

**SERVICE DATE**  
**Mar 20, 2013**

PSC REF#:182455

Public Service Commission of Wisconsin  
RECEIVED: 03/20/13, 12:08:01 PM

**PUBLIC SERVICE COMMISSION OF WISCONSIN**

Joint Application of Wisconsin Electric Power Company, as an Electric Public Utility, for Authority to Construct a New Distribution Substation and Related Electric Distribution Facilities in the City of Wauwatosa and American Transmission Company, LLC, as an Electric Public Utility, for Authority to Construct Related 138 kV Electric Transmission Facilities in the Cities of Milwaukee and Wauwatosa, all in Milwaukee County, Wisconsin (Western Milwaukee County Electric Reliability Project)

5-CE-139

**FINAL DECISION**

On March 6, 2012, Wisconsin Electric Power Company (WEPCO) and American Transmission Company, LLC (ATC), filed a joint application with the Commission seeking a certificate of authority (CA) and a certificate of public convenience and necessity (CPCN) with respect to construction of a new WEPCO substation and two closely-related ATC 138 kilovolt (kV) electric transmission lines in the cities of Wauwatosa and Milwaukee in western Milwaukee County. WEPCO seeks authority under Wis. Stat § 196.49 and Wis. Admin. Code ch. PSC 112 to construct and place into operation, at a proposed cost of \$10.8 million, a new 138/13.2 kV distribution substation, called the Milwaukee County Substation (MC Substation), to serve the growing needs of the Milwaukee Regional Medical Center (MRMC) and the western portion of Milwaukee County. ATC seeks authority under Wis. Stat. § 196.491 and Wis. Adm. Code ch. PSC 111 to construct and place in operation two 138 kV electric transmission lines, one from the west and one from the south and each about two miles long, to provide reliable transmission service to WEPCO's proposed MC Substation. The line from the west would tap ATC's existing Bluemound-Tosa 138 kV line, and the line from the south would originate at the existing

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WEPCO 96<sup>th</sup> Street Substation. Several route alternatives are proposed, either by ATC or by other intervenors, for each proposed transmission line, including overhead and underground construction configurations, at estimated construction costs ranging from \$23.3 million to \$56.4 million depending on the route and configuration alternatives selected.

The Commission considered this matter, commonly known as the Western Milwaukee County Reliability Project, at its open meetings on March 1, 2013, and March 14, 2013. The CA and CPCN applications are APPROVED, subject to conditions.

### **Introduction**

By letter dated April 4, 2012, the Commission determined the application in this proceeding to be complete pursuant to Wis. Stat. § 196.491(3)(a)2. The Commission issued a Notice of Proceeding on April 20, 2012, and a Notice of Prehearing Conference on April 30, 2012. A prehearing conference was held in this docket on May 9, 2012. The city of Wauwatosa, Milwaukee Montessori School (MMS), People Friendly Power (PFP), Milwaukee County, city of Milwaukee, city of Milwaukee Alderman Michael J. Murphy, and Wisconsin Lutheran College, Inc., requested to intervene in this docket and were granted party status. The issue for the hearing, as determined at the prehearing conference, was whether the project complies with the standards that apply to constructing two high-voltage transmission lines and a new substation, as set out in Wis. Stat. §§ 1.11, 1.12, 196.025, 196.49, and 196.491, and Wis. Admin. Code chs. PSC 4, 111, and 112. Included within the issue were the matters of an underground route proposed by MMS, and other routes that intervenors might develop during the proceeding.

On August 13, 2012, the Dane County Circuit Court issued an “Order Granting Extension of Time to Take Final Action on CPCN Action”<sup>1</sup> that set March 30, 2013, as the final date for Commission action, pursuant to Wis. Stat. § 196.491(3)(g). On August 30, 2012, WEPCO filed a revised application that set forth its proposal to locate its substation on WEPCO-owned land at its existing Milwaukee County Power Plant on Watertown Plank Road.

An Environmental Assessment (EA) was prepared by Commission staff in cooperation with the Wisconsin Department of Natural Resources (DNR) and the final EA was issued on October 29, 2012. The EA concluded that preparation of an Environmental Impact Statement was not warranted. The Notice of Hearing was mailed on October 12, 2012. The public hearing was held on November 27, 2012, in Wauwatosa, Wisconsin, while the technical hearing continued to November 28, 2012, in Madison, Wisconsin. The Notice of Hearing solicited testimony and comments on the proposed project from members of the public. The filing of briefs, Commission staff’s briefing memorandum and decision matrix, and party comments on the decision matrix was completed on February 20, 2013.

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

### **Findings of Fact**

1. WEPCO is an electric public utility engaged in rendering electric service in Wisconsin, pursuant to Wis. Stat. § 196.01(5)(a).
2. WEPCO is proposing to construct and place in operation a new 138/13.2 kV distribution MC Substation, as described in its revised application, at a total estimated cost of \$10.864 million. Commencement of construction is proposed for September 2014.

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<sup>1</sup> Dane County Cir. Ct., Case No. 12-CV-2964.

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

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

5. Construction and operation of the substation at the estimated cost will not impair the efficiency of WEPCO's service, will not provide facilities unreasonably in excess of probable future requirements and, when placed in operation, will increase the value or available quantity of service in proportion to any addition to the cost of service.

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

7. The substation 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.

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

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

10. Approval of the proposed substation project is in the public interest and required by the public convenience and necessity.

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

12. ATC proposes to construct and place in operation two 138 kV electric transmission lines, each about two miles long. The total estimated cost of the lines is \$23.3 million to \$56.4 million, depending on the route alternatives selected, and including pre-certification costs of \$2.223 million and new substation connection costs of \$3.307 million.<sup>2</sup>

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

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

15. 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 transmission facilities.

16. Construction and operation of the transmission 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 increase the value or available quantity of service in proportion to any addition to the cost of service.

17. The transmission facility design, location, and routes approved by this Final Decision are in the public interest considering alternative sources of supply, alternative locations

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<sup>2</sup> This is the total capital cost, removal cost, and operation and maintenance costs for the ATC-related MC Substation.

or routes, individual hardships, and engineering, economic, safety, reliability, and environmental factors.

18. The transmission 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.

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

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

21. 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.

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

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

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

### **Conclusion of Law**

The Commission has jurisdiction under Wis. Stat. §§ 1.11, 1.12, 196.025, 196.49, and 196.491, and Wis. Admin. Code chs. PSC 4, 111, and 112 to approve (a) issuance of a CA authorizing WEPCO to construct and place in operation the proposed substation, and

(b) issuance of a CPCN authorizing ATC to construct and place in operation two proposed 138 kV electric transmission lines as authorized in this Final Decision, subject to the conditions described in this Final Decision.

### **Opinion**

Joint applicants WEPCO and ATC have proposed a project that closely combines construction of a new WEPCO substation to supply the needs of the MRMC and the western portion of Milwaukee County, with the construction of two separate, reinforcing two-mile ATC 138 kV transmission lines to support the substation and, in particular, the reliability needs of MRMC. The need for the substation, the need for two new lines, and the general East-West and North-South transmission line locations for redundancy purposes are supported in the record and drew very little public opposition. The key issue in this case is the proper location of the transmission lines and whether all or part of the lines should be underground. For purposes of this Final Decision, the principal provision governing the substation portion of the application is Wis. Stat. § 196.49, and, because the proposed transmission lines are longer than one mile and will operate at 100 kV or more, Wis. Stat. § 196.491 is the principal provision governing the transmission line portion of the application.

### **Substation Purpose, Need, and Cost**

The existing WEPCO 24.9 kV to 13.2 kV Milwaukee County Substation (MCSS) supplies all the electric supply needs of MRMC. MRMC is a consortium of six health care institutions with a Level One Adult Trauma Center and a Level One Pediatric Trauma Center. Level One Trauma Centers provide the highest level of specialty expertise, meet strict national

standards, and are available 24 hours a day, 365 days a year to treat life-threatening injuries.

These facilities require a high level of electric reliability.

The MCSS has an allowable loading of 25.8 megavolt-amperes (MVA), based on an N-1<sup>3</sup> contingency of the loss of either substation transformer. The limiting factor in this contingency is the emergency rating of the remaining transformer. The loss of either 24.9/13.2 kV transformer is projected to result in loading the remaining transformer above its allowable contingency loading, beginning in the 2014 to 2015 timeframe.

Having undertaken a broad construction program, MRMC projects that its load will increase to 41.9 MVA by 2021. As past projections of load growth at MRMC have been very accurate, a realization of load planned for this area of 85 to 90 percent is expected. Load growth is also anticipated on the 24.9 kV distribution system in this area. Developments proposed to date, including initial load projections through 2020 for the 24.9 kV distribution system, include up to an additional 48 MVA in load demand.

MCSS is normally served by two underground 24.9 kV networked conductors from the bus section of WEPCO's 96th Street Substation. There is also a dedicated backup 24.9 kV line from the bus section of the 96th Street Substation. The existing MCSS 13.2 kV distribution system serving MRMC has no adjacent 13.2 kV capacity available for bridging. A 30-degree phase difference exists between the existing MCSS distribution system and the rest of WEPCO's 13.2 kV system in the area. WEPCO does not have a spare 24.9/13.2 kV transformer as this transformation is unique on its system. Given the "island" effect created by the 13.2 kV

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<sup>3</sup> An N-1 contingency is a single outage contingency, such as the loss of a transmission line or transformer.

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distribution system of MRMC, the lack of a spare transformer is the weakest link of the electrical supply to MRMC.

The proposed 138 kV to 13.2 kV MC Substation will provide capacity for the projected load growth at MRMC and any future growth on the Milwaukee County Grounds. Additionally, the distribution feeders that are currently used as supply sources for the existing MCSS will be made available for 24.9 kV load growth in the area.

Construction of the proposed MC Substation is slated to commence in September 2014, and is estimated to cost approximately \$10.8 million as set out below:

| <b><u>Description</u></b>            | <b><u>Amount</u></b> |
|--------------------------------------|----------------------|
| <b><u>Capital Cost</u></b>           |                      |
| Milwaukee County Substation          |                      |
| Site Purchase and Preparation        | \$ 97,000            |
| Substation Foundations and Equipment | \$ 8,773,000         |
| Distribution Feeders                 | \$ 915,000           |
| AFUDC (8.83% on 50% of CWIP)         | <u>\$ 242,000</u>    |
| <b><u>Total Capital Cost</u></b>     | \$ 10,027,000        |
| <b><u>Removal Cost</u></b>           | \$ 285,000           |
| <b><u>O&amp;M Cost</u></b>           | <u>\$ 552,000</u>    |
| <b>Gross Project Cost</b>            | \$ 10,864,000        |

The Commission finds that the proposed MC Substation is necessary to meet anticipated load growth in the area of the MRMC. When constructed, it will not substantially impair the efficiency of utility service, provide facilities unreasonably in excess of probable future requirements, or add to the cost of service without proportionately increasing the value or available quantity of service. The Commission further finds that the estimated cost of \$10,864,000 is reasonable.

### **Transmission Line Purpose, Need and Cost**

The need for WEPCO's proposed MC Substation is uncontested. The substation will require interconnection to the existing distribution or transmission system. ATC proposes to interconnect the new MC Substation through the construction of two new transmission facilities.

Given the importance of Level One Adult Trauma Centers to the public, ATC developed a Level One Trauma Center Exception Guide. The Guide establishes appropriate criteria for serving substations that support Level One Trauma Centers, and its implementation will ensure that the new MC Substation will maintain a high degree of reliability for the MRMC Level One Trauma Centers.

The Guide provides for redundant service to substations serving Level One Trauma Centers. If power is supplied to the new MC Substation from the transmission system, compliance with the Guide requires two transmission lines to serve the substation. Redundant transmission service ensures no loss of power to the substation under first contingency (N-1) conditions on the transmission system.

Based on the Guide's requirements and the relatively close proximity of the proposed lines as they enter the new MC Substation, ATC proposes to underground at least one of the two lines as it nears the substation. ATC also proposes to install duplicate phase conductors in separate duct banks for any underground segment of the underground line. The purpose of the second conductor is to minimize any repair outage time in case of outages caused by line failure.

ATC estimates the cost of the two proposed transmission lines from \$23.3 million to \$56.4 million, depending on the routes and construction method (overhead or underground) that the Commission authorizes.

The Commission finds that two independent 138 kV transmission lines are needed to provide reliable transmission service to the proposed MC Substation. When constructed, the proposed transmission lines will not substantially impair the efficiency of utility service, provide facilities unreasonably in excess of probable future requirements, or add to the cost of service without proportionately increasing the value or available quantity of service.

### **Project Alternatives Analysis**

Several distribution-level remedies were considered by WEPCO as alternatives to the proposed project. Any benefits derived from distribution-level solutions would be only short term. The existing MCSS and other substations in this area are already at or near capacity. The anticipated area load growth would require a new transmission-to-distribution substation no later than 2020, even if a distribution-level alternative was implemented.

For the proposed new MC Substation, use of the MRMC backup generation is not an acceptable system reconfiguration in an N-1-1<sup>4</sup> contingency. The existing MRMC backup generation is intended to provide sufficient power for life support devices and to facilitate the orderly evacuation of the facilities in the event of an emergency. It cannot support the entire MRMC load.

Supplying the new MC Substation with one transmission line and WEPCO-owned backup generation was also evaluated. This option is not reasonable because it does not allow closed-transition auto-changeover between sources to be maintained. A closed-transition auto-changeover allows the system to automatically transfer from the primary source to the backup source without interrupting the power supply to load. Additionally, the cost of a

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<sup>4</sup> An N-1-1 contingency is the consecutive loss of two elements, such as a transmission line or transformer.

combustion turbine, additional infrastructure costs to interconnect the generator, annual fuel costs, and generator maintenance make this option cost prohibitive. Furthermore, annual generator maintenance outages pose an unacceptable risk to the Trauma Centers' electric supply.

The Commission finds that the alternatives evaluated, including energy efficiency and conservation, are not technically feasible and cost-effective alternatives to the proposed project.

### **Potential Impacts on Wholesale Competition**

The record sets out that the proposed project is intended to address local load growth and reliability issues at the MRMC and the western portion of Milwaukee County. The Commission finds that the proposed project addresses needs at the distribution level and will not have a material adverse impact on competition in the wholesale electric service market.

### **Wisconsin Environmental Policy Act Compliance**

The Commission's review of a proposal to construct transmission lines and the substation includes the preparation of an EA. *See* Wis. Admin. Code Ch. PSC 4, Table 2., Type II Actions, f. and h. On May 2, 2012, the Commission issued a notification letter indicating its intent to prepare an EA and soliciting information or comments on environmental issues. Comments were due by June 1, 2012. Commission staff completed the EA in cooperation with DNR and mailed a preliminary determination letter to the entire project mailing list on October 5, 2012, with a request for any comments by October 19, 2012. The letter stated that preparation of an environmental impact statement was not warranted. Based on comments that it received, Commission staff did not modify the EA. The EA was entered into the case record as Ex. PSC-Rahn-3 ([PSC REF#: 176787](#)).

The Commission finds that its review of the proposed project complies with the Wisconsin Environmental Policy Act, pursuant to Wis. Stat. § 1.11 and Wis. Admin. Code ch. PSC 4.

**Proposed Routes and Compliance with Wis. Stat. §§ 1.12(6) and 196.025(1m)**

All of the proposed routes in ATC’s application follow existing highway, street, railroad, or recreational trail corridors for nearly their entire lengths. A notable exception is Segment 10UG<sup>5</sup> of Route B(3), which, while it crosses undeveloped land, nonetheless is located in the corridor of a planned street. Routes A, C, and D and their variants were not significantly challenged under Wis. Stat. §§ 1.12(6) and 196.025(1m), the laws that establish priority corridors for transmission line siting.

PFP, however, challenges the proposed overhead placement of electric transmission lines in right-of-way (ROW) alongside the Oak Leaf Trail in Segments 8b, 9a and 9b. The trail is on Underwood Parkway where Segment 8b is proposed to be located. Segments 9a and 9b are located adjacent to an off-road portion of the trail. PFP contends that the statute permits electric transmission lines along recreational trails “to the extent that the facilities may be constructed below ground and that the facilities do not impact environmentally sensitive area.” PFP construes the statute too restrictively. In fact, the Commission has previously approved overhead transmission lines along a recreational trail.<sup>6</sup> Wisconsin Stat. §§ 1.12(6) and 196.025(1m) direct the Commission to use corridors in the stated order of preference, “consistent with economic and

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<sup>5</sup> “UG” denotes an underground transmission line segment and “OH,” where used, denotes an overhead transmission line segment.

<sup>6</sup> See *Application of American Transmission Company, LLC, for Authority to Modify Existing Transmission Facilities and Construct a 138 kV Transmission Line from the Jefferson Substation in the Town of Jefferson to the Stoney Brook Substation in the Town of Waterloo, generally known as the Jefferson County Reliability Project, Final Decision*, PSCW Docket No. 137-CE-121, 16-20 (2006) (authorizing transmission line along portions of the Glacial Drumlin State Trail) (PSC REF#: 58847).

engineering considerations, reliability of the electric system, and protection of the environment.”<sup>7</sup> The term “corridor” is not a restrictive term, but one best defined by facts on a case-by-case basis. The term is not synonymous with a precise “metes-and-bounds” legal description of a “right-of-way.” Evaluating all the record evidence in light of the statutory factors and corridor priorities, the Commission finds that the routes proposed by ATC and intervenors comply with Wis. Stat. §§ 1.12(6) and 196.025(1m).

### **Proposed Routes and Relationship to Orderly Land Use and Area Development Plans**

Assessment of impacts upon land use and development plans in the route areas is assisted by visualizing the area on a map as four quadrants, with the U.S. Highway (USH) 45 freeway dividing the quadrants vertically North-South and Watertown Plank Road providing the East-West horizontal dividing line. Three sources of potential future change that will impact land use and development are: (1) changes proposed for USH 45 and the Zoo Interchange in the south; (2) East-West transmission lines that originate in the northwest quadrant (Route A and variants) and just inside the southwest quadrant (Route B) and extend easterly to the northeast quadrant where the new MC Substation will be located; and (3) North-South proposed transmission lines (Routes C and its variants and Route D) that originate in the southeast quadrant at the 96<sup>th</sup> Street Substation and extend northerly to the proposed MC Substation in the northeast quadrant. For

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<sup>7</sup> See *Application of American Transmission Company LLC, as an Electric Public Utility, for Authority to Construct and Place in Service a New 345 kV Switching Station in Shawano County, to be called the Central Wisconsin Substation, and a new 345 kV Electric Transmission Line Between that Substation and the Gardner Park Substation, in Shawano and Marathon Counties, Wisconsin, Final Decision*, PSCW Docket Nos. 137-CE-122 and 123, 39 (2006) (“The Commission agrees that the Legislature intended [in Wis. Stat. § 1.12(6)] to promote the sharing of existing corridors in order to impose additional impacts upon the landscape only incrementally where possible, . . . .”) (PSC REF#: 56478).

convenience in identifying the principal routes and their constituent segments, a map from Figure 1, Ex.-PSC-Rahn-2 is attached as Appendix B.

### **Highway Changes**

Work will begin shortly on the USH 45 Zoo Interchange reconstruction project. The work near Segment 5 (Routes A and B(1)) in the northeast quadrant will likely expand the highway ROW so that the segment would lie within a freeway ramp area. Nonetheless, ATC indicates that it would coordinate closely with the Wisconsin Department of Transportation (WisDOT) so that transmission line construction work and facility placement would not interfere with work on this and other affected freeway and street segments. No other party has suggested any proposed line interferes with, or cannot be built because of, expected highway changes.

### **East-West Routes**

The land use plans of the cities of Wauwatosa and Milwaukee largely show existing land uses in the northwest and northeast quadrants on either side of USH 45 as continuing into the future.

The notable exception is the northeast quadrant where the Milwaukee County Grounds are shown as changing from “institutional” to “campus” use. This reflects the development of the UW-Milwaukee Innovation Park-Integrated Research Complex, consisting of an engineering and graduate school campus of the University of Wisconsin-Milwaukee and private research facilities. If Segment 10UG through the Milwaukee County Grounds is used for the transmission line, the line would be buried and would not interfere with the development and operation of the research park or users’ enjoyment of the adjacent parkland.

The land essentially due west of the Innovation Park in the northwest quadrant—across USH 45 and north of Watertown Plank Road—is slated for re-development. This redevelopment plan is partly due to USH 45 reconstruction necessitating the relocation of some Milwaukee County government facilities. “Office park” is the planned future use designation of these highway-impacted lands.

Wauwatosa raises the “harm to development” argument. Wauwatosa is concerned that Segments 4, 5, and 6 of Routes A and B(1) would interfere with local development plans and have significant adverse economic impacts. Also with respect to Route A, a 50-unit residential building is planned to be located west of the closed city landfill, along Segment 2 of Route A. Part of the building would lie within 300 feet of the proposed transmission line centerline. Wauwatosa also objects to the aesthetic impacts of an overhead line along Watertown Plank Road (Segment 6 of Routes A, B(1), C(1), and C-Alt-2).

PPF claims that, if placed along Segment 3 of the A Routes (A, A-Alt-1, Wauwatosa Alt-1, Wauwatosa Alt-2, and Wauwatosa Resolution Route), a transmission line would conflict with the current use of the Underwood Creek floodplain.

With respect to Route B, a heavily-used bicycle and walking trail parallels the Route B options for about a mile. This trail, which is part of a countywide system of biking and hiking trails, called the Oak Leaf Trail, lies along Routes B(1) to (3). Segments 9a and 9b follow a portion of the trail that is a paved, off-street path. Milwaukee County is on record as opposing the placement of the transmission line on the county-owned parkland containing the trail.

### **North-South Routes**

MMS states that Routes C(1) and C(3) would interfere with MMS plans for a performing arts center on its property. MMS agrees with and advances the city of Milwaukee's view in its West Side Area Plan that an overhead power line would adversely affect the "quality of life" in the Cannon Park residential area and the viability of Milwaukee Montessori School, and "would conflict with land use and development recommendations of the West Side Area Plan."

The Commission finds that none of the proposed routes would unreasonably interfere with local land use and area development plans. First, this is already a highly developed urban area, with major highway corridors, railroad corridors, existing transmission and distribution lines, and numerous municipal, industrial, and commercial facilities, such as those found in the northwest quadrant described above. The MRMC is itself a part of the existing development, augmented by the presence of the existing MCSS, the replacement of which is largely uncontested. The largest open parcel, the Milwaukee County Grounds, will not be materially affected, as the proposed transmission line routes would be underground in that parcel or follow the perimeter of the parcel along USH 45 and Watertown Plank Road before heading north into the proposed new substation.

Second, Wauwatosa's evidence and argument about adverse impacts upon land values from Routes A and B(1) and their variants fail to show an unreasonable interference with municipal redevelopment plans. Its evidence of property value impacts is flawed in its methodology or incomplete. The parcel to the west of USH 45, containing the Milwaukee County garage and other facilities, is already subject to a planned re-alignment of Swan Boulevard to pass under USH 45. An overhead transmission line through this parcel may alter

development, but will not foreclose the city's re-development goals. Moreover, ATC's rebuttal expert witness Thomas Jackson fairly critiqued Wauwatosa's evidence as methodologically unsound or, at best, inadequately developed. In particular, Mr. Jackson produced evidence of comparable office building sales that showed no loss in value attributable to the presence of overhead electrical transmission lines.

Consequently, the Commission concludes that all of the routes proposed by ATC and intervenors would not unreasonably interfere with the orderly land use and development plans for the area, and therefore they comply with Wis. Stat. § 196.491(3)(d)6.

**Routes Compliant with Wis. Stat. §§ 1.12(6) and 196.491(3)(d)3., 4., 5., and 6. that may be Authorized in a CPCN**

**Transmission line routing options**

ATC proposed two basic East-West routes and two basic North-South routes, each of which it considers to be buildable and acceptable in terms of cost. ATC does not have a preferred route. Before and during the case, alternatives were developed by intervening parties, primarily Wauwatosa as to modifications of the East-West routing options, and MMS as to undergrounding for Route C in the North-South routing options. Various combinations of routes and segments developed by ATC or presented to it were analyzed by ATC and identified as feasible routes that would also satisfy the Trauma Center Exception Guide.<sup>8</sup> An underground part is required for any pair of routes (one East-West, and the other North-South). The route with the shortest distance underground would be built with two underground cables per transmission line phase (a total of six cables) in order to meet the Level One Trauma Center Exception Guide. A cost comparison can be made for each pair of routes selected. Generally,

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<sup>8</sup> Ex.-ATC-Aeschbacher-6 (Revised) (PSC ERF#: 176298).

the routes with the greater length of underground cable are more expensive. Parts of the overall cost for ATC include pre-certification costs of \$2.223 million and costs for connecting with the proposed substation of \$3.307 million.<sup>9</sup> Neither amount was contested by any intervenor. Both amounts are added to the cost of the combination of selected routes.

The original and modified ATC-proposed routes and intervenor-proposed routes are described below, the East-West routes first, followed by the North-South routes from the 96<sup>th</sup> Street Substation. Where available, ATC's estimated costs for the routes are indicated at the end of each description. These engineering costs were not substantially challenged by the intervenors except as noted with respect to an underground easement route option proposed by MMS. However, some intervenors suggested other external costs should be added to determine the true "cost" of a route.

### **East-West Route Alternatives**

**Route A—Walnut Road Hybrid** consists of Segments 1UG, 2, 3, 4, 5, 6, and 7. Route A begins at the interconnection point located west of 119<sup>th</sup> Street. The route follows Walnut Road east for 0.35 mile as an underground segment and then east of 113<sup>th</sup> Street transitions to overhead to continue east, crossing the Union Pacific railroad and State Highway (STH) 100 (Mayfair Road). On the east side of STH 100 the route then turns south to parallel the highway and cross the Canadian Pacific railroad. Just north of Underwood Creek, the route turns east, crosses USH 45 freeway (Segment 4), parallels the east side of the freeway south to Watertown Plank Road (Segment 5), and then runs east on that street's north side until it reaches a point just south of the proposed MC Substation site (Segment 6). The route then proceeds north into the

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<sup>9</sup> See Footnote 7.

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MC Substation (Segment 7). The total route length is 2.3 miles and has an estimated cost of \$11,971,850.

**Route B(1)—Underwood Creek Overhead** consists of Segments 8a (or 8b), 9a, 9b, 4, 5, 6, and 7. Route B(1) begins at a proposed interconnection point located near 120<sup>th</sup> Street and West Diane Drive in the Underwood Parkway. Segment 8a on Route B(1) runs north of and parallel to Underwood Creek and the Canadian Pacific railroad until it turns south to cross to the south side of the creek at 115<sup>th</sup> Street. An alternate starting point, Segment 8b interconnects with ATC's transmission line on the south side of Underwood Creek and continues along Underwood Parkway's north side to the west side of 115<sup>th</sup> Street. Route B(1) proceeds across 115<sup>th</sup> Street, following Underwood Creek, crossing the Union Pacific railroad (Segment 9a), and then proceeding over Watertown Plank Road northeasterly up to and across STH 100 (Segment 9b). The remainder of the route consists of Segments 4, 5, 6, and 7 described immediately above. The total route length is 2.1 miles and has an estimated cost of \$6,509,350.

**Route B(2)—Underwood Creek Overhead-Watertown Plank Hybrid** consists of Segments 8a, 9a, 23UG, 18UG, and 19UG. Route B(2) begins at a proposed interconnection point located near 120<sup>th</sup> Street and West Diane Drive in the Underwood Parkway and follows the same path as Route B(1) north of and parallel to Underwood Creek and the Union Pacific railroad until it crosses to the south side of the creek at 115<sup>th</sup> Street. Route B(2) continues to follow Underwood Creek, crossing the Union Pacific railroad, until it reaches Watertown Plank Road. At that point, the route transitions to underground as it follows Watertown Plank Road east, crosses USH 45, reaches a point just south of the proposed MC Substation site, and then

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turns to proceed north into the MC Substation. The total route length is 1.9 miles and has an estimated cost of \$15,099,950 to \$18,486,500.<sup>10</sup>

**Route B(3)—Underwood Creek Overhead-County Grounds Hybrid** consists of Segments 8a, 9a, 9b, 4, and 10UG. Route B(3) begins at the same interconnection point located near 120<sup>th</sup> Street and West Diane Drive in the Underwood Parkway and follows the same path as Route B(1) to the east side of the USH 45 freeway. At that point, the route transitions to underground and continues east on Segment 10UG to the MC Substation site. The total route length is 1.9 miles and has an estimated cost of \$12,676,600.

**Wauwatosa Alt-1—Hybrid Route** is a variation of Route A, consisting of Segments 1UG, 2, 3, a new segment of overhead line along the Underwood Parkway, the eastern part of 23UG, 18UG, and 19UG. The route is underground from the interconnection point eastward to a point located east of 113<sup>th</sup> Street, where it transitions to overhead. The route transitions to underground on the south side of Watertown Plank Road and continues underground to the MC Substation. The total route length is about 2.3 miles and has an estimated cost of \$21,325,000 to \$24,596,000.

**Wauwatosa Alt-2—Underground Route** is similar to the Wauwatosa Alt-1 Route, consisting of the same segments, but is entirely underground. The total route length is about 2.3 miles and has an estimated cost of \$30,078,000 to \$40,573,000.

**Wauwatosa Resolution Route** is similar to the Wauwatosa Alt-1 Route, consisting of the same segments, but with an underground part along the Underwood Parkway road instead of

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<sup>10</sup> Cost ranges for a route are based on whether any underground portion would have one or two cables per phase. See Ex.-ATC-Aeschbacher-6 (Revised).

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overhead. The total route length is about 2.3 miles and has an estimated cost of \$23,625,000 to \$27,196,000.

**Route A-Alt-1** consists of Segments 1UG, 2, 3, 4, and 10UG. It is similar to Route A, but substitutes Segment 10UG for Segments 5, 6, and 7 east of USH 45 in order to have an underground line entering the new MC Substation from the west. This particular route was proposed by Commission staff to be paired with North-South Route C-Alt-2 to avoid the impacts of the Route B option on Underwood Parkway, while also meeting ATC's reliability guidelines for a Level One Trauma Center. The total route length is 2.0 miles and has an estimated cost of \$16,400,000 to \$19,400,000.

#### **East-West Route Findings and Analysis**

While any of the routes meet engineering requirements, Wauwatosa, PFP, and members of the public voiced opposition to each route. Walnut Road area residents do not like the interconnection structures on Route A and desire screening. Proposed burying of part of the line on Walnut Road helped to lessen some, but not all, of the opposition. Many public members oppose use of Route B along the Underwood Parkway, but Walnut Road residents noted that even Route A impacted the Parkway on the east side of STH 100.

Wauwatosa supports different configurations of Route A that utilize undergrounding or overhead lines in different segments and with various turns to avoid impacting current property values or future development prospects. Simultaneously, Wauwatosa favors keeping the Underwood Parkway free of overhead transmission lines. Wisconsin Lutheran College has baseball facilities in the area and supports the underground facilities of Wauwatosa's Alt-2 and

Resolution Routes, because they would be more aesthetically pleasing and eliminate potential noises associated with overhead lines.

PFP vigorously opposes overhead lines along the Oak Leaf Trail and the Underwood Parkway for environmental and aesthetic reasons. Many members of the public oppose Route B because they believe power lines should not be located in parklands. Route B's Segments 8a, alternative 8b, 9a, and 9b (as well as Segment 3 on Route A options) are considered by the Southeastern Wisconsin Regional Planning Commission to be located in a primary environmental corridor, highly valued in the very urbanized Milwaukee metropolitan area. The Underwood Creek Parkway is eligible for listing in the National Register of Historic Places, but no evidence indicates a grant of such designation.

DNR noted that the wetland impacts were less with Route A options and prefers those options over Route B options. DNR testified that all Route A and Route B options were permissible. DNR identified Underwood Creek as a Natural Heritage Inventory waterway and considers it an area of Special Natural Resource Interest. Segment 8a, as proposed by ATC, contains 1.44 acres of upland woodland in the proposed ROW and 0.92 acres of wooded wetlands. About 1.8 acres of woodland are found in Segments 9a and 9b in Underwood Parkway, as well as scattered along other segments. Several of the East-West routes cross upland woodland communities or other wooded areas.

Commission staff identified the proximity of the Monarch Trail, a habitat for migrating monarch butterflies that is on the northern part of the Milwaukee County Grounds. However, plans have been developed that would protect the roosting habitat from proposed reconstruction of USH 45 and ATC's need to place poles in the highway ROW for part of Segment 5. In terms

of Route B options, only 11 homes would be located within 300 feet of the centerline, while 66 homes would be so located on the Route A options. If Segment 8b were used, the number of residences in close proximity to Route B would increase by 11. The Route A options would also have a multi-family residential building within 51 to 100 feet of the ROW centerline, and on Route B Segment 9a, would have a similar building within 151 to 300 feet of the ROW centerline.

Aesthetics issues were examined on the record. Clearing trees for Routes B(1) to (3) could affect screening of the railroad tracks and the concrete-lined channel of Underwood Creek. Various overhead segments on the Route A and B options would be visible to motorists and trail users. The tap structures would be significantly more visible to residents and visitors for the Route A options' interconnection at Walnut Road and 120<sup>th</sup> Street, compared to the Route B options' interconnection with the existing 138 kV line, which is near fewer homes at the edge of a residential neighborhood and screened by more trees. Additional structures and a switch for the Route B options would be located further west along the tapped transmission line, adjacent to a trucking terminal.

### **North-South Route Alternatives**

**C(1)—Highway 45 Overhead** consists of Segments 11, 12a, 12b, 13, 14, 6, and 7. The route begins at the 96<sup>th</sup> Street Substation and follows the east edge of the USH 45 freeway ROW behind the Parkside Pool Apartments, MMS, and St. Therese Church properties north to Watertown Plank Road, crossing Bluemound Road and Wisconsin Avenue. At Watertown Plank Road, the route turns east to follow the north side of the street until it reaches a point just south

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of the proposed substation site. The route proceeds north into the substation. The total route length is 1.5 miles and has an estimated cost of \$5,112,950.

**C(2)—95<sup>th</sup> Street Underground** consists of Segments 11UG, 12UG, 15UG, 16UG, 17UG, 18UG, and 19UG. The route is underground for its entire length. It begins at the 96<sup>th</sup> Street Substation and after running cross-country for 0.2 mile passes beneath 95<sup>th</sup> Street as it heads north, crossing Bluemound Road. At Wisconsin Avenue, the route proceeds east a short distance within the street ROW to 94<sup>th</sup> Street. It then turns north to continue to Watertown Plank Road, mainly following 94<sup>th</sup> and 95<sup>th</sup> Streets. At Watertown Plank Road the route proceeds east until it reaches a point just south of the proposed substation site. The route then turns north into the substation. The total route length is 1.4 miles and has an estimated cost of \$15,307,150 to \$19,040,300.

**C(3)—Highway 45 Hybrid** consists of Segments 11, 12a, 12b, 13, 20UG, 17UG, 18UG, and 19UG. Route C(3) combines the southern part of Route C(1) for its overhead part and the northern end of Route C(2) for its underground part. The route transitions between those two routes, using Segment 20UG, at a point approximately halfway between Wisconsin Avenue and Watertown Plank Road. The total route length is 1.4 miles and has an estimated cost of \$9,902,050 to \$11,592,200.

**D—92<sup>nd</sup> Street Underground** consists of Segments 21UG, 22UG, 16UG, 17UG, 18UG, and 19UG. The route is underground for its entire length. It heads east from the 96<sup>th</sup> Street Substation until it reaches 92<sup>nd</sup> Street. It then turns north, following 92<sup>nd</sup>, Michigan, and 93<sup>rd</sup> Streets to Wisconsin Avenue, crossing Bluemound Road. At Wisconsin Avenue, the route continues west for a short distance to 94<sup>th</sup> Street. It then turns north to continue to Watertown

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Plank Road, mainly following 94<sup>th</sup> and 95<sup>th</sup> Streets. At Watertown Plank Road the route turns east and continues east until it reaches a point just south of the proposed substation site, where it turns to proceed north into the substation. The total route length is 1.6 miles and has an estimated cost of \$16,488,450 to \$20,748,100.

**C-Alt-1—Montessori Easement**<sup>11</sup> is a route proposed by MMS that uses a slightly more direct underground alternative to Segments 11UG, 12UG, and 15UG. The southern end of Segment 11UG and the northern end of Segment 15UG are the same as the C(1) Route, but the middle portion crosses through the parking lots of the Parkside Pool Apartments building, MMS, and St. Therese Church, instead of being buried in 95th Street. This alternative continues north of Bluemound Road through a property that is USH 45 ROW. The cost is estimated at \$14,139,954 to \$17,956,851.

**C-Alt-2—PSC Hybrid** consists of Segments 11UG, 12UG, 15aUG, 24UG, 13b, 14, 6, and 7.<sup>12</sup> The route is similar to the C(2) underground route south of Wisconsin Avenue and the C(1) overhead route north of Wisconsin Ave. The cost is estimated at \$10,759,000 to \$12,606,000.

**Montessori USH 45 Underground** is an underground route on the west side of the Parkside Pool Apartments, MMS, and St. Therese Church, along a soon-to-be-rebuilt section USH 45. Estimated costs for this route were not entered by ATC on the record.

**S-2 Underground** is a variation on Route C(2) that turns east on Wisconsin Avenue and proceeds north beneath 92nd Street through MRMC to the new MC Substation site. Estimated costs for this route were not entered by ATC on the record.

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<sup>11</sup> The segments for this route and the last four routes are not depicted on Appendix B.

<sup>12</sup> A map depicting this route is in Ex.-ATC-Aeschbacher-3, Attachment 21 (PSC REF#: 169150).

**S-3 Underground** is a variation on the Montessori USH 45 Underground Route that turns east on Wisconsin Avenue and proceeds north beneath 92nd Street through MRMC to the new MC Substation site. Estimated costs for this route were not entered by ATC on the record.

### **North-South Route Findings and Analysis**

All of the routes other than Route C(1) utilize undergrounding to various degrees to mitigate alleged harm from an overhead line and take varying routes from the common origin point in the 96<sup>th</sup> Street Substation to reach the new MC Substation site. Intervenors MMS, Milwaukee, and Milwaukee County support undergrounding primarily south of Bluemound Road. PFP believes the most cost-effective, all underground route is in the public interest and should be selected.

MMS suggested a slightly more direct underground alternative (Route C-Alt-1) through the parking lots east of the Parkside Pool Apartments, MMS, and St. Therese Church. MMS offered to donate an easement without charge, but the church only indicated a willingness to negotiate for an easement for a buried line. South of Bluemound Road, the impacts of this route compare closely to that of Route C(2), but it offers the advantages of further distance from the homes on the east side of 95<sup>th</sup> Street and avoidance of the temporary traffic disruption of construction work in 95<sup>th</sup> Street required for Route C(2). North of Bluemound Road, the proposed route continues underground along USH 45 rather than being buried under 95<sup>th</sup> Street, Wisconsin Avenue, and 94<sup>th</sup> Street, thereby avoiding traffic disruption on those streets. The MMS alternative may have a slightly reduced cost and cause less traffic disruption compared to other underground route options for the southern portion of the North-South route options, but it

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is unclear whether cost savings will accrue if jack and bore construction is necessary to cross under the USH 45 exit ramp to Wisconsin Avenue.

MMS also proposed as an alternative undergrounding the segment along the east edge of USH 45 (Montessori USH 45 Underground). ATC rejects this alternative due to mutual heating problems with WEPCO distribution lines and compression issues and significant extra difficulty in construction and maintenance.

The city of Milwaukee and the chief executive officer of Wisconsin Energy Corporation supported Routes S-2 and S-3. While similar to Route C(2) and the Montessori USH 45 Route, respectively, in undergrounding past MMS, they differ by proposing undergrounding between Wisconsin Avenue and Watertown Plank Road, through the MRMC grounds. This segment, however, has the prospect of interfering considerably with MRMC infrastructure, expansion plans, and emergency vehicle access.

Residential buildings are located throughout the area of the project in close proximity to all of the routes. At least 167 homes are within 300 feet of Route D's centerline. On Segments 11 and 11UG, the Parkside Pool Apartments would be between 26 and 50 feet from the centerline of the ROW. While undergrounding Route D may alleviate the concerns of many nearby property owners along the route, Route C(1) is preferable because it passes the fewest occupied dwelling units.

With respect to the North-South route options generally, most of the parties and members of the public prefer undergrounding with its associated temporary disruptions to the presence of overhead transmission lines. MMS is especially vigorous in seeking undergrounding of transmission lines near its school and day care center, located between Segments 12b and 12UG.

It alleged that overhead lines could drive away current and prospective students due to a fear of health impacts from magnetic fields, and thereby threaten the school's continued existence in as little as two years. MMS described its previous unsuccessful efforts to relocate the school. MMS argues that its closing would cause numerous external costs: loss of gym and parking rental income to St. Therese Parish, individual hardships to its terminated employees, loss of revenues to MMS's local supply vendors, additional student education costs in the public schools, and an empty building and anchor institution that could blight the neighborhood and cause reduced property values.

MMS also asserts that an overhead line would conflict with its plans for a proposed performing arts building. ATC, however, introduced evidence that those plans are on hold due to the proposed WisDOT USH 45 expansion plans. ATC notes that overhead line Routes C(1) and C(3) would not interfere with those plans. St. Therese Parish claims that the southern overhead segment of Route C(1) would impair the church's ability to use its lands to the west of the church for athletics and church fairs.

The Milwaukee Common Council and Milwaukee County support an underground route consistent with the position taken by MMS, St. Therese Parish, and neighboring residents, noting that residents and institutions along USH 45 are already subjected to high levels of noise, air, and aesthetic pollution, and because of fears of harmful human health effects of overhead transmission lines.

### **Commission Route Determinations**

The Commission must consider the route alternatives advanced and the views of the applicant, intervenors, and members of the public to determine which East-West and North-South routes and design are “in the public interest considering alternative . . . routes, individual hardships, engineering, economic, safety, reliability and environmental factors.” Wis. Stat. § 196.491(3)(d)3. Because of the highly urbanized character of the area, the placement of the route cannot avoid an impact on some interest to some degree.

Given the requirements for issuance of a CPCN under Wis. Stat. §§ 1.12(6) and 196.491(3)(d)3., 4., 5., and 6., the Commission concludes that Route B(1), Underwood Creek Overhead, which includes Segments 8a, 9a, 9b, 4, 5, 6, and 7, should be authorized for the East-West route. Route Segment 8a is selected over Segment 8b because it affects fewer homes than the latter segment and only causes a minimal impact on forested wetlands.

Given the requirements for issuance of a CPCN under Wis. Stat. §§ 1.12(6) and 196.491(3)(d)3., 4., 5., and 6., the Commission concludes that Route C(1)—Highway 45 Overhead, which includes Segments 11, 12a, 12b, 13, 14, the eastern part of 23UG, 18UG and 19UG,<sup>13</sup> should be authorized as the North-South route, with the modification that Segment 14 transition to underground near its north junction and proceed easterly along 23UG. The transition to underground should be at a point ATC deems compatible with cost-effectiveness and engineering considerations required by the project.<sup>14</sup>

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<sup>13</sup> If it is more efficient or economical, ATC may use the ROW of Segments 6 and 7 for undergrounding of the line in lieu of Segments 23UG (part), 18UG, and 19UG.

<sup>14</sup> Placing this portion of the transmission line underground is needed to ensure compliance with the Level One Trauma Center Exception Guide that is an essential component of need for this project.

Because few people welcome a transmission line on or near their property, the proposed project in this urban area cannot avoid some unwanted impacts. The key fact, however, is that the line is needed. Nobody contests that fact. The Commission must determine which route is in the public interest based on multiple factors mandated by law, many of which point in different directions. For this CPCN project, the Commission finds cost to be a dominant, significant statutory factor. Route B(1)'s projected \$6.5 million cost is approximately half the cost of the next lowest-cost East-West route. Selecting another route would shift millions of dollars of extra costs for underground lines to ratepayers in the ATC footprint<sup>15</sup> far removed from the Milwaukee area, who would not benefit from a more aesthetically pleasing project area. The Commission must evaluate costs from a statewide perspective, and it finds that no other East-West route offers benefits commensurate with its substantial additional cost.

Moreover, Route B(1) has other advantages. The losses of forested wetlands and upland woodland in the Underwood Creek Parkway are small, and DNR is willing to issue permits for this route. The line can be sited with a minimum of impact on few nearby residences, and its western interconnection point can be well screened. To the extent part of the overhead line parallels a recreational trail, this aesthetic and visual impact is reasonably limited considering the congested area involved.

Though Route B(1) traverses the Milwaukee County facilities parcel between STH 100 and USH 45, the potential development impacts of a transmission line on that parcel and others that Wauwatosa projected are speculative, affected with methodological flaws, and more than

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<sup>15</sup> The Commission officially notices that ATC's footprint for its transmission lines covers most of eastern Wisconsin and the Upper Peninsula of Michigan, and its tariffed interstate electric transmission rates, where the costs of the project would be recovered, are subject to the jurisdiction of the Federal Energy Regulatory Commission.

countered by the testimony of ATC's expert witness. In general, the testimony furnished on property values by Wauwatosa's witness was unconvincing because it was based on four articles and lacked a technical foundation, such as a highest and best-use analysis. The witness took no account of how underground lines also might affect future uses entailing foundational or other digging. Wauwatosa did not propose to reduce residential property valuations due to the proximity of transmission lines. ATC's witness showed that any impact of overhead lines on property values was limited at best. Finally, market evidence and professional literature did not bear out assertions that parcels are harder to market due to the proximity of transmission lines. Transmission lines have not been shown in this record to significantly reduce property values of campus-type office properties as shown in comparable sales evidence.

Another key consideration is that use of underground construction should in general be limited to where it is technically necessary and no reasonable options exist. Of more than 11,000 miles of transmission lines in Wisconsin, less than one percent is underground, usually due to a reliability issue, building clearance concerns, or a nearby airport. Underground lines are not a panacea; they have their own problems such as limited access and ROW congestion.

Turning to the North-South routes, the Commission determines that the concerns motivating demands for underground transmission lines are not justified. A "perception of harm" from electromagnetic fields (EMF) emanating from overhead transmission lines is not rationally founded and cannot be the basis of a Commission decision that must be based upon fact. The claim by MMS that "perception is the reality" only introduces a slippery slope of unreasoned, if not simply emotion-based, decision-making. All the electrical appliances and equipment used in

homes, factories, and offices emit EMF. Biological and other scientific studies to date have not established a causal link between EMF exposure and human disease or injury.

MMS furnished witnesses to make its argument that placement of an overhead line along the western edge of its property would cause the school to go into a “death spiral,” closing in about two years due to allegedly huge losses in enrolled students. The Commission finds that the MMS witnesses engaged in a substantial amount of speculation on this point and were not persuasive. No evidence in the record shows a widespread belief among parents of MMS students that the transmission lines would be dangerous to their children. Parents do send their children to nearby parochial schools situated near power lines. That evidence suggests MMS parents are not likely to “flee” a very successful school like MMS whose educational philosophy they endorse. The enrollment declines forecasted were not substantiated by empirical data, and no evidence was presented that any other private school in the country has ever closed because a transmission line was located near the school. The line placement in this case would still have the structures 180 feet from the school. The Commission finds that a transmission line will not materially impair MMS’s use of its property.

The difference in costs among the North-South routes, like the difference in the East-West route costs, is an important, dominant factor. The same comparison applied to the North-South routes shows that Route C(1)—Highway 45 Overhead, as modified, at a cost of \$10.63 million, would be far less costly than the other proposed route options. As discussed previously, undergrounding the transmission lines would provide localized benefit for which ratepayers elsewhere, such as in Green Bay, would ultimately have to pay.

The Commission concludes that upon consideration of all the facts noted here and supported in the record, the public convenience and necessity, as defined by the applicable statutes, is best served by certifying Route B(1) and Route C(1)—Highway 45 Overhead, as modified.

ATC proposes to commence construction of the two 138 kV transmission lines in the second quarter of 2013 and estimates the cost at approximately \$22.7 million as set out below:

| <u>Description</u>                     | <u>Amount</u>              |
|--|----------------------------|
| <b><u>Capital Cost</u></b>             |                            |
| North-South Route C(1) Modified        | \$ 10,623,950              |
| East-West Route B(1) (with Segment 8a) | \$ 6,502,550               |
| ATC-Related MC Substation costs        | \$ 3,291,800 <sup>16</sup> |
| Pre-Certification Cost                 | <u>\$ 2,222,800</u>        |
| <b><u>Total Capital Cost</u></b>       | \$ 22,641,100              |
| <b><u>Removal Cost</u></b>             | \$ 5,300                   |
| <b><u>O&amp;M Cost</u></b>             | <u>\$ 23,700</u>           |
| <b>Gross Project Cost</b>              | \$ 22,670,100              |

### Conditions

The Commission finds it necessary to impose conditions to protect the environment during construction and ensure compliance with Wis. Stat. §§ 44.40 and 196.491(3)(d).

The Commission concludes that clearing or trimming of oak trees between April and October could spread oak wilt to oak trees present in the surrounding woodlands. Clearing trees

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<sup>16</sup> The total ATC-related MC Substation cost includes the removal cost and a portion of operation and maintenance costs as set forth in the cost breakdowns in the table.

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.

Suitable habitat for a rare snake exists in the project area. Because the project has the potential to impact the snake species, avoidance measures should be taken.

### **Certificates**

The Commission grants WEPCO a CA for a new 138/13.2 kV distribution substation, as described in its revised application, at a total estimated cost of \$10.864 million.

The Commission grants ATC a CPCN for construction of Route B(1) at an estimated total cost of \$6.5 million, and for construction of Route C(1)-Highway 45 Overhead, as modified, at an estimated cost of \$10.63 million. Combined with \$2.223 million in pre-certification costs and \$3.307 million in related ATC substation construction costs, the total estimated cost under this CPCN is \$22.67 million.

### **Order**

1. WEPCO is authorized to construct and place in operation the proposed substation facility at a total estimated cost of \$10.864 million. ATC is authorized to construct and place in operation the transmission lines approved in this Final Decision at a total estimated cost of \$22.67 million.

2. The proposed substation location, and the routes and overhead and underground configuration of the transmission lines as modified by this Final Decision, are approved.

3. If either applicant cancels all or part of the project, it shall provide prior notice to the Commission. Either applicant shall notify the Commission and receive the Commission's prior consent before entering into any new arrangement, not already part of the approved project,

with another party regarding ownership or operation of the proposed facilities. All of the joint applicants' commitments and all of the conditions of this Final Decision apply to the applicants and to their successors, assigns, agents, and contractors.

4. All necessary federal, state, and local permits shall be secured by each applicant prior to beginning construction.

5. ATC may propose minor adjustments in the approved routes for the protection of social, cultural, or environmental resources, but any changes in alignment from the approved centerlines may not affect resources or cause impacts not discussed in the EA, nor may they affect new landowners who have not been given proper notice and hearing opportunity. For each proposed minor centerline adjustment, ATC 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 ATC's communications with the affected landowners.

6. This authorization is for the specific substation and the specific transmission lines, as described in this Final Decision, at the stated cost of each of those parts of the total project. Should the scope, design, or location of either part of the project change significantly, or if it is discovered or identified that any project part cost, including *force majeure* costs, may exceed the estimated cost of that part by more than 10 percent, the relevant applicant shall promptly notify the Commission as soon as it becomes aware of the possible change or cost increase.

7. Applicant ATC shall work with all landowners, to the extent practicable, regarding the best placement of facilities on their properties.

8. ATC's clearing or trimming of oak trees shall take place outside of the April through 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.

9. To avoid harming the rare snake species that could be present in the project area, ATC shall:

a. Locate poles outside of wetland areas and suitable overwintering habitat, and complete work during the snake's inactive period from approximately the beginning of November to mid-March.

b. Within suitable upland habitat, install exclusion fencing prior to mid-March of each year to prevent snakes from entering the construction workspace.

c. For poles and construction activity within wetlands, use a combination of exclusion fencing followed by snake removals during the snake's active season prior to entry into wetland areas regardless of when construction will occur.

10. After construction, ATC shall submit geographic information systems files compatible with state government standards that contain the location of each transmission structure, the ROW centerline, and the location of the substations. ATC shall provide this data to the Commission in the next quarterly report after the information becomes available.

11. Beginning with the quarter ending June 30, 2012, and within 30 days of the end of each quarter thereafter and continuing until their respective facilities are operational, each applicant 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.

12. Upon completion of its part of the project, each applicant shall notify the Commission and report the actual costs segregated by plan account and comparable to the cost breakdown included in this Final Decision. For any account or category where actual cost deviates significantly from that authorized, the final cost report shall itemize and explain the reasons for the deviation.

13. The CPCN for ATC, and the CA for WEPCO, are valid only if construction commences no later than one year and two years, respectively, after the latest of the following dates:

- a. The date this Final Decision is served.
- b. The date when the applicant has received every federal and state permit, approval, and license that is required prior to commencement of construction under the CA or CPCN.

c. The date when the deadlines expire for requesting administrative review or reconsideration of this Final Decision and of the permits, approvals, and licenses described in par. b.

d. The date when the applicants received the Final Decision, after exhaustion of all avenues of judicial review concerning the CA or CPCN and the permits, approvals, and licenses described in par. b.

14. This Final Decision takes effect the day after the date of service.

Dated at Madison, Wisconsin, this 20<sup>th</sup> day of March, 2013.

By the Commission:



Sandra J. Paske  
Secretary to the Commission

SJP:MV:cmk:DL:00645520

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.<sup>17</sup> 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

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<sup>17</sup> 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.

**WISCONSIN ELECTRIC POWER COMPANY**

Kate Phillips  
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**AMERICAN TRANSMISSION COMPANY LLC and  
ATC MANAGEMENT INC.**

Trevor Will  
Foley & Lardner LLP  
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Milwaukee, WI 53202-5306  
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(Fax: 414-297-4900)  
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**CITY OF MILWAUKEE and  
ALDERMAN MICHAEL J. MURPHY**

Thomas D. Miller  
200 East Wells Street, Room 800  
Milwaukee, WI 53202  
(Phone: 414-286-2601 / Fax: 414-286-8550)  
(Email: [tmiller@milwaukee.gov](mailto:tmiller@milwaukee.gov))

**CITY OF WAUWATOSA**

Paul G. Kent  
Margaret I. Hoefler  
Stafford Rosenbaum LLP  
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Madison, WI 53701-1784  
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**PEOPLE FRIENDLY POWER**

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MILWAUKEE COUNTY

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MILWAUKEE MONTESSORI SCHOOL

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WISCONSIN LUTHERAN COLLEGE

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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>.

Michael Varda

Ali Wali

Marilyn Weiss

Public Service Commission of Wisconsin

610 North Whitney Way

P.O. Box 7854

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(Varda Phone: 608-267-3591)

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(Email: [Mike.Varda@wisconsin.gov](mailto:Mike.Varda@wisconsin.gov); [Ali.Wali@wisconsin.gov](mailto:Ali.Wali@wisconsin.gov); [Marilyn.Weiss@wisconsin.gov](mailto:Marilyn.Weiss@wisconsin.gov)

)

# Western Milwaukee County Project

## Docket 5-CE-139

### Figure 1



**Proposed Milwaukee County Substation**

**Milwaukee County Power Plant**

**MRMC**

**96th Street Substation**

**KEY**

- 6 **Overhead Segment**
- - - 1UG **Underground Segment**
- **Existing Transmission Lines**
- **Existing Substation**
- H **Milwaukee Regional Medical Center (MRMC)**

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