrading the soil such that the infrastructure could be compromised. ATC should work cooperatively with the village to resolve any potential conflicts prior to construction.

The village intends to extend and realign CTH ML from 80th Avenue to STH 31. This extension would include the construction of a bridge over the Union Pacific railroad track. Poles would need to be spaced so as to allow for the spanning of the new four-lane roadway. In addition, the transmission line would need to be high enough to avoid any conflicts with the bridge and roadway traffic on the new CTH ML. ATC's design places the realigned road near the center of a span and uses taller poles near that location to help accommodate the future bridge and roadway. However, it may be necessary to adjust the alignment of the existing Kenosha-Lakeview 138 kV line at this location to accommodate the realigned road.

DNR endangered resources staff states that some measures to avoid or minimize impacts to rare resources may be needed, depending on the project's final design and conditions during construction. DNR staff recommends that ATC should consult with DNR prior to construction to confirm whether such measures are needed.

Clearing or trimming of oak trees between April and October could possibly spread oak wilt to oaks present in the surrounding woodlands. Clearing trees outside of this season is highly recommended. If this is not possible, immediate treatment of oak stumps or wounds with tree wound paint could prevent the spread of oak wilt disease.

Project Costs

The estimated cost of the project as approved is detailed as follows:

Description	Approved Route
345 kV Transmission Line - WI	\$11,796,889
345 kV Transmission Line – IL	\$9,362,569
Structure 1424 to Structure 20203 Modifications	\$293,865
Transmission Line Total	\$21,453,323
Pleasant Prairie Substation Modifications	\$2,101,707
Zion Energy Center Substation Modifications	\$4,522,479
Bain Substation Fault Current Impact Modifications	\$482,808
Substation Modifications Total	\$7,106,994
345 kV Environmental Impact Fees	\$714,796
Project Pre-Certification Costs (not included in estimates)	\$2,313,000
Total Estimated Project Costs (rounded)	\$31,588,000

Construction is expected to begin during the fourth quarter of 2012 with completion in May 2014.

High-Voltage Transmission Line Fees to Municipalities

Wisconsin law imposes a one-time environmental impact fee and an annual impact fee for construction of high-voltage lines with a nominal voltage of 345 kV or more. Wis. Stat. § 196.491(3g)(a). Under Wis. Stat. § 16.969(2), ATC must pay the following impact fees to the Department of Administration (DOA):

- (a) An annual impact fee in an amount equal to 0.3% of the cost of the high-voltage transmission line, as determined by the commission under s. 196.491(3)(gm).
- (b) A one-time environmental impact fee in an amount equal to 5% of the cost of the high-voltage transmission line, as determined by the commission under s. 196.491 (3) (gm).

DOA then distributes these amounts to affected counties and municipalities, which, for this project, includes Kenosha County and the village of Pleasant Prairie.

The Commission is responsible for determining the “cost of the high-voltage transmission line.” Wis. Stat. § 196.491 (3)(gm). The statute defines “high-voltage transmission” as “a conductor of electric energy . . . together with associated facilities,” but does not specifically define “associated facilities.” Wis. Stat. § 196.491(1)(f).

The Commission finds that estimates of environmental impact fees (EIF) themselves, pre-certification expenses, and operation and maintenance (O&M) costs during construction are not part of the cost of the high-voltage transmission line, and such costs shall be excluded from the cost basis used to calculate the impact fees pursuant to Wis. Stat. § 196.491(3g)(a). While a project applicant must pay impact fees, must incur pre-certification expenses, and must pay O&M costs, they are not costs of the conductor or associated facilities. The approval of these costs in this order does not require their inclusion in the cost basis for the impact fees. The purpose of the impact fees is to compensate municipalities for the burden of the physical facilities. Pre-certification and O&M costs during construction have no physical impact on the affected municipalities. For the approved route, the cost basis for calculation of the impact fees is set forth below.

Item	Project Costs Applicable to 345 kV EIF Calculation
PLP-ZEC Transmission Line - WI	\$10,780,359
Structure 1424 to Structure 20203 Modifications	\$267,344
Transmission Line Total	\$11,047,703
Pleasant Prairie Substation Modifications	\$2,001,807
Bain Substation Fault Current Impact Modifications	\$437,216
Substation Modification Total	\$2,439,023
EIF Total	\$13,486,726

Certificate

ATC, as an electric public utility, is granted a certificate authorizing it to construct the facilities described in its application and in this Final Decision at a total estimated cost of \$31,588,000, subject to the conditions in this Final Decision.

Order

1. ATC's application for authority to construct the 345 kV transmission line as described in its application and associated facilities, at an estimated total cost of \$31,588,000, is granted as conditioned by this Final Decision.

2. This authorization is for the specific project as described in the application, constructed on Route 1 (which primarily follows an existing railroad and transmission line ROW), and at the stated cost. Should the scope, design, or location of the project change significantly, or if it is discovered or identified that the project cost, including *force majeure* costs, may exceed the estimated cost by more than 10 percent, ATC shall promptly notify the Commission as soon as it becomes aware of the possible change or cost increase.

3. When constructing the approved project, ATC shall implement all construction and environmental mitigation methods included in the project application and stated in testimony, unless specifically modified by a subsequent DNR permit.

4. ATC shall make reasonable efforts to restore to its original condition any property adversely affected by construction of the approved project.

5. All necessary state and local permits shall be secured by ATC prior to beginning construction:

6. ATC shall obtain proper floodplain impact permits.
7. ATC shall work cooperatively with the village of Pleasant Prairie prior to construction to resolve any potential conflicts with existing village infrastructure.
8. ATC shall space poles so as to allow for the spanning of the planned relocation of CTH ML. In addition, the transmission line conductors shall have sufficient clearance to avoid any conflicts with the bridge and roadway traffic on the new CTH ML and any required modification of the existing Kenosha-Lakeview 138 kV line to accommodate the new roadway.
9. ATC shall restrict heavy equipment operation to 7:00 a.m. to 10:00 p.m. daily to preserve the public peace.
10. ATC shall consult with DNR Bureau of Endangered Resources staff to determine appropriate measures to protect rare species.
11. ATC shall clear or trim oak trees outside of the April to October growing season. If this is not possible, oak stumps or wounds shall be immediately treated with tree wound paint to prevent the spread of oak wilt disease.
12. ATC shall use appropriate mitigation measures to minimize construction impacts to agricultural lands crossed by the line.
13. ATC shall submit to the Commission quarterly progress reports and the date the facilities are placed in service.
14. Final actual costs segregated by major accounts shall be submitted to the Commission within one year after the in-service date. For those accounts or categories where actual costs deviate significantly from those authorized, the final cost report shall itemize and explain the reasons for such deviations.

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15. This authorization is valid only if construction is started within one year of the date of this Final Decision.

16. After construction, ATC shall identify the location of each transmission structure using global positioning system technology and transfer this data to a geographic information systems database using software compatible with state government standards, and shall submit this information to the Commission.

17. This Final Decision is effective the day after the date of mailing.

Dated at Madison, Wisconsin, this 7th day of May, 2012.

By the Commission:



Sandra J. Paske
Secretary to the Commission

SJP:JAK:cmk:DL:00563764

See attached Notice of Rights

PUBLIC SERVICE COMMISSION OF WISCONSIN
610 North Whitney Way
P.O. Box 7854
Madison, Wisconsin 53707-7854

**NOTICE OF RIGHTS FOR REHEARING OR JUDICIAL REVIEW, THE
TIMES ALLOWED FOR EACH, AND THE IDENTIFICATION OF THE
PARTY TO BE NAMED AS RESPONDENT**

The following notice is served on you as part of the Commission's written decision. This general notice is for the purpose of ensuring compliance with Wis. Stat. § 227.48(2), and does not constitute a conclusion or admission that any particular party or person is necessarily aggrieved or that any particular decision or order is final or judicially reviewable.

PETITION FOR REHEARING

If this decision is an order following a contested case proceeding as defined in Wis. Stat. § 227.01(3), a person aggrieved by the decision has a right to petition the Commission for rehearing within 20 days of mailing of this decision, as provided in Wis. Stat. § 227.49. The mailing date is shown on the first page. If there is no date on the first page, the date of mailing is shown immediately above the signature line. The petition for rehearing must be filed with the Public Service Commission of Wisconsin and served on the parties. An appeal of this decision may also be taken directly to circuit court through the filing of a petition for judicial review. It is not necessary to first petition for rehearing.

PETITION FOR JUDICIAL REVIEW

A person aggrieved by this decision has a right to petition for judicial review as provided in Wis. Stat. § 227.53. In a contested case, the petition must be filed in circuit court and served upon the Public Service Commission of Wisconsin within 30 days of mailing of this decision if there has been no petition for rehearing. If a timely petition for rehearing has been filed, the petition for judicial review must be filed within 30 days of mailing of the order finally disposing of the petition for rehearing, or within 30 days after the final disposition of the petition for rehearing by operation of law pursuant to Wis. Stat. § 227.49(5), whichever is sooner. If an *untimely* petition for rehearing is filed, the 30-day period to petition for judicial review commences the date the Commission mailed its original decision.¹ The Public Service Commission of Wisconsin must be named as respondent in the petition for judicial review.

If this decision is an order denying rehearing, a person aggrieved who wishes to appeal must seek judicial review rather than rehearing. A second petition for rehearing is not permitted.

Revised: December 17, 2008

¹ See *State v. Currier*, 2006 WI App 12, 288 Wis. 2d 693, 709 N.W.2d 520.

Appendix A

SERVICE LIST

AMERICAN TRANSMISSION COMPANY LLC

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VILLAGE OF PLEASANT PRAIRIE

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WISCONSIN ELECTRIC POWER COMPANY

Catherine Phillips
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PUBLIC SERVICE COMMISSION OF WISCONSIN

(Not a party, but must be served)

610 North Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

Please file documents using the Electronic Regulatory Filing (ERF) system which may be accessed through the PSC website: <https://psc.wi.gov>.

DATE MAILED

JUN 13 2008

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of American Transmission Company, as an Electric Public
Utility, to Construct a New 345 kV Transmission Line from the
Rockdale Substation, Dane County, Wisconsin, to the Paddock
Substation, in Rock County, Wisconsin

137-CE-149

FINAL DECISION

On May 18, 2007, American Transmission Company LLC (ATC) filed an application with the Public Service Commission (Commission or PSC) for authority under Wis. Stat. § 196.491(3) and Wis. Admin. Code § PSC 111.53 to construct, own, and operate a new 345 kilovolt (kV) electric transmission line and associated substation facilities. The project, known as the Paddock-Rockdale project, is proposed to be located in Rock and Dane Counties, Wisconsin. ATC proposes to construct this new approximately 35-mile transmission line and associated substation facilities primarily along existing rights-of-way (ROW) using one of two possible routes. The purpose of the project is to provide ATC's customers access to lower cost sources of electric supply.

The Certificate of Public Convenience and Necessity (CPCN) application is GRANTED subject to conditions.

Introduction

The Commission found ATC's application in this docket to be complete on June 21, 2007, pursuant to Wis. Stat. § 196.491(3)(a)2. Wis. Stat. § 196.491(3)(g) requires that the Commission take final action within 180 days after it finds a CPCN application complete unless the Commission receives an extension from Dane County Circuit Court (the Court). On

November 27, 2007, the Court granted the Commission a 180-day extension. The Commission must now take final action on or before June 16, 2008, or the application is approved by operation of law.

The Commission issued a Notice of Proceeding and Prehearing Conference in this docket on July 13, 2007. Prehearing conferences were held on August 15 and November 28, 2007. During the initial prehearing conference, requests to intervene in the docket were granted to Madison Gas and Electric Company, Wisconsin Electric Power Company, Wisconsin Power and Light Company, Wisconsin Public Power, Inc., and Wisconsin Public Service Corporation (together, the Joint Utilities), Stanley H. Lien, Howard Lien and Sons, Inc., and Stolen Farms, Inc.

On January 10, 2008, the Commission issued its final environmental impact statement (EIS) regarding the project. As noticed in its December 26, 2007, Notice of Hearing, technical and public hearing sessions were held in Janesville, Wisconsin, on February 13, 2008. The subjects for hearing, as agreed to by the parties at the prehearing conference and as listed in the Notice of Hearing, are as follows:

1. Should the Commission grant a Certificate of Public Convenience and Necessity (CPCN) for the proposed project, pursuant to Wis. Stat. §§ 1.12, 196.025, and 196.491?
2. Has the Commission's review of the project complied with the Wisconsin Environmental Policy Act (WEPA), pursuant to Wis. Stat. § 1.11 and Wis. Admin. Code ch. PSC 4?

Briefs were filed by ATC and the Joint Utilities on March 12, 2008.

The Commission conducted its hearings as Class 1 contested case proceedings, pursuant to Wis. Stat. §§ 196.491(3)(b) and 227.44. The Commission discussed the record in this matter at its May 30, 2008, open meeting.

Findings of Fact

1. ATC is a public utility engaged in rendering electric transmission service in Wisconsin, pursuant to Wis. Stat. §§ 196.01(5)(a) and 196.485.
2. The facilities approved in this Final Decision are necessary to provide adequate and reliable service to present and future electric customers.
3. The facilities approved in this Final Decision will adequately address the present needs of ATC's electric system and are necessary to satisfy the reasonable needs of the public for an adequate supply of electrical energy. The reasonable needs of the public include the financial needs of electric utility customers.
4. The facility designs, locations, and route approved in this Final Decision are in the public interest considering alternative sources of supply, alternative locations or routes, individual hardships, and engineering, economic, safety, reliability, and environmental factors.
5. The approved transmission line route uses existing utility corridors to the extent practicable, and the routing and design of the facilities approved in this Final Decision minimize environmental impacts in a manner that is consistent with achieving reasonable electric rates.
6. The facilities approved in this Final Decision will not have undue adverse impacts on environmental values such as ecological balance, public health and welfare, historic sites, geological formations, aesthetics of land and water, and recreational use.
7. Construction and operation of the facilities at the estimated cost will not impair the efficiency of ATC's service, will not provide facilities unreasonably in excess of probable

future requirements and, when placed in operation, will not add to the cost of service without proportionately increasing the value or available quantity thereof. The Commission further finds that probable future requirements include economic requirements, including the need for reasonable rates.

8. The facilities approved by this Final Decision will not unreasonably interfere with the orderly land use and development plans for the area.

9. The facilities approved by this Final Decision will not have a material adverse impact on competition in the relevant wholesale electric service market.

10. Energy conservation, renewable resources, or other energy priorities listed in Wis. Stat. §§ 1.12 and 196.025 are not cost-effective, technically feasible, or environmentally sound alternatives to the proposed facilities. Moreover, new generation facilities or increased conservation and energy efficiency are not alternatives to the proposed project because they would not allow access to lower cost energy sources.

11. The approved transmission line route utilizes priority siting corridors listed in Wis. Stat. § 1.12(6) to the greatest extent feasible, consistent with economic and engineering considerations, reliability of the electric system, and protection of the environment.

12. The proposed project is not located near the Lower Wisconsin Riverway as defined in Wis. Stat. § 30.40(15), and as such, will not affect the scenic beauty or the natural value of the Riverway as provided for in Wis. Stat. § 196.491(3)(d)3m.

Conclusions of Law

The Commission has jurisdiction under Wis. Stat. §§ 1.11, 1.12, 44.40, 196.02, 196.025, 196.395, and 196.491 and Wis. Admin. Code chs. PSC 4 and 111 to issue a CPCN authorizing

ATC to construct and place in operation the proposed electric transmission facilities described in this Final Decision, subject to the conditions stated in this Final Decision.

Opinion

Project Background and Purpose

The Paddock-Rockdale project was one of five transmission projects analyzed during ATC's 2004-2005 Access Initiative and the Commission's 2005-2006 policy proceeding on transmission access, docket 137-EI-100. The purpose of that proceeding was to evaluate whether additional transmission lines into Wisconsin would reduce the delivered cost of energy to Wisconsin customers by reducing congestion on the system and improving access to additional energy sources. Following the issuance of the Commission staff report in March 2006, ATC selected the Paddock-Rockdale project for further review, and subsequently filed its application to construct the project in this docket.

Unlike previous transmission line projects, the purpose of this project is primarily economic. That is, the proposed transmission line and substation upgrades are not, as a primary focus, needed to address a specific reliability issue. Rather, the project is proposed to reduce the cost of purchased power for ATC's customers by helping to bring the locational marginal price (LMP) charges in the ATC footprint closer to the average Midwest Independent Transmission System Operator (MISO) footprint LMP. LMP charges in the Wisconsin Upper Michigan System (WUMS) area are consistently higher than in other areas within MISO. In addition, the project will increase the transfer capability into Wisconsin by up to 450 megawatts.

Differences Between the Proposed Project and Typical Reliability Projects

The proposed Paddock-Rockdale project is the first project to be considered by the Commission which will be constructed primarily for economic purposes. As such, the standards

applied in considering whether to approve, modify, or deny the project must be different than those that would be applied to typical projects that are needed for reliability purposes. In particular, the Commission determines that the following requirements must be met for it to authorize construction of projects for economic purposes:

- The project must clearly have economic benefits.
- If the project also has reliability benefits, those benefits should be clearly identified in the application.

Proposed Transmission Line Routes

ATC proposes to construct the project along one of two routes, referred to as the West Route and the East Route. Both route options share a common segment for about 7.5 miles, from the Rockdale Substation in Dane County south to the intersection with Interstate Highway 39/90 (I-39/90). This common segment shares a corridor with an existing double-circuit 345/138 kV transmission line. The West Route is approximately 34.7 miles long and would primarily share its ROW with an existing 345 kV line. The East Route is about 36.1 miles long and would, to a large extent, share portions of existing transmission line, road, and railroad ROW. ATC estimates that the cost of construction is \$132,706,200 for the West Route and \$210,804,100 for the East Route.

Proposed Substation Facilities

This project will also require modifications to three substations: the Christiana, Rockdale, and Paddock Substations. Regardless of the route selected, the substation modifications will be identical. Modifications to the Christiana and Paddock Substations will require some installation of additional equipment, but will require no work outside the existing substation boundaries. The Rockdale Substation will need to be expanded in order to

accommodate the installation of additional facilities. This expansion will add approximately five to six acres to the existing substation.

Electric System Alternatives

Under Wis. Stat. § 196.491(3)(d)3, in order to grant a CPCN for the project, the Commission must find that the proposed project is in the public interest considering alternative sources of supply and engineering, economic, safety, and reliability factors.

ATC began the Access Initiative in 2004 to determine the potential value of expanding the transmission system to: (1) provide ATC's customers with greater access to energy alternatives outside the ATC footprint; and (2) improve the ability to transfer energy within the ATC system to serve retail customers by the local distribution utilities (LDU). The ATC Access Report examined five "notional"¹ projects to improve transmission connectivity between the ATC footprint and the rest of the MISO transmission system. These five projects included:

- South: a new Byron (Illinois)-North Monroe-West Middleton-North Madison 345 kV line;
- South: a new (second) Paddock-Rockdale 345 kV circuit (the proposed project);
- Southwest: a new Salem (Iowa)-Spring Green-West Middleton-North Madison 345 kV line with a rebuild of the Salem-Maquoketa 161 kV line;
- West: a new Prairie Island (Minnesota)-Columbia 345 kV line;
- Low Voltage: rebuilding the Lore-Turkey River-Cassville-Nelson Dewey 161 kV line.

In addition to the five "notional" project alternatives and the two route alternatives, other possible alternatives were considered. Two of these alternatives include:

- A non-transmission option, such as constructing new electric generation;
- A no-build alternative, where no new electric facilities would be constructed.

¹ The term "notional" is used in modeling. In this case, each of the five "notional" projects is based upon different likely scenarios of possible future conditions affecting the performance of the electrical system. Likely scenarios relate estimates of transmission system function (as measured by factors such as revenue requirement, congestion costs, and savings due to reduced losses) with assumptions about future conditions based on estimates of economic condition, transmission retirements, fuel supply, and growth. Cost estimates for options used in these analyses are also very generic, as detailed engineering is not available.

These two non-transmission options are not considered viable alternatives for meeting the purpose of the proposed project since neither alternative would provide ATC's customers with access to energy alternatives outside the ATC footprint, nor would they improve the ability to transfer energy within the ATC system to serve retail customers by the LDUs.

Economic Analysis

As noted in pages 67 through 71 of Appendix C to its application, ATC updated the estimated construction costs of the five "notional" alternative projects from the Access Report. Three of the projects were substantially more expensive. The Low Voltage and Paddock-Rockdale projects were the two lower cost alternatives. While the Low Voltage alternative was significantly lower cost than the Paddock-Rockdale alternative, the benefits of the Low Voltage alternative were also significantly lower. ATC performed an analysis of the Net Present Value of Net Savings for the two Low Voltage and the Paddock-Rockdale alternatives. Even with higher construction costs, the Paddock-Rockdale alternative had much greater Net Present Value of Net Savings in six of the seven plausible futures analyzed by ATC in its application.

The analytical approach chosen by ATC tests the Paddock-Rockdale project against seven plausible futures for the electric industry in 2011 and 2016. These plausible futures include combinations of variables such as robust or slow economic growth, additional environmental regulation, and fuel supply volatility. The seven futures are based upon key drivers such as load growth, generation retirement and expansion, fossil fuel costs, use of renewable energy, and increased environmental regulation. ATC assigned a range of plausible outcomes for each of these factors based upon available data and estimates, then built up a plausible future composed of these selected values. The purpose of these futures is to bound the

range of likely outcomes with logically consistent attributes. During the 40-year life of the project, actual events are expected to fall somewhere between the defined futures most of the time and only occasionally fit within a particular future. The premise of this approach, known as Strategic Flexibility, is that if Paddock-Rockdale performs well in these futures, it is a robust project that would produce benefits for ratepayers.

ATC initially estimated energy cost savings for customers using the PROMOD² model. These estimates were adjusted to reflect the impacts on congestion costs and losses. Other standard methods were used to quantify increased competitiveness, system failure insurance, and capacity savings due to reduced losses.

ATC also evaluated other benefits of the project, including resource cost advantage (by improving access to lower cost sources of supply outside of ATC), improved potential for positive reserve margin impacts, and reliability effects. ATC took a conservative approach and did not quantify these other benefits because it did not conclude that an appropriate method was available to measure them at this time.

While the Paddock-Rockdale project is not driven by reliability benefits, it would produce somewhat reduced loss of load expectation and expected unserved energy. ATC has calculated these reliability impacts as well.

ATC's analysis for this project concluded that it will consistently produce benefits in excess of its costs and will reduce the delivered price of energy to ATC's transmission customers and to its respective retail customers without creating unreasonable risks. Except for the slow

² PROMOD is a computer model that simulates electric power market system operation. It uses probabilistic methodology to determine generator operating costs, and attempts to minimize generation dispatch costs to hourly load. The dispatch process includes the capability of including complex purchase and sale configurations and accounts for transmission system limit and constraint input (known as Security Constrained Economic Dispatch, SCED).

growth future (which is highly unlikely to persist for the entire 40-year life of the project), the Net Present Value (NPV) of the net benefits available as a result of constructing the Paddock-Rockdale project ranges from \$82 million to \$1.8 billion, depending on the future and the metric. The aggregate annual benefits available for all the futures range from \$7 million to \$133 million for 2011, and from \$7 million to \$230 million for 2016. With these levels of benefits, the Paddock-Rockdale project is expected to first show net savings over the annual cost of constructing the facilities in 2011, the first full year after its in-service date, in most futures and metrics. The economic benefits will exceed, on a net savings basis, the cumulative cost of constructing the facilities by 2013 in most futures and metrics.

Based on the information presented in the record in this docket regarding ATC's analysis, the Commission finds that there is clearly an economic benefit to the proposed Paddock-Rockdale project.

Potential Impacts on Wholesale Competition

Wisconsin Statute § 196.941(3)(d)7. requires the Commission to find that a "proposed facility will not have a material adverse impact on competition in the relevant wholesale electric service market" before it can approve any CPCN application. The Paddock-Rockdale project will expand transfer capability and will facilitate commerce and promote, not adversely affect, competition in electric markets. Therefore, the project will not have a material adverse impact on competition in the relevant wholesale service market.

Routing Process

ATC's transmission routing process complied with Wis. Stat. §§ 1.12(6) and 196.025(1m). ATC adequately documented a process that included: extensive coordination, both pre-application and post-application, with Commission staff and the Wisconsin Department

of Natural Resources (DNR); a public review phase that included public information meetings in March, 2007; and detailed environmental studies. All existing linear utility and transportation corridors were investigated as potential routes, and the routes presented in the application follow existing corridors for the majority of their lengths.

Compliance with WEPA

Under Wis. Stat. § 1.11, the Commission must consider the environmental impact of a proposed action such as a CPCN application to construct a high-voltage transmission line. This is a Type I action as defined by Wis. Admin. Code § PSC 4.10(1), which implements the Commission's application of Wis. Stat. § 1.11 and requires that the Commission prepare an EIS for the project.

The Commission worked jointly with DNR to prepare the EIS. The two agencies sent mailings and press releases soliciting comments, questions and concerns, developed agency contacts to answer questions, and held local scoping sessions at which members of the public could learn about the project and relate particular concerns about its environmental impacts. The Commission and DNR released a draft EIS dated October 11, 2007, which it distributed broadly to interested persons. The agencies encouraged people to respond with concerns and criticisms during a 45-day public comment period, after which the agencies revised the draft and prepared the final EIS. The final EIS corrected and updated the draft EIS. After issuing the final EIS, the Commission waited 30 days to allow public review before holding its hearings on ATC's CPCN application and the final EIS. The Commission finds that the draft and final EIS comply with the requirements of Wis. Stat. § 1.11 and Wis. Admin. Code ch. PSC 4.

Environmental Review

The final EIS found that while both the West and East Routes would largely be built entirely or partially on existing transmission line or road ROW, the West Route would require no new ROW and would require only limited expansion of existing ROW. The expanded ROW would result in 8.0 acres of new impact, affecting about 4.4 acres of wetland and 3.4 acres of agricultural fields. The East Route, however, would require about 5.3 miles of new ROW and would affect an additional 158 acres with new and expanded ROW. New or expanded ROW for the East Route would, in part, result in new impacts to about 15 acres of wetland, 39 acres of woodland, and 74 acres of agricultural land.

While the number of stream crossings is greater for the West Route, all of the proposed crossings would be along existing transmission line ROW. In contrast, the East Route would require three new crossings involving the Rock River, Bass Creek, and one unnamed stream.

The East Route would also result in additional woodland impacts, including several acres in the Cook Arboretum. The Cook Arboretum is situated within one of the larger contiguous forest habitats in Rock County and supports several breeding populations of forest birds. A number of these birds are sensitive to reductions in forest area resulting from forest fragmentation. The East Route would follow an existing transmission line ROW through the Cook Arboretum, but would result in about 3.0 acres of new impact because of expanded ROW needs.

Surveys completed by the applicant in 2007 indicate that state-listed bird species are present along the East Route. This route is also more likely to present a greater risk to nesting or migrating birds because of new ROW and structure requirements. Moreover, the East Route would result in greater impacts to natural communities, which may also affect rare plants. The

West Route would have less overall impact to rare species and natural communities than the East Route.

Six residences are located within 100 feet of the West Route, while a total of 27 residences are within 100 feet of the East Route.

The Department of Agriculture, Trade and Consumer Protection issued an Agricultural Impact Statement (AIS) for this project in January 2008. Consultations with farmland owners and county conservationists in the project area are necessary in order to ensure that construction proceeds in a manner that minimizes drainage problems, crop damage, soil compaction, and soil erosion. In terms of soil compaction, a higher proportion of agricultural soils along the West Route are at greater risk for compaction than those along the East Route. The Commission finds it reasonable for ATC to ensure that, in particular, any sub-soil compaction be properly mitigated.

Selected Transmission Route

Based on evidence presented in the record, in particular Table 5.4-1 of the Commission's final Environmental Impact Statement (EIS) for the project, most of the impacts for the West Route are less than those for the East Route, including wetland impacts. The West Route would require less new ROW than the East Route. The West Route avoids impacts on the Cook Arboretum, and the associated impacts on bird species. In addition, the cost of the West Route is approximately \$78 million less than the East Route.

A majority of entities that provided testimony or comments for the record regarding the route for the project did so in favor of the West Route. These entities include the City of Janesville and the Rock County Board of Supervisors.

Because of the factors listed specifically above, and after considering the many factors required by Wis. Stat. § 196.491(3)(d), the Commission finds that the West Route, as proposed

in ATC's application and modified by this Final Decision, is the most appropriate route for the proposed Paddock-Rockdale project. The Commission further finds that of the two routes reviewed, the West Route best meets the siting priorities established in Wis. Stat. § 1.12(6), because it uses existing electric utility corridors for its entire length and requires no new transmission corridors.

Environmental Requirements

ATC testified that it would employ all of its voluntary commitments regarding environmental and agricultural protection measures, as well as its agricultural protection practices during construction of the project. The Commission finds that it is reasonable for ATC to follow these practices during construction of the proposed project and to report to the Commission on where these voluntary measures have been implemented.

In previous dockets, the Commission has conditioned its order with requirements that practices be employed during construction to avoid the spread of invasive species. For this project, it is reasonable for ATC to use such practices. In addition, it is reasonable that ATC submit to Commission staff a report and map identifying invasive species encountered and the actual construction activities used to avoid the spread of those species.

ATC proposes to clear most ROW to the full width of the easement, although some exceptions to this practice may occur. These exceptions will be located where protected species habitat exists or where ATC has made commitments to protect natural resources, such as rivers and streams. It is reasonable for ATC to provide to Commission staff a map showing all areas of the approved route where exceptions to its ROW clearing practices have been allowed.

ATC will prepare a Construction and Mitigation Plan (CMP) for the project (now referred to as an Environmental Access Plan by ATC). The CMP will address the construction

measures necessary to protect sensitive resources in the area of the authorized route. It is reasonable for the Commission to require ATC to provide to Commission staff a copy of the CMP when it becomes available.

ATC will use environmental monitors to ensure that construction is completed according to the CMP. It is reasonable for the Commission to require that ATC provide to Commission staff a report of the qualifications and responsibilities of the environmental monitors.

Individual Hardships

Wisconsin Statute § 196.491(3)(d)3. requires the Commission to make a determination about whether the proposed project is in the public interest considering, among other things, alternative routes, alternative locations, personal hardships, and environmental factors. Several members of the public provided testimony or written comments regarding personal hardships that the proposed project might create if it is constructed on the West Route.

Messrs. D. Rebout and R. Rebout expressed concerns that the proposed project could cause stray voltage and/or current problems at their farming operation. There are numerous confined animal operations in the area in which the proposed project would be located. Since it is unclear whether the project would have any effect on such operations, it is reasonable for ATC to coordinate testing on those operations before and after the project is placed in service. It is also reasonable for ATC to provide, to Commission staff, reports of the results of the testing. If, as a result of the testing, it is noted that problems have developed as a result of the project, it is reasonable for ATC to work with the applicable distribution utility and affected owners to resolve the problems. Specifically, ATC shall coordinate tests for stray voltage at all dairy operations along the approved route prior to construction and again after the project is energized. ATC shall work with the distribution utilities and farm owners to rectify any stray voltage

problems arising from the construction and operation of the project. Prior to any testing, ATC shall work with the applicable distribution utility and Commission staff to determine the manner in which stray voltage measurements will be conducted and on which properties.

A member of the public, Mr. S. Orlovsky, testified on behalf of Glacier's Edge Council, Boy Scouts of America (Council) regarding the configuration of structures on its property on Segment 9 of the West Route. In his testimony, Mr. Orlovsky asked that ATC work with the Council regarding the placement of additional facilities on its property. In testimony, ATC agreed to work with the Council, and provided as a delayed exhibit several options presented to the Council for the configuration of the facilities on its property. In its brief, ATC states that it had reached an agreement with the Council regarding the configuration of the structures on Council property.

Two members of the public, Ms. M. Johnson and Mr. L. Jensen testified or provided written comments stating that they would prefer that the new parallel circuit 69 kV line along Segment 8 of the West Route be located on the west side of the existing double-circuit line, rather than the east side as proposed by ATC. In testimony, ATC agreed to work with these property owners, and provided as a delayed exhibit information regarding the options for construction the parallel circuit 69 kV line along Segment 8. ATC stated in its brief that its original proposed configuration is the more reasonable choice. The Commission finds that proposed 69 kV line is not close enough to the residences on the property to justify the additional cost to locate the 69 kV line to the west of the 345 kV line. As such, ATC shall construct the 69 kV line as described in its application.

Project Costs

ATC estimates that the cost of construction is \$132,706,200 for the West Route, detailed as follows:

Description	Amount
Transmission Line Costs	\$98,077,900
Substation Costs (including costs for facilities below 345 kV)	\$116,851,300
One-Time 5-Percent Environmental Impact Fee	\$5,595,800
Annual 0.3-Percent Environmental Impact Fee (during 2-year construction period only)	\$671,500
Subtotal, Transmission and Substation Costs	<u>\$121,196,500</u>
Removal	\$2,762,000
Pre-Certification Costs	\$5,051,300
Operation and Maintenance (during construction period only)	<u>\$3,696,400</u>
Total Project Cost	<u>\$132,706,200</u>

The estimated cost of construction includes costs associated with line design changes for the purposes of mitigating galloping of the conductors.

Construction is proposed to begin in the fall of 2008 with completion in the spring of 2010.

High-Voltage Transmission Line Fees to Municipalities

Under Wis. Stat. § 196.491(3g), a person who receives a CPCN from the Commission for a 345 kV transmission line must pay an annual impact fee and a one-time environmental impact fee to the Wisconsin Department of Administration (DOA). The annual impact fee is 0.3 percent of the cost of the approved line and the one-time environmental impact fee is 5 percent of the cost of the approved line. Under Wis. Stat. § 16.969(2) and Wis. Admin. Code ch. Adm 46, DOA distributes the one-time environmental impact fee payments among cities, towns, villages and counties through which the transmission line passes, and the annual impact fee payments among the cities, towns and villages, allocated in proportion to the length of transmission line that will be built within each municipality.

The Commission will assist DOA by reporting to it the cost of constructing the Paddock-Rockdale 345 kV transmission line, the municipalities eligible to receive fees, and the allocation of fee payments. To produce this report, the Commission will need from ATC a line-item description of the cost of constructing the Paddock-Rockdale project on the approved route, the cost of the transmission line and associated facilities to be used for initially calculating and paying the fees under Wis. Stat. § 196.491(3g), an updated list of eligible municipalities, and the percentage of the route that passes through each of them. ATC must provide this information to the Commission within 30 days after the date this Final Decision is signed.

Certificate

The Commission grants ATC a CPCN for construction of the Paddock-Rockdale project along the West Route, as described in its application and the docket record, and as modified by this Final Decision, at an estimated cost of \$132,706,200.

Order

1. The facilities authorized to be constructed are those described in ATC's CPCN application, and are subject to the conditions specified in this Final Decision.
2. The West Route, as described in ATC's application and modified by this Final Decision, is approved for the Paddock-Rockdale project.
3. ATC shall employ all of its voluntary commitments regarding environmental and agricultural protection measures, as well as its agricultural protection practices. ATC shall provide a brief written summary and map, by construction spread or other appropriate project portion, identifying environmental and agricultural protection measures, and agricultural protection practices including sub-soil decompaction, used during construction of the project.

4. ATC shall provide to Commission staff a map showing all areas with invasive species identified for construction avoidance as well as areas where avoidance is not possible. In addition, ATC shall provide a brief written summary and map, by construction spread or other appropriate project portion, identifying invasive species encountered and actual activities undertaken to protect against the spread of those species. All areas requiring continued surveys in the future shall be identified.

5. ATC shall provide to Commission staff, during construction and by construction spread or other appropriate project portion, a map showing the location of all areas along the approved route where exceptions to ROW clearing practices in upland forested areas have been employed to protect natural resources. ATC should specifically identify all areas where "border zone" vegetation will be allowed to support low growing woody species. In addition, ATC shall provide a map showing the location of river and stream crossings where vegetative buffer zones will be maintained.

6. ATC shall provide to Commission staff a copy of the CMP used for this project when it becomes available.

7. ATC shall provide to Commission staff a report listing all personnel employed as environmental monitors. The report shall include a list of the environmental monitors' qualifications and their responsibilities during the construction phase of the project. The report shall identify to whom the environmental monitors will report and what authority they have for enforcing the CMP. ATC shall also provide copies of training materials used to train construction crews.

8. ATC shall work with the applicable distribution utility to test for stray voltage at all dairy operations along the approved route prior to construction and again after the project is energized. ATC shall work with the distribution utilities and farm owners to rectify identified

stray voltage problems arising from the construction and operation of the project. Prior to any testing, ATC shall work with the applicable distribution utility and Commission staff to determine the manner in which stray voltage measurements will be conducted and on which properties. ATC shall provide to Commission staff reports of the results of the testing.

9. ATC shall construct the parallel 69 kV line to the east of the double-circuit 345 kV line along Segment 8, as described in its application.

10. ATC shall work with landowners to minimize impacts of line and new structure placement and construction.

11. ATC shall avoid pruning or removing any oak trees from April 15 to July 1.

12. ATC shall submit to the Commission the date that it commences construction and the date that the facilities are placed in service. ATC shall submit quarterly progress reports to the Commission indicating the project's major construction and environmental milestones, the extent of the physical completion to date, and the expenditures to date by line item. In addition, once each year, ATC's quarterly progress report shall include a revised total cost estimate for the project.

13. This authorization is for the specific project as described in this Final Decision and at the stated cost. Should ATC's plans for the scope, design, or location of the project change significantly, or if the estimated cost of the project increases by more than 10 percent, ATC shall promptly notify the Commission.

14. ATC shall report to the Commission a line-item description of the cost of constructing the Paddock-Rockdale project on the approved route, the cost of the transmission line and associated facilities to be used for initially calculating and paying the fees under Wis. Stat. § 196.491(3g), an updated list of municipalities eligible for the annual high-voltage transmission impact fee and the one-time environmental impact fee, and the percentage of the

route that passes through each of these municipalities. ATC shall provide this information within 30 days after the date this Final Decision is issued.

15. Upon completion of the project, ATC shall notify the Commission and report the actual costs segregated by plant account and comparable to the cost breakdown listed in this Final Decision. For any account or category where actual cost deviates significantly from those authorized, the final cost report shall itemize and explain the reasons for the deviation.

16. After construction, ATC shall identify the location of each transmission structure using global positioning system technology and transfer this data to a geographic information systems database, using software compatible with state government standards, and shall submit this information to the Commission.

17. This CPCN is valid only if construction commences no later than one year after the date this Final Decision is mailed.

18. This Final Decision is effective the date of mailing.

Dissent

Commissioner Meyer dissents regarding the location of the 69 kV line on the properties owned by Ms. M. Johnson and Mr. L. Jensen along Segment 8.

Dated at Madison, Wisconsin, June 13, 2008

By the Commission:


Sandra J. Paske
Secretary to the Commission

SJP:JAL:jlt:g:\order\pending\137-CE-149 final

See attached Notice of Appeal Rights

Notice of Appeal Rights

Notice is hereby given that a person aggrieved by the foregoing decision has the right to file a petition for judicial review as provided in Wis. Stat. § 227.53. The petition must be filed within 30 days after the date of mailing of this decision. That date is shown on the first page. If there is no date on the first page, the date of mailing is shown immediately above the signature line. The Public Service Commission of Wisconsin must be named as respondent in the petition for judicial review.

Notice is further given that, if the foregoing decision is an order following a proceeding which is a contested case as defined in Wis. Stat. § 227.01(3), a person aggrieved by the order has the further right to file one petition for rehearing as provided in Wis. Stat. § 227.49. The petition must be filed within 20 days of the date of mailing of this decision.

If this decision is an order after rehearing, a person aggrieved who wishes to appeal must seek judicial review rather than rehearing. A second petition for rehearing is not an option.

This general notice is for the purpose of ensuring compliance with Wis. Stat. § 227.48(2), and does not constitute a conclusion or admission that any particular party or person is necessarily aggrieved or that any particular decision or order is final or judicially reviewable.

Revised 9/28/98

APPENDIX A
(CONTESTED)

In order to comply with Wis. Stat. § 227.47, the following parties who appeared before the agency are considered parties for purposes of review under Wis. Stat. § 227.53.

Public Service Commission of Wisconsin
(Not a party but must be served)
610 N. Whitney Way
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STOLEN FARMS, INC.
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Docket 137-CE-149

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Jeffrey Gray
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Michael G. Stuart
Wisconsin Public Power Inc.
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Sun Prairie, WI 53590-9109

William L. Bourbonnais
Wisconsin Public Service Corporation
600 North Adams Street
Green Bay, WI 54301

Date Mailed July 20, 2005

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of American Transmission Company, LLC, for Authority to
Construct a 138 kV Transmission Line and Related Facilities in Dane
County, Generally Known as the Femrite-Sprecher Project

137-CE-120

FINAL DECISION

Introduction

On December 30, 2004, American Transmission Company, LLC, (ATC) filed an application with the Commission for authority to install a new 138 kilovolt (kV) transmission line between the existing Femrite and Sprecher substations, convert from 69 kV to 138 kV operation the existing 138 kV Kegonsa-McFarland-Femrite and Sprecher-Reiner-Sycamore transmission lines, expand and upgrade Femrite and McFarland substations, and upgrade facilities at Reiner and Kegonsa substations to accommodate the new transmission line and conversion of the existing transmission lines. ATC proposed the project to improve the reliability of the electric transmission system in Madison and surrounding areas in Dane County. The application was filed pursuant to Wis. Stat. §§ 196.49, 196.491 and Wis. Admin. Code chs. PSC 4, PSC 111, and PSC 112, which require the Commission to determine if a certificate of public convenience and necessity (CPCN) should be granted. On January 28, 2005, the application was determined to be complete and ATC was notified of this determination as required by Wis. Stat. § 196.491(3)(a)2.

On January 13, 2005, a Commission notification letter was sent to area residents informing them of ATC's transmission project and the Commission review process. A draft

Environmental Assessment (EA) on the proposed project was completed by staff and on May 23, 2005, a preliminary determination letter was sent to area residents informing them that the proposed project would not have significant environmental effects so that preparation of an Environmental Impact Statement was not needed.

On May 24, 2005, upon due notice, a public hearing was held before Administrative Law Judge David Whitcomb in Madison, Wisconsin. Persons certified as parties are listed in Appendix A. Other persons who appeared and testified at the hearing are listed in the hearing transcripts.

The application is GRANTED subject to conditions.

Findings of Fact

1. ATC is a public utility engaged in providing electric transmission service in this state, pursuant to Wis. Stat. § 196.01(5)(a).
2. Electric load growth in the Madison urban area creates the need for expanding and upgrading the existing electric transmission system.
3. The facilities approved by this Final Decision and subject to the conditions in the Final Decision are necessary to provide adequate and reliable service to present and future customers.
4. The proposed project will adequately address the present needs of the applicant's electrical system as well as provide flexibility to meet future load-serving needs in the Dane County area.
5. Energy conservation, renewable resources, and other energy priorities listed in Wis. Stat. §§ 1.12 and 196.025 are not cost-effective alternatives to the proposed facilities.

6. The construction and operation of the proposed facilities at the estimated cost will not impair the efficiency of applicant's service, will not provide facilities unreasonably in excess of probable and future requirements and, when placed in operation, will not add to the cost of service without proportionately increasing the value or available quantity thereof.

7. Alternative plans, designs, and routes for various portions of the facilities have been considered, but no other reasonable alternatives to the proposed project exist that could provide adequate support in a more reliable, timely, cost-effective, and environmentally acceptable manner.

8. Construction of the proposed facilities to satisfy the reasonable needs of the public for an adequate supply of electrical energy is necessary and appropriate.

9. Public convenience and necessity requires the applicant to construct and place in operation the 138 kV transmission line along Segments 7, 7a, 2a, 3, 24, 14, and 6, as described in the CPCN application and this decision, and related required upgrades at existing substations, for an estimated total construction cost of \$22,069,820.

10. Public convenience and necessity requires the applicant to construct overhead the Segments 7, 7a, 2a, and 3, and to construct underground the Segments 24, 14, and 6.

11. The proposed facilities will not have a significant effect on the human environment, and the preparation of an environmental impact statement is not necessary.

12. Construction, operation, and maintenance of the proposed facilities will not have undue adverse impacts on environmental values such as ecological balance, public health and welfare, historic sites, geological formations, aesthetics of land and water, and recreational use.

13. A short length of line will cross a 100-year floodplain. However, the new line will replace an existing line. In addition, the applicant will use effective vibration boring techniques, and will locate the structures as much as possible on higher ground.

14. The proposed facilities will not unreasonably interfere with the orderly land use and development plans for the area.

15. There are no known archeological or historic sites located on the proposed route.

16. No endangered or threatened species are known to be present in the project area.

Conclusions of Law

The Commission has jurisdiction under Wis. Stat. § 196.491 and Wis. Admin. Code ch. PSC 111 to issue a CPCN authorizing ATC, as an electric transmission public utility, to construct and place in operation a new 138 kV transmission line known as the Femrite-Sprecher Project as described in and subject to the conditions stated in this Final Decision.

Opinion

ATC is a limited liability company created pursuant to Wisconsin state law as a single-purpose, for-profit transmission company that is required to provide transmission services to utilities and others connected to its transmission system. As such, ATC is a public utility pursuant to Wis. Stat. § 196.01(5)(a).

Project Need

Madison Gas & Electric Company (MGE), Wisconsin Power and Light Company (WP&L), Wisconsin Public Power Incorporated (WPPI), and Wisconsin Electric Power Company (WEPCO) provide electric distribution service in Dane County. MGE's distribution

load contributes about 60 percent toward the Dane County coincident peak demand. Power plants within the city of Madison can meet about 30 percent of the MGE and the WP&L combined peak demand. The other 70 percent of Madison area demand is met primarily by power delivered from power plants located north and south-east of Dane County. The power from outside of Dane County is transported to two substations, the North Madison and Rockdale substations, and then transmitted by a 69/138 kV transmission network around the Madison urban area. The proposed project would complete a 138 kV transmission loop around the Madison urban area with a new 138 kV transmission line between the existing Femrite and Sprecher Substations. Such a loop would improve the reliability of transmission service and meet the need for increased transmission service caused by an over 3 percent annual growth rate in electric energy demand in Dane County.

ATC proposes to convert from 69 kV to 138 kV operation the existing 138 kV Kegonsa-McFarland-Femrite and Sprecher-Reiner-Sycamore lines. ATC also proposes to expand the existing Femrite and McFarland substations and construct at each of them a new 138 kV radial bus and associated facilities and a new control room, install a new 138 kV bus and associated facilities at the existing Reiner Substation, upgrade the 138 kV terminals at the existing Sprecher Substation, and relocate the existing Kegonsa-McFarland-Femrite transmission lines to the existing 138 kV bus at Kegonsa Substation. ATC also will make minor facility modifications at substations affected by the proposed project. The proposed project would strengthen the transmission system in Dane County and allow MGE to import 75 MW from the Riverside Energy Center, located north of Beloit, beginning in June 2007.

ATC follows standard industry criteria in determining the adequacy of its transmission network for meeting the electric energy needs of its customers. One criterion ATC used in identifying the need to reinforce the power delivery system is called the “single contingency” criterion. Under the single contingency criterion, transmission facilities and their voltages are designed to remain within safe operating limits on failure of a single component of the transmission system, such as a line or a transformer. The Madison area has two single contingencies that cause low voltages and overloading on several transmission facilities. Outage of either of these components would cause marginal to low voltages on several 69 kV buses and overloading of 138/69 kV transformers in the Madison area.

This ATC application proposes the construction of about 3.5 miles of new 138 kV transmission line between the existing Femrite and Sprecher substations. The applicant proposed two routes that principally corridor-share with an existing transmission line, and existing transportation corridors. Both routes require ¼ mile of new transmission line or road right-of-way (ROW). The proposed line would involve both overhead and underground construction. The proposed line would be single circuit, except for less than a mile of double-circuit 69/138 kV which would combine the proposed line with a portion of the existing Femrite-Royster 69 kV transmission line. In addition, ATC would convert the existing 138 kV Kegonsa-McFarland-Femrite and Sprecher-Reiner-Sycamore lines from 69 kV to 138 kV operation.

Overhead portions of the new line would use T2-477 kcmil ACSR (Hawk) conductor. This conductor resists wind-induced motion, eliminating the need for dampers and permitting transmission line construction that uses fewer, shorter, and narrower structures on a narrower ROW. The Femrite-Royster transmission line would use double-circuit T2-4/0 AWG (Penguin)

conductor. ATC would use 2500 kcmil extruded dielectric insulated copper conductor, one per phase, for underground construction of the new transmission line.

Electrical System Alternatives

In addition to the project proposed in this application, ATC evaluated two alternative solutions for improving the transmission system reliability of the Madison urban area. One alternative would construct a new 138 kV transmission line between the Femrite and Sprecher substations, but continue its operation at 69 kV for the next ten years. In this alternative, the new 138 kV transmission line would use the same construction and routes as currently proposed. This alternative fails to solve the overload of 138/69 kV transformers that would occur in the two single contingencies discussed above. This alternative also does not provide as strong a voltage support in Dane County as the proposed project. This alternative is estimated to cost \$10 million.

The second alternative is construction of 13 miles of a new 138 kV single-circuit transmission line between Rockdale and Sprecher substations in addition to the construction proposed in the current application. The estimated cost of this alternative is \$42 million, almost twice the estimated proposed project cost. While this alternative performs better than the proposed project for the two single contingencies discussed above, it would result in an overload of another 69 kV transmission line in the area under other single-contingency conditions.

Description of Proposed Facilities

Route Options: ATC developed two routes for the proposed Femrite-Sprecher transmission line. These routes are about 3.5 miles long, and share about one mile toward their middle. Due to this sharing, either of the two northern route options could combine with either

of the two southern route options. The southern route options (southern sub-routes) and the northern options (northern sub-routes) are combinations of the segments of the two proposed routes described in the CPCN application.

Both southern sub-routes would combine the proposed 138 kV line with an existing 69 kV line that exits the Femrite Substation to the north. ATC would place the new double-circuit line either close to the existing line through the middle of a wet farm field (Segment 7), or on the edge of this wet farm field (Segments 1 and 2), along Interstate Highway 90 (I-90). In both instances, ATC would remove the existing 69 kV structures. The common portion of the proposed routes crosses to the east side of I-90 just south of the Chicago and Northwestern Railroad (Segments 2a and 3), and shares ROW with I-90 north to Buckeye Road. The two northern sub-routes begin southeast of the intersection between Buckeye Road and I-90. One sub-route (Segments 24, 14, and 6) turns east along Buckeye Road, north along Sprecher Road, and crosses Cottage Grove Road to the Sprecher Substation. The other sub-route (Segments 4, 5, and 6) continues north on the east side of I-90 to Cottage Grove Road, where it turns east on Cottage Grove Road and proceeds to the intersection of Cottage Grove and Sprecher Roads, where it turns north into the Sprecher Substation.

ATC proposes to place the new 138 kV line on overhead structures for both southern sub-routes and for any portion of a route along I-90. ATC proposes to place the transmission line underground along those portions of either of the northern sub-routes that cross through or along the edge of residential areas along Buckeye Road, Sprecher Road, and Cottage Grove Road.

The proposed line would be double-circuit for both southern sub-routes except for Segment 7a. This segment would be either single-circuit 69 kV or single-circuit 138 kV. Its

voltage would be 69 kV if it reconnects the 69 kV side of the double-circuit along I-90 to the rest of the existing 69 kV line. It would be single-circuit 138 kV if it starts at the north end of the route along the existing line location and takes the new 138 kV line to the I-90 crossing point.

This Segment 7a is the only segment that does not corridor-share with either an existing transmission line ROW or an existing road ROW. This segment involves the placement of one transmission pole in a wet farm field away from existing ROW.

ATC's proposed underground design would place cables inside a concrete duct, allowing space for future expansion.

Costs and Completion

The total estimated cost for this project is \$20,764,120 to \$22,069,820, depending on which segments are selected for the final routing. ATC would finance the project through internal funds and/or the issuance and sale of securities. ATC plans to start construction April 2006, with completion by June 2007.

Environmental Review

The proposed transmission project was reviewed by the Commission, in conjunction with the Department of Natural Resources (DNR) Office of Energy, for environmental impacts. This is a Type II action under Wis. Stat. § PSC 4.10(2). An environmental assessment was prepared to determine if an environmental impact statement would be necessary under Wis. Stat. § 1.11. The proposal involves a 138 kV transmission line placed in a highly developed area along major rights-of-way. As the project is located in an urban area along already-disturbed road and

transmission corridors, the project would not create any major new environmental effects.

Therefore, an environmental impact statement is not required.

There was no public response to the Commission staff's letter notifying landowners and interested persons of the project and soliciting comments on environmental effect. The responses to the Commission staff's letter regarding the preliminary determination of no finding of need for an environmental impact statement were focused on the timing of the project hearings. Public comments gathered by ATC during various informational meetings reflected concerns about potential destruction of yard trees, reduction in property value, aesthetics, and health. DNR would require two permits for construction of the proposed project; however, DNR does not expect any problems with granting those permits.

The proposed overhead and underground structures are located on the ROW of major corridors except for Segment 14, which is along the smaller Sprecher Road, so the project would not disrupt possible development of future land uses beyond any disruptions already caused by the existing major corridors. The proposed project is located in a rapidly developing area on the southeastern edge of the city of Madison and the western edge of the town of Blooming Grove.

The proposed expansion of the Femrite Substation is contiguous to the existing Femrite Substation and located on land, zoned Industrial, that has been used as a construction lay-down area by both ATC and previous owners.

The two proposed routes potentially affect only one wetland area. Segments 7, 1, and 2 are located in this area, but plans to site transmission structures adjacent to existing roads or on the higher spots in the wet field limit the potential for impact to wetlands. ATC proposes to mitigate construction effects in wet soils by using a vibratory method for setting pole

foundations. If construction occurs when soils are frozen, there would be little or no impact from access for construction. Otherwise, ATC would need to follow DNR guidelines on construction in wetlands to ensure that construction affects wet soils as little as possible.

Portions of Segment 7 would cross areas designated as part of the 100-year floodplain. The new structure locations would be almost adjacent to the existing structure locations.

The land that ATC acquired for the proposed Femrite Substation has a wetland area on the northern edge of the site and on the eastern edge by Pinnito Creek. ATC plans to locate the substation so as to maintain buffer areas between the substation and the wetlands. ATC would develop erosion control and water management plans for review and approval by DNR.

There is essentially no woodland or undisturbed natural land in the project area. Since this is a developing urban area, there is concern about removing yard trees, some mature, native trees along I-90, and potentially some remnant woods on land along the east side of Sprecher Road (if there is overhead construction).

Segments 3, 4, and 14 include several mature hardwood trees such as oaks, walnut, and hickory that are slow-growing and do not readily establish in disturbed areas. The structure provided by these mature trees translates into greater habitat diversity for wildlife. If such areas are preserved and properly managed within the urban landscape, they can provide movement corridors and stopover sites for wildlife as well as retain remnant habitat for plants. DNR recommends that ATC design the transmission line alignment, as well as the access routes for construction, to avoid or minimize the loss of natural habitat, especially areas that support mature hardwood trees. In addition, DNR recommends that native species be preferred during restoration of temporarily disturbed areas along the transmission line route as well as for

landscaping at the substation. Pruning or removing oak trees could contribute to the spread of oak wilt. To minimize any risk, ATC must avoid pruning or removing oak trees during late spring and early summer.

There are no archeological or historic sites listed with the Wisconsin Historical Society (WHS) that would be affected by construction of the possible routes. However, if any archeological materials were encountered during construction, it would be necessary for ATC to stop construction in that area and notify the Commission and the WHS for further direction.

The project alternatives primarily traverse agricultural and developed areas along major roadsides. Within this developed landscape, there are fragments of habitat in small wooded areas, along fencerows, road and railroad ROW, and a small riparian area along Pinnito Creek at the Femrite Substation. The Natural Heritage Inventory identifies rare plant species that may occur within the project area. Most of the plant species are historical occurrences, recorded at least 25 years ago. The yellow giant hyssop (*Agastache nepetoides*), a state threatened species, was more recently recorded near the project area within railroad ROW and in an open woodlot located in a residential area. Both railroad ROW and open woodlots exist within the project area and, therefore, it is possible that this species is present. DNR recommends that ATC conduct plant surveys at the appropriate time of year to identify the potential presence of yellow giant hyssop within the project area, in order to avoid or minimize losses during construction, and maintenance.

ATC supplied Commission staff with estimates of the electromagnetic fields (EMF) that would be produced by the proposed transmission line. Commission staff reviewed these

estimates and checked the calculations to ensure they met the Commission's application requirements.

The effects of construction, whether overhead or underground, would be primarily temporary and could include noise, traffic disruption, soil compaction, erosion, and also brush or tree removal due to the need to gain access to the construction site. ATC plans to follow best erosion control practices as outlined by DNR. Soil compaction can be mitigated. Traffic disruption would be minimal.

The primary effect of the proposed underground construction on residential areas would be the temporary annoyances related to construction (noise, dust, traffic obstruction), which ATC could mitigate in a number of ways. These would include keeping one lane of any road open as much as possible, scheduling construction to avoid commute times, avoiding construction before and after certain hours, employing good erosion control techniques, and good communication with area residents, both before and during construction.

Approved Routes and Cost Breakdown

The two proposed routes have common segments (2a and 3). Siting the transmission line along one southern sub-route (Segments 7 and 7a) and one northern sub-route (Segments 24, 14, and 6) offers several advantages over the alternative sub-routes.

Siting along Segments 7 and 7a would avoid the cutting of any trees from a grove located on the other southern sub-route (Segments 1, 2, and 7a). While DNR expressed concern with Segment 7 because it crosses a farm field that has the potential for future wetland restoration, the owner of the farm field has no plan to restore wetland on his property.

Aesthetics was a primary issue for the two northern sub-routes. On the northern sub-route (Segments 4, 5, and 6), the city of Madison, DNR, and Schoenstatt Sisters of Mary had concerns about locating the transmission line along Cottage Grove Road. The city had concerns because of aesthetics and future possible Cottage Grove Road expansions, DNR because of mature trees, and the Schoenstatt Sisters of Mary because of their highly visited religious retreat at 5901 Cottage Grove Road. DNR's concerns with the northern sub-route (Segments 24, 14, and 6) are addressed if the transmission line is constructed underground. The city of Madison also preferred the northern sub-route (Segments 24, 14, and 6) because Sprecher Road is less traveled than Cottage Grove Road. A citizen, however, disagreed with the city's preference for constructing underground transmission lines along less traveled roads.

Given the above advantages, the Commission therefore chooses the siting of the transmission line along the Segments 7, 7a, 2a, 3, 24, 14, and 6, as proposed in the CPCN application.

The project's estimated construction cost is \$22,069,820 as detailed below:

Femrite-Sprecher Transmission line:		Total
Overhead construction of Segments 7, 7a, 2a and 3	\$2,432,150	
Underground construction of Segments 24, 14, and 6	\$5,385,270	
Engineering and planning	\$309,900	\$8,127,320
138 kV conversion of Sprecher-Reiner-Sycamore and Kegonsa-McFarland-Femrite transmission lines	\$2,362,400	\$2,362,400
Substation construction:		
McFarland Substation	\$1,136,300	
Femrite Substation	\$5,163,400	
Sprecher Substation	\$1,568,700	
Reiner Substation	\$3,398,600	
Sun Prairie Substation	\$35,500	\$11,302,500
Remaining engineering and planning studies	\$220,500	\$220,500
Transmission and substation removals	\$57,100	\$57,100
Total cost		\$22,069,820

To facilitate construction, this Final Decision shall take effect the day of mailing.

Certificate

ATC, as an electric transmission public utility, may construct and place in operation a new 138 kV transmission line between Femrite and Sprecher Substations, and make associated substation changes needed to change operation of the 138 kV Kegonsa-McFarland-Femrite and Sprecher-Reiner-Sycamore lines from 69 kV to 138 kV at an estimated cost of \$22,069,820. For construction of the Femrite-Sprecher 138 kV transmission line, the Commission approves the route with Segments 7, 7a, 2a, 3, 24, 14, and 6, as described in the CPCN application and this Final Decision. ATC is granted this certificate subject to the conditions stated in this Final Decision.

Order

1. The facilities authorized to be constructed are those described in this Final Decision, which include a 138 kV transmission line between Femrite and Sprecher substations in Dane County and associated required upgrades at existing substations that will allow operation of the Kegonsa-McFarland-Femrite and Sprecher-Reiner-Sycamore lines at 138 kV. ATC will construct the Femrite-Sprecher line along the Segments 7, 7a, 2a, 3, 24, 14, and 6 as described in the CPCN application and in this Final Decision, using underground construction for Segments 24, 14, and 6.

2. Proper erosion control methods using DNR Best Management Practices for Construction Sites shall be employed before, during, and immediately after construction of the project. Erosion control shall be regularly inspected and maintained throughout the construction phase of the project and until exposed soil has been stabilized.

3. ATC will conduct any work in wet areas when the soil is frozen, or will use mitigation methods as determined by consultation with DNR.
4. ATC shall conduct plant surveys at the appropriate time of year to identify the potential presence of yellow giant hyssop within the project area, in order to avoid or minimize losses during construction and maintenance.
5. ATC will give preference to native species during restoration of temporarily disturbed areas along the transmission line route as well as for landscaping at the substations.
6. If archeological artifacts are found during construction, ATC will cease construction in that area and inform the Commission and Wisconsin Historical Society.
7. ATC shall avoid pruning or removing any oak trees during late spring and early summer.
8. ATC will design the transmission line alignment, as well as the access routes for construction, to avoid or minimize the loss of undeveloped habitat, especially areas that support mature hardwood trees.
9. ATC shall work with all landowners from whom ROW easements are required to locate transmission poles, guy wires, structures and the facilities in locations that are reasonably acceptable to the landowner in order to minimize impacts and hardships.
10. ATC shall work with all landowners regarding the removal of trees and shrubs from the proposed ROW and the final disposition of any cut trees and other vegetation.
11. ATC shall reasonably restore and grade, to its original condition or better, any property adversely affected by construction of the approved project.

12. ATC shall take all reasonable action to remedy any problems of businesses or property owners along the approved route that are directly attributable to construction or operation of the new facilities.

13. ATC shall inform property owners from whom ROW easements are required of their rights and obligations pursuant to Wis. Stat. § 182.017.

14. ATC shall submit quarterly progress reports to the Commission indicating the project's major construction and environmental milestones, the extent of the physical completion to date, and the expenditures to date. The first report is due within 90 days of the date of this Final Decision.

15. Upon completion of the project, ATC shall notify the Commission and report the actual cost segregated by plant account comparable to the cost breakdown of the application. For those accounts or categories where actual costs deviate significantly from those authorized, the final cost report shall itemize and explain the reasons for such deviations.

16. This order authorizes only the specific project and facilities described in this Final Decision at the estimated cost of \$22,069,820 for the route with Segments 7, 7a, 2a, 3, 24, 14, and 6, as described in the CPCN application and in this Final Decision. ATC shall notify this Commission before making any substantive changes in the design, size, cost, or location of the proposed facilities.

17. The certificate granted here is valid only if the construction is started within one year of the effective date of this Final Decision.

18. This Final Decision is effective the date of mailing.

Docket 137-CE-120

19. Jurisdiction is retained.

Dated at Madison, Wisconsin, July 19, 2005

By the Commission:

Christy L. Zehner

Christy L. Zehner
Secretary to the Commission

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See attached Notice of Appeal Rights

Notice of Appeal Rights

Notice is hereby given that a person aggrieved by the foregoing decision has the right to file a petition for judicial review as provided in Wis. Stat. § 227.53. The petition must be filed within 30 days after the date of mailing of this decision. That date is shown on the first page. If there is no date on the first page, the date of mailing is shown immediately above the signature line. The Public Service Commission of Wisconsin must be named as respondent in the petition for judicial review.

Notice is further given that, if the foregoing decision is an order following a proceeding which is a contested case as defined in Wis. Stat. § 227.01(3), a person aggrieved by the order has the further right to file one petition for rehearing as provided in Wis. Stat. § 227.49. The petition must be filed within 20 days of the date of mailing of this decision.

If this decision is an order after rehearing, a person aggrieved who wishes to appeal must seek judicial review rather than rehearing. A second petition for rehearing is not an option.

This general notice is for the purpose of ensuring compliance with Wis. Stat. § 227.48(2), and does not constitute a conclusion or admission that any particular party or person is necessarily aggrieved or that any particular decision or order is final or judicially reviewable.

Revised 9/28/98

Date Mailed October 30, 2001

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Joint Application of Minnesota Power Company and
Wisconsin Public Service Corporation for Authority to
Construct and Place in Service Electric Transmission Lines
and Other Electric Facilities for the Arrowhead-Weston Project,
Located in St. Louis County in Minnesota, and Chippewa, Clark,
Douglas, Lincoln, Marathon, Oneida, Price, Rusk, Sawyer, Taylor,
and Washburn Counties in Wisconsin

05-CE-113

FINAL DECISION

Introduction

Background

From the origin of the electric utility industry more than a century ago, the growth in electricity demand and the resulting increase in generation has been matched by ever-increasing need for interconnection of electric power systems. The first power plants served only a few city blocks. The development of electric transmission systems, however, allowed power plants to be linked to serve entire cities, states, and ultimately, large multistate regions. Between 1950 and 1970 many miles of high-voltage transmission lines were constructed within and between regions, ultimately encompassing virtually all electrical loads in the contiguous United States and Canada within four interconnected systems. Wisconsin is within the Eastern Interconnection, extending from Saskatchewan to Florida and New Mexico to Nova Scotia.

The growth of interconnections within the power system allows ever-larger transfers of power between areas and enables utilities to take advantage of distant lower-cost generation. More importantly, it also permits utilities to take advantage of the diversity of electricity demand

and generation between different parts of the power system, thereby enhancing the reliability of all of the interconnected regions. To ensure reliability of service, operators must maintain the system with some generation capacity in excess of peak customer demand. This surplus is commonly referred to as reserve margin. By sharing their generation resources via an interconnected system with neighboring utilities experiencing particularly high demand or an unanticipated generation outage, utilities can reduce the required reserve margin throughout the system. Increased interconnections have contributed to increased reliability and decreased prices.

With increasing interconnection of the nation's electric system comes increasing risk that a systematic failure in one part of the country would cause a catastrophic failure across large regions of the country. This risk became evident in November 1965 when a large-scale blackout occurred in the Northeast, which affected millions of customers and a large region of the country. This blackout demonstrated that close coordination of the interconnected electric network was necessary in order to reduce the risk of large-scale disturbances. In response, the North American Electric Reliability Council (NERC) was formed. The NERC is a system of ten reliability councils, which encompass all North American power systems. The reliability councils, in turn, are composed of the electric utilities within each region and undertake coordinated planning and operation to reduce the risk of widespread outages.

Until recently, utilities used the transmission network primarily in a cooperative manner with the goal of promoting the reliability of the interconnected systems. In 1996, the Federal Energy Regulatory Commission (FERC) issued Order 888, which required most transmission owning utilities to permit open access to their transmission system by other parties. This has

permitted generators and electric power users separated by great distances to engage in bulk power transactions. This, in turn, has increased the number of transactions and the amount of electric power moving across the transmission network between various regions of the country.

The increase in use of the existing transmission network for bulk power transactions has affected the reliability of the electric transmission system in Wisconsin.

Wisconsin is divided electrically between eastern and western areas. Utilities in western Wisconsin (generally west and north of the Wisconsin River Valley) belong to the Mid-Continent Area Power Pool (MAPP) and generally have sufficiently strong connections with Minnesota to meet their power needs. Utilities in eastern Wisconsin belong to the Mid-America Interconnected Network (MAIN) and serve the bulk of the electrical demand in the state.

Eastern Wisconsin and that portion of Upper Michigan, which is part of MAIN, comprise a geographical subset of MAIN called Wisconsin-Upper Michigan System (WUMS). Electrically, WUMS is closely integrated into MAIN. Because WUMS is bordered on the east by Lake Michigan and on the north by Lake Superior, significant power imports can be achieved only from the west and south. The WUMS Western Interface (across western Wisconsin to Minnesota and Iowa) is crossed by only one major transmission line – the 345,000 volt (345 kV) Eau Claire-Arpin line – and a number of lower voltage lines. The Southern Interface (the Wisconsin–Illinois Border) is crossed by three 345 kV lines. Beyond the Western Interface, an extensive transmission system exists, extending from Duluth to Iowa. By improving this connection, the transfer of power into WUMS would be greatly improved. Likewise,

reinforcement of the Southern Interface would permit increased power flows into WUMS from the extensive transmission system existing in northern Illinois.

Combined with the large electrical demand in eastern Wisconsin and the geographic isolation of WUMS, the weakness of the MAPP-MAIN interconnection across the Western Interface poses a reliability risk in Wisconsin. In essence, the most significant reliability-threatening transmission constraints experienced in Wisconsin are those associated with moving power into eastern Wisconsin.

Reliability Incidents In Wisconsin

In recent years, two episodes occurred which highlighted the limitations of the Western Interface into WUMS. The first occurred in 1997 during a period of heightened Nuclear Regulatory Commission (NRC) oversight of the operation of nuclear power plants. As a consequence of this heightened oversight and associated unanticipated outages, all three nuclear units located in Wisconsin, plus three located in Illinois and one located in Minnesota were off-line at the same time. Due to the unavailability of nuclear generation in the region during summer of 1997, Wisconsin utilities sought to purchase replacement power from out-of-state generators. As a consequence of this, the Eau Claire-Arpin 345 kV line became heavily loaded and reached its maximum capacity on several occasions. Transmission line loading relief procedures were initiated several times and on June 11, 1997, the Eau Claire-Arpin line tripped and created a disturbance on the system. The first effect was to cause an excessive phase angle difference at Arpin thereby preventing reclosure of the tripped line for fear of damaging the Weston power plant. It also precipitated a dangerous reduction in voltages in eastern Iowa and northwestern Illinois and depleted all of the reactive power reserves at generating plants in the

Quad Cities area. Depressed voltage with no reactive power reserves to restore voltage signals a significant vulnerability of the system to voltage collapse.

The second incident occurred on June 25, 1998. Lightning caused a 345 kV line connecting Minnesota to Iowa and Missouri to trip out of service and, while service was being restored on that line, the same storm caused the King-Eau Claire line to trip out of service. The loss of two major lines caused a number of additional lines to trip, which ultimately led to the creation of an electrical island in MAPP immediately adjacent to Wisconsin and caused the MAPP transmission system to separate into parts. After this separation, the level of northern MAPP generation was in excess of what could be delivered to load. The result of this was instability and a blackout in the western part of Ontario.

WRAO Study and Recommendations

In response to the reliability issues and the potential for capacity shortages, former Governor Thompson requested that the state's electric utilities convene a task force to make recommendations on new generation and transmission measures necessary to avoid reliability issues in the future. In September 1997 the ad hoc utility group recommended additional generation in eastern Wisconsin and additional transmission capacity between eastern Wisconsin and other regions.

In 1998, the Wisconsin Reliability Assessment Organization (WRAO) was formed by several Wisconsin electric utilities. The WRAO formed a transmission analysis task force to study regional constraints affecting Wisconsin's ability to import electricity and to investigate system reinforcement alternatives to alleviate those constraints. The task force included participation from electric utilities in Illinois, Iowa, Minnesota, Wisconsin, Michigan, and Manitoba. MAPP and MAIN both endorsed the study group as a regionally recognized study

effort. The study group released an initial report in August of 1998 (*Wisconsin Interface Reliability Enhancement Study Phase I Report*)¹ and a second report in June 1999 (*Wisconsin Interface Reliability Enhancement Study Phase II Report*).² Following completion of the Phase II Report, the WRAO filed with the Commission on June 14, 1999, the *Report of the Wisconsin Reliability Assessment Organization on Transmission System Reinforcement in Wisconsin* (WRAO Report).³ As a possible solution for alleviating the constraints identified in the study, the WRAO report recommended construction of a 345 kV line from the Arrowhead Substation near Duluth, Minnesota to the Weston Substation near Wausau, Wisconsin as outlined in Plan 3j of the report.

Procedural History

On November 10, 1999, Wisconsin Public Service Corporation (WPSC) and Minnesota Power Company (MP) jointly filed an application for the issuance of a certificate of public convenience and necessity (CPCN) for authority to construct the Arrowhead-Weston project as recommended in the WRAO Report. In addition, WPSC proposed to construct a 345/115 kV substation near Tripoli, Wisconsin and a 115 kV transmission line from the proposed Tripoli Substation to the Highway 8 Substation in Rhineland, Wisconsin. The applicants' proposed routes for the new 345 kV line were approximately 210 miles in length, and the routes for the new 115 kV line were approximately 42 miles long.

¹ Introduced into the record as Exh. 173.

² Introduced into the record as Exh. 174.

³ Introduced into the record as Exh. 175.

Wis. Stat. § 196.491(3)(a)1. prohibits any person from constructing a high-voltage transmission line without a CPCN from the Commission. Upon receiving a CPCN application, the Commission has 30 days to determine whether it is complete. Wis. Stat. § 196.491(3)(a)2. The Commission issued its declaration of completeness 30 days after the filing, on December 9, 1999. At least 60 days before filing a CPCN application with the Commission, the sponsor of a project must also submit an engineering plan to the Wisconsin Department of Natural Resources (DNR) that describes the project and its anticipated impact on air and water quality. Wis. Stat. § 196.491(3)(a)3.a. On June 2, 2000, the DNR verified to the Commission that WPSC and MP had provided sufficient information during the summer of 1999 to fulfill their statutory requirement to file an engineering plan.

Later in the course of this proceeding, a third party requested permission to become an applicant and co-sponsor the transmission project. The American Transmission Company LLC and ATC Management Inc. (collectively, “ATC”) had been a party of record in the case but, on April 13, 2001, filed a motion for a change in status. After considering this request in open meeting, the Commission issued an order on June 29, 2001, approving ATC’s application to become an applicant.⁴ As part of this approval, the Commission declared that ATC was bound by all conditions, commitments, and agreements made by WPSC or MP in the course of the Commission proceedings.

Under Wis. Stat. § 196.31, the Commission has authority to provide funding to participants in its proceedings (other than public utilities) to compensate for some or all of the

⁴ The Commission’s open meeting was held on June 19, 2001. The Commission’s order is dated June 29, 2001.

reasonable costs, necessary to create a record that adequately addresses significant issues in a Commission docket. In this case, the Commission ultimately authorized a total of \$379,066 for intervenor compensation. It provided \$209,306 to the organization Save Our Unique Lands (SOUL), \$100,000 to the Citizens' Utility Board (CUB), \$54,760 to Wisconsin's Environmental Decade (WED), and \$15,000 to the World Organization of Landowner Freedom (WOLF).

The Commission issued a Notice of Proceeding, Assessment of Costs and Prehearing Conference on April 14, 2000. In that notice, the Commission ordered that parties could commence discovery as of the date of the notice. The notice also informed interested persons that they did not have to be a full party to participate in the case but could exercise virtually all of the rights of a party while participating as a "limited intervenor." *See*, Wis. Admin. Code § PSC 2.32 (2) (1997). In the notice dated April 14, 2000, persons were given until May 30, 2000, to file a request for intervention pursuant to Wis. Admin. Code § PSC 2.32 (3) (1997) and Wis. Stat. § 227.44 (2m) to become full parties to this proceeding.

A prehearing conference was held on May 15, 2000, at which time a list of proposed issues was developed to guide the hearing and procedures were established for the conduct of the hearing. On July 5, 2000, a Party and Status Order was issued in this proceeding. This order determined that 36 persons or organizations were entitled to participate as full parties pursuant to Wis. Admin. Code § PSC 2.32 (3) (1997). A second prehearing conference was held on September 22, 2000, for the purpose of finalizing the issues list and the procedures to be followed at the hearing.

The Commission held lengthy public hearings on this matter, both in northern Wisconsin and in Madison. It scheduled daytime and evening hearings to receive oral testimony from

interested members of the public in Rhinelander on November 28, 2000, in Tomahawk on November 29, 2000, in Abbotsford on November 30, 2000, in Wausau on December 1, 2000, in Superior on December 4 and 5, 2000, in Hayward on December 6, 2000, and in Ladysmith on December 7 and 8, 2000. During these hearings the Commission also accepted testimony in writing from members of the public who needed to leave early, or who preferred not to provide oral statements. From January 3, 2001 to February 23, 2001, the Commission held further hearings in Madison to receive testimony from technical witnesses of the parties and from Commission staff. The parties for purposes of review under Wis. Stat. § 227.47 are listed in Appendix A to this order. During this period, the Commission also provided an opportunity for people who own property in the project area but reside out of state, and those unable to attend the public hearings because of physical disabilities, to testify by telephone. In all, the Commission held nine days of hearings at which members of the public could testify and 22 days of hearings at which technical witnesses testified.

To preside at its hearings, the Commission appointed former Wisconsin Supreme Court Justice Janine Geske, a distinguished professor of law at Marquette University Law School and a reserve judge. The record developed at the hearings consists of 9,680 pages of transcript and 383 exhibits. Following the Commission hearings, parties submitted briefs and reply briefs. At its open meeting on August 17, 2001, the Commission approved the issuance of a CPCN to the applicants for the construction of the Arrowhead-Weston project via Owen and declined to issue a CPCN for the Tripoli Substation and the 115 kV line from Tripoli to Rhinelander.

Findings of Fact

1. WPSC is a public utility, as defined in Wis. Stat. § 196.01(5). MP is a Minnesota corporation that provides public utility services in Minnesota and Wisconsin through its utility affiliates. ATC is a transmission company, as defined in Wis. Stat. § 196.485(1)(ge), and a public utility, as defined in Wis. Stat. § 196.01(5).

2. The facilities approved in this order for the Arrowhead-Weston project⁵ are necessary to satisfy the reasonable needs of the public for an adequate supply of energy.

3. The facilities approved in this order for the Arrowhead-Weston project are in the public interest considering alternative sources of supply and routes, individual hardships, engineering, economic, safety, reliability, and environmental factors.

4. The Oliver 1 Modified (Oliver to Exeland) and Owen 4 (Exeland to Weston via Owen) routes for the Arrowhead-Weston project use existing rights-of-way (ROW) to the extent practicable and minimize environmental impacts in a manner that is consistent with achieving reasonable electric rates.

5. The facilities approved in this order for the Arrowhead-Weston project will provide usage, service, or increased regional reliability benefits to wholesale and retail customers or members in this state, and the costs are reasonable in relation to the benefits of the project.

6. The facilities approved in this order for the Arrowhead-Weston project will not have undue adverse impact on other environmental values.

7. The facilities approved in this order for the Arrowhead-Weston project will not substantially impair the efficiency of an applicant's service or provide facilities unreasonably in

⁵ In this order, "Arrowhead-Weston project" refers to the 345 kV transmission line and its associated facilities. It does not include the 115 kV transmission line and facilities proposed to serve WPSC's Upper West area.

excess of the probable future requirements. When placed in operation, the facilities will increase the value or available quantity of service in proportion to the amount they increase the cost of service.

8. The facilities approved in this order for the Arrowhead-Weston project will not unreasonably interfere with orderly land use and development plans for the area involved.

9. The facilities approved in this order for the Arrowhead-Weston project will not have a material adverse impact on competition in the relevant wholesale electric service market.

10. Alternatives that consist of energy conservation, the use of renewable resources, and the use of other energy priorities listed in Wis. Stat. §§ 1.12 and 196.025 are not cost-effective or technically feasible.

11. The scientific evidence in the record does not support a conclusion that electromagnetic fields (EMF) from transmission lines adversely affect human health or the health of farm animals. The record contains no credible evidence to support the theory that ground currents can adversely affect human health or the health of farm animals.

12. The conditions specified in this order are in the public interest considering individual hardships, engineering, economic, safety, reliability, and environmental factors and will not have undue adverse impact on environmental values. Specifically, it is in the public interest to require that WPSC, MP, and ATC:

a. Work with Commission staff, and with other appropriate federal and state agencies, to develop and implement a Construction and Mitigation Plan for the proposed Arrowhead-Weston project that provides specific information about environmentally sensitive

resources on the route and mitigation measures to avoid or minimize adverse impacts on those resources.

b. Refrain from commencing construction of any specific unit of the Arrowhead-Weston project until the Commission has approved both Part A of the Construction and Mitigation Plan and, for that specific unit, Part B of the plan.

c. Hire one or more environmental inspectors per construction spread and an environmental manager. It is reasonable to require that these environmental inspectors be funded by WPSC, MP, and ATC, and to require that the inspectors be independent of the applicants by reporting directly to the environmental manager. It is reasonable to require that the environmental manager report to the Commission.

d. Be responsible for correcting any stray voltage problems that are created by the construction or operation of the Arrowhead-Weston project.

13. The public convenience and necessity require completion of the Arrowhead-Weston project.

14. The reasonable needs of the public for an adequate supply of electric energy require the construction of a high-voltage transmission facility, the installation of a new generating facility, or some other alternative to support the electric system in WPSC's Upper West area. WPSC or ATC may submit an application for a project to satisfy this need.

15. The final Environmental Impact Statement (EIS) identifies and evaluates the significant environmental effects of the Arrowhead-Weston project, of the 115 kV transmission line that was proposed to serve WPSC's Upper West area, and of alternatives to these projects.

The EIS also identifies and evaluates proposed methods of mitigating these environmental effects.

Conclusions of Law

1. The preparation of the draft and final EIS in this docket complies with Wis. Stat. § 1.11 and Wis. Admin. Code ch. PSC 4, and the content of the final EIS complies with all legal requirements.

2. Order Point 10.2 of Advance Plan 6 does not limit the extent to which the Commission can consider the value of expanding import transfer capacity, for the purpose of improving system reliability or firm power transactions.

3. The Commission is authorized under Wis. Stat. §§ 1.12, 196.025, 196.49, and 196.491, and Wis. Admin. Code chs. PSC 111 and 112 to issue the following order and certificate, authorizing WPSC, MP, and ATC to construct the Arrowhead-Weston project.

Opinion

I. NEED FOR A NEW EXTRA-HIGH VOLTAGE TRANSMISSION LINE

A. Reliability Problems Of Wisconsin's Electric System

In this decision the Commission culminates a long process of study, analysis and discussion. Prompted by concerns that arose in 1997, when Wisconsin was unusually dependent on electric power imports because the eastern Wisconsin utilities faced unprecedented generation outages and severe supply shortages, the Commission and the state's utilities engaged in an effort to identify and address weaknesses in Wisconsin's electricity supply infrastructure.

As part of this process, in 1998 the Commission prepared its *Report to the Wisconsin Legislature on the Regional Electric Transmission System* (Report to the Legislature).⁶ In this document the Commission identified significant constraints on the ability of the transmission system to support electricity imports into Wisconsin, and found that the system was in need of reinforcement if it were to continue to provide reliable electric service. In order to strengthen the system, the Commission acknowledged the need to increase the ability to import electric power into eastern Wisconsin to approximately 3,000 MW. The Commission found this level of import capability to be a reasonable target, given both the need to provide adequate electricity supply to Wisconsin customers and the uncertainty surrounding the development of new generation in the state.

Electric reliability consists of two distinct components: adequacy and security. In general terms, adequacy is ensured by arranging sufficient electricity generation resources to meet demand with a high degree of probability. When electricity supply is met in part by importing power, as is true in Wisconsin, sufficient transmission import capability is also necessary to ensure system adequacy. The second component, security, consists of planning, constructing and operating the power system so that it will withstand unpredictable but inevitable weather events and equipment failures without threatening loss of service or damage to critical equipment. In its 1998 Report to the Wisconsin Legislature, the Commission identified issues surrounding both transmission system adequacy and security.

The security issues with the transmission system identified in the Report to the Legislature remain unresolved today. The record clearly shows that a variety of problems in the

⁶ Exh. 176.

existing electric transmission system exist. The bulk of the problems on the existing system can be traced back to the sparseness of transmission interconnections along the interface between eastern Wisconsin and the region to the west. When any portion of the existing 345 kV Eau Claire-Arpin line – the only extra-high voltage line across this interface – is forced out of service, the ability of the system to support power imports and to remain stable is significantly reduced.

1. Power Supply Adequacy

In this docket, the principal evidence related to the adequacy of the eastern Wisconsin power system resides in the loss-of-load expectation (LOLE) analyses that appear in the record. These analyses provide a basis from which to estimate the amount of generation and transmission infrastructure required to provide a specified level of reliability, where that level of reliability is expressed in terms of a particular probability of firm load curtailment in response to supply shortfalls. The accepted industry-wide standard for reliability is that the LOLE not exceed 0.1 day/year. If a system meets this level of reliability, system operators should need to curtail firm load in response to supply shortfalls no more often than one day every 10 years.

In order to meet an LOLE standard of 0.1 day/year, eastern Wisconsin utilities must have access to sufficient generation during power supply emergencies to meet the reasonable needs of the public. In an interconnected system, this means that eastern Wisconsin utilities must be able to rely on the transmission system to provide access to electric power generated outside of WUMS. Given data on electricity demand and the characteristics of power plants in eastern Wisconsin, a LOLE analysis can determine the amount of power imports that the eastern

Wisconsin transmission system must be able to support in order to satisfy the 0.1 day/year reliability standard.

The LOLE analyses conducted for this case show that the eastern Wisconsin power system has fallen well short of this system adequacy benchmark in recent years, and that this condition may well continue into the future, depending on increases in generation capacity within eastern Wisconsin. Moreover, the record suggests that even these estimates may be optimistic. While LOLE analysis relies on a well-defined mathematical algorithm, the real-world power system is complex and unpredictable. In the real-world power system, for example, generation outages can reduce the capability of the transmission system to support electric power imports. In addition, as historical data introduced in this docket shows, import capability on the existing system is highly variable. This data, which shows the amount of transmission import capability available on a weekly basis in recent years, also makes it clear that at times the system has not been capable of supporting any new imports above existing firm commitments. This provides important evidence that it would be difficult to rely on the existing system for purposes of accessing power during emergencies. These considerations suggest that Wisconsin's power system is marginally adequate. Moreover, the variability and uncertainty surrounding the ability of the system to support imports demonstrates that a conservative approach is appropriate when translating LOLE results into import capability targets.

The adequacy problem of Wisconsin's power system is no mere mathematical abstraction. The real-world symptoms of this problem were made apparent through abundant evidence introduced in this docket. The record shows that the Western Interface is one of the most significant transmission constraints in the combined areas of MAPP and MAIN. Data from

the MAIN reliability council show that a fully subscribed transmission network is a regularly recurring fact of life for Wisconsin utilities. The testimony of a number of utility witnesses, who spoke of the difficulty that they had in securing transmission service, underscores the pervasiveness of constraints on the system. Because of these constraints on the existing system, utilities cannot count on obtaining the power they need to maintain reliable service during periods of power supply emergencies.

Even if transfer capability into eastern Wisconsin were consistently above the level that LOLE analysis indicates is required to provide adequate electric service, this would still not resolve all adequacy concerns. This is because constraints on the Western Interface can prevent the free movement of power between individual sub-areas within Wisconsin. Because the LOLE analysis assumes a transmission system with perfect availability, this effect has real reliability implications for Wisconsin customers.

The record demonstrates that inadequacy of Wisconsin's power system affects not only Wisconsin, but a large surrounding region. Because power flows are governed by the physical characteristics of the interconnected transmission system, any particular power transfer will flow over a number of parallel transmission lines. The record indicates that more than 2,000 different transactions (distinct pairings of electricity buyers and sellers) may significantly impact the existing MAPP-WUMS interface by means of parallel path flow. As a consequence, all of these transactions, which may include transactions necessary to support reliable electric service, are vulnerable to administrative restrictions because of the limitations on this interface.

Improving the transmission system to permit a simultaneous import capability of 3,000 MW into eastern Wisconsin is a reasonable target considering the needs of the public for

an adequate supply of electric power. This will allow utilities much-needed flexibility in providing an adequate electricity supply by satisfying the 0.1 day/year LOLE criterion for the foreseeable future, even in the face of continuing uncertainties about when new generation will actually become operational. Although many developers have expressed interest in building new generation in Wisconsin, uncertainty exists regarding whether and when new capacity will become available. In addition, unforeseen circumstances may make existing generation capacity within WUMS unavailable in the future. For example, common mode failures, including possible future stringent environmental regulations, may reduce the future availability of existing generation. In addition, many existing plants have aged beyond their design lives. Given this continuing generation uncertainty, the Commission must act to ensure a robust and flexible power system capable of providing reliable electric service for Wisconsin customers.

Other factors point to the need to significantly increase import capability. These include the need to accommodate parallel-path flows through WUMS (which may be required for reliable service in other regions) and the possibility of common-mode generation failures. Moreover, as noted above, LOLE analysis does not account for all deficiencies in the electric system. Collectively, these considerations provide support for a WUMS import capability target of 3,000 MW.

Additional considerations add weight to the conclusion that an increase in transfer capability is necessary. For example, the Commission's market power study concluded that, in the absence of the significant increases in import capability that a new line would provide, the WUMS wholesale energy market would be characterized by significant horizontal market power problems.

2. Power System Security

Alongside the issues of power supply adequacy raised in this docket, power system security plays a significant role. As noted above, power system security consists of planning, constructing and operating the power system so that it will withstand unpredictable but unavoidable disruption without threatening loss of service or damage to critical equipment. While a power system suffering from adequacy problems exposes customers to the risk of curtailment (which would likely take the form of controlled rolling blackouts), a system with security problems faces the risk of outages that are uncontrolled in terms of their duration and geographical extent. Some outages resulting from security deficiencies could be isolated and not significantly affect other areas. However, some could be truly catastrophic, involving damage to generation or transmission infrastructure and the separation of the regional interconnected power system. Restarting power plants and reconnecting transmission connections and customer loads is an extremely complex undertaking that could take days to complete.

The security concerns associated with the operation of the existing Western Interface include reliance on operating guides, voltage stability and dynamic stability problems, the potential for cascading thermal overloads, and the Arpin phase angle problem.

Operating guides are special procedures carried out to improve security in the event of a line outage, impending line overload, or other system problem. While operating guides may be necessary to allow continued operation of the system, they often bring with them new security risks. A typical example involves the outage of a single transmission line, which exposes parallel transmission lines to increased power flows. In some cases these increased flows may exceed the ratings of the lines that remain in service, requiring manually opening the line at one end, thereby preventing through-flows that would cause it to overload. While this procedure

protects the line and allows it to remain in service, it also deprives customers served by that line of a dual source of supply, leaving them instead with a power line connected to a source of power at only one end. This exposes these customers to the risk of outages in the event that the single remaining connection to the system is lost.

A failure to ensure adequate voltage stability and dynamic stability exposes the system to risks of widespread outages. Under certain conditions, usually associated with high power transfer, portions of the power system can suddenly experience “voltage collapse” in which voltage plummets without warning, leading to failure. Dynamic instability involves fluctuations in the speed of rotating generators that propagate through the transmission system. These fluctuations can grow in intensity, leading to equipment damage and outages of transmission lines or generators.

A weak transmission system may be subject to cascading thermal overloads, in which outage of one line exposes additional lines to heavy flows that, in turn, cause them to be forced out of service. This can lead to a domino effect in which all connections between two regions may be lost, which typically leaves one region with a sudden generation surplus and the other with a sudden generation deficit, both undesirable situations. As the events of June 25, 1998, illustrate, large geographic areas may be affected by such a disturbance.

The Arpin phase angle problem is a consequence of the fact that the existing Eau Claire-Arpin line is the only significant connection across the Western Interface. If this line is forced out of service when significant power transfers are occurring, it cannot be immediately returned to service because of the shock that this would impose on nearby power plants. Rather, generation must be laboriously adjusted on both sides of the interface until the potential for line

reclose shock is reduced to an acceptable level. This may take hours to accomplish, leaving the system exposed to additional line outages in the interim.

The record in this case clearly shows that each of these security problems, many of which were described in the Commission's 1998 Report to the Legislature, continue to afflict Wisconsin's electric transmission system. Voltage stability limits are frequently present on the system. The need to use operating guides associated with outage of parts of the existing Eau Claire-Arpin line leaves customers in a precarious state at the end of radial transmission connections. Moreover, operating guides are required any time that certain parts of the existing Eau Claire-Arpin line are de-energized for maintenance. This is a violation of the NERC planning standards, which require that transmission systems be capable of accommodating planned bulk electric equipment outages without experiencing overloads. The Arpin phase angle problem also causes violation of additional NERC standards, by preventing restoration to a secure system state for significantly longer than the prescribed 30-minute interval. Clearly, the existing system falls short of allowing the secure operation that customers expect and industry standards dictate. Once again, each of these problems is primarily associated with the existing weakness of the interface between eastern Wisconsin and the region to the west.

As described earlier, these security problems are a concern because they threaten electric service outages. Such service outages are completely independent of, and incremental to, outages that may be necessitated by power shortages, which are accounted for in LOLE analyses. The greatest concern posed by these security problems, however, is the fact that they could lead to catastrophic breakdowns in the regional power system, which could involve significant equipment damage and widespread, lengthy and uncontrolled outages. While the disturbance of

June 25, 1998, was mostly resolved within a few hours, it nonetheless shows how weaknesses in the existing system can lead to serious disturbances, and it provides a glimpse at what a truly catastrophic outage might look like.

Use of the transmission system at present is such that power transfers across the system is often fully subscribed and thus is frequently operated near security limits. This is clear from the data in the record on transmission import capability and testimony concerning transmission loading relief (TLR) actions taken by system operators. In these circumstances, the existing power system is under considerable stress, and stable operation of the system becomes much more complex. This stress has brought the system close to collapse more than once in recent years, as described in the record. Expert testimony in this docket made a compelling case that continued operation near system security limits exposes not only Wisconsin customers but the entire region to the risk of catastrophic system failure. The body of evidence in the record supports this conclusion.

While improved operational practices can reduce the risk of catastrophic failure, they cannot eliminate it. For example, voltage stability limitations, which are frequently present on the existing system, are indicative of problems that can lead to sudden and widespread system collapse with little or no warning. Given this reality, preserving electric reliability calls for system improvements that will not only address specific security problems such as the Arpin-area operating guide, but that will also provide a greater margin of safety for everyday system operation, thereby reducing the risk of catastrophic outages. It is clear that power system planners, operators and regulators have a responsibility to take these concerns seriously and to act accordingly.

The record shows that a second extra-high voltage transmission interconnection between MAPP and WUMS would enhance reliability in eastern Wisconsin. In particular, the record shows that the Arrowhead-Weston project enables an increase of eastern Wisconsin's import capability to 3,000 MW, thereby significantly increasing access to generation resources both within and outside of WUMS. In addition, the proposed project would effectively address a number of significant security risks faced by the existing electric system. Thus the proposed project is a reasonable solution to the problems afflicting Wisconsin's power system.

B. Alternative Means Of Improving The Electric System

1. Alternatives Other than Extra-High Voltage Transmission Lines

When a need for improving the state's electric system is shown, state law prefers specific means of making such improvements. Wis. Stat. § 196.025(1) declares, "To the extent cost-effective, technically feasible and environmentally sound, the commission shall implement the priorities under s. 1.12(4) in making all energy-related decisions and orders, including advance plan, rate setting and rule-making orders." Wis. Stat. § 1.12(4) provides a list of preferred solutions, in rank order:

(4) PRIORITIES. In meeting energy demands, the policy of the state is that, to the extent cost-effective and technically feasible, options be considered based on the following priorities, in the order listed:

- (a) Energy conservation and efficiency.
- (b) Noncombustible renewable energy resources.
- (c) Combustible renewable energy resources.
- (d) Nonrenewable combustible energy resources, in the order listed:
 - 1. Natural gas.
 - 2. Oil or coal with a sulphur content of less than 1 percent.
 - 3. All other carbon-based fuels.

The applicants analyzed energy efficiency, the highest statutory priority, in their application and subsequently provided a supplementary analysis of energy efficiency's cost-effectiveness. WED also provided an independent analysis that included energy efficiency as a partial means of addressing the need for electric system improvements. These analyses are not sufficiently comprehensive to establish the amount of cost-effective energy efficiency, beyond what was already included in the applicants' forecast that could be used to offset the need for the Arrowhead-Weston project. Although it is likely that additional cost-effective conservation measures are available, energy efficiency alone is not a reasonable alternative to a transmission project of this size. The applicants' analysis estimates that 750 MW, or 187.5 MW per year, of sustainable reductions in electric demand would be needed by 2003 to avoid the need for the Arrowhead-Weston project. This is considerably higher than the approximately 15 MW of annual reduction in demand that the applicants have generally achieved in the past. Even if this much energy conservation could be achieved, energy efficiency will not remove existing problems with electric system security on the transmission grid. For these reasons, energy efficiency alone is not a technically feasible or cost-effective means of improving the electric system.

The Arrowhead-Weston project is also more cost-effective than installing more generation in Wisconsin. Conventional generation, renewable resources, and distributed generation would all be more expensive than constructing a new extra-high voltage line, and would not address all identified transmission system security needs.

The least costly form of conventional generation would be gas-fired combustion turbines; the least costly types of renewable resources are either wind or biomass. If a major transmission

reinforcement to external regions were not built, an additional 834 MW of combustion turbine generation would be needed for emergency dispatch to protect eastern Wisconsin's electric system. The 834 MW is based on the additional generation capacity – above an 18 percent reserve margin – that would be necessary to meet the LOLE criterion of 0.1 day/year. The record shows that the Arrowhead-Weston project would be 10 to 20 percent less expensive than constructing combustion turbine generation in Wisconsin. If renewable resources were substituted for combustion turbines, building the new extra-high voltage line would be from 30 to 55 percent less expensive. The use of microturbine or fuel cell distributed generation would also not be cost-effective alternatives at present, because these newer technologies cost even more than conventional generation. These conclusions remain valid even after increasing the estimated cost of the Arrowhead-Weston project to account for capacity charges and other contingencies, such as the likelihood that easement acquisition will be more expensive than the applicants have projected. Moreover, generation would not be as capable of resolving existing transmission system security problems, and significant uncertainties surround both the cost and availability of future generation. For these reasons, generation alone would not be a cost-effective alternative to this transmission line.

An alternative that substitutes new lower-voltage transmission lines and upgrades of existing lower-voltage transmission lines for a new extra-high voltage transmission connection between MAPP and WUMS could improve the adequacy of electric service in Wisconsin. However, this approach could not increase eastern Wisconsin's import capability to the target level of 3,000 MW, nor could it effectively address all security concerns in the existing system. Another alternative involves combining lower-voltage transmission improvements with

conventional generation, distributed generation, energy efficiency, and pricing strategies such as market-based curtailable load programs and real-time pricing. This integrated alternative cannot be accurately modeled, however, so its costs and benefits are not well defined.

A prudent long-term path to electric reliability requires that improvements to the transmission system proceed in parallel with generation additions. This ensures that the citizens of Wisconsin will have the benefits of diversification of energy sources and will not have to rely solely on generation in Wisconsin for their energy needs. This also ensures that during power emergencies Wisconsin electric utilities will have access to generation resources outside of the state for emergency power. Finally, it partially mitigates the horizontal market power that currently exists in WUMS. Under the current circumstances, the public interest is best served by a robust, long-term solution to electric transmission system problems. A new extra-high voltage transmission line is a necessary part of any such solution.

2. Alternative Extra-High Voltage Transmission Lines

The Arrowhead-Weston project is not the only extra-high voltage transmission line that could potentially meet the need, however. The record discusses several extra-high voltage transmission alternatives to the Arrowhead-Weston project. Many of these other transmission lines have technical performance attributes comparable to the Arrowhead-Weston project. However, no project application has been filed for any of these alternatives. To reject the Arrowhead-Weston project in favor of an alternative extra-high voltage transmission line that has not been fully developed in an application would mean that the state must incur further delay, while potential routes for this replacement project are investigated and a CPCN application is

prepared. Given the immediate need facing Wisconsin, further delay would not be in the public interest.

C. Restrictions on Transfer Capability

The Commission's 1992 Advance Plan 6 order⁷ establishes a limitation on transfer capacity across the transmission interface between the eastern and western portions of Wisconsin. Order Point 10.2 provides, "In construction authority cases, evaluation of options affecting the interface will not recognize benefits due to transfer capacity in excess of 1,200 MW." Advance Plan 6 Order, page 120. Some parties argued that this directive applies to the Arrowhead-Weston project, which would increase import capacity above the 1,200 MW maximum. The Findings of Fact in Advance Plan 6, however, indicate otherwise. The Commission was considering the proper transfer capacity level "to accommodate economy power transactions," not to provide firm power to Wisconsin utilities and ratepayers. Advance Plan 6 Order, page 38. This prior decision quantifies the economic benefits associated with increasing transfer capacity, when such an increase is designed to expand the utilities' ability to import power for economy short-term, non-firm transactions. However, the Commission also stated, "This record does not establish the costs or benefits of long-term firm transactions across the interface." Advance Plan 6 Order, page 39. Therefore, this decision does not limit the extent to which the Commission can consider the value of expanding import transfer capacity for the purpose of improving system reliability or providing firm power transactions. The Arrowhead-Weston project's principal purpose is to improve the reliability of the transmission

⁷ Docket 05-EP-6 (September 18, 1992).

system, both in Wisconsin and on a regional level. As a result, Order Point 10.2 is not relevant to this docket.

D. Meeting The Conditions For Issuance Of A Certificate Of Authority

State law requires that a CPCN project application must also comply with the conditions for issuance of a Certificate of Authority under Wis. Stat. § 196.49(3)(b), if the application is filed by a public utility. Wis. Stat. § 196.49(3)(d)5. Although MP does not meet the statutory definition of a public utility because it is a foreign corporation, both WPSC and ATC are public utilities in Wisconsin. State law, therefore, applies the Certificate of Authority criteria to the Arrowhead-Weston project. Wis. Stat. § 196.49(3)(b) provides that the Commission may disapprove the Arrowhead-Weston project if it finds that the project will do any of the following:

1. Substantially impair the efficiency of the service of the public utility.
2. Provide facilities unreasonably in excess of the probable future requirements.
3. When placed in operation, add to the cost of service without proportionately increasing the value or available quantity of service unless the public utility waives consideration by the commission, in the fixation of rates, of such consequent increase of cost of service. *See*, Wis. Stat. § 196.49(3)(b).

The Arrowhead-Weston project will serve electric power users in this state and in the region. The line, as approved by the Commission, will enhance the security and adequacy of electric service for all eastern Wisconsin utilities. When placed in operation, the Arrowhead-Weston project will substantially improve the ability of Wisconsin utilities to import power reliably into eastern Wisconsin. This improved ability in part will assure that the electric transmission system will be able to deliver electric power which has been committed to meet the needs of electric users in eastern Wisconsin across a much greater range of potential disruptions

to the electric system than is currently possible. Accordingly, this project will enhance and not impair the efficiency of service of ATC and WPSC and all of the other utilities in Wisconsin.

The project, as approved by the Commission, will not provide facilities unreasonably in excess of the probable future requirements of ATC and WPSC. As has been discussed above, the project enables an increase of simultaneous import capability to 3,000 MW into eastern Wisconsin. The Commission has found that the 3,000 MW target is a reasonable planning target for transmission capability into eastern Wisconsin and that this project, when constructed and placed into operation, will enhance the reliability of electric service for all customers in Wisconsin.

Finally, when placed in operation, the Arrowhead-Weston project will not add to the cost of service without proportionately increasing the value or available quantity of service. As discussed above, this project will enhance the reliability of electric service for all customers in Wisconsin and the region. This project enhances both the value of the committed generating capacity as well as the quantity of service, which can be delivered to customers in eastern Wisconsin.

E. Impact on Wholesale Competition and Customer Benefits

Under Wis. Stat. § 196.941(3)(d)7., one of the findings the Commission must make in order to issue a CPCN is that “[t]he proposed facility will not have a material adverse impact on competition in the relevant wholesale electric service market.” By definition, an extra-high voltage line that expands transfer capability and facilitates commerce will promote, not adversely affect, competition in electric markets in eastern Wisconsin. In addition, the Arrowhead-Weston project will help address horizontal market power issues in WUMS. By increasing transfer

capacity, the Arrowhead-Weston project will allow more buyers and sellers to participate in electricity markets and help prevent generators from selling at excessive prices. These market forces can discipline or eliminate higher cost competitors. An independent study performed for the Commission and introduced into the record demonstrated that expanding transfer capability by means of a new extra-high voltage line would help foster a more competitive market structure in Wisconsin.⁸ The Arrowhead-Weston project is such a transmission line.

Wis. Stat. § 196.491(3)(d)3t. imposes an additional requirement upon the issuance of a CPCN for this project. Under that statute, the Commission may not approve the CPCN application for an extra-high voltage line unless it finds that the line “provides usage, service or increased regional reliability benefits to the wholesale and retail customers or members in this state and the benefits of the high-voltage transmission line are reasonable in relation to the cost of the high-voltage line.”

As noted above, the proposed Arrowhead-Weston project will provide significant benefits to both wholesale and retail customers in Wisconsin by substantially increasing the transfer capability into eastern Wisconsin. By increasing transfer capability, the Arrowhead-Weston project will allow more competition in wholesale electricity markets and help prevent generators from selling at excessive prices. The project will address existing transmission system operational problems such as the Arpin phase angle limitation and the current need to rely upon transmission system operating guides, and will improve both dynamic and voltage stability on the system. This, in turn, will permit the transmission system in

⁸ “Horizontal Market Power in Wisconsin Electricity Market,” Tabors Caramis and Associates (2000). Introduced as Exh. 244.

Wisconsin to operate more securely at higher power transfer levels, thereby enhancing the reliability of the system. Utilities in eastern Wisconsin, as wholesale customers using the Arrowhead-Weston project, will benefit from enhanced reliability of the electric system in eastern Wisconsin. The fact that all forms of generation would be significantly more expensive alternatives than the construction of the Arrowhead-Weston project demonstrates that the project's benefits are reasonable in relation to its cost.

F. EMF, Earth Currents, Stray Voltage, and Property Value Impacts

Opponents of the Arrowhead-Weston project argued that construction of such a transmission line could harm people or farm animals, because of the presence of EMF and because of earth currents. Others contended that the Arrowhead-Weston project would increase stray voltage on neighboring farms.

A significant body of research has studied whether EMF from electrical lines adversely affects human health or the health of agricultural animals; scientific evidence does not support such a conclusion. The project opponents relied upon the testimony of Dr. Duane Dahlberg when arguing that EMF and ground currents are a health risk. Dr. Dahlberg failed to offer credible testimony on these subjects. The better evidence in the record demonstrates that his theories are discredited, outdated, and not supported by scientific research. The overwhelming weight of scientific evidence indicates that exposure to EMF is extremely unlikely to result in any meaningful health impact. This conclusion is supported by the weak epidemiological evidence of any link to childhood leukemia, by the lack of a plausible biological mechanism that would explain how exposure to EMF could cause disease, and by the fact that the magnetic fields produced by electric power lines do not have enough energy to break chemical bonds or cause

DNA mutation. Whole animal studies that have investigated long-term exposure to power frequency EMF have shown no connection between exposure and cancer of any kind. Regarding earth currents (electric currents that use the earth as a return path), the record contains no credible evidence to support the theory that such currents can adversely affect human health or the health of farm animals.

Stray voltage can be a serious problem on dairy farms. Any contribution to stray voltage typically do not derive from high-voltage transmission lines. Testing procedures are available to identify stray voltage and determine its cause. In the unlikely event that the Arrowhead-Weston project were to create a stray voltage problem, reliable mitigation procedures exist to eliminate stray voltage. It is reasonable to require that the applicants be responsible for correcting any stray voltage problems that are created by the construction or operation of this project.

The proposed transmission line's potential effect on property values was a significant concern expressed by affected landowners throughout this case. Based on an overview of recently published trade and research articles, the final EIS discusses the types and degree of property value effects expected to occur as a result of transmission line construction and operation. In addition, technical witnesses sponsored by SOUL and the applicants debated the extent of the potential decrease in property values due to the proposed project.

The Commission acknowledges that the construction of new power lines may cause changes in the value of affected property. However, because so many other factors can affect the value of property and because all transmission lines do not affect properties in a similar manner, it is difficult to assess the potential dollar impacts of a particular transmission line, such as the proposed Arrowhead-Weston project. To the extent these effects can be quantified, though, the

applicants would be required to compensate individual landowners for the loss of property value either through a negotiated payment for an easement or through condemnation proceedings. The Commission has no jurisdiction with respect to determining compensation amounts or methods of payment, but it is reasonable to require that the applicants work with landowners in the placement of transmission line structures on private lands (*see* the discussion of a Construction and Mitigation Plan, below), to minimize individual hardships and adverse effects on property.

II. ROUTING THE 345 kV LINE

A. Oliver to Exeland

1. General discussion

The record describes four routes that would extend approximately 95 miles from the Town of Oliver, on the St. Louis River at the Minnesota border, to just north of the Town of Exeland. The north end of the line would connect to a new twelve-mile 345 kV line in Minnesota, extending from the Arrowhead Substation to the Wisconsin border.

In the case of an application for construction of a 345 kV transmission line, Wis. Stat. § 196.491(3)(d)3r. requires maximizing corridor sharing to the extent practicable consistent with other statutory criteria:

For a high-voltage transmission line that is proposed to increase the transmission import capability into this state, existing rights-of-way are used to the extent practicable and the routing and design of the high-voltage transmission line minimizes environmental impacts in a manner that is consistent with achieving reasonable electric rates.

State law also requires that a transmission line route comply with other conditions enumerated in Wis. Stat. § 196.491(3)(d)3. The statute provides that the Commission may only issue a CPCN if it finds that the transmission line route “is in the public interest considering alternative sources

of supply, alternative locations or routes, individual hardships, engineering, economic, safety, reliability and environmental factors.” Two of the routes, Oliver 1 and Oliver 2, were proposed by the applicants and described in the initial application. The applicants developed Oliver 1 to maximize corridor sharing, using corridors with existing transmission lines, natural gas and oil pipelines, highways, and railroads. While the main focus of Oliver 1 was corridor sharing with other utility or transportation facilities, the applicants designed Oliver 2 as a route alternative that would minimize impact on local landowners and commercial development by placing portions of the new transmission line corridor through undeveloped areas. These design goals were not fully realized. For example, one section of Oliver 1 uses a new (no existing infrastructure) corridor to avoid the Lac Courte Oreilles Reservation, and a section of Oliver 2 follows an existing transmission line corridor through a group of small lakes with many residences.

The other two routes described in the record, Oliver 3 and Oliver 1 Modified,⁹ were proposed by Commission staff. Parties to the case did not propose any further routes. Oliver 3 is the same as Oliver 1, except in the southernmost quarter where it would use a different segment (segment 320) to cross the Lac Courte Oreilles Reservation on an existing transmission line corridor.¹⁰ By doing so, Oliver 3 would further increase the amount of corridor sharing along the transmission route. East of the Reservation, Oliver 3 would continue to follow the transmission line corridor by using the southernmost segment from the Oliver 2 route (segment 312).

When the Lac Courte Oreilles tribe ultimately announced its opposition to the proposed

⁹ Oliver 1 Modified is also identified in the record as the “revised” Oliver 1 route.

¹⁰ The application also contains information on many “unused” segments, segments not included in a route proposed by the applicants that could be substituted or used to develop alternative routes.

line, the Commission staff developed a modification to the Oliver 1 route. Oliver 1 Modified further increases corridor sharing (using some Oliver 2 segments and an unused segment 315), without crossing the Lac Courte Oreilles Reservation.

The table below, drawn from Exhibit 312, provides a quantitative comparison of the environmental impacts for all of the Oliver routes.

Comparison of Oliver Routes

	Oliver 1	Oliver 2	Oliver 3	Oliver 1 Modified
General				
Total length (miles)	93.5	99.2	91.5	91.9
No existing infrastructure (miles)	18.2	47.5	6.0	10.8
Existing transmission line (miles)	56.9	17.0	78.9	62.8
New ROW (acres) Double circuit	655	1404	304	530
Parallel construction	1264	1518	NA	NA
Natural Resources				
Lakes within 1000 feet	7	10	12	13
River/stream crossings, no existing transmission line	20	61	2	19
River/stream crossings that are inaccessible	10	40	10	8
Outstanding/Exceptional Resource Water crossings	8	11	4	7
Wetland (non-forested), total crossed (miles)	11.8	7.4	13.8	12.6
Wetland (non-forested) no existing infrastructure (miles)	0.9	3.0	1.0	0.9
Sensitive wetlands (miles)	1.7	0.7	1.7	1.7
Wetlands greater than 800 feet wide	19	26	23	19
Wetland areas that are inaccessible	2	11	4	2
Forest, total land crossed (miles)	46	64.5	40.2	45
Forest land crossed, no existing infrastructure (miles)	11.5	49.2	3.5	5.0
Upland forest cleared (acres) Double circuit	386.5	863.5	108.5	347
Parallel construction	629.5	915.5	NA	NA
Wetland forest cleared (acres) Double circuit	30.5	132.5	22.5	28.5
Parallel construction	91.5	138	NA	NA
Social and Economic				
Public land crossed (miles)	36	23	31	32
Recreation trails (no existing transmission line)	2	4	1	2
Lac Courte Oreilles Res. Land cleared (acres)	0	0	10.4	0
Homes 0-150 feet Double circuit	8	13	16	19
Parallel construction	10	13	NA	NA
Homes 150-300 feet Double circuit	36	40	47	44
Parallel construction	30	39	NA	NA
Agricultural land, total crossed (miles)	20.7	14.9	24.8	19.9
Agricultural land crossed, no existing transmission line (miles)	7.4	9.1	2.6	3.8
Historical/Archeological sites	10	4	13	13

Oliver 1 Modified complies with the statutory requirements for transmission siting. It maximizes corridor sharing, while also recognizing the fact that the applicants cannot exercise condemnation over lands owned by the Lac Courte Oreilles Tribe. Maximizing corridor sharing reduces the amount of land required to develop a transmission line corridor. In general, this will have the effect of decreasing the acres of land where new easements must be acquired and decreasing the overall environmental impact of a transmission line. Using Oliver 1 Modified accomplishes this purpose and has a number of other advantages over the alternative Oliver routes. Oliver 1 Modified has:

1. The most miles with the potential for double circuiting with existing transmission lines. Using existing transmission line corridors generally has the least environmental and aesthetic impact.
2. The fewest river and stream crossings in roadless areas. Inaccessible areas could require building temporary or permanent access roads, which have their own environmental and aesthetic impacts.
3. The fewest Outstanding/Exceptional Resource Waters crossings. This designation by the DNR indicates a lake or stream having excellent water quality, high recreational and aesthetic value, high-quality fishing, and a lack of pollution. These locations require special mitigation practices to protect the exceptional aesthetic beauty and environmentally sensitive nature of these streams.
4. The least amount of forest lands affected, both in terms of length in miles and acres cleared. Consequently, this route involves the least loss of timber production and least aesthetic impact to forest lands.

5. The least impact on agricultural lands where no transmission line currently exists. Creating new corridors on agricultural land has the greatest impact on operation of farm machinery and loss of cropland.

In other measures of environmental impact, Oliver 1 Modified is comparable to the other choices. Its only comparative disadvantage is that more homes are located within 150 feet of this route, but this could be remedied to some extent during development of the Construction and Mitigation Plan (*see* Section III.A, below), when exact centerline and structure placement are determined.

Wis. Stat. § 196.491(3)(d)6. requires that a proposed facility “not unreasonably interfere with the orderly land use and development plans for the area involved.” Oliver 1 Modified has less conflict with local land use plans than either Oliver 2 or 3. As described above, Oliver 3 would be incompatible with the Lac Courte Oreilles tribal position. Oliver 2 would unreasonably interfere with long-range plans or goals for the Washburn County Forest, several state-owned wildlife areas, the Ice Age National Scenic Trail, the North Country National Scenic Trail plans, and several state trails. Oliver 1 Modified affects some of these same types of areas but, because it uses existing infrastructure corridor, creates less conflict. Even Oliver 1 Modified will require some mitigation measures in county forests, on national trails, on state and county trails, and in wildlife areas. It is reasonable to require that the applicants develop specific mitigation requirements in the required Construction and Mitigation Plan.

All Oliver routes cross the Namekagon River, which is part of the St. Croix National Scenic Riverway. Because the National Park Service (NPS) is legally required to maintain or enhance the quality of the riverway, the applicants must apply for and obtain a permit from the

NPS before constructing such a crossing. Crossing the Namekagon River at the location of the existing transmission line has less aesthetic and environmental impact than the alternative crossing proposed, at the railroad bridge. This order, however, does not specify whether the new line should be underground or overhead, the technology if underground, or the structure type if overhead. Instead, it is reasonable for the applicants to work with the NPS to determine the exact configuration of the river crossing. Since the NPS is the governmental entity that would grant the necessary permit, any mitigation strategies should also be set by the NPS.

2. Route Description

Oliver 1 Modified is about 92 miles long, running in a southeasterly direction from the Town of Oliver, Wisconsin, on the St. Louis River (the Minnesota-Wisconsin border) to just southwest of the Town of Exeland, Wisconsin. The route crosses the St. Louis River at its narrowest point parallel to other infrastructure. It follows an existing rail and transmission line corridor through Oliver, then continues to parallel the rail corridor for over six miles to the east. It leaves the rail corridor for a short distance before turning south on Lyman Lake Road. At County C it veers southeast on or adjacent to the Lakehead Pipeline ROW. An existing transmission line then joins the corridor and Oliver 1 Modified follows this transmission line/pipeline route, which also includes a rail corridor for much of the distance, all the way through Douglas County,¹¹ Washburn County, and into Sawyer County. Near Boylan Road in Sawyer County, the corridor continues cross-country for about 0.5 mile to reach another existing transmission line. Oliver 1 Modified follows this line south and then east, staying just north of

¹¹ In one section southeast of Solon Springs there will be a dogleg off the pipeline route, and both the existing and new line will be moved southwest to allow for a planned longer airstrip.

Sand Lake, then southeast past Ham Lake, Upper and Lower Holly Lakes, and Hungry Lake.

The existing transmission line route veers off past Hungry Lake, but Oliver 1 Modified continues to follow the pipeline route until it approaches the edge of the Lac Courte Oreilles Reservation.

Here, Oliver 1 Modified turns south just outside the reservation to a point southeast of Summit Lake, where it turns east and avoids the southern edge of the reservation. When it intersects the pipeline corridor again, the route follows the pipeline to the Sawyer/Rusk County line, just south and west of Exeland, Wisconsin.

The project application divides each route option into segments, which are separately numbered. Starting in the north, Oliver 1 Modified consists of the following route segments: 397, 394, 393, 392, 385, 379, 377, 372, 367, 360, 359, 357, 352, 349, 346, 343, 341, 340, 339, 332c, 332a, 330, 329, 326, 325, 323b, 323a, 319, 317, 316, 314, 311.

3. Special Concerns

While Oliver 1 Modified has the least impact of the routes on the record, construction of a 345 kV line on this route will still have considerable environmental impact. A list of specific mitigation efforts is usually a part of any Commission order authorizing construction of a transmission line. Because the Arrowhead-Weston project is so long, portions of which are located in areas that are currently inaccessible, at this stage in the process not all of the environmental problems and necessary mitigation techniques can be identified. The following is a list of known areas along the route where problems are likely to be found that must be addressed in the Construction and Mitigation Plan, using site-specific mitigation techniques:

1. Inaccessible wetland on segment 392, south of Superior near Bear Creek, in an area characterized by DNR as high-quality wetland with potential for special status.

Consultation with DNR is required.

2. At least two large areas of inaccessible wetlands on segment 372 in Douglas County Forest, one north of County L and another north of Tom Green Rd. Consultation with DNR and Douglas County Forestry is required.

3. Three wolf packs in the project area could be affected during the construction process: the Moose Lake pack (segment 372); the Frog Creek pack (segment 357); and the Chain Lake pack (segments 359-360). Because the location of wolf packs can shift and new packs can be identified, consultation with DNR and U.S. Fish and Wildlife Service is required to determine whether construction must be suspended in some wolf pack territories at times when wolf packs are at risk.

4. The Nature Conservancy identified two significant bird areas along segments 372 and 367 of the corridor. These areas support mating pairs of rare game and non-game birds and are considered important to their survival. Consultation with DNR and the Nature Conservancy is required on appropriate mitigation techniques to reduce the disruption of mating and nesting activities during construction and the likelihood of bird collisions.

5. Segment 372 shares corridor with an existing 161 kV transmission line. MP has proposed to change the location of this line to a new corridor between County A and Baldwin Avenue, west of Solon Springs. This section of the Arrowhead-Weston project needs to be carefully designed so that the new double-circuit line does not come any closer to residences than the existing line to residences that are within 300 feet of MP's current transmission line.

6. The North Country National Scenic Trail will be crossed by segment 367.

Consultation with NPS is required.

7. The State Historical Society of Wisconsin (SHSW) has identified three archeological sites as needing field surveys by a qualified archeologist—two lithic artifact sites on segment 360 and a logging campsite on segment 357. Another site near segment 357 is not on the agency's list, but both SHSW and Washburn County agree that this site also should be protected. It is reasonable to require that archeological field surveys be done to determine the boundaries of these four sites. The Construction and Mitigation Plan shall describe any impacts to these sites, including impacts of construction equipment, and the results of consultations with Washburn County and SHSW about necessary mitigation.

8. In segment 359, the line will cross the Totogatic River and surrounding muskeg wetlands. The Totogatic River is designated a Wild and Scenic River by Washburn County, is listed on the National Rivers Inventory, and is a resource conservation area with potential for old growth forest. Consultation with Washburn County Forestry and DNR is required.

9. An extensive inaccessible wetland area is located north of STH 77 in Washburn County Forest, on segment 357. Consultation with DNR and Washburn County Forestry is required.

10. Access may need to be developed on segment 357 to a branch of Chippanazie Creek within the Lost Lake area, which is designated a Class I trout stream, and across its extensive associated wetlands. This area is cooperatively protected by Washburn County and the DNR. Consultation with Washburn County Forestry and DNR is required.

11. Crossing the Namekagon River and nearby wetlands on segment 346 must be negotiated with the appropriate state and federal agencies.
12. On segment 332, the corridor will be very close to Sand Lake, which is designated an Outstanding/Exceptional Resource Water. Consultation with DNR is required.
13. On segment 326 new crossings will be required over Alder Creek and Hauer Creek, because no existing infrastructure is present at either site. Both streams are designated Outstanding/Exceptional Resource Waters, are inaccessible, and have surrounding inaccessible wetlands. Consultation with DNR is required.
14. Part of segment 326 will be built on the southeast shore of Summit Lake, west of Summit Lake Road. No existing infrastructure is located in this area, except that part of the segment is parallel to Summit Lake Road, a narrow dirt road with tree canopy. The line must be built west of the road and next to the lake because the western boundary of the Lac Courte Oreilles Reservation is adjacent to the east of the road. The lakeshore and watershed will need to be stabilized to prevent runoff into the lake during and after construction. Since a corner structure will also be required near the lake, it must be carefully located to have the least impact possible on the now-unobstructed views from the lake. Consultation with DNR and Lac Courte Oreilles Tribe is required, and with U.S. Army Corps of Engineers as needed.
15. On segment 329, Hauer Springs wetlands, part of the headwaters for Hauer Creek, will be affected in a very wild and undeveloped area. An inaccessible branch of Hauer Creek will be crossed. Consultation with DNR is required.
16. Exact placement of the northern end of segment 329 should be reviewed. The pipeline and transmission line corridors separate just past Hungry Lake. The approved corridor

stays with the pipeline route but the application proposed a southerly displacement from the pipeline corridor for some distance, just past Hungry Lake. This displacement would move the line closer to several homes on Hungry Lake. The final alignment for this section of the line must be clearly described in the Construction and Mitigation Plan.

17. Segment 323 crosses the Tuscobia Falls State Trail. No overhead infrastructure now exists at this crossing, so structure placements must be kept as far from the trail as possible. Consultation with DNR is required.

18. Segment 311 affects the Wiergor Springs Wildlife Area. Little Wiergor Creek is a Class II trout stream. Consultation with DNR is required.

19. Several county trails will be affected: Little Douglas County Trail (segment 393); Wild Rivers Trail (segment 377); and trails in the Douglas County Wildlife Area (segment 367). Consultation with Douglas County is required.

20. Many other sensitive and inaccessible wetland areas along this route will need careful attention in the Construction and Mitigation Plan. Consultation with appropriate agencies is required.

21. The Lac Courte Oreilles tribe is considering a survey of ceded lands for archeological sites that might be affected by the transmission line. If the tribe finds sites and reports them to SHSW, changes in centerline and structure placement shall be made where needed to avoid damage to the sites.

B. Exeland to Weston

1. General discussion

Between Exeland in Sawyer County and the Weston Power Plant in Marathon County, the proposed routes fall into two sectors: the Owen sector or the Tripoli sector. Within either sector several routes have been proposed. Using routes in the Owen sector, the transmission line would extend southeast from Exeland to the vicinity of Owen in Clark County, and then proceed east to Weston. Using routes in the Tripoli sector, the transmission line would first extend east from Exeland to near the Price-Lincoln County line, where it would then turn south and continue to Weston. Routing the transmission line from Exeland to Weston first required that either the Owen or the Tripoli sector be chosen; then, a route within the preferred sector be selected.

The final EIS shows that the Owen sector routes share more of their corridor with existing facilities and have considerably fewer environmental impacts than the Tripoli sector routes. All four Owen sector routes share existing facility corridors to a greater extent than any of the routes in the Tripoli sector. These facility corridors now contain electric transmission lines, petroleum pipelines, railroads, and roads. The Owen 3 and Owen 4 routes allow the most corridor sharing; approximately 63 percent of these routes share corridors with existing infrastructure. In the Tripoli sector, the Tripoli 3 or Tripoli 4 routes would provide the greatest amount of corridor sharing, but only about 31 percent of their ROW would be shared. Wis. Stat. § 196.491(3)(d)3r., which prefers transmission line routes that maximize corridor sharing, therefore favors the Owen sector. This statute declares that the Commission must select a route for this project using existing ROW “to the extent practicable,” and that “minimizes environmental impacts in a manner that is consistent with achieving reasonable electric rates.” A further comparison of the environmental impact associated with routes in the Owen and Tripoli

sectors shows that choosing the Owen sector will also minimize environmental impact.

Compared to Tripoli sector routes, the Owen sector routes would fragment one-third to one-eighth the number of large forest blocks, cross half as many streams with potential construction access difficulties, cross two-thirds as many wetlands with potential access difficulties, and require one-half to one-third as much forest clearing.

Neither the Owen sector routes nor the Tripoli sector routes would unreasonably interfere with orderly land use and development plans, as specified in Wis. Stat. § 196.491(3)(d)6. Most lands crossed are not zoned, or zoned for agricultural or conservancy uses. The Tripoli sector routes would cross, on average, more land zoned residential or conservancy than the Owen sector routes. A new electric transmission line could inhibit residential development or constrain the layout of residential lots. Agricultural land that is crossed by a new transmission line could still be farmed, but the line may adversely affect some aspects of farm operation. Conservancy areas could also continue as low-intensity use lands, often maintained in a natural state, although clearing the ROW would alter wooded land in both appearance and function.

The Owen sector is superior to the Tripoli sector for routing the Arrowhead-Weston project because of its ability to maximize corridor sharing and reduce environmental impact in general. The applicants, though, also proposed a means of serving WPSC's Upper West (Rhineland) area that depends upon selecting the Tripoli sector for the Arrowhead-Weston 345 kV line, because it would involve the construction of a new 115 kV transmission line from a proposed substation near Tripoli to the Highway 8 Substation in Rhineland. If this were the only means of serving the Upper West area, routing the Arrowhead-Weston project through Tripoli and building the Tripoli Substation might become necessary despite the disadvantages of

the Tripoli sector routes. However, as described in Section IV below, a number of other methods do exist to improve the electric system in the Upper West area and the optimal route for the Arrowhead-Weston project need not be held captive by the choice of methods for providing service to the Upper West area. Thus, a route within the Owen sector is the proper location for the Arrowhead-Weston project.

As described above, the Owen 3 and Owen 4 routes maximize corridor sharing and minimize the amount of new ROW required. Both routes would minimize the number of stream crossings, wetland crossings, the acreage of forest clearings, and the crossing of large forest blocks. Owen 4 is superior to Owen 3 in that it has fewer stream crossings, particularly crossings of very high quality streams that the DNR has designated Outstanding and Exceptional Resource Waters. Owen 4 also crosses less land zoned residential. The table below, drawn from the final EIS,¹² compares the environmental impacts for all of the Owen routes:

Comparison of Owen Routes

	Owen 1	Owen 2	Owen 3	Owen 4
General				
Total length (miles)	124.7	116.4	117.5	118.4
No existing infrastructure (miles)	73.6	58.5	42.8	44.1
Existing transmission line (miles)	31.6	15.4	37.5	38.1
New ROW (acres)				
Double circuit	1,705	1,802	1,544	1,552
Parallel construction	2,001	NA	1,737	1,745
Natural Resources				
River/stream crossings, no existing transmission line	38	34	28	22
River/stream crossings that are inaccessible*	35	28	24	21
Outstanding/Exceptional Resource Water crossings	8	2	8	2
Wetland (non-forested), total crossed (miles)	16.2	13.9	13.4	13.1
Wetland (non-forested) no existing infrastructure (miles.)	7.0	6.8	5.0	4.6
Wetlands greater than 1,000 feet wide	25	28	29	28
Wetlands that are inaccessible	129	110	103	106

¹² EIS Table 12-3, p. 659

	Owen 1	Owen 2	Owen 3	Owen 4
Forest, total land crossed (miles)	44.3	35.9	33.5	33.7
Forest, land crossed, no existing infrastructure (miles)	23.4	16.0	11.2	12.2
Upland forest cleared (acres) Double circuit	484	443	373	369
Parallel construction	580	NA	417	414
Wetland forest cleared (acres) Double circuit	116	98	76	85
Parallel construction	134	NA	87	96
Social and Economic				
Public land crossed (miles)	3.5	2.6	2.4	2.6
Historical/Archeological sites	1	2	2	2
Homes 0-150 feet Double circuit	12	15	14	15
Parallel construction	10	NA	14	15
Homes 150-300 feet Double circuit	19	30	26	27
Parallel construction	21	NA	26	27
Agricultural land, total crossed (miles)	57.4	58.1	62.9	64.0
Agricultural land crossed, no existing transmission-line (miles)	41.6	50.0	40.4	41.3
Recreation trails (no existing transmission line)	1	1	1	1

Overall, Owen 4 would result in the least environmental impact of the Owen routes.

Commission staff developed this route alternative, which is substantially similar to Owen 3, to reduce the number of very high quality waterways and inaccessible waterways that would need to be crossed. Where Owen 3 would cross eight Outstanding and Exceptional Resource Waters and 10 trout streams, and would require crossing rivers and streams in 24 locations that are currently inaccessible, Owen 4 crosses two Outstanding and Exceptional Resource Waters and three trout streams, and involves 21 inaccessible crossings.

2. Route Description

Owen 4 begins near Exeland and follows a petroleum pipeline southeast to a point northwest of Owen. The route turns south and continues cross-country to an existing electric transmission line ROW that passes south of Owen. Between Owen and Abbotsford, Owen 4 follows an electric transmission line corridor from which a portion of the existing transmission line has recently been removed. Between Abbotsford and Edgar, the route follows a recently

rebuilt electric transmission line. The route then continues east, cross-country, to the Weston Substation.

Owen 4 consists of the following segments, which are described in the project application: 308', 303, 301b, 301a', 242', 240, 239, 237, 235, 233, 231, 230, 229, 226, 223, 213', 211, 207, 205, 204, 202c, 202a, 23b, 23a, 21, 18, 16, 11, 8b, 8a, 1b, 1a.

3. Special Concerns

1. An existing transmission line on H-frame structures, built to 161 kV standards but operated at 115 kV, currently crosses directly through the Three Lakes Wetland Mitigation Site, east of Abbotsford. Bird collisions are a problem in this area. Segment 205 of the Owen 4 route passes just south of this mitigation site; the applicants agreed to move the 115 kV line out of the mitigation area and onto segment 205, using double-circuit structures with the 345 kV transmission line. This is a reasonable means of reducing the risk of bird collisions with the wires.

2. The wood turtle (*Clemmys insculpta*), a threatened species, has been observed in several locations on segments 1 and 242. The Blanding's turtle (*Emydoidea blandingii*), a state threatened species, has also been observed on segment 239, west of Sheldon. Since construction activities could present a threat to turtle nests, it is reasonable to require that construction be avoided in areas inhabited by these turtles during the egg-laying and hatching time of June to late September.

III. CONDITIONS FOR APPROVAL OF THE 345 kV LINE

A. Construction And Mitigation Plan

WPSC and MP proposed general construction guidelines in their project application and in testimony that they would use to reduce environmental damage. The final EIS discusses these and other construction procedures commonly used when building transmission lines. This is the most complex transmission project ever proposed in Wisconsin, though, and its approved route passes through areas where the environmental impact is not yet clearly understood. It is, therefore, reasonable to require that the applicants develop a comprehensive Construction and Mitigation Plan, in cooperation with the Commission and appropriate resource agencies, that will provide very specific information about environmentally sensitive resources on the route and how they will be protected. Preparing and complying with this plan will ensure maximum consideration of the environmental and socioeconomic concerns expressed on the record by other governmental resource agencies and by area residents. For ease in development and to enable the applicants to proceed with the timely planning and construction of the Arrowhead-Weston project, the plan shall have two parts: Part A, concerning construction and mitigation practices of general applicability, which the applicants can prepare immediately; and Part B, concerning site-specific construction and mitigation measures, which the applicants must prepare after the project route is specifically identified and further examination of the affected area for sensitive resources has occurred.

1. Part A of the Plan

The first part of the Construction and Mitigation Plan shall be a compilation of all general construction and mitigation practices that will be applied across the entire project area. These

practices include, but are not limited to, erosion control measures and construction methods to be used in wetlands, across bodies of water, through agricultural fields, and in upland forested areas. Part A of the plan shall also include revegetation and restoration procedures. In addition, detailed duties and responsibilities of environmental inspectors and of an environmental manager must be described in this part of the plan, as well as the inspection and reporting procedures these persons will use. The applicants shall develop Part A in cooperation with all appropriate federal and state government resource agencies. The applicants may not commence construction activity, as defined in Wis. Stat. § 196.491(1)(b), until the Commission approves Part A of the Construction and Mitigation Plan.

2. Part B of the Plan

The second part of the plan shall address specific construction and mitigation measures that are needed at locations where sensitive resources are present. Examples of such areas include known archeological sites, unique or unusual wetland or forest types, the Namekagon River and the Ice Age National Scenic Trail. Locations where sensitive resources are known to be present are described in Section II of this order. Other locations are currently unknown, but are likely to be identified during the final engineering survey, when the centerline and ROW boundaries are staked, and while construction is actually occurring. To ensure that these sites are properly protected, this portion of the plan must be cooperatively developed among the applicants, the site-specific landowner or manager, and all appropriate agencies. This part of the Construction and Mitigation Plan may be developed in sections that correspond to geographic boundaries, potential construction spreads, or other logical units that form the basis for inspection and reporting. If the applicants find it necessary to adjust the route so that its location

differs in any way from the route described in this order, these changes shall be described in Part B of the Construction and Mitigation Plan. The applicants may not commence construction in a specific unit until the Commission approves Part B of the plan for that unit.

In addition to the cooperative development of a Construction and Mitigation Plan, the applicants agreed that one or more environmental inspectors should be hired to monitor construction and site restoration activities to ensure adherence to the approved plans. Several landowners and parties to the case, including the DNR, also testified to the need for independent environmental monitors that would have the authority to stop work if violations of the Construction and Mitigation Plan or regulatory permit conditions occur.

In order to ensure that the applicants comply with the Construction and Mitigation Plan, these environmental inspectors must be independent and have an active role in the final design, siting, and construction of the Arrowhead-Weston project. Examples of their involvement include helping to determine the final centerline and placement of structures, monitoring all construction activities to ensure compliance with the mitigation procedures identified in this order and in the Construction and Mitigation Plan, identifying other environmentally sensitive sites while construction is in progress that need protection, and recommending appropriate revegetation and restoration procedures. An independent, third party environmental manager will be needed to oversee all aspects of environmental compliance.

The applicants shall work with Commission staff to prepare a request for proposal (RFP) for the positions of environmental inspector and environmental manager. The RFP shall contain the scope of duties, responsibilities and authority of each position. The environmental inspectors shall function primarily as field staff. Multiple environmental inspectors will be needed, because

of the likelihood that crews will be working at several construction spreads at any one time. The environmental manager shall make site visits as necessary. The environmental manager's primary responsibilities shall be to oversee all environmental inspection activities and coordinate environmental reporting to the Commission and other applicable resource agencies.

The applicants and the Commission shall review the proposals received in response to the RFP, with the final selection and hiring done by the applicants. The applicants shall fund the salaries and expenses of the environmental inspectors and the environmental manager. The environmental inspectors shall report, weekly or more frequently, directly to the environmental manager. In turn, the environmental manager shall report to the Commission at least monthly throughout the period of active construction of the line.

In their testimony, the applicants requested some flexibility in determining the final centerline for the proposed project. The applicants proposed that this routing flexibility would allow them the opportunity to work with landowners and to reduce impacts to humans, animals, businesses, and the environment. The applicants also cited a potential need to adjust the alignment of the line to account for sensitive resources and other circumstances discovered during the final engineering survey.

Granting the applicants some ability to make minor adjustments in the centerline, once the engineering survey and surveys for cultural resources or threatened and endangered species are completed, may be necessary. It is also reasonable to require the applicants to work with landowners in determining the final structure locations. However, any changes in alignment from the proposed centerline shall not affect resources or cause new impacts not discussed in the final EIS, nor shall they affect new landowners who have not been given proper notice and the

opportunity to comment on the proposed project. Part A of the Construction and Mitigation Plan shall provide a detailed description of the guidelines and process for altering the proposed centerline, and Part B shall identify any routing changes that the applicants are recommending.

In order that the Commission can determine the one-time environmental impact fee and the annual impact fee that the applicants must pay to the Wisconsin Department of Administration, as described under Wis. Stat. §§ 16.969 and 196.491(3)(gm) and (3g), in Part B of the Construction and Mitigation Plan the applicants shall include the number of miles of the approved 345 kV transmission line that would be located in each of the eleven affected counties and the number of miles of line in each township and municipal district in those counties. For an exact identification of the final route, the applicants shall record the location of each transmission structure using global positioning system (GPS) technology. The applicants shall transfer this data to a geographic information systems database, using software compatible with state government standards, and include this data with Part B of the Construction and Mitigation Plan.

B. Double-Circuit Construction With Existing Transmission Lines

The applicants have declared that they prefer to build the new transmission line as double circuit with existing lines, rather than parallel to existing lines but on separate structures. The approved route follows the existing ROW of a number of transmission lines owned by Northern States Power Company-Wisconsin (NSPW) and by Dairyland Power Cooperative (DPC). NSPW expressed concerns that constructing the Arrowhead-Weston project not compromise its existing facilities or land rights, and recommended that the NSPW facilities should be rebuilt on the same structures used for the extra-high voltage transmission line.

In the interest of maximizing corridor sharing, the Commission has selected a route that utilizes these existing ROWs to the extent practicable. The applicants, NSPW, and DPC should be able to resolve any issues concerning the sharing of these corridors amongst themselves, without advance Commission direction. However, the Commission has the authority under Wis. Stat. § 196.04 (2) to prescribe acceptable terms of use for the shared corridors if these parties are unable to reach an agreement on their own that satisfies the concerns of each entity and protects both the state's electric system and the environment.

C. Use Of Fiber-Optic Communication Line As A Shield Wire

The applicants originally proposed that one of the shield wires used for the Arrowhead-Weston project would be comprised of a fiber-optic communication line, consisting of 48 fibers. Only 10 to 12 of these fibers would be used to control and monitor power flows on the transmission line; the applicants intended to lease the remaining fiber-optic capacity to any interested third party for general communications. Members of the public raised concerns about combining such an unregulated, revenue-producing activity with the construction of a transmission line, in part because of the possibility that utility condemnation authority would be used to promote a nonutility business venture. Subsequently, the applicants removed the cost of this component from project cost estimates and declared that they would not pursue its use unless a third party came forward to share in the costs.

To avoid the use of utility authority in a manner that may subsidize a nonutility activity, it is reasonable to reject the use of a fiber-optic communication line as shield wire. Instead, the applicants shall substitute a power line carrier system, which is adequate for system operation.

IV. IMPROVING THE ELECTRIC SYSTEM THAT SERVES WPSC'S UPPER WEST (RHINELANDER) AREA

A. Reliability Problems Of The Upper West Electric System

That part of WPSC's electric service territory extending north from the Merrill and Antigo areas is known as the "Upper West" area. The weaknesses in the transmission system serving this area have long been recognized. Growing electricity demand in the area is pushing the system even closer to the point where a voltage collapse event – which would cause an extensive blackout – could result from an outage of one of the two key 115 kV transmission lines that serve this area. In prior Advance Plans the Commission has identified the need to reinforce this area to keep pace with growing demand, and in the intervening years the need for reinforcing the Upper West area power system has increased, not decreased. The updated need analysis included in the current application was uncontested.

To serve this area, WPSC proposed building a new 115 kV transmission line, 42 miles long. The line would extend from the Highway 8 Substation in Rhineland to a new substation in Tripoli, which would receive power from the Arrowhead-Weston project. However, because this order directs the use of Owen routes for the Arrowhead-Weston project, not Tripoli routes, the Tripoli Substation will not be built. As a result, WPSC's proposal is not a feasible means of serving the Upper West area.

B. Alternative Means Of Improving The Upper West Area

The record describes a number of alternatives to the proposed Tripoli-Rhineland 115 kV line that could improve the electric system in the Upper West area. These include new Rhineland-area generation as well as alternative transmission line projects. Although these

ideas are not fully developed, they appear to be feasible methods of meeting the local need, at reasonable economic and environmental costs. Since the Commission would need to complete its review of any alternative Upper West area reinforcement that requires a CPCN within the statutory 180-day timeline, the electric needs of the Upper West area can be promptly addressed. It is therefore reasonable to deny WPSC's request for a CPCN to build the proposed 115 kV transmission line from the Tripoli Substation to the Highway 8 Substation. Instead, WPSC or ATC may submit a project application for an alternate means of serving this area. With such an application, WPSC or ATC is not required to resubmit information in the current record about the need to improve electric service in the Upper West area. The filing will be sufficient if it confirms that this need still exists.

V. SUFFICIENCY OF THE EIS

Wis. Stat. § 1.11(2) requires the Commission to prepare a detailed EIS for any "major action" it is considering that would significantly affect the quality of the human environment. The Commission has adopted rules that categorize the types of actions it undertakes, for purposes of complying with this statute. Wis. Admin. Code § PSC 4.10(1) and Table 1 provide that a proposal to construct a 345 kV electric transmission line more than 10 miles long, that would require construction activity outside existing ROW, is a major action significantly affecting the quality of the human environment. As a result, Commission staff commenced work on a draft EIS. On May 5, 2000, the Commission released a two-volume draft EIS on the proposed Arrowhead-Weston project, including the 345 kV line and the Rhinelander 115 kV line. The Commission distributed its draft EIS broadly to interested persons, encouraging people to provide written or oral comments during a 45-day comment period. The Commission staff

also hosted public meetings in six locations within the project area during the weeks of June 5 and 12, 2000, to solicit comments on the project and the draft EIS. On October 3, 2000, the Commission released its final EIS.¹³ The final EIS substantially expanded the draft EIS, adding about 200 pages; in total, it is approximately 850 pages long. The final EIS evaluates the need for the project, alternatives to the 345 kV and 115 kV transmission lines, and the costs and potential environmental effects of the proposed routes for these lines. The final EIS analyzed four alternative routes from Oliver to Exeland, four alternative routes from Exeland to Weston via Tripoli and four alternative routes from Exeland to Weston via Owen. The various alternative routes covered almost 1400 miles.

In the course of this docket, some parties have argued that the Commission's final EIS is inadequate because it does not provide sufficient site-specific information about the natural resources present along the entire length of the proposed transmission line routes. These parties also alleged that the document does not adequately describe the environmental mitigation measures that could be implemented to reduce damage to the natural environment, or the expected efficacy of mitigation strategies that are covered in the final EIS.

Some sections of the proposed routes pass through areas that are remote and inaccessible by foot or road, under normal circumstances. Other sections are located on private property, which neither the applicants nor the Commission has authority to enter without the landowner's permission. Because access to areas such as these may be impossible, it was not feasible to include specific information about every foot of each of the alternative routes analyzed in the final EIS. Instead, the Commission's final EIS reasonably examined and disclosed all significant

¹³ The final EIS was introduced into the record as Exh. 172.

impacts to the quality of the human environment that are associated with this project. More detailed descriptions of the existing environment in the project area would not substantially change the evaluation in the final EIS.

The discussion of mitigation procedures in the final EIS covers general practices commonly used in the construction of transmission lines and natural gas pipelines through environmentally sensitive areas. The common imposition of these practices by regulatory agencies demonstrates their efficacy. In addition, the applicants will be required to prepare a Construction and Mitigation Plan that consists not just of these general practices, but also requires the development of detailed site-specific construction procedures and methods for protecting sensitive resources that are identified in the EIS and during engineering surveys and during construction of the project. This plan will require Commission approval prior to the commencement of construction, and will be developed by the applicants in consultation with other appropriate agencies.

The Commission finds that the preparation of the draft and final EIS complied with the requirements of Wis. Stat. § 1.11 and Wis. Admin. Code ch. PSC 4. The final EIS also complies with all legal requirements regarding the description and analysis of the project itself, alternatives to the project, the project's potential impacts, and the mitigation procedures that could be employed to reduce these impacts.

Certificate

WPSC, MP, and ATC may construct the Arrowhead-Weston project as a new 210.2 mile, 345 kV transmission line and required substation upgrades, using the facilities described in the application and as modified by this order, at an estimated cost of \$165,721,000. The new

transmission line shall connect MP's Arrowhead Substation near Duluth, Minnesota, with WPSC's Weston Substation near Wausau, Wisconsin, following the Oliver 1 Modified Route and the Owen 4 Route.

Order

1. The CPCN for the Arrowhead-Weston project is valid only if the applicants commence construction, as defined in Wis. Stat. § 196.491(1)(b), no later than one year after the latest of the following:

- a. The date when this order is no longer subject to judicial review or all appeals resulting from such judicial review have been finally determined.
- b. The date when all other federal, state, and local approvals, permits and licenses that are required prior to the commencement of construction are no longer subject to judicial review or all appeals resulting from such judicial review have been finally determined.
- c. The date when the Commission has approved both Part A and Part B of the Construction and Mitigation Plan for all construction spreads.

2. The applicants shall submit quarterly progress reports to the Commission indicating the Arrowhead-Weston project's major construction and environmental milestones, the extent of physical completion to date, and expenditures to date, commencing within 90 days of the date that construction commences.

3. The applicants shall notify the Commission before proceeding with any substantial changes in the design, size, cost (exceeding 10 percent of the estimated cost shown in the Certificate above), location, or ownership of the Arrowhead-Weston project facilities.

4. Upon completion of the Arrowhead-Weston project, the applicants shall notify the Commission when the facilities are placed in service and report the actual cost segregated by plant account.

5. The applicants shall develop and submit for the Commission's approval a Construction and Mitigation Plan, as described in the Opinion above. Commencement of construction, as defined in Wis. Stat. § 196.491(1)(b), may not occur until the Commission approves Part A of this plan. In addition, commencement of construction in a specific unit of the Arrowhead-Weston project may not commence until the Commission approves Part B of the plan for that unit. In developing Part B of the Construction and Mitigation Plan, the applicants shall work with landowners on the placement of transmission line structures on private property to minimize individual hardships and adverse impacts on property. The applicants may also propose minor adjustments in the centerline for the protection of cultural or environmental resources, but any changes in alignment from the proposed centerline shall not affect resources or cause impacts not discussed in the final EIS, nor shall they affect new landowners who have not been given proper notice and hearing. Part B of the Construction and Mitigation Plan shall:

- a. Identify all proposed routing changes in Part B of the plan.
- b. Address the special concerns of the Oliver 1 Modified and Owen 4 routes, discussed in the Opinion above, where mitigation techniques must be used. The applicants shall describe the mitigation techniques required by the NPS to cross the Namekagon River at the existing transmission line crossing, on the Oliver 1 Modified route.

c. Identify and provide very specific information about the environmentally sensitive resources located on the route, and how these resources will be protected.

d. Identify the location of each transmission structure using global positioning system technology and transfer this data to a geographic information systems database, using software compatible with state government standards.

6. The applicants shall work with Commission staff to prepare an RFP to hire environmental inspectors and an environmental manager. The RFP shall include the scope of duties, responsibilities, and authority of each position. The applicants shall hire enough environmental inspectors so that inspectors can be present at every construction spread where work is occurring. The inspectors and manager shall be independent and have the authority to stop work at any construction spread if they identify a violation of the Construction and Mitigation Plan or of any regulatory permit conditions. The inspectors and manager shall also have an active role in the final design, siting, and construction of the Arrowhead-Weston project. The environmental manager shall oversee all aspects of environmental compliance.

7. The applicants shall promptly stop work on a construction spread if directed to do so by an environmental inspector or the environmental manager.

8. The applicants shall comply with all requirements described in the Opinion above for known areas of special concern along the Oliver 1 Modified and Owen 4 routes.

9. The 115 kV transmission line currently located in the Three Lakes Mitigation Site shall be moved to segment 205, rebuilt to its current 161 kV standard and installed on double-circuit structures with the 345 kV transmission line portion of the Arrowhead-Weston project.

10. In areas inhabited by the threatened species wood turtle and Blanding's turtle, construction activities shall cease during the egg-laying and hatching period of June to late September.

11. The applicants shall promptly correct any stray voltage problems that are created by the construction or operation of the Arrowhead-Weston project.

12. WPSC's request for a CPCN to construct a 42-mile, 115 kV transmission line from a new Tripoli Substation to the Highway 8 Substation in Rhinelander is denied. WPSC or ATC may file an application for an alternate means of serving need in the Upper West area.

13. This order takes effect on the day after issuance. The CPCN for the Arrowhead-Weston project does not take effect until the DNR has issued all necessary permits and approvals that are required prior to construction.

14. Jurisdiction is retained.

Dated at Madison, Wisconsin, _____

By the Commission:

Lynda L. Dorr
Secretary to the Commission

LLD:JAL:mem:g:\order\pending\05-CE-113 Final.doc

See attached Notice of Appeal Rights

Notice of Appeal Rights

Notice is hereby given that a person aggrieved by the foregoing decision has the right to file a petition for judicial review as provided in Wis. Stat. § 227.53. The petition must be filed within 30 days after the date of mailing of this decision. That date is shown on the first page. If there is no date on the first page, the date of mailing is shown immediately above the signature line. The Public Service Commission of Wisconsin must be named as respondent in the petition for judicial review.

Notice is further given that, if the foregoing decision is an order following a proceeding which is a contested case as defined in Wis. Stat. § 227.01(3), a person aggrieved by the order has the further right to file one petition for rehearing as provided in Wis. Stat. § 227.49. The petition must be filed within 20 days of the date of mailing of this decision.

If this decision is an order after rehearing, a person aggrieved who wishes to appeal must seek judicial review rather than rehearing. A second petition for rehearing is not an option.

This general notice is for the purpose of ensuring compliance with Wis. Stat. § 227.48(2), and does not constitute a conclusion or admission that any particular party or person is necessarily aggrieved or that any particular decision or order is final or judicially reviewable.

Revised 9/28/98

APPENDIX A
(CONTESTED)

In order to comply with Wis. Stat. § 227.47, the following parties who appeared before the agency are considered parties for purposes of review under Wis. Stat. § 227.53.

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(Not a party but must be served)
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Date Mailed June 11, 1999

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Joint Application of Northern States Power Company-Wisconsin,
Northern States Power Company-Minnesota, and Dairyland
Power Cooperative for Authority to Construct and Place in
Service Electric Transmission Lines and Electric Substation
Facilities for the Chisago Transmission Project, Located in
Chisago County, Minnesota, and Polk County, Wisconsin

1515-CE-102
4220-CE-155

**FINDINGS OF FACT, CONCLUSIONS OF LAW,
CERTIFICATE, AND ORDER**

Introduction

In September 1996, three electric utilities filed a joint application for issuance of a certificate of public convenience and necessity (CPCN) by the Public Service Commission of Wisconsin (Commission). Northern States Power Company-Wisconsin and Northern States Power Company-Minnesota (NSP) collaborated with Dairyland Power Cooperative (DPC) on the application. The utilities requested that the Commission authorize the construction of the electric transmission improvements for the Chisago Electric Transmission Line Project, or the “Chisago Project.”

The Chisago Project application consists of four principal elements. The utilities proposed constructing a new 38-mile, 230 kilovolt (kV) transmission line between the Chisago Substation in Chisago County, Minnesota, and the Apple River Substation in Polk County, Wisconsin. They also proposed a new 15-mile, 115 kV transmission line between the Chisago Substation and a new substation (the Lawrence Creek Substation) near Taylors Falls, Minnesota,

rebuilding an existing 69 kV line between this new substation and the Apple River Substation, installing a new 345/230 kV transformer and 230 kV substation facilities at the Chisago Substation, and installing a new 230/161 kV transformer and 230 kV substation facilities at the Apple River Substation.

The Commission's review of this joint application has been conducted under Wis. Stat. §§ 1.12, 196.025, 196.49, and 196.491, and under Wis. Admin. Code chs. PSC 4, 111, and 112.

The joint application of NSP and DPC to construct the Chisago Project is granted, subject to conditions.

Background

By the year 2000, growth in electric demand will place northwestern Wisconsin and east-central Minnesota at risk of widespread service interruptions. In addition, the age, condition, and capacity of transmission lines in this region will require their replacement in the near future, to continue serving local loads reliably. The utilities proposed the Chisago Project as a solution to these problems with the existing electric system in northwestern Wisconsin and east-central Minnesota.

In prior planning dockets, the Commission has reviewed the Chisago Project. In Advance Plans 4, 5, and 6 (1986, 1989, and 1992), the Commission considered whether building a Chisago-Apple River transmission line would be an appropriate means of increasing the transmission system's transfer capability between western and eastern Wisconsin. Shortly thereafter, however, local reliability problems became the primary reasons for needing transmission improvements, instead of transfer capability. Seven Wisconsin utilities and one Minnesota utility prepared an "Interface Transmission Study Report" in 1995 that identified

several alternative plans (sets of transmission system improvements) as solutions to these local reliability problems. For Advance Plan 7 the utilities proposed two of these plans (C and D) as preferred solutions. Both solutions involved a new transmission line from the Chisago Substation to the Apple River Substation. The Commission reviewed the alternatives in Advance Plan 7 and approved Plans C and D in its Advance Plan 7 Order (1996).

Upon further electrical and economic analysis, NSP and DPC developed a single hybrid version that combined aspects of the two preferred solutions: a Chisago-Apple River 230 kV line and a Stone Lake-Bay Front 161 kV line. The utilities' original joint application, in September 1996, proposed the construction of both of these lines. When electric service reliability deteriorated further in the Northern Wisconsin Region, NSP requested that the Commission separately consider the Stone Lake-Bay Front project on an advanced schedule. In November 1997, the Commission granted this request. After holding hearings in Ashland and Hayward, Wisconsin, the Commission issued an order in April 1998, approving construction of the Stone Lake-Bay Front transmission line. This new line is scheduled to begin operation in April 2001.

To the extent practicable, the Commission has attempted to coordinate its review of the Chisago Project with that of the Minnesota Environmental Quality Board (MEQB), because similar reviews and approvals are needed from that agency. Numerous other governmental agencies are involved in reviewing this project. The routes under consideration all cross the St. Croix National Scenic Riverway, which means that federal approval is also necessary from the National Park Service and the U.S. Army Corps of Engineers. Minnesota and Wisconsin agencies must each issue permits to cross a navigable waterway and wetlands, while an easement

from the Wisconsin Department of Natural Resources (DNR) is needed to cross land it owns on one route.

Commission staff prepared both a draft and a final environmental impact statement (EIS) for this project. The Commission issued the draft EIS in September 1998, and held public information meetings jointly with the MEQB in Lindstrom, Minnesota and Dresser, Wisconsin on October 12 and 13, 1998. These meetings were convened to provide background information to the public and to receive comments on both Minnesota's draft Environmental Impact Assessment and the Commission's draft EIS. The Commission issued the final EIS in January 1999.

Public hearings were held, pursuant to due notice, on this project before Examiner Jeffry Patzke at the Trollhaugen Convention Center in Dresser, Wisconsin. These hearings lasted from February 8 to February 18, 1999, and involved significant participation from members of the public and local representatives. Persons certified as full parties for the purpose of service are listed in Appendix A of this order. Others who appeared and testified at the hearings are listed in the Commission files for this proceeding.

Summary

This Commission order grants NSP and DPC a CPCN, authorizing construction of the Chisago Project, subject to conditions. The project will satisfy the reasonable needs of the public for an adequate supply of electric energy and is in the public interest. By building the facilities, further instances of low voltage or voltage collapse and blackouts can be avoided. The electrical problems developing in northwestern Wisconsin and east-central Minnesota raise serious concerns of public health, safety, and welfare and need to be addressed immediately. Over the

long term, constructing the Chisago Project is also the least costly method of supporting growing demand in northwestern Wisconsin and east-central Minnesota. The project area under review includes four transmission study regions: the Northern Wisconsin Region; the Northwest Wisconsin Region; the Western Wisconsin Region; and the East-Central Minnesota Region. In all, 21 counties in the northwestern quadrant of Wisconsin and six counties in Minnesota are covered, with a total population of 1,200,000.

The Commission approves the South Crossing of the St. Croix River, subject to the condition that the transmission line must be drilled beneath the river and kept underground to a point beyond the bluffs on both sides of the river. The Commission approves the South-Washington Route immediately to the east of the river and the South-USH 8 Route to the Apple River Substation. As an alternative to the South Crossing, the Commission also approves the Dam Crossing of the St. Croix River, but this overhead crossing may be used only if the MEQB or the government agencies that regulate the National Scenic Riverway and Interstate State Park reject the South Crossing. In that case, burying the 230 kV transmission line beneath Louisiana Street through the city of St. Croix Falls is approved.

The total cost of the project is estimated to be \$ 53.5 million. Construction is expected to begin in by 2001 and be completed in 2003.

FINDINGS OF FACT

THE COMMISSION FINDS:

Project Need

Current forecasts indicate that the demand for electricity in northwestern Wisconsin and east-central Minnesota will exceed the capability of the existing transmission system within the

next one to three years. When that critical load limit is passed, the existing electric systems of NSP and DPC will no longer be capable of delivering sufficient electricity in a reliable manner. Low voltage and system overloads are the principal problems in the study area. The electric system's ability to serve local load has been jeopardized for several reasons. In addition to increased load growth, low voltage, line overloads, worn-out facilities, and outdated technology all threaten the areas' electric reliability. Any unexpected increases in load growth, plus the possibility of single or multiple contingency failures of the electric system, only compound the risk that the system will fail.

Many communities in Wisconsin are at imminent risk of blackout. The municipalities of Tony, Conrath, Sheldon, Holcombe, Donald, Hawkins, Kennan, Catawba, Prentice, Lugerville, Phillips, Iron River, Port Wing, Herbster, Cornucopia, Red Cliff, Bayfield, Washburn, Ino, Moquah, Benoit, Mason, Grand View, Drummond, Cable, Seeley, and the surrounding rural areas could lose electric service if transmission improvements are not made as soon as possible. A number of these communities are in winter peaking regions; if a blackout were to occur when the transmission system is operating at peak demand in the winter, life-threatening problems could arise.

Increases in population and in employment levels in northwestern Wisconsin and east-central Minnesota are the principal factors driving the need to improve the transmission system. Population is surging upward in east-central Minnesota, much faster than in other parts of the state, while economic growth is soaring in northwestern Wisconsin. DPC's peak load has exceeded its growth forecasts for each of the past four years. The Northern Wisconsin Region is already in jeopardy during critical periods of the year, forcing NSP to use an operating procedure

(the “Stinson Transfer Trip Scheme”) that can control cascading outages by blacking out some communities in the event of transmission failure. The addition of the Stone Lake-Bay Front 161 kV transmission line will alleviate some of this region’s problem, but only for a short time. The record shows that low voltage problems will probably reappear in the Northern Wisconsin Region within three years.

In the Western Wisconsin Region, wide-ranging outages that have already occurred in the recent past demonstrate that the electric system is not sufficiently strong to withstand a “single contingency,” i.e. the failure of one component in the system. The need for substantial transmission improvements to solve problems in the Western Wisconsin Region will appear by 2002, when electric load is forecasted to exceed 575 MW. By the year 2002, forecasts show that a single contingency in the Northwestern Wisconsin Region will overload the transmission system and cause low voltages. The same situation is likely to occur by the year 2003 in the East-Central Minnesota Region. In addition, problems with this region’s lower-voltage distribution system need immediate correction.

Some parties questioned the accuracy of the utilities’ load growth projections. These forecasts, however, are consistent with forecasts that the Commission reviewed and approved in prior Advance Plans, and that Minnesota and other states approved in their planning dockets. A witness appearing on behalf of the Concerned River Valley Citizens (CRVC) asserted that the need for the Chisago Project has not yet been shown, because additional stability and reliability studies should first be completed to determine whether the Chisago Project will alleviate or exacerbate local electric problems. Substantial evidence in the record indicates that stability

studies are unnecessary at this stage because stability is not the limiting element on the system, and that the utilities' single contingency studies properly assessed transmission reliability.

A principal issue in this docket is whether delaying a decision would be appropriate, in order to coordinate potential solutions to local problems with solutions to regional, transfer capacity problems. The expert witness for MEQB raised the concern that planning, to date, has focused too intensely on local problems and has failed to address long-range, bulk power transfer issues. Given the imminent need for system improvements, however, a need that this record clearly defines, waiting for a single comprehensive solution is not an appropriate response. The delay involved in further study will only increase the risk of system failure. In addition, the record shows that the Chisago Project is a flexible option that would fit well with solutions to regional bulk transfer problems.

Energy Priorities

Wis. Stat. § 1.12 establishes a priority list of methods to meet energy demand. Through this statute the Legislature has declared that energy conservation and efficiency are the state's most preferred options, followed by (in descending order) noncombustible renewable energy resources, combustible renewable energy resources, natural gas, oil or coal with a sulfur content of less than one percent, and other carbon-based fuels. Wis. Stat. § 196.025 requires that the Commission implement these priorities, to the extent cost-effective, technically feasible, and environmentally sound, when making any energy-related decisions.

Demand-side management (DSM) programs are the vehicle for promoting energy conservation and efficiency in the electric industry. Relying solely on DSM to offset the need for the Chisago Project is unrealistic. The record indicates that the cost of achieving such an

energy conservation goal would be high, which means that DSM is not a cost-effective alternative by itself.

DSM can sometimes be used in conjunction with other, preferred alternatives, whose combined effect may offset the need for a transmission line. Some DSM can be employed to reduce electric load while the remainder of the area's energy demand is met with local improvements, such as installing new generation or making changes in the lower-voltage electric distribution system that serves the locality. This process is generally known as "targeted area planning" (TAP). The utilities rejected TAP solutions as alternatives to the Chisago Project because the geographic area in need of improvement is too large and because the need is too immediate. In this case, these concerns reasonably prevent the use of TAP to avoid or defer the need for the Chisago Project. TAP is intended to target a specific area, not an area as large as northwestern Wisconsin and east-central Minnesota. In addition, TAP alternatives require time to implement. Modifying consumer habits to increase conservation substantially, and installing cost-effective local solutions, are slow processes that cannot be completed quickly enough to replace the Chisago Project. NSP and DPC did complete a TAP study for the Northern Wisconsin Region. This 1996 study, which concluded that TAP could not avert the need for the Stone Lake-Bay Front transmission line in that single region, supports the conclusion that TAP cannot supplant a larger Chisago Project that is designed to serve all four regions.

The use of small generating plants, distributed throughout northwestern Wisconsin, was also considered as a method of reducing the need for transmission improvements. Distributed generation could consist of conventional fossil-fueled power plants or of plants that use renewable resources. Both types of plants are analyzed in the record.

The cost of adding new generation in northwestern Wisconsin to substitute for the Chisago Project is high. Distributed generation would need to support the area as well as the Chisago Project and do so for as long a period. Without the Chisago Project, by the year 2010 the transmission system in this area will be unable to support approximately 120 megawatts (MW) of load. Because each individual generating plant has a higher outage rate than a transmission line, though, more than 120 MW of new generation would be needed to replace the Chisago Project. If the least-expensive generating plants (combustion turbines that burn natural gas) were installed, their combined cost would be two to three times more expensive than the Chisago Project. Renewable resources fare no better, because their overall cost exceeds that of a combustion turbine.

The record discusses the viability of increasing production from existing generating plants, in lieu of making transmission improvements. Both NSP and DPC operate numerous power plants in northwestern Wisconsin. Some of them, such as the hydroelectric plants, are currently run at full capacity. Others are operated at less than their nominal capacity, but increasing the energy production from these existing plants will not replace the Chisago Project. In the Northern Wisconsin Region, insufficient generation is available to protect the area. Elsewhere in the study area, the utilities' generation capacity is operated to bolster the area's reliability when the transmission system does not have sufficient capability. This causes uneconomic generation dispatch to occur and makes it difficult to schedule plant maintenance.

Transmission Alternatives

This Commission has examined different proposals to improve the area's transmission system extensively, over a period of more than a decade. From this analysis four transmission

plans arose to correct the reliability problems of northwestern Wisconsin and east-central Minnesota. The cost, electrical performance, and environmental impact of these plans all vary. Each plan, also known as a transmission “system alternative,” has unique geographic endpoints for its major transmission lines and describes a different engineering solution to the electric problems of the area. The record shows that the Chisago Project and the Arrowhead alternative offer the best electrical performance. Compared to the Chisago Project, the Arrowhead alternative is much more expensive and would take longer to build. Overall, the Chisago Project is the least expensive transmission system alternative. It is also the system alternative that best serves all four regions in the study area over the long term. The other system alternatives would need substantial modification, incorporating some of the transmission improvements of the Chisago Project, to support all four areas in the future.

CRVC asserted that components of the King alternative could be trimmed without affecting its performance, making its cost closer to that of the Chisago Project. However, other testimony rebuts the assertion that this alternative is overbuilt.

An environmental review shows that none of the system alternatives would be less damaging than the Chisago Project. The principal environmental impact of the Chisago Project is caused by crossing the St. Croix National Scenic Riverway, but each of the other alternatives must also cross the Riverway at other locations. If an underground crossing is completed in a manner that satisfies the National Park Service and the Wisconsin DNR, the Chisago Project’s impact can be substantially mitigated. In addition, this order imposes numerous other conditions to lessen the project’s environmental impact. Overall, the Chisago Project is the shortest of the

system alternatives and shares most of its transmission right-of-way (ROW) with existing utility corridors or roads. Proper routing of the line can minimize its general environmental impacts.

River Crossing Alternatives

Three sites to cross the St. Croix River are offered in the record. The North Crossing, located four miles north of the cities of Taylors Falls and St. Croix Falls, is not favored by any party. Construction at this site would be a new crossing of the river, which is not consistent with the National Park Service's objective of consolidating river crossings. It is not a feasible location for this project.

The South Crossing is located three miles south of Taylors Falls and St. Croix Falls. With substantial mitigation, it is a reasonable site to cross the St. Croix River. Two natural gas pipelines travel underground and cross the river at the South Crossing, with a cleared ROW 75 feet wide passing through the woodlands on each side of the river and up the bluffs. This area is an important element of the St. Croix National Scenic Riverway and needs to be protected against further aesthetic or environmental damage. The National Park Service owns and manages most of the land along the Minnesota shore, and holds scenic easements on both sides of the river. Wisconsin's portion of Interstate State Park surrounds the South Crossing. This section of the Lower St. Croix River is a popular recreational site.

Overhead transmission lines through this area are not a viable option, because they would constitute a significant new manmade feature on the landscape. The National Park Service stated that the South Crossing is only possible if it is constructed underground. An underground line that shares the natural gas pipelines' corridor to the greatest extent possible would further widen the ROW by 10 to 50 feet. NSP is willing to bury its transmission line from bluff to bluff,

approximately 3,800 feet, so the overhead structures that would be erected beyond the edges of the National Scenic Riverway are not visible to river users. Requiring that the line be constructed underground, with the eastern overhead-underground transition station located east of County Highway (CTH) S in Wisconsin and the western transition station located beyond the western bluff of the river, is reasonable to maintain the scenic integrity of the Riverway.

The gas pipelines were installed in 1960 by trenching across the river. This is no longer a feasible construction method, because its potential for adverse environmental effects is too great. Many rare or endangered species of mussel are found in this area and their habitat could be destroyed by trenching. Horizontal directional drilling is a preferred method of installing the line, although its use entails the risk that a bentonite slurry could leak into the river. If industry-standard leak detection technology is used, this risk can be reasonably mitigated.

Horizontal directional drilling may not be feasible all the way up the bluffs on each side of the river. Therefore, it is reasonable to allow the utilities to trench the transmission line from a point beyond the river's edge to the eastern transition station. The governmental agencies that manage the National Scenic Riverway and Interstate State Park, however, ultimately control what construction activity is allowable at the South Crossing. If these river agencies, as they work with the utilities, determine that horizontal directional drilling is technically feasible from bluff to bluff and is a preferable construction method, the utilities should adopt this method at the South Crossing. These agencies can also decide the appropriate mitigation measures for reclaiming the horizontal directional drilling entry and exit sites, the proper location of these sites, and the mitigation techniques for maintaining any additional right-of-way that will be needed.

Three types of underground cable technology exist for a high-voltage transmission line beneath the St. Croix National Scenic Riverway. High-pressure fluid-filled cable and self-contained fluid-filled cable both rely on conduits filled with pressurized oil, constantly bathing the cables in dielectric fluid for insulation. Pumping stations or pressure tanks are needed to maintain pressure in this liquid, and small buildings must be constructed to house the fluid reservoirs, alarms, and controls. A third technology, using extruded dielectric cables with cross-linked polyethylene insulation, does not require a pressurizing station. To avoid the need for constructing pumping stations in Interstate State Park, it is reasonable to require that NSP use extruded dielectric cable from bluff to bluff. If this cable technology allows construction at 345 kV, it is reasonable to require that the South Crossing be built to this design. Constructing the new river crossing to 345 kV design will avoid the need to return to this site for more construction activity, if the need to convert the 230 kV transmission line arises in the future.

The Environmental Impact Assessment, prepared by MEQB staff, describes routes in Minnesota that lead to the South Crossing. The Assessment does not identify any signal defect in these route alternatives that would make the South Crossing a poor choice. It is reasonable to assume that the MEQB, if it approves the Chisago Project and selects the South Crossing, can find an appropriate Minnesota route from the Chisago Substation to the South Crossing.

The third river crossing site is located at the hydroelectric dam between Taylors Falls and St. Croix Falls. The Dam Crossing is a heavily disturbed site supporting a dam, hydroelectric plant, and several distribution and transmission circuits. Its use would least affect the National Scenic Riverway. The impact on Taylors Falls of using this crossing, and on areas affected by transmission corridors in Minnesota, is described in the MEQB's Environmental Impact

Assessment. As with the South Crossing, the Assessment does not identify any problems in Minnesota that would prevent the use of the Dam Crossing.

Routes from the Dam Crossing

The impact on St. Croix Falls of the routes associated with the Dam Crossing, however, could be significant. If an overhead 230 kV transmission line were used, it would pass through central portions of this city and would conflict with the city's development plans. An underground 230 kV transmission line could be installed beneath Louisiana Street to avoid these problems. The eastern underground-overhead transition station would be placed in the city's industrial park, which is an appropriate location for overhead facilities. An existing 69 kV transmission line that passes through St. Croix Falls on Washington Street must also be rebuilt. If the 230 kV transmission line is buried under Louisiana Street, the rebuilt 69 kV line could remain in its current location. Work on the 69 kV line would then have no impact on the community. Placing the 230 kV transmission line underneath Louisiana Street and keeping the 69 kV line unmoved will protect the development plans of St. Croix Falls and will control the aesthetic impacts of the project. Aesthetic impacts can be further reduced by using low-profile structures that are at or below tree height within 400 feet of the river on the Minnesota side and by allowing low-growing vegetation to remain in the ROW (unless the MEQB prescribes a different line configuration for the Minnesota portion of the project). If the Dam Crossing is used, the 230 kV line should be placed within the existing ROW of the 69 kV line that currently crosses the river at this site, below the dam.

If the 230 kV transmission line needs to be upgraded to 345 kV in the future, however, this could not be accomplished for the routes through St. Croix Falls associated with the Dam

Crossing. It is unlikely that a 345 kV transmission line could be successfully buried beneath the streets of St. Croix Falls, and a 345 kV overhead line's appearance would impose significant aesthetic and socioeconomic impacts. For this reason, it is reasonable to approve the Dam Crossing and the Dam-Louisiana-Washington Route only if MEQB, or the river agencies, prohibit the use of the South Crossing.

The National Park Service's policy is to discourage further proliferation of river crossings. The utilities can reasonably conform to this policy by removing utility lines that currently cross the St. Croix National Scenic Riverway, but will become unnecessary upon construction of the Chisago Project. When the Lawrence Creek Substation is built in Minnesota, distribution lines extending from an NSP substation in St. Croix Falls across the river will no longer be needed to serve customers in Minnesota. These lines should be removed. In addition, NSP has kept a 34.5 kV line across the river, just north of the dam, although it carries no electricity. Requiring the removal of this unused subtransmission line is a reasonable method of mitigating impacts of the Chisago Project on the Scenic Riverway, regardless of which crossing is used.

Routes from the South Crossing

From the South Crossing, it is reasonable to use the South-Washington Route. The 230 kV transmission line would be installed on single-circuit, overhead structures and routed east approximately 1.5 miles, where it can intersect with an existing DPC 69 kV transmission line and share its corridor on double-circuit structures. This will require only 40 feet of new ROW, rather than the 100 feet that would be necessary if a separate new corridor were created.

Oak is a dominant species in area woodlots through which these lines would pass. Oak is highly susceptible to oak wilt disease, which often results in death within one year of initial infection. The primary cause of the disease is a fungus, which can be spread throughout a forest by sap-feeding beetles or through interconnected root systems. Initial infection in a stand of healthy trees is possible by wounding, pruning, or removing trees during spring or early summer, when the beetles are active and the fungus is producing spores. To prevent the spread of this disease, construction and maintenance activities that result in wounding, pruning, or removing oak trees should follow the standards described in the Wisconsin DNR's "Statewide Utility Guidelines for Cutting and Pruning Oaks."

The existing DPC 69 kV transmission line travels east from Poplar Lake, connecting to the Sand Lake Substation, the Garfield Substation, and the Apple River Substation. Up to the Garfield Substation, it is reasonable to use this corridor for both the 69 kV and the 230 kV transmission lines. East of the Garfield Substation, however, the 69 kV line crosses more than 500 acres of heavily wooded, environmentally sensitive land: the D. D. Kennedy Environmental Area; the Lake Wapogasset Bible Camp; and the Town of Garfield Recreational Area. Owners of these parcels have formed a partnership with the Wisconsin DNR and the YMCA to protect more wild lands in the same area. In addition, the line crosses 270 acres of restored and protected private land. These natural areas are high-quality habitat, and a poor location for a transmission line. A substantial environmental benefit can be achieved by removing the 69 kV transmission line from these areas and allowing the corridor to revegetate to the greatest extent feasible. This can be accomplished by using the South-USH 8 Route, which reroutes the 69 kV line north at the Garfield Substation, traveling on Segment VV (150th Street) to U. S. Highway

(USH) 8, then six miles east to State Trunk Highway (STH) 46. The 230 kV transmission line can follow the same corridor on double-circuit structures. At STH 46 the 69 kV line turns south while the 230 kV line continues east, sharing corridor with a different DPC 69 kV line to the Apple River Substation. Some homeowners live on this portion of STH 46. The 69 kV line should be installed on the east side of STH 46 to minimize the impact to these homes, unless using the east side of the highway is impractical. This South-USH 8 Route is a reasonable path for the Chisago Project.

DPC notes that USH 8 may be expanded in the near future, but plans for its improvement are still in the early stages. The utility is concerned that waiting for decisions about highway expansion could delay the Chisago Project. The alternative discussed in the record, however, would require DPC to secure an easement from the Town of Garfield to cross the Garfield Recreational Area. Given the town's stated opposition to negotiating an easement, this alternative does not appear feasible. DPC should stay in contact with the Wisconsin Department of Transportation to accommodate any plans to expand USH 8.

General Mitigation Measures

Archeological and historical sites are likely to exist at the South Crossing, adjacent to the St. Croix River. Under Wis. Stat. § 44.40 and Section 106 of the National Historic Preservation Act, the State Historical Society of Wisconsin (SHSW) has determined that an archeological survey will be needed before construction can commence. A survey may also be needed along the South-USH 8 Route. The utilities should follow the SHSW's recommendations concerning the type and scope of surveys to be completed.

If MEQB or the river agencies require use of the Dam Crossing, it is reasonable to authorize a variant of the South-USH 8 Route between the industrial park of St. Croix Falls and the Apple River Substation. From the industrial park, the 230 kV transmission line can follow USH 8 east for five miles to Segment VV (150th Street). DPC's 69 kV transmission line can be routed north on Segment VV, to remove it from the Town of Garfield Recreational Area and neighboring natural areas. East of Segment VV, the South-USH 8 Route can be used to complete the corridor.

Wetlands are found along the Chisago Project route. These are important environmental areas because they store runoff, regenerate groundwater, filter sediments and pollutants, and provide essential habitat for many species of wildlife. Utility construction and maintenance practices can adversely affect these areas by damaging the soil structure, altering the hydraulic characteristics of the area, and introducing opportunistic weedy species. These species, such as purple loosestrife, often crowd out native vegetation while failing to provide food or nesting habitat for wildlife. It is reasonable to require that wetlands along the transmission route be spanned, to the extent practicable. Where work must be performed in wetlands, it should be completed when the ground is frozen. If winter construction is not practicable, the use of large mats and wide track vehicles can reduce the damage imposed. To control the invasion of purple loosestrife, the utilities should survey the wetlands along the route before construction and identify portions of the route that pass through areas uninfested with purple loosestrife. For five years after construction, the utilities should then identify and remove new infestations of this plant from these areas. Removal should occur before seed dispersal and be conducted in accordance with methods recommended by the Wisconsin DNR. The utilities should confirm

their annual inspection and removal of purple loosestrife in writing, within 90 days of undertaking these activities.

Transmission line construction also can adversely affect farming operations. If transmission structures are poorly located in fields, farmers can lose productive land or find that their wind and soil conservation practices are disrupted. Working around these structures can take additional time and can risk damage to farm implements. Utility work in farm fields can damage crops, cause soil compaction, promote weed infestation, and damage drainage tiles. To avoid or minimize these problems, it is reasonable for the utilities to work with farmers concerning the location of the transmission structures, complete their construction activities in farm fields in dry soil conditions outside of the growing season to the extent practicable, limit the use of heavy equipment in crop areas, and chisel plow farm fields, if necessary, after construction is complete.

Wholesale Competition

Under Wis. Stat. § 196.491(3)(d)7, the Commission must find that a proposed facility will not impose a material adverse impact on competition in the relevant wholesale electric service market before it can issue a CPCN. The Chisago Project provides only an incidental increase in the bulk transfer of electricity, so NSP (which owns and operates the major electric transmission facilities between eastern Wisconsin utilities and the Mid-Continent Area Power Pool) will not gain further advantage by constructing this project. The statutorily-mandated creation of independent transmission system operation by June 30, 2000, can also neutralize a utility's ability to manipulate the market through its transmission system.

FINDINGS OF ULTIMATE FACT

THE COMMISSION FINDS:

1. NSP is an electric utility as defined in Wis. Stat. § 196.491(1)(d), and a public utility as defined in Wis. Stat. § 196.01. DPC is an electric utility as defined in Wis. Stat. § 196.491(1)(d).

2. The facilities approved in this order are necessary to satisfy the reasonable needs of the public for an adequate supply of electric energy.

3. The facilities approved in this order are in the public interest after considering alternative sources of supply and routes, individual hardships, engineering, economic, safety, reliability, and environmental factors. Other alternatives brought forth are not in the public interest.

4. Alternatives that consist of energy conservation, the use of renewable resources, and the use of locally installed natural gas-fired generators are not, in comparison to the Chisago Project, cost-effective, technically feasible, and environmentally sound.

5. The facilities approved in this order will not have undue adverse impact on other environmental values.

6. The facilities approved in this order will not substantially impair the efficiency of NSP's service or provide facilities unreasonably in excess of the probable future requirements. When placed in operation, the facilities will increase the value or available quantity of service in proportion to the amount they increase the cost of service.

7. The facilities approved in this order will not unreasonably interfere with orderly land use and development plans for the area involved.

8. The facilities approved in this order will not have a material adverse impact on competition in the relevant wholesale electric service market.

9. The conditions specified in this order are in the public interest after considering individual hardships, engineering, economic, safety, reliability, and environmental factors and will not have undue adverse impact on environmental values.

10. The public convenience and necessity require completion of this project.

11. The EIS prepared for this docket, as supplemented by the hearing record, accurately describes the environmental effects of the Chisago Project and otherwise complies with Wis. Stat. § 1.11.

CONCLUSION OF LAW

THE COMMISSION CONCLUDES:

It has jurisdiction under Wis. Stat. §§ 1.11, 1.12(4), 196.025, 196.49, and 196.491 and Wis. Admin. Code chs. PSC 4, 111, and 112, to issue a certificate and order authorizing NSP and DPC to construct and place in operation the facilities approved in this order, subject to the conditions specified.

CERTIFICATE

THE COMMISSION CERTIFIES:

NSP and DPC may install and place in operation the facilities of the Chisago Project, as specified in this order, at a total estimated construction cost in Wisconsin of \$28.9 million. The cost of the project in Minnesota west of the river crossing is estimated to be \$24.6 million. The

total estimated project cost is \$53.5 million, using the (underground) South Crossing, the South-Washington Route, and the South-USH 8 Route. If the Dam Crossing is used, the total estimated construction cost is \$42.5 million, using the (overhead) Dam Crossing, the Louisiana-Washington Route, and the South-USH 8 Route. Each utility is granted a Certificate of Public Convenience and Necessity upon the condition that it notify the Commission before proceeding with any substantial changes in the design, size, cost (10 percent), location, or ownership of the proposed facilities of the project and subject to the conditions stated in the order below.

ORDER

THE COMMISSION ORDERS:

1. The certificate is valid only if construction commences within two years of the date this order is signed.
2. NSP shall use the South Crossing, unless the MEQB or the government agencies that manage the St. Croix National Scenic Riverway or the Interstate State Parks (the National Park Service, U.S. Army Corps of Engineers, Minnesota DNR, or Wisconsin DNR reject this site.
3. At the South Crossing, the following construction techniques shall be used unless the MEQB or another regulatory agency described in paragraph 2 imposes a different standard:
 - (a) The transmission line shall be underground from the west bluff to the east bluff. The western transition station shall be beyond the western bluff of the river, while the eastern transition station shall be east of CTH S.

(b) Overhead structures approaching each bluff shall be located beyond the edges of the National Scenic Riverway and shall not be visible to river users.

(c) Horizontal directional drilling shall be used to bore beneath the St. Croix River for the line, using all industry-standard leak detection technology.

(d) Trenching may be used for the remainder of the underground portion of the route, to the transition stations on each side of the National Scenic Riverway.

(e) Extruded dielectric underground cable shall be used between the transition stations, to avoid the need for pumping stations in the National Scenic Riverway.

(f) Underground construction shall be at 345 kV if technically feasible, to avoid the need to return to this site at some point in the future for more construction.

4. If the MEQB or a river agency prohibits the use of the South Crossing, NSP may use the Dam Crossing.

5. If the Dam Crossing is used, the following construction techniques shall be used unless the MEQB or a river agency imposes a different standard:

(a) An overhead 230 kV transmission line is permitted.

(b) Low-profile structures, at or below the tree height within 400 feet of the river on the Minnesota side, are required. NSP shall allow low-growing vegetation to remain in the ROW.

(c) The 230 kV line shall be placed within the existing right-of-way of the 69 kV line that crosses the river below the dam.

6. When the Lawrence Creek Substation is built, NSP shall remove the distribution lines extending across the river from St. Croix Falls that are no longer needed to serve customers in Minnesota.

7. NSP shall remove its unused 34.5 kV line, located just north of the dam.

8. If the South Crossing is used, NSP and DPC shall use the South-Washington Route and the South-USH 8 Route to connect the new 230 kV and rebuilt 69 kV transmission lines to the Apple River Substation.

9. If the Dam Crossing is used, NSP shall use the Louisiana-Washington Route through the city of St. Croix Falls. From the city's industrial park, the 230 kV transmission line shall follow USH 8 east to Segment VV (150th Street). East of Segment VV, the South-USH 8 Route shall be used. The western transition station shall be placed adjacent to the hydroelectric plant and the eastern transition station shall be located in the industrial park.

10. To mitigate the impact of these transmission lines, the utilities shall perform the following procedures:

(a) Follow the Wisconsin DNR's standards specified in its "Statewide Utility Guidelines for Cutting and Pruning Oak" when engaging in construction or maintenance activities that result in wounding, pruning, or removing oak trees.

(b) Work with the SHSW to avoid or reduce potential adverse impacts to historical, archeological, and traditional cultural sites as construction of the project proceeds. The utilities shall perform any surveys the SHSW determines are needed along the transmission line route.

- (c) Span wetlands along the transmission route, to the extent practicable.

Each utility shall schedule wetlands construction for winter months when the ground is frozen, unless the utility notifies the Wisconsin DNR and the Commission of unforeseen problems and works out an acceptable solution. If construction must occur when the ground is unfrozen, the utility shall use large mats and wide track vehicles to reduce impacts on vegetation and the soil. Each utility shall survey wetlands along the route before construction and identify portions of the route that pass through areas uninfested with purple loosestrife. For five years after construction is completed, the utilities shall identify and remove new infestations of purple loosestrife from these areas. Removal shall occur before seed dispersal and be conducted in accordance with methods recommended by the Wisconsin DNR. The utilities shall confirm their annual inspection and removal of purple loosestrife in writing, within 90 days of undertaking these activities.

- (d) Work with farmers concerning the location of the transmission structures, complete their construction activities in farm fields during dry soil conditions to the extent practicable, limit the use of heavy equipment in crop areas, and chisel plow farm fields, if necessary, after construction is complete.

11. NSP and DPC shall submit quarterly progress reports to the Commission indicating the project's major construction and environmental milestones, the extent of physical completion to date, and expenditures to date, commencing within 90 days of the date that construction commences.

12. Upon completion of the project, NSP and DPC shall notify the Commission when the facilities of the Chisago Project are placed in service and report the actual cost segregated by plant account.

13. NSP and DPC shall work with landowners from whom ROW easements are required in determining reasonably acceptable line routing and actual physical structure placement prior to construction, in order to minimize impacts.

14. NSP and DPC shall reasonably restore and grade, to its original condition or better, any property adversely affected by trucks or equipment used for the project.

15. NSP and DPC shall inform landowners from whom ROW easements are required of their rights and obligations, as described within Wis. Stat. § 182.017.

16. Jurisdiction is retained.

Dated at Madison, Wisconsin, _____

By the Commission:

Lynda L. Dorr
Secretary to the Commission

LLD:DAL:mem:G:\Order\Pending\1515-CE-102/4220-CE-155

See attached Notice of Appeal Rights

Dissent of Commissioner John Farrow:

I agree with my fellow Commissioners that the reliability of the electric system in northwestern Wisconsin and east-central Minnesota is in jeopardy and that transmission improvements are needed to maintain reliability in these areas. I also agree that the planning performed to date shows the Chisago Project is the least costly solution to these problems. However, the record indicates the concern of several parties that the local needs of these areas should be considered in conjunction with the regional, bulk transfer needs of eastern Wisconsin. The Wisconsin Reliability Assessment Organization (WRAO) recently issued its draft “Report on Transmission System Reinforcement in Wisconsin” and is scheduled to release a final Report in early June. I believe it is reasonable to incorporate this final Report into the record of this docket before issuing a CPCN, in case the WRAO’s findings support a combined solution to local reliability and bulk transfer problems.

I also would prefer to enlarge the record on underground construction techniques before selecting the proper crossing of the St. Croix National Scenic Riverway. The record presently before us indicates that horizontal directional drilling from bluff to bluff is probably not feasible. If that is actually the case, trenching would be needed down to each side of the river at the South Crossing. Before making a decision on the crossing options, I need additional information about whether horizontal directional drilling is practicable and whether the National Park Service, Minnesota DNR, and Wisconsin DNR would allow trenching down the bluffs. In addition, completing this project at a lower voltage may make it easier to accomplish an underground crossing or reduce some of the environmental impacts of the Chisago Project. For example, construction of a 161 kV transmission line could involve lower structures than those needed for a

230 kV transmission line, which could reduce the aesthetic impact of the project. I would be interested in reopening this docket to hear testimony on whether constructing this project at 161 kV could reasonably meet the area's needs and ease construction or environmental problems.

If reopening the docket would have the effect of delaying the completion date of the Chisago Project, I would not make these recommendations. The utilities, however, have requested that they be allowed to defer commencement of construction for two years, in part because they must secure the approval of many different government agencies for this project. Issuing a CPCN a few months from now, in order to enlarge the record on these specific areas, should not affect the decision timelines of these other agencies nor affect the overall construction schedule.

Notice of Appeal Rights

Notice is hereby given that a person aggrieved by the foregoing decision has the right to file a petition for judicial review as provided in Wis. Stat. § 227.53. The petition must be filed within 30 days after the date of mailing of this decision. That date is shown on the first page. If there is no date on the first page, the date of mailing is shown immediately above the signature line. The Public Service Commission of Wisconsin must be named as respondent in the petition for judicial review.

Notice is further given that, if the foregoing decision is an order following a proceeding which is a contested case as defined in Wis. Stat. § 227.01(3), a person aggrieved by the order has the further right to file one petition for rehearing as provided in Wis. Stat. § 227.49. The petition must be filed within 20 days of the date of mailing of this decision.

If this decision is an order after rehearing, a person aggrieved who wishes to appeal must seek judicial review rather than rehearing. A second petition for rehearing is not an option.

This general notice is for the purpose of ensuring compliance with Wis. Stat. § 227.48(2), and does not constitute a conclusion or admission that any particular party or person is necessarily aggrieved or that any particular decision or order is final or judicially reviewable.

Revised 9/28/98

APPENDIX A

This proceeding is not a contested case under Wis. Stat. ch. 227, therefore there are no parties to be listed or certified under Wis. Stat. § 227.47. However, the persons listed below participated.

Public Service Commission of Wisconsin (Not a party but must be served)
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P.O. Box 7854
Madison, WI 53707-7854

NORTHERN STATES POWER COMPANY - WISCONSIN

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NORTHERN STATES POWER COMPANY - MINNESOTA

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DAIRYLAND POWER COOPERATIVE

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Wheeler, Van Sickle and Anderson, S.C.
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CITIES OF ST. CROIX FALLS, WI and TAYLORS FALLS, MN

by
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RENEW WISCONSIN

by
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CONCERNED RIVER VALLEY CITIZENS, INC. (CRVC)

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BIG ROCK CREEK FARM PARTNERSHIP

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WISCONSIN ELECTRIC COOPERATIVE ASSOCIATION

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MINNESOTA DEPARTMENT OF PUBLIC SERVICE (MDPS)

by

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MINNESOTA ENVIRONMENTAL QUALITY BOARD (MEQB)

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Mr. Todd Smith
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MADISON GAS AND ELECTRIC COMPANY

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WISCONSIN MERCHANTS FEDERATION

by

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Senior Vice President and General Counsel
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Dockets 1515-CE-102/4220-CE-155

MN EQB ROUTE ADVISORY TASK FORCE

by

Mr. Bill Neuman
18837 Osceola Road
Shafer, MN 55074

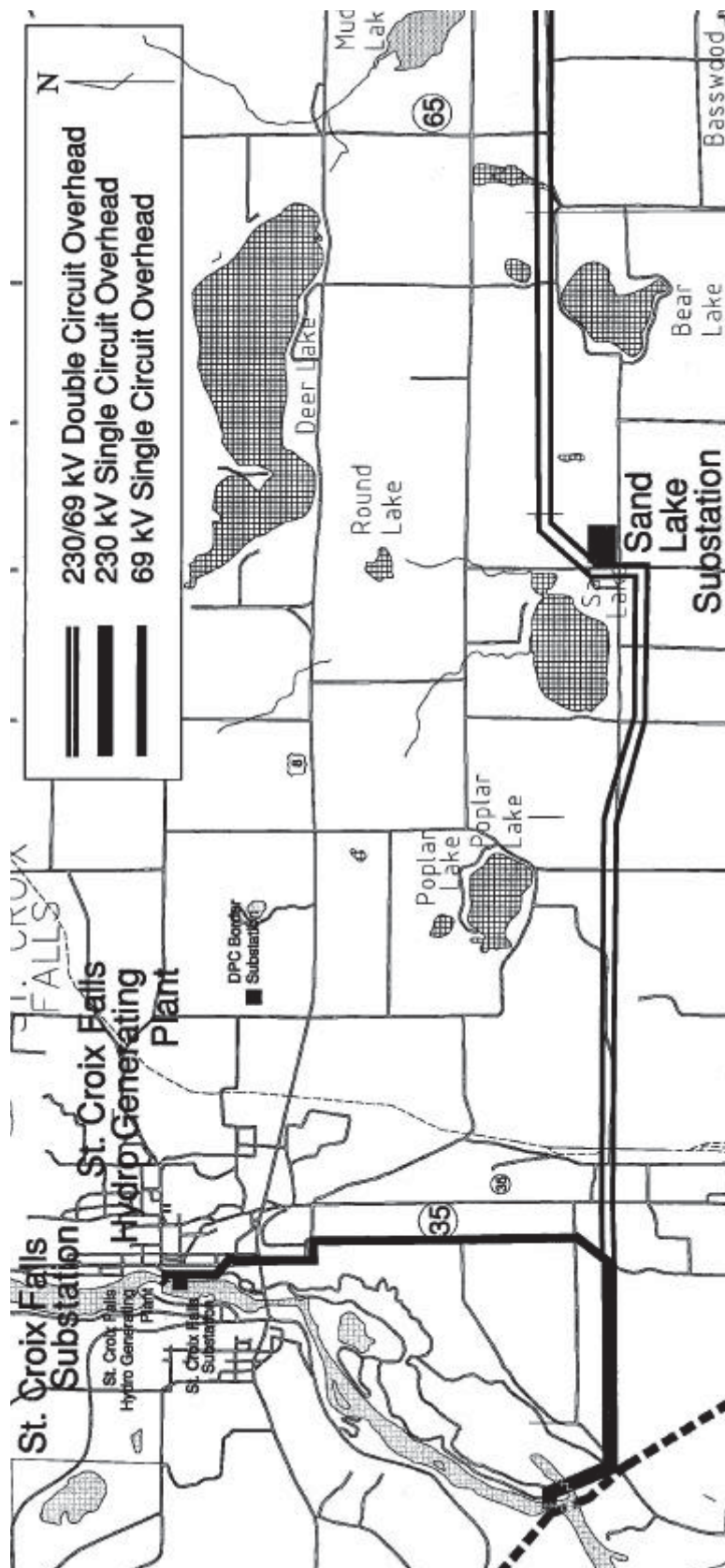
PUBLIC SERVICE COMMISSION OF WISCONSIN

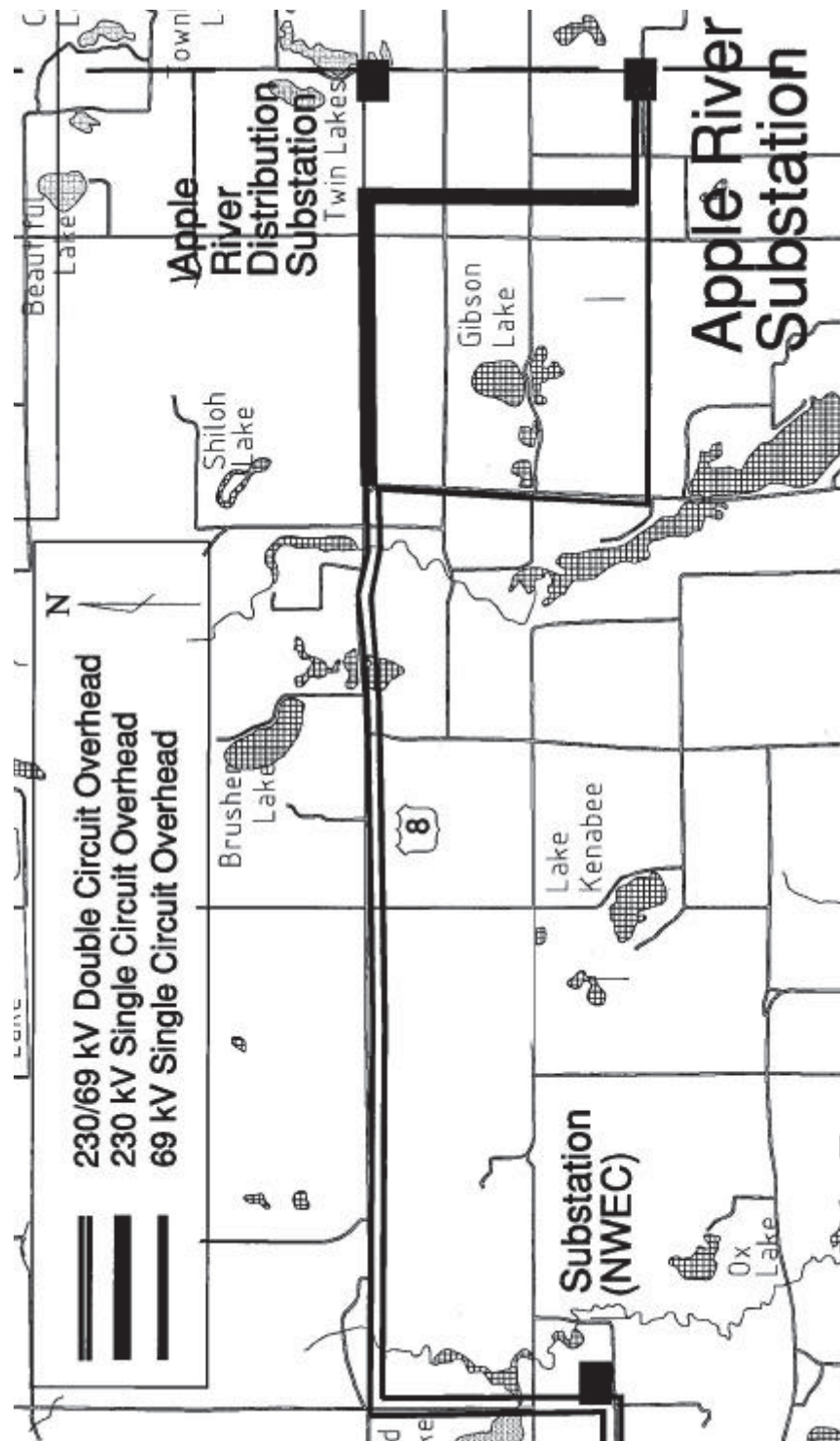
(Not a party, but must be served)

610 North Whitney Way

P.O. Box 7854

Madison, WI 53707-7854





TOWN OF HOLLAND,

Petitioner,

Case Nos. 15-CV-219

30607 Administrative Agency Review

v.

Honorable Todd Bjerke

**PUBLIC SERVICE COMMISSION
OF WISCONSIN,**Respondent.

CERTIFICATE OF SERVICE

I hereby certify that, on August 15, 2016, I caused to be e-filed, hand delivered, or mailed a true and correct copy of the **Response Brief of Intervenor-Respondents American Transmission Company LLC and ATC Management, Inc., Dairyland Power Cooperative, Northern States Power Company-Wisconsin, SMMPA Wisconsin, LLC, and WPPI Energy** on the following:

<u>Plaintiff Town of Holland</u> HAND DELIVERED Frank Jablonski Dana Lesmonde PROGRESSIVE LAW GROUP LLC 354 West Main Street Madison, WI 53703-3115 frankj@progressivelaw.com dlesmonde@progressivelaw.com	<u>Defendant – Public Service Commission of Wisconsin</u> HAND DELIVERED Alex G. Mahfood Assistant General Counsel Alex2.mahfood@wisconsin.gov Cynthia E. Smith Chief Legal Counsel Public Service Commission of Wisconsin 610 N. Whitney Way, 2 nd Floor P.O. Box 7854 Madison, WI 53707-7854
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<p>Intervenor: Northern States Power Company E-FILE</p> <p>Valerie Herring BRIGGS AND MORGAN, P.A. 80 South 8th Street, Suite 2200 Minneapolis, MN 55402 Email: vherring@briggs.com</p>	<p>Intervenor: City of Onalaska U.S. MAIL</p> <p>Sean O’Flaherty Amanda Halderson Jackson O’FLAHERTY HEIM EGAN & BIRNBAUM LTD. U.S. Bank Place, Tenth Floor 201 Main Street La Crosse, WI 54601 Sean@lacrosselaw.com</p>
<p>Intervenor: SMMPA Wisconsin, LLC E-FILE</p> <p>Joseph C. Hall Rebeha Kamaluddin DORSEY & WHITNEY LLP 1801 K Street, N.W., Suite 750 Washington, DC 20006 Hall.joseph@dorsey.com</p> <p>Bradley Hammer 50 South Sixth Street, Suite 1500 Minneapolis, MN 55402-5469 Hammer.bradley@dorsey.com</p>	<p>Intervenor: Midcontinent Independent System Operator Inc. E-FILE</p> <p>Warren J. Day DAY LAW OFFICE 2010 Hawkinson Road Oregon, WI 53575 warren@warrendaylaw.com</p>
<p>Intervenor: Dairyland Power Cooperative E-FILE</p> <p>Jeffrey Landsman WHEELER, VAN SICKLE & ANDERSON, S.C. 44 East Mifflin Street, Suite 1000 Madison, WI 53703 jlandsman@wheelerlaw.com</p>	<p>Intervenor: WPPI Energy E-FILE</p> <p>Matthew J. Frank MURPHY DESMOND S.C. 33 East Main Street, Suite 500 P.O. Box 2038 Madison, WI 53701-2038 Mfrank@murphydesmond.com</p>

Dated August 15, 2016

By: /s/ Brian H. Potts

Brian H. Potts, WBN 1060680

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