Public Service Commission of Wisconsin

Lon Roberts, Chairperson
Mike Huebsch, Commissioner
Rich Zipperer, Commissioner

4822 Madison Yards Way
P.O. Box 7854
Madison, WI 53707-7854

May 24, 2018

Mr. Thomas Malanowski, Regulatory Relations Manager
American Transmission Company LLC
W234 N2000 Ridgeview Parkway Court
Waukesha, WI 53188-1022

Re: Joint Application of American Transmission Company, ITC Midwest LLC, and Dairyland Power Cooperative, for Authority to Construct and Operate a New 345 kV Transmission Line from the Existing Hickory Creek Substation in Dubuque County, Iowa, to the Existing Cardinal Substation in Dane County, Wisconsin, to be Known as the Cardinal-Hickory Creek Project
5-CE-146

Dear Mr. Malanowski:

On April 30, 2018, American Transmission LLC, ITC Midwest LLC and Dairyland Power Cooperative (ATC, ITC, Dairyland, respectively, and together the applicants) filed an application with the Public Service Commission of Wisconsin (Commission) for authority to construct and place into operation a new high-voltage transmission line, referred to by the applicants as the Cardinal-Hickory Creek Transmission Line Project. The project would include construction of a new 345 kilovolt (kV) transmission line from the Cardinal Substation in Dane County, Wisconsin, to the Hickory Creek Substation in Dubuque County, Iowa, connecting to a new intermediate substation to be constructed in Grant County, Wisconsin and associated facility upgrades and modifications.

The Commission and the Wisconsin Department of Natural Resources (DNR) reviewed the application to construct the facilities described above. The Commission, under Wis. Stat. § 196.491(3)(a)2. and Wis. Admin. Code § PSC 111.51, finds the Certificate of Public Convenience and Necessity (CPCN) application to be incomplete because of items in the attached list, which were identified as missing, incomplete, or requiring clarification.

While both agencies' staff devoted considerable time to reviewing the application, the attached list should not be considered final. It is possible that subsequent staff review may identify additional information or areas requiring clarification in the form of a data request. The information requested in the attachment to this letter is necessary to continue with the timely review and processing of the CPCN application. This information is required to complete the record from which the Commission will make its decision whether to approve, modify, or deny the CPCN application under Wis. Stat. § 196.491(3)(d). Providing this information in a timely manner will allow the Commission's review of the CPCN application and the DNR's review of other permit applications to proceed.

Wisconsin Stat. § 196.491(3)(a)2. provides that an applicant may supplement and re-file an application that the Commission deems incomplete. The Commission, however, will not consider the application complete until the applicants have met all of the CPCN application standards to the satisfaction of the Commission and DNR. Commission and DNR staff are available to meet with the applicants to clarify and discuss any of the completeness items prior to a new submission.

Prior to filing any application supplement, please consult with Commission staff regarding the form in which such information is presented. Depending on the extent of the revisions, the application supplement may require the re-filing of some or all of the application documents.

If you have any questions regarding this letter, please contact the docket coordinator Akanksha Craft at (608) 267-9509 or Akanksha.Craft@wi.gov.

Sincerely,

for

Martin R. Day
Administrator
Division of Energy Regulation

MRD:JAL:jlt:DL: 01636014

Attachment

Docket 5-CE-146
Items Identified as Missing, Incomplete, or Requiring Clarification
Items Related to Routing and Siting

01.1. (Application, all sections related to routing.) Reformat all application materials to consistently reflect all available route alternatives. For example, the "other route segments" are not represented in all areas of the application. It is our understanding that "other route segments" are additional route segments requested by RUS. If this is not the case, provide an explanation. For additional guidance, refer to the decision matrix for docket 5-CE-142 (PSC REF#: 232853) regarding route segments that can be combined in different ways to create several unique route alternatives that would be evaluated by the Commission.

01.2. (Application, page vii, Application Appendix J, Table of Contents.) Identify all items included in Appendix J in the Table of Contents.

01.3. (Application page 5, Executive Summary Section D.a..; AFR Section 1.9.) The map does not match the map provided in Appendix A, Figure 1. Include the most current map in the application.

01.4. (Application, page 5, Executive Summary Section D.a.; AFR Section 1.9.) Identify the yellow route segments as displayed in the map provided in this section.

01.5. (Application, page 8; AFR Section 1.2.) Identify the contractual agreements the applicants are seeking between developers and utilities to construct, finance, lease, use, or own transmission facilities. PSC confidential procedures may be used for the submittal of confidential information.

01.6. (Application, page 8; AFR Section 1.2.) Identify which of the applicants would construct, finance, lease, use, and own the proposed project facilities.

01.7. (Application, page 9; AFR Section 1.4.) Provide a list of all cities, villages, and townships and their respective counties that the proposed project, any associated facilities, and any potential construction activity would cross or potentially impact. The tables provided only appear to include cities, villages, and townships potentially impacted by the proposed project routes.

01.8. (Application, page 12, Appendix B; AFR Section 1.6.2.) Include potential impacts from proposed substation sites in Table 8 of Appendix B.

01.9. (Application, page 13; AFR Section 1.9.) The map on page 13 does not match the map provided in Appendix A, Figure 1. Include the most current map in the application.

01.10. (Application, page 14; AFR Section 1.6.4.) For the resources listed in Section 1.6.4, identify the route segments that could impact each resource. All special or unique areas mentioned elsewhere in application materials or comments sent to the applicant should be included in this section (e.g. Dead Lake, Wood Duck Slough, Driftless Region of Wisconsin, Nelson Dewey Important Bird Area, Mississippi Flyway, etc.). For all of the areas listed in this section, include a general description of each area. If it is elsewhere in the application, provide a reference to that part of the application.

01.11. (Application, page 14, 143, Sections 1.6.4 and 7.7, AFR Section 1.6.4 & 7.7.1.) In Sections 1.6.4 and 7.7, for each route alternative include all areas that may be impacted by any portion of the proposed project facilities. For example, include areas that could be impacted by proposed laydown areas, off-ROW access roads, substations, etc.

01.12. (Application, page 14, Section 1.6.5, AFR Section 1.6.5.) For each route alternative, identify areas of residential concentrations and urban centers that would be crossed or potentially impacted by the proposed project.

01.13. (Application, page 15, Section 1.6.6, AFR Section 1.6.6.) In this section, include a description regarding transmission configurations crossing the Mississippi River. Include

height of structures, type of structures, configuration of transmission lines, height of transmission lines, type of foundations, and season of year these structures would be constructed. Include a reference to where the figures are in the application.

01.14. (Application, page 15, Section 1.6.6, AFR Section 1.6.6.) In this section, include a general description of transmission configuration by route alternative. For each route alternative, include a range of structure heights, types of foundations, heights of conductors, span lengths, etc. Include a reference to where the figures are in the application. Include the expected life of the proposed facilities.

01.15. (Application, page 15, Section 1.6.7, AFR Section 1.6.7.) When discussing the proposed project ROW, provide the requested information by proposed route alternative. Include the average width (feet), length (miles), and total area (acres) of the proposed ROW.

01.16. (Application, page 16, Section 1.7.2, AFR Section 1.7.2.) Include the Federal Environmental Impact Statement and the Federal Record of Decision in the table. Include a description of the activities, permit types, and statuses of each WDNR permit the applicants are seeking in the table. Include the approval the applicants are seeking from PSC in the table. Include the state approvals the applicants are seeking in Iowa as a part of the proposed project. Include a general timeline for each of the regulatory approvals sought in Wisconsin, in Iowa, and for RUS.

01.17. (Application, pages 16 and 122, Sections 1.7.2 and 6.5.2, AFR Section 6.5.2.) Provide the draft biological assessment that was submitted to RUS and cooperating agencies referenced in the application.

01.18. (Application, page 22, Section 1.7.6, AFR Section 1.7.6.) Identify locations of WisDOT high-quality prairies within the proposed project area. If available, provide associated GIS shapefiles.

01.19. (Application, page 24, Section 1.7.6, AFR Section 1.7.6.) In this section, provide a description of the general routing and siting issues identified in the consultations with WisDOT. Identify the route segments that could require alternative alignments as a result of WisDOT corridor sharing and crossings.

01.20. (Application, page 25, Section 1.8.1, AFR Section 1.8.1.) In the table identifying project activity and preliminary date, include the start and end dates of on-site disturbance as identified in the Endangered Resources Review, Appendix J. Identify and explain whether proposed construction is anticipated to start greater than one year after a Commission decision.

01.21. (Application, page 26, Section 1.9, AFR Section 1.9.) Along Segment G, in the town of Elk Grove, Lafayette County, there are a number of parcels in cropland owned by the Board of Regents of State Colleges. Provide the following:

a. Any additional information regarding communication between the applicants and the Board of Regents.
b. Contact information for the Board of Regents, if known.
c. Any information regarding the use of the land, including experimental or research.

01.22. (Application, page 26; AFR Section 1.9.) The wetland, waterway, and open water delineation GIS feature classes submitted to the Commission do not include the data provided in the corresponding WDNR Water Resources for Project Permits tables (PSC REF#: 341436). Provide updated versions of the following GIS feature classes to include populated

fields for all data submitted in Tables 1, 2A, 2B, and 2C: E_Wetlands_Delin; E_Waterways_Delin; E_OpenWater_Delin.

01.23. (Application, page 26; AFR Section 1.9.) Provide GIS data for proposed route alignments for the Iowa segments of the project.

01.24. (Application, page 26; AFR Section 1.9.) Provide GIS data for all resources identified in Sections 1.6.4 and 7.7 of the application. If a piece of data for a resource has already been submitted, identify the feature class(es) in which those records can be found.

01.25. (Application, page 26; AFR Section 1.9.) Provide correspondence confirming that zoning information for the village of Livingston in GIS mapping format is unavailable.

01.26. (Application, page 26; AFR Section 1.11.4.5.) Provide a mailing list for applicable state and federal agencies.

01.27. (Application, page 26; AFR Sections 1.9 and 1.10.) Provide maps of the proposed routes RUS is considering and the corresponding GIS data for those routes. Provide additional information for any differences between the routes that RUS is considering and the route alternatives presented in the application to the Commission.

01.28. (Application, page 64; AFR Section 4.) Include project costs for each route alternative.

01.29. (Application, page 64; AFR Section 4.) Provide the estimated percentage of the total project cost that would be allocated to Wisconsin load. In addition, provide a breakdown of the estimated cost allocated to ATC, DPC, and NSP customers as a whole.

01.30. (Application, page 68; AFR Section 5.1.) Include the year the applicants started screening possible transmission line routes for the proposed project.

01.31. (Application, page 68; AFR Section 5.1.) In this section, include a list of route segments that were field inspected, or provide a reference to where that information is in the application. Provide an explanation for the route segments that were not field inspected.

01.32. (Application, page 69; AFR Section 5.1.2.) In this section, identify if endangered resources were considered when screening possible transmission line routes.

01.33. (Application, page 69; AFR Section 5.1.2.) Provide references to additional information within the application describing the input from local landowners, public officials, and other stakeholders as referenced in this section.

01.34. (Application, page 70; AFR Section 5.1.) In the section discussing the Mississippi River crossing, include a discussion of the necessary federal permitting process. Include the anticipated date when a federal decision would be made. Include a reference to the map that shows the proposed Mississippi River crossings.

01.35. (Application, page 70; AFR Section 5.1.) Provide the Alternative Crossings Analysis and Macro-Corridor Study referenced in this section.

01.36. (Application, page 70; Figures 3A, 3B, 4A, 4B, AFR Section 8.4.) The narrative mentions two locations for the crossing of Mississippi River, at Nelson Dewey and Stoneman substations, but only a common route is shown at Nelson Dewey in Figures 3 and 4. Provide an explanation.

01.37. (Application, page 73; AFR Section 5.2.) Identify which of the applicants (ATC, ITC, DPC) would have easement rights for the proposed project facilities. Provide an example of a standard easement agreement that would be presented to landowners.

01.38. (Application, page 73; AFR Sections 5.2.1, 5.2.2, and 5.2.3.) For each route segment, provide all of the information requested in AFR Sections 5.2.1, 5.2.2, and 5.2.3 for each

existing easement that would change. Identify, by route segment, the easements that would be retained and the easements that would be released.

01.39. (Application, page 74; AFR Section 5.3.6.) Provide illustrations clearly indicating shared right-of-way configurations, similar to PSC REF#: 203883 and PSC REF#: 203884.

01.40. (Application, page 74; AFR Section 5.3.1 and Appendix C.) Provide dimensions and identify transmission structure types for figures 1-14 in Appendix C, PSC REF#: 203883 and PSC REF#: 203884.

01.41. (Application, page 83; AFR Section 5.3.1.) Provide more information regarding which structures would have a galvanized finish and which structures would have a weathering steel finish.

01.42. (Application, page 83; AFR Section 5.3.1.) Identify areas within the proposed project that could have modified structure types and/or conductors that could avoid or minimize impacts to birds. For example, proposed route segments near important bird areas (IBA). Discuss whether an Avian Mitigation Plan would be implemented for the proposed project. If so, provide the Avian Mitigation Plan as a part of the application. Identify if bird diverters are included in the proposed project, and if so, where they would be located.

01.43. (Application, page 83; AFR Section 5.3.1.) In this section, identify and explain proposed changes to existing structures. By route segment, provide details of changes to structure heights and the amount of structures. Include a reference to the figure drawings of structures.

01.44. (Application, page 88; AFR Section 5.3.6.) For proposed project facilities, include a maximum distance (feet) of where the applicants would locate structures on private property along route segments following roads and highways. Provide a more specific application reference to the exceptions mentioned in this section.

01.45. (Application, page 89, Appendix B, Tables 1-7; AFR Section 5.4.) Consistently identify the type and date of source material used to determine table inputs in both the narrative and the impact tables.

01.46. (Application, page 89, Appendix B, Table 1; AFR Section 5.4, Table 1.) Reformat and resubmit Table 1 so that the table column headings match the format provided in the AFR. For example, include column "Sub-segment or segment length" and use shared/existing as provided in the AFR. Refer to the example ROW figure in the AFR to correctly identify shared ROW, existing ROW, new ROW, and proposed total ROW. Refer to Sample Table 1 in the AFR to correctly represent sub-segments in the table. (Application, page 90; AFR Section 5.4.) In the narrative description of Table 1, include the total estimated acres that would be shared with existing ROW whenever the percent of shared ROW is identified. After reformatting Table 1 as directed in 01.45, the percentages in this narrative may need to be updated.

01.47. (Application, page 91, Table 4; AFR Section 5.4.) Explain why Barneveld schools are not included in the table for the preferred route.

01.48. (Application, page 91, Appendix B, Table 2; AFR Section 5.4.) Include the applicants' definition of clearing in the list of assumptions for Table 2 as well as in the narrative of Section 6.1.

01.49. (Application, page 91, Appendix B Table 3; AFR Section 5.4.) Change "existing" to "shared."

01.50. (Application, page 92; AFR Section 5.5.1.) Describe the construction sequence for any given construction spread from commencement of construction through completion of construction.

01.51. (Application, page 92; AFR Section 5.5.) Include a description of the vegetation management activities that would occur during the maintenance phase of the proposed project facilities. Include the type of machinery that would be used, how the vegetation would be managed (IVM, wire zone/border zone, clear cut, etc.), the vegetation management cycle implemented, the type of herbicides used (selective/nonselective), how the herbicides would be used (broadcast/selective spray), and mitigation measures that could avoid or minimize impacts from vegetation management activities conducted during the maintenance phase.

01.52. (Application, page 92; AFR Section 5.5.2.) Describe the construction impacts associated with each construction activity described in Section 5.5.2.

01.53. (Application, page 92; AFR Section 5.5.2.) Identify and describe minor construction activities referenced in Section 5.5.2.

01.54. (Application, page 93; AFR Section 5.5.2.) Provide additional information regarding sky trims and side trimming. Provide an example of when a landowner request would not be implemented. Identify whether the herbicide utilized would be selective or nonselective.

01.55. (Application, page 93; AFR Section 5.5.2.) In the Clearing of ROW section, provide the total estimated acres that would be cleared of herbaceous vegetation and the total estimated acres that would be cleared of woody vegetation.

01.56. (Application, page 95; AFR Section 5.5.2.) For the existing lines to be removed, clarify whether the poles would be cut off at grade or completely removed and filled. If it would be filled, ensure that wetland impacts are accounted for in DNR Table 1. Also, clarify whether any matting for removal of existing poles is accounted for in DNR Table 1.

01.57. (Application, page 95; AFR Section 5.5.2.) Describe mitigation options and/or BMPs that would be implemented to avoid or minimize the impacts from construction activities described in Section 5.5.2.

01.58. (Application, page 95; AFR Section 5.5.2.) In the Construction Matting section, include the estimated total acres of area that would be matted as well as the estimated duration these areas would be matted.

01.59. (Application, page 95; AFR Section 5.5.2.) In the Cleanup and Restoration of ROW section, provide a reference to where additional information regarding these activities is in the application.

01.60. (Application, page 95; AFR Section 5.5.2.) In the Removal of Existing Facilities section, identify which route segments would have facilities removed or provide a reference to where this information is in the application.

01.61. (Application, page 95; AFR Section 5.5.2.2.) If applicable, update the Section reference.

01.62. (Application, pages 101-107; AFR Section 5.6; 5.7, 5.8.) Reformat section headings and imbedded references to sections in the application to match the AFR.

01.63. (Application, page 102; AFR Section 5.6.) Include staging areas (laydown yards) and temporary work space sites in Table 8 of Appendix B.

01.64. (Application, page 102; AFR Section 5.6.) In Table 5.5.5-1, identify whether the footprint of any of these areas would be different from the typical dimensions mentioned.

01.65. (Application, page 103; AFR Section 5.5.) Discuss the role eminent domain will play in the temporary acquisition of farm land for off-ROW access roads and laydown yards. As part of the response to this item, explain whether acquisitions of land for off-ROW access roads and laydown yards would be acquired only from willing sellers.

01.66. (Application, page 103, Appendix B, Table 8; AFR Section 5.7.3.) Provide a justification (e.g. topography, avoid stream crossing) for each proposed off-ROW access road.

01.67. (Application, page 104; AFR Section 5.) Clarify parcel ownership of the Proposed Hill Valley Substation site. The provided parcel map indicates a different landowner.

01.68. (Application, page 104; AFR Section 5.) Include in the application a description of all the potential environmental impacts associated with the two Hill Valley Substation sites.

01.69. (Application, page 108; AFR Section 6.1.) Correct the reference to the Land Cover table.

01.70. (Application, page 108; AFR Section 6.1.) Include the applicants' definition of clearing.

01.71. (Application, page 108; AFR Section 6.1.) Provide an explanation for switching between the terms "forested" and "woodland" throughout the application and impact tables.

01.72. (Application, page 110; AFR Section 6.1.3.) Update to reflect the most current quarantine area in Wisconsin for the emerald ash borer.

01.73. (Application, page 110; AFR Section 6.1.3.) Explain why woody vegetation is proposed to be chipped and scattered in wetlands and floodplain, and why removal methods are not feasible. Provide the proposed depth of chip cover. Explain what steps would be taken to ensure chips do not enter waterways.

01.74. (Application, page 111; AFR Section 6.2.) Correct the reference to the Land Cover table.

01.75. (Application, page 113; AFR Section 6.2.2.) Provide an explanation of pre-construction condition seed mixes referenced in this section. Identify whether the high-quality/remnant prairie areas noted in Section 6.2.1 would be treated differently during construction and restoration than the low-quality grasslands within the project area.

01.76. (Application, page 113; AFR Section 6.3.1.) Wetlands to be crossed are identified for each route. For "Other Segments" provide the number of wetlands crossed for each segment. Also, update the narrative accordingly.

01.77. (Application, page 113; AFR Section 6.3.1.) Discuss the percentage of wetlands on each route segment that were not accessible for field investigations and thus only evaluated by off-site methods.

01.78. (Application, page 114; AFR Section 6.3.3.) There are significant slopes that lead to regulated resources in this project. Provide additional details on the sediment and erosion control BMPs that would be used to prevent sedimentation from entering wetlands and waterways.

01.79. (Application, page 117; AFR Section 6.3.4.2.) Identify which ASNRI designated wetlands were also identified as degraded, and whether the routes impact the degraded or non-degraded portions. Update the narrative and Table 2 accordingly.

01.80. (Application, page 117; AFR Section 6.3.4.3.) Provide further details on the site restoration activities that would occur in wetlands that would be disturbed.

01.81. (Application, page 117; AFR Section 6.3.4.3.) Clarify whether matting would be used in wetlands with dry, stable soils.

01.82. (Application, page 117; AFR Section 6.3.4.3.) Include the BMPs that would be implemented to minimize impacts to significant or high-quality wetlands. Include the applicants' standard environmental protection practices referenced in this section.

01.83. (Application, page 118; AFR Section 6.4.) Provide additional information on the Mississippi River crossings, including whether the crossing would span the entire waterway, or if poles would be located in the waterway or on an island, how tall the poles would be here, and how the crossing would be accomplished, including if any equipment would be needed in the waterway to facilitate construction.

01.84. (Application, page 118; AFR Section 6.3.4.3.) The narrative states "…resulting in conversion to wet meadow or shrub-carr wetland types." Clarify whether shrubs would be allowed to re-generate within the ROW, and not be continuously cleared, in areas where new ROW is needed and the land would be cleared of trees.

01.85. (Application, page 118; AFR Section 6.4.1.) Waterways to be crossed are identified for each route. Clarify how use of "Other Segments," would affect the number of waterways crossed compared to other route segments. Update the associated narrative.

01.86. (Application, page 118; AFR Section 6.4.1.) Clarify whether a stormwater pond is proposed for the Hill Valley Substation site. If so, clarify if the pond, at either site, would be located within 500 feet of a waterway. If located within 500 feet of a trout stream or navigable tributary to a trout stream, an infiltration basin versus wet pond should be used.

01.87. (Application, page 119; AFR Section 6.4.3.) Provide information regarding how long bridges would be in place, and whether they would remain in place until no longer needed (i.e. not re-installed).

01.88. (Application, page 119; AFR Section 6.4.4.) Clarify whether wire stringing activities would require closing waterways to navigation. Provide adequate details on which waterways this may be proposed for, and the likelihood of navigation, to determine if closing waterways to navigation is allowable.

01.89. (Application, page 119; AFR Section 6.4.4.) Provide the BMPs referenced in this section.

01.90. (Application, page 119; AFR Section 6.4.5.) Update the DNR Table reference. Include a figure reference to a typical TCSB crossing.

01.91. (Application, page 119; AFR Section 6.4.5.) Identify the site-specific methods that would be utilized to mitigate potential impacts to outstanding or exceptional resource waters, trout streams, and wild or scenic rivers identified as impacted in DNR Table 1, and application Sections 6.4.5.1 - 6.4.5.3.

01.92. (Application, page 122; AFR Section 6.5.) In this section, identify whether there are additional endangered resources that may be state or federally listed prior to the Commission making a decision on the proposed project. Of the endangered resources identified, provide measures that could be taken as a part of the proposed project to avoid or minimize impacts to those endangered resources (e.g. the monarch butterfly). For example, identify areas within the proposed route alternatives where the applicants could implement enhanced pollinator seed mixes.

01.93. (Application, page 122; AFR Section 6.5.3.1.) This section references actions that would be implemented where species are verified to occur. Provide additional information regarding when and how these verifications would occur.

01.94. (Application, page 123; AFR Section 6.5.3.2.) In this section, reference applicable laws.

01.95. (Application, page 123; AFR Section 6.5.3.2.) Of the recommended measures provided to protect "special concern animal and plant species," explain whether the provided measures would also apply to threatened and endangered plant species as well as natural communities.

01.96. (Application, page 123; AFR Section 6.5.3.2.) Provide additional information regarding when and where DNR-identified recommended actions would be implemented as a part of the proposed project.

01.97. (Application, page 123; AFR Section 6.6.1.) Provide GIS shapefiles for invasive plants identified within the proposed project area.

01.98. (Application, page 126; AFR Section 6.6.1.) Include the route segment reference for each invasive species that was identified in the proposed project area.

01.99. (Application, page 126; AFR Section 6.6.1.) The application notes that curly-leaf pondweed and Eurasian water milfoil have been identified in Black Earth Creek. Identify the proposed route segments that cross waterways that may have curly-leaf pondweed or Eurasian water milfoil.

01.100. (Application, page 126; AFR Section 6.6.2.) Provide a list of specific BMPs that could be implemented to prevent the spread of Eurasian manna grass (a prohibited invasive species) during construction and maintenance of the line.

01.101. (Application, page 126; AFR Section 6.6.2.) Provide a list of site specific BMPs that could be implemented during construction.

01.102. (Application, page 126; AFR Section 6.6.2.) Provide further details on water withdrawal, like location, duration, and amount in gallons per day. Explain why this is discussed under invasive species and not mentioned in the waterway impact sections.

01.103. (Application, page 126; AFR Section 6.6.2.) States "where equipment and materials will be placed below the OHWM…" Provide more information on what materials or equipment would be placed below the OHWM. DNR Table 1 does not show any impact to waterways for structures placed below the OHWM of waterways.

01.104. (Application, page 127; AFR Section 6.6.2.) Construction matting placement and use must not promote the spread of invasive species. Revise the narrative describing mat use to include language to this effect.

01.105. (Application, page 127; AFR Section 6.7.2.) The applicants have submitted the entire archeological survey (including historic architecture) as "confidential." Review and provide a redacted version of the report, in particular the above ground architecture/history portion of the report.

01.106. (Application, page 127, Appendix H, Exhibit 4; AFR Section 6.7.2.) Provide details regarding the Barneveld Family Farm and Historic Barn. Explain whether is it listed on the State or National Register of Historic Places.

01.107. (Application, page 127, Architecture/History Review, PSC REF#: 341878; AFR Section 6.7.) Two properties listed on the National Register of Historic Places, David J. & Maggie Jones House (AHI 28412) and Thomas Stone Barn (AHI 59885) were identified within the area of potential effect for the proposed project. Describe potential impacts to their historic significance, including the introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting. Discuss specific modifications to the proposed project that could mitigate these impacts.

01.108. (Application, page 127, Archeological Survey, PSC REF#: 341904 confidential; AFR Section 6.7.) Discuss plans to incorporate recommendations provided in PSC REF#: 341904 for each archaeological site within the area of potential effect. Discuss specific modifications to the proposed project that could mitigate construction impacts.

01.109. (Application, page 127, Archeological Survey, PSC REF#: 341904 confidential; AFR Section 6.7.) Application documents state that portions of previously identified archaeological sites were outside of existing transmission alignments and public rights-of-way but within the RUS study area that remains to be surveyed if they fall within the final project alignment. (PSC REF#: 341904, confidential.) Identify these sites.

01.110. (Application, page 127, Archeological Survey, PSC REF#: 341904 confidential; AFR Section 6.7.) Application documents state that additional investigations of four human burial sites, 47GT0750/BGT0395, 47GT0437/BGT0187, 47GT0788/BGT0417, and 47IA0067/BIA0115, are recommended. (PSC REF#: 341904, confidential.) Provide the results of these additional investigations.

01.111. (Application, page 127, Archeological Survey, PSC REF#: 341904 confidential; AFR Section 6.7.) Application documents state that subsequent to the completion of the 2017 archaeological field investigations, project redesign resulted in alterations to the RUS study area. These alterations added four previously identified archaeological and cemetery/burial sites to the revised study area and eliminated four others, which were unable to be surveyed. (PSC REF#: 341904, confidential.) Provide the results of the revised RUS study area survey.

01.112. (Application, page 127, Archeological Survey, PSC REF#: 341904 confidential; AFR Section 6.7.) Discuss whether access roads, substation locations, and laydown areas for the proposed project were taken into consideration when surveying for potentially impacted historic properties. If access roads, substation locations, and laydown areas were not taken into consideration, identify and provide details for any historic properties that may be impacted by these.

01.113. (Application, page 127, Archeological Survey, PSC REF#: 341904 confidential; AFR Section 6.7.) Discuss whether the National Historic Preservation Act, Section 106 review has been or will be completed for the proposed project. Provide the results of that review.

01.114. (Application, page 127; AFR Section 6.7.) Provide references in the application document for all archaeological survey reports and above ground architecture/history reviews completed for the proposed project.

01.115. (Application, page 128; AFR Section 6.8.) Explain how the applicants work with landowners to avoid or minimize impacts to existing conservation easements.

01.116. (Application, page 128; AFR Section 6.8.) Provide a list of BMPs that the applicants could implement that would avoid or minimize impacts to existing conservation easements.

01.117. (Application, page 128; AFR Sections 6.8.2.2, 6.8.2.3, 6.8.2.4, and 6.8.2.5.) Provide the information requested in AFR Sections 6.8.2.2, 6.8.2.3, 6.8.2.4, and 6.8.2.5 for each conservation easement identified in Table 6.8-1.

01.118. (Application, page 129, Table 6.8-1; AFR Section 6.8.1.) Identify the date the data in Table 6.8-1 were procured.

01.119. (Application, page 130; AFR Section 6.9.) Provide the locations of known invasive species, and areas where the investigation for invasive species was not completed. Discuss the monitoring plan for identifying the spread of invasive species after the construction of the project is completed. Discuss the criteria that the applicants would use to determine the source and cause of invasive species that are observed beyond pre-construction conditions. If it is determined that invasive species have been spread due to the construction of the proposed project, discuss the scope and type of additional monitoring, management, and or mitigation that the applicants would conduct.

01.120. (Application, page 130; AFR Section 6.9.) Provide a list of property owner requirements, as referenced in this section that could impact the applicants' restoration practices.

01.121. (Application, page 130; AFR Section 6.9.) Define appreciable soil disturbance.

01.122. (Application, page 130; AFR Section 6.9.) Provide the WDNR-approved technical standards/BMPs, as referenced in this section, that the applicants would comply with during construction of the proposed project.

01.123. (Application, page 130; AFR Section 6.9.) Provide a detailed re-vegetation and site restoration plan for the proposed project. The plan shall include, but not be limited to, all disturbed wetland areas where matting would be installed for longer than 60 days during the growing season and should discuss re-vegetation, vegetation monitoring and criteria, invasive species monitoring, and whether post-construction monitoring is proposed.

01.124. (Application, page 130; AFR Section 6.9.1.) Provide a list of species and seeding density for each of the seed mixes that would be implemented for the proposed project. Identify where each of these seed mixes would be implemented within the proposed project area.

01.125. (Application, page 130; AFR Section 6.9.1.) Clarify whether the applicants could implement an enhanced seed mix for pollinators as a part of the proposed project. If this type of seed mix could be utilized, provide the list of species that would be included in this mix, the seeding density, and where it could be utilized within the proposed project area.

01.126. (Application, page 133; AFR Section 7.1.) Provide a list of the names of stakeholders (local officials and their staff, economic development organizations, environmental groups, business/civic/community groups, etc.) that the applicants took steps to reach out to, as referenced in Section 7.1.

01.127. (Application, page 133; AFR Section 7.1.) Include the link to the interactive map of the proposed project.

01.128. (Application, page 134; AFR Section 7.2.) Describe the measures that the applicants took during the project planning and siting stages that address the community concerns identified in the application. Provide a list of mitigation options that the applicants could implement to avoid or minimize impacts from the community concerns identified.

01.129. (Application, page 134, Appendix A, Figure 7; AFR Section 7.3.) Provide the missing future land use plan maps for the following jurisdictions: town of Blue Mounds, Grant County; town of Beetown, town of Platteville, Iowa County; village of Barneveld, Lafayette County; and, Southwestern Wisconsin Regional Planning Commission.

01.130. (Application, page 136; AFR Section 7.4.) Provide a list, by route segment, of the property owners which the applicants identified from the DATCP database as using organic practices.

01.131. (Application, page 137; AFR Section .7.4) Discuss whether the applicants intend to hire agricultural monitor(s) for the project. Identify the responsibilities of the agricultural monitor(s) and reporting functions.

01.132. (Application, page 137; AFR Section 7.4.) Discuss whether the applicants would draft a project-specific Agricultural Mitigation Plan (AMP) and Best Management Practices (BMPs) for constructing within agricultural lands. If so, provide the following information:

a. A detailed list of the subjects that would be included in the document.
b. A time period or month when a draft would be available for review and comment.

01.133. (Application, page 137; AFR Section 7.4.) If ATC does not intend to draft AMP/BMPs, provide details regarding the following issues:

a. Identify the practices that the applicants would use to keep cut black walnut trees and cut black walnut vegetation away from livestock.
b. Identify practices the applicants would use to protect and repair existing agricultural erosion control practices including filter strips, contour strips, and grassed waterways.
c. Identify practices the applicants will use to identify when matting will be used to construct in agricultural fields.
d. Identify how the applicant will identify significant rutting in agricultural fields and whether construction activities will be modified if significant rutting occurs.
e. Identify any practices the applicants will use during de-watering operations to ensure that growing crops are not damaged from excessive water.
f. Identify the practices the applicants will use to inhibit weed growth within the ROW and on any stockpiled soils during construction, and prevent the spread of weeds off the ROW into crop fields.
g. After construction is completed, identify practices the applicants will use to verify that debris including flags, wires, parts of mats, etc. are not left in the field where livestock could ingest them or farm equipment could be damaged.
h. Identify the practices the applicants will use for restoration of agricultural soils within the construction zone such as decompaction, topsoil replacement, and rock removal. Identify any additional restoration practices the applicants will apply on agricultural land used as temporary off-ROW access roads and laydown yards.
i. Identify any practices the applicants will use for the repair of drain tile(s) damaged during the construction of this project.
j. Identify any practices the applicants will use for seeding and seed bed preparation in agricultural areas disturbed by construction activities.

01.134. (Application, page 137; AFR Section 7.4.) If existing electric poles are to be removed from agricultural fields, provide specifics about the following:
a. If poles are to be cut below grade, detail how far below the surface they will be cut.
b. If poles are to be fully removed, identify practices the applicants will use to prevent soil mixing.

01.135. (Application, page 137; AFR Section 7.4.) Provide the length of time between notification to agricultural operators and the start of construction activities on their properties.

01.136. (Application, page 138; AFR Section 7.4.5.) Discuss whether an Agricultural Impact Statement is being prepared for the proposed project.

01.137. (Application, page 142; AFR Section 7.6.) Consult with property managers at the following locations to arrange for additional photo simulations and include these photo simulations in the application.
a. Governor Dodge State Park
b. Blue Mounds State Park
c. Nelson Dewey Memorial State Park/Dewey to Nelson Important Bird Area
d. Dane County Land & Water Resources Department Parks Division, Black Earth Creek Wildlife Area- Sunnyside Unit.
e. Deer Valley Golf Course in Brigham Township
f. Cross Plains State Park in Cross Plains
g. Great River Road, a portion of STH 131 designated as a scenic road.

01.138. (Application, page 142; AFR Section 7.6.) Verify whether the highway identified as a Wisconsin Scenic Byway on page 142 of the application should be STH 133 and not STH 131.

01.139. (Application, page 142; AFR Section 7.6.) Provide details regarding any discussions the applicants had with WisDOT regarding this project crossing STH 133 and its status as the Great River Road and a Wisconsin Scenic Byway.

01.140. (Application, page 143; AFR Section 7.7.1.) Provide the location of Table 6 in the application.

01.141. (Application, page 143; AFR Section 7.7.1.) Identify snowmobile trails that could be impacted by the proposed project. Describe the potential impacts and provide mitigation options that could avoid or minimize impacts from the construction and placement of proposed project facilities on or near snowmobile trails. If available, provide the associated GIS data for these trails.

01.142. (Application, page 148; AFR Section 7.8.5.) Provide any documentation of consultation with the WisDOT Bureau of Aeronautics.

01.143. (Application, page 150; AFR Section 7.9.1.) Discuss what measures could be taken to mitigate audible noise interference occurring after the proposed line has been exposed to weather for long periods of time.

01.144. (Application, page 152; AFR Section 7.10.1 and 7.10.3.) Include estimated fee payments for each proposed route alternative.

01.145. (Application, page 153; AFR Section 8.) Discuss whether the applicants expect to need coverage under a DNR WPDES pit/trench dewatering permit.

01.146. (Application, page 153; AFR Section 8.) The bridge clearance requirements cannot be "waived". A 5-foot clearance is required if the requirements in NR 320.04 cannot be met. Identify which waterways are proposed to be bridged with less than a 5-foot clearance by adding a column to DNR Table 1. For DNR to determine whether the crossings meet the requirements in NR 320.04, provide information on the recreational use of these waterways, including winter use, if known, and how portage would be provided for motorized and non-motorized water crafts, including for waterways with steep sloped and vegetated banks.

01.147. (Application, page 154; AFR Section 8.) Provide additional information on the grading on waterway banks, including the existing conditions at the area to be graded, why other options are not feasible, and how soils would be stabilized and the area restored.

01.148. (Application, page 154; AFR Section 8.) Identify how the wetland delineation report was provided to the agencies as well as to which agencies it was provided.

01.149. (Application, page 158; AFR Section 9.2.) Include an appendix reference to the identified figures.

01.150. (Appendix A, Section 27, Figure 7; AFR Section 7.3.) Provide a legible copy of the Platteville Comprehensive Plan map.

01.151. (Appendix A, Figure 7, Application Section 7.3, Figure 7; AFR Section 7.3.) Provide a more explicit future land use map for the Village of Ridgeway.

01.152. (Appendix A, Wetland Delineation Report; AFR Section 8.3.) Add to Tables 1A - 1C the justification on how the wetland boundary was determined for off-site methods (the aerial review methodology, and if other desktop resources were used, like contours), and justification for how the waterways were determined to be or not be present for off-site methods.

01.153. (Appendix A, Wetland Delineation Report; AFR Section 8.3.) Add to Tables 2A - 2C the justification on how DNR-mapped waterways were determined to not be present for off-site methods. Clarify whether other resources besides only aerial imagery were consulted.

01.154. (Appendix A, Wetland Delineation Report; AFR Section 8.3.) The total area of investigation in unclear in Figure 2s. Clarify whether the legend items named "Engineered ROW," "off-ROW access," "extent of adjacent ATC ROW," and "laydown yards" are included.

01.155. (Appendix A, Wetland Delineation Report; AFR Section 8.3.) Each photo provided should include a corresponding photo point location on the Figure 2s. The photos taken at sampling plots are easily identified on the map, but the locations are unknown for photos taken at waterways (at both field identified and at DNR-mapped waterways that were not field identified). Add to the Figure 2s, as necessary.

01.156. (Appendix A, Figure 3A, page 1 of 81; AFR Section 8.4.) Add location of the poles that would be placed within the Mississippi River (including on islands) or on the banks on both the Wisconsin and Iowa sides if the waterway is completely spanned. Also make the same edits to Figures 3B, 4A, and 4B.

01.157. (Appendix A, Figure 4A; AFR Section 8.4.) There are TCSBs called out but no waterways mapped (either DNR-mapped waterways or field mapped waterways), on for example pages 2 of 81 and 6 of 81. Clarify whether these TCSBs are included in DNR Table 1. If so, please update the maps to include a unique ID label such that they may be cross-referenced to DNR Table 1. If not, update the maps and add to DNR Table 1. Make the same edits to figures 4B and 4C, if necessary.

01.158. (Appendix A, Figure 4A; AFR Section 8.4.) There are DNR-mapped waterway crossings in the ROW but without a TCSB shown, and they do not have a unique ID label in the map, so they cannot be cross-referenced with DNR Table 1 as crossed by a TCSB. See for example pages 2 of 81 and 4 of 81. Clarify whether these DNR-mapped waterways are presumed to be non-navigable by the applicant, or just missing a unique ID label. If these are DNR-mapped waterways that are presumed to be non-navigable by the applicant, the maps should have a comment box pointing to the hydroline that says "navigability determination requested" or similar. Update the maps to include the unique ID for these waterways, such as a WBIC code, so we can match it to DNR Table 1, and add them to DNR Table 1 if they will be crossed by vehicles. Also make these same edits to figures 4B and 4C if necessary.

01.159. (Appendix A, Figure 4A; AFR Section 8.4.) There are many branches of a DNR-mapped waterway crossed by off-ROW access roads, but only one branch of the waterway shows a TCSB, for example page 6 of 81 on the off-ROW access. Clarify whether these other branches are just missing a unique ID label, or that they presumed to be non-navigable. Either way, update the maps accordingly, as requested in the items above, that they may be cross-referenced with the DNR Tables. Edit Figures 4B and 4C as necessary.

01.160. (Appendix A, Figure 4A; AFR Section 8.4.) There are field identified waterways missing a unique ID label, for example page 9 of 81 at the Grant River. Add the labels to the maps so they can be cross-referenced with the DNR Tables. Edit Figures 4B and 4C as necessary.

01.161. (Appendix A, Figure 4A; AFR Section 8.4.) Add directional arrows to show the direction of vehicle traffic from off-ROW access roads onto the ROW, and symbols of where traffic would stop, as shown on figures for previous ATC projects. In some areas it is hard to determine what waterways would be crossed with a TCSB and which would be avoided with the use of off-ROW access, as there is no indication for the direction of traffic, and a lot of

the hydrolines and field identified waterways are not labeled to reference back to DNR Table 1. Edit Figures 4B and 4C as necessary.

01.162. (Appendix F, DNR Table 1; page ii of the AFR.) Update this table to include the amount of grading for feature D-OR-20 and D-OR-R01 on the preferred route. As part of the response to this item, clarify whether NR216 permit coverage would be obtained for this off-ROW access.

01.163. (Appendix F, DNR Table 1; page ii of the AFR.) For each route, under the column "Placement Structure/Fill Placement," include the number of poles the impact accounts for. For example: 95 (1 pole), 190 (2 poles).

01.164. (Appendix F, DNR Table 1; page ii of the AFR.) As previously requested, all DNR-mapped waterways (referred to here as hydrolines) that would be impacted by the project should be included in DNR Table 1, regardless of state jurisdictional status. A column may be added to DNR Table 1 to include information or comment on these hydrolines, such as "navigability determination requested," or "waterway was identified east of where the hydroline is mapped," and each hydroline should have a unique, identifying name (which can be the hydrolines assigned WBIC code) so that DNR staff can reference these hydrolines when making navigability determinations. The narrative on page 118, Section 6.4.1, mentions that hydrolines presumed to be non-navigable by the applicants were only included in DNR Table 2, but these also need to be added to DNR Table 1 if they would be impacted by the project (grading on banks, crossed by vehicles, structures placed within, etc.).

01.165. (Appendix F, DNR Table 2; page ii of the AFR.) Verify if column 3 (named "Feature Type, Name and Designation") includes all wetlands designation as ASNRI types listed in NR 103.04, and that the table does not just include the wetlands adjacent to ASNRI waterways.

01.166. (Appendix G, page 63; AFR Section 3.1, 3.2.) Provide the missing configuration diagrams and magnetic field estimates for the following segments: B1, C1, C2A, C2B, C3, C4, D5, D9A, D9B, D10A, D10B, E12, M1, M4, M5, N7, V5, W1, Y1C.

01.167. (Appendix J, Figure 3.) Refile Figure 3 (Appendix J) so that the entire electronic map is in color.

01.168. (Appendix J, Tables 2a, 2b, 2c, and 3.) If available, provide Microsoft Excel spreadsheet(s) for Tables 2a, 2b, and 2c which summarizes the WDNR NHI element occurrence records. Also provide the Microsoft Excel spreadsheet(s) of Table 3 which summarizes habitat suitability and follow-up actions.

Docket 5-CE-146
Items Identified as Missing, Incomplete, or Requiring Clarification
Items Related to Need, System Alternatives, and Modeling

Note: The following list includes items related to need, system alternatives, and modeling that most clearly need to be addressed or explained. Commission modeling staff will provide a list of additional items to ATC modeling staff for discussion, and arrange a meeting to do so. Additional data request items may result from those discussions. If so, those items will be documented in the form of a subsequent Commission staff data request.

01.169. (Application, page 31, Table 2.1-1; AFR Section 2.7.) Provide ATC's detailed calculation of the projected Present Value Revenue Requirements for the proposed project, charged to ATC customers and to Wisconsin as a whole.

01.170. (Application, page 61; AFR Section 2.8.) Provide PowerWorld models and associated contigencies for MTEP17 Existing Fleet (EF) (Low 10/90) future.

01.171. (Appendix D, page 1; AFR Section 2.1.) Clarify which studies are referred to by the statement "At least three other studies generally corroborate the conclusions in this Planning Analysis…" Also, provide copies of the results of these studies if they are not already included in the application.

01.172. (Appendix D, page 13; AFR Sections 2.7 and 2.8.) The PROMOD modeling includes ATC's previously proposed Wisconsin-Illinois Reliability Project, docket 137-CE-185. However, on January 17, 2018, ATC submitted a letter officially withdrawing the CPCN application for that project. Update the PROMOD and PowerWorld modeling to not include the withdrawn project.

01.173. (Appendix D, page 13; AFR Section 2.8.) In the event the in-service date for the Badger Coulee line is delayed, perform a sensitivity on all studied futures with the Badger Coulee project removed from PROMOD and PowerWorld models.

01.174. (Appendix D, page 13; AFR Section 2.8.) Verify that all planned ATC 2018 10-Year Assessment projects are present in the PowerWorld and PROMOD modeling. These planned projects should include uprates, new construction, removals, and asset renewal using the projected in-service date of each project.

01.175. (Appendix D, page 16; AFR Section 2.8.) Appendix D quotes MISO's analysis of the proposed project: "In combination with another MVP, the Oak Grove – Galesburg – Fargo 345 kV line, this project enables 1,100 MW of wind power transfer capability." However, in the executive summary of Appendix D, ATC states the project will provide 1,300 MW of increased transfer capability with no mention of the Oak Grove - Galesburg - Fargo 345 kV line. Clarify which number should be used and whether the proposed project by itself incrementally increases the wind power transfer capability above the amount enabled by the Oak Grove - Galesburg - Fargo transmission line.

01.176. (Appendix D, page 20; AFR Section 2.8.) ATC utilizes a "Customer Benefit Metric" (CBM) to evaluate the benefits of the proposed project to the ATC footprint. However, ATC uses the standard "Adjusted Production Cost" (APC) method to evaluate the benefits of the proposed project to the DPC and NSP footprints. Either include an APC evaluation of the proposed project to the ATC footprint that is consistent with the evaluation performed for the DPC and NSPW footprints, or explain why such an analysis is inappropriate.

01.177. (Appendix D, page 27; AFR Section 2.8.) ATC's Non-Transmission Alternative included implementation of additional energy efficiency located in south central and southwestern Wisconsin. Explain why southeastern Wisconsin and the Fox Valley/Green Bay areas of the ATC footprint were excluded.

01.178. (Appendix D, page 28; AFR Section 2.8.) ATC provided Demand Response (DR) targets for several industry partners in the Non-Transmission Alternative in the PROMOD model. Explain if industry partners were contacted for input about the assumed DR values and if so, provide a list of the partners contacted and their respective responses.

01.179. (Appendix D, page 28; AFR Section 2.8.) The application states "residential solar facilities were modeled as offsetting load in Mount Horeb and Cross Plains." Explain the reasoning behind modeling the solar facilities in only these two municipalities and not over a larger geographic footprint. Clarify whether ATC determined that locating residential solar facilities in these municipalities maximizes thermal loading relief on the transmission system.

01.180. (Appendix D, page 40; AFR Section 2.8.) ATC only performed sensitivities on the MTEP17 Policy Regulations (PR) future. These sensitivities studied the impact of low demand and energy growth and the impact of the new Foxconn facility load on the need for the proposed project in the PR future. Provide an additional PROMOD sensitivity using the Existing Fleet future that accounts for the expected new Foxconn load.

01.181. Appendix D, page 41; AFR Section 2.7.) ATC states that "a nominal discount rate of 6.4 percent was used to be consistent with the values used by FERC and MISO." Explain why ATC selected this discount rate. The selected discount rate is well below ATC's weighted cost of capital as calculated in ATC's most recent Attachment O filing with FERC.

01.182. (Appendix D, page 32; AFR Section 2.) Explain ATC's reasoning behind selecting each of the five scenarios studied in PROMOD for the Insurance Value benefit metric calculation.

01.183. (Appendix D, pages 43-45; AFR Section 2.2.) Clarify whether the outages studied in ATC's Insurance Value benefit metric include any NERC Planning Event contingencies.

01.184. (Appendix D, pages 43-46; AFR Section 2.2.) ATC describes the Insurance Value Benefit calculation as “standard insurance valuation metrics consisting of probability of occurrence and impact of occurrence for generation outage and transmission outage scenarios.” Provide detail as to what metrics ATC is referring to and the reasoning behind them.

01.185. (Appendix D, page 44; AFR Section 2.8.) ATC notes that "the Applicants assigned probabilities to emergency events occurring." Provide ATC's basis for assigning the probability calculations of these emergency events occurring and ATC's basis for picking the events selected for the Insurance Value Benefit.

01.186. (Appendix D, page 51; AFR Section 2.8.) Provide the bus numbers of all the monitored branches included in the steady state reliability analysis results for Table 13 to Table 28 in Appendix D.

01.187. (Appendix D, page 52; AFR Section 2.8.) Update Tables 15 and 16 using emergency ratings for all monitored branches.

01.188. (Appendix D, page 61; AFR Section 2.1.) Provide ATC's detailed calculation of the Present Value Avoided Reliability Benefit for each of the conceptual projects listed in Table 29 of the application Appendix D. In ATC's response, clarify the percentage of all costs that the conceptual Hickory Creek - Nelson Dewey project that would be allocated to Wisconsin customers.

01.189. (Appendix D, page 65; AFR Section 2.1.) Provide ATC's detailed calculation of the Present Value Asset Renewal Benefit for each of the projects listed in Table 34 of Appendix D.

01.190. (Appendix D, page 65; AFR Section 2.1.) Provide the original in-service date of each of the projects listed in Table 34 of Appendix D.

01.191. (Appendix D, page 65; AFR Section 2.1.) The Nelson Dewey - Eden 138 kV line listed in Table 34 of Appendix D shows two separate asset renewal in-service dates. Provide the renewal cost and detailed calculation of present value asset renewal benefit for each portion of the project by asset renewal in-service date.

01.192. (Appendix D, p. 73; AFR Section 2.) Provide copies of the operating guides mentioned in Appendix D.

01.193. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Provide one line diagrams for all summer peak, summer peak 90/10, shoulder peak, and shoulder peak west to east bias PowerWorld models, for each alternative.

01.194. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) MISO MVP Projects 3 (Lakefield Jct - Webster), 4 (Winco - Hazelton), and 13 (Michigan Thumb Loop Expansion) do not appear to be represented in ATC's PROMOD and PowerWorld models. Verify whether these projects are in the modeling. If the projects are not included in the modeling, update the PROMOD modeling to reflect these projects being in-service or explain why these projects should not be included in the modeling. If included, identify the buses where they are connected.

01.195. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) The Arcadian-Pleasant Prairie 345 kV transmission line does not appear to be represented in ATC's PROMOD models. If the line is not included in the modeling, update the PROMOD modeling to reflect the line or explain why the line should not be included in the modeling.

01.196. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Pleasant Prairie Units 1 and 2 are shown in-service well beyond the announced retirement date of the units by WEC Energy Group. Update the PowerWorld models to reflect the announced retirement of the units.

01.197. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Edgewater Unit 4 is treated inconsistently in the PROMOD models. A settlement exists with EPA to retire or convert the unit to natural gas by the end of 2018. Indications are the unit will retire. Update the PROMOD models to account for the projected retirement of the unit, or justify its inclusion in the scenarios that assume the unit is in-service.

01.198. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Genoa Unit 3 is treated inconsistently in the 2026 and 2031 PROMOD models. There are no indications of the retirement date for the unit at this time. Update the PROMOD models to treat the unit consistently or justify its retirement in scenarios where it is assumed to no longer be operating.

01.199. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) The Quilt Block Wind Farm is known to be in operation at this time, one of the co-applicants currently owns or has a PPA with the facility, and is listed as being explicitly conditioned on the proposed project. However, the 2031 PROMOD models do not include this wind facility. Update the PROMOD models to include Quilt Block or explain why the facility should be excluded.

01.200. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) The Nemadji Trail Energy Center is a project that is expected to be co-owned by one of the co-applicants and is

expected to file a CPCN application at the Commission in the near future. Update the PROMOD and PowerWorld models to include the unit with expected in-service date or explain why the facility should be excluded.

01.201. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Presque Isle Units 5-9 are shown in-service well beyond the announced retirement date of the units by WEC Energy Group. Update the PROMOD and PowerWorld models to reflect the announced retirement of the units or explain why the units should be included in the models.

01.202. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) South Oak Creek Units 5-6 are removed from service in the 2026 and 2031 PROMOD models. There are no indications of the retirement date of these units at this time. Revise the PROMOD modeling to keep these units in operation or justify the retirement of these units for the purposes of the PROMOD analysis.

01.203. South Oak Creek Units 7-8 are treated inconsistently in the 2026 and 2031 PROMOD models. There are no indications of the retirement date of these units at this time. Revise the PROMOD modeling to keep these units in operation or justify the retirement of these units for the purposes of the PROMOD analysis.

01.204. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) The Valley Power Plant is removed from service in the 2026 and 2031 PROMOD models. The plant was recently converted to burn natural gas in 2015 and is used to supply the steam customers of Milwaukee. It is unlikely for this unit to retire before year 2026. Update the PROMOD modeling to include the plant in the years studied or explain why the plant should be excluded.

01.205. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) The application includes a list of projects that are described as being explicitly conditioned on the proposed project. However, projects such as MISO queue projects G735, G826, and G858/H071 may be operating at this time and are not included in the PROMOD modeling. Clarify whether these projects should be included in either the base case, CHC case, LVA case, NTA case, or all of the cases. If any of the projects should be included in the PROMOD or PowerWorld analysis of any of the proposed project alternatives, update the PROMOD and PowerWorld modeling to include these projects.

01.206. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) The application includes a list of projects that are described as being implicitly conditioned on the proposed project. However, projects such as MISO queue projects J041, J399, J412, J436, J437, J441, J442, J449, J455 may be operating at this time or under construction and are not included in the PROMOD modeling. Clarify whether these projects should be included in either the base case, CHC case, LVA case, NTA case, or all of the cases. If any of the projects should be included in the PROMOD or PowerWorld analysis of any of the proposed project alternatives, update the PROMOD and PowerWorld modeling to include these projects.

01.207. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Generator RRF MISO CC 053, a 600 MW NGCC power plant, is included in the ALTE service territory in the PR, PR-LE, PR-Foxconn, and AAT futures for years 2026 and 2031. Update the modeling to remove this non-existent unit or explain its purpose in the PROMOD model.

01.208. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Stanton Station Unit 1 is identified by MISO as being retired. However, the PROMOD modeling still shows this

generator as active. Update the PROMOD modeling to exclude this retired unit or explain why it should be included.

01.209. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Pulliam Units 7 and 8 are listed as active in all the PowerWorld models and in the PROMOD model in year 2021. However, WEC Energy group announced that the units will retire by 2020. Update the PowerWorld and PROMOD models to exclude these units or explain why they should be included.

01.210. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Generator RRF MISO CC 011, a 1,000 MW NGCC power plant, is included in the WEC service territory in the PR, PR-LE, PR-Foxconn, and AAT futures for years 2026 and 2031. Update the modeling to remove this non-existent unit or explain its purpose in the PROMOD model.

01.211. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Generator RRF MISO CC 013, a 400 MW NGCC power plant, is included in the ALTE service territory in the PR, PR-LE, PR-Foxconn, and AAT futures for years 2026 and 2031. Update the modeling to remove this non-existent unit or explain its purpose in the PROMOD model.

01.212. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Generator RRF MISO CC 014, a 300 MW NGCC power plant, is included in the DPC service territory in the AAT future for years 2026 and 2031. Update the modeling to remove this non-existent unit or explain its purpose in the PROMOD model.

01.213. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Mankato Energy Center Unit 2 is believed to be under construction and does not appear in the PROMOD and PowerWorld modeling. If the unit is under construction, update the PROMOD and PowerWorld modeling to include the unit or explain why the unit should not be included.

01.214. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) A large number of generators located in PJM including Hudson Unit 2, JM Stuart Unit 1, Roanoake Valley Units 1 and 2, Bellemeade Unit 1, Perryman Unit 2, Dale Units 3 and 4, and Mercer Units 1 and 2 are identified by PJM as retired. These units total 2498 MW of nameplate capacity. However, the PROMOD and PowerWorld models still show these generators as active. Update the PROMOD and PowerWorld models to exclude these retired units or explain why they should be included.

01.215. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) The application lists the Saratoga Wind Farm as implicitly conditioned on the proposed project. However, the 2026 and 2031 PROMOD models and PowerWorld models do not include this facility. The facility was recently approved by the Commission as a CA under docket 3270-CE-127. Update the models to include the facility or explain why it is excluded.

01.216. (Appendix D, PROMOD/PowerWorld modeling; AFR Section 2.8.) Large nuclear units, specifically Beaver Valley 1, Beaver Valley 2, Davis Besse 1, Oyster Creek 1, Palisades 1, Perry 1, and Three Mile Island 1 may retire. Update the PROMOD and PowerWorld models, or provide suitable sensitivities for certain futures, to exclude these retired units or explain why they should be included.