

**STATE OF MINNESOTA
BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION**

In the Matter of the Application of
Minnesota Power for a Certificate of Need for
the HVDC Modernization Project in
Hermantown, Saint Louis County;

In the Matter of the Application of
Minnesota Power for a Route Permit for a
High Voltage Transmission Line for the
HVDC Modernization Project in
Hermantown, Saint Louis County.

**OAH 5-2500-39600
MPUC E-015/CN-22-607
MPUC E-015/TL-22-611**

DIRECT TESTIMONY OF ROBERT MCKEE

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, employer, title, and business address.

A. My name is Robert McKee. I am employed by ATC Management, Inc., the corporate manager of American Transmission Company LLC (collectively, ATC). My job title is Strategic Projects and Execution Director and my business address is 2485 Rinden Road, Cottage Grove, WI 53527.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of ATC in support of the Arrowhead Substation Alternative that ATC has presented as an alternative to the new St. Louis County Substation Minnesota Power (MP or Applicant) is proposing to construct as part of the HVDC Modernization Project (Project).

Q. Please describe your educational and professional background as it relates to this proceeding.

1 A. I have worked at ATC since 2005. Since 2017, I have served as ATC's Strategic Projects
2 and Execution Director. Prior leadership roles at ATC have been in federal and state
3 regulatory and policy, Regional Transmission Operator/Independent System Operator
4 matters, regional transmission system planning, and business development. I have held
5 numerous industry leadership roles, including serving as chair of the Midcontinent
6 Independent System Operator's (MISO) Planning Advisory Committee and member of the
7 Advisory Committee, president and board member of the WIRES trade organization, and
8 board member of the Wisconsin Public Utility Institute.

9 Prior to working at ATC, I worked at Alliant Energy as a senior corporate research
10 and strategic planning analyst and as an energy research manager at a subsidiary of the
11 Electric Power Research Institute (EPRI). I have a Doctor of Philosophy (Ph.D.) degree in
12 political science and government from the University of Illinois – Chicago, a Master of
13 Business Administration (MBA) degree from the University of Wisconsin School of
14 Business, and a bachelor's degree in journalism and political science from Eastern Illinois
15 University.

16 **Q. What are your current responsibilities at ATC?**

17 A. In my role as Strategic Projects and Execution Director I am the executive lead of the
18 development, evaluation, and execution of strategic efforts, including transmission
19 facilities needed to interconnect datacenters and other large end-use customers, large
20 regional transmission projects, new types of technologies, new service offerings, and other
21 ways to add value to customers and that are otherwise of strategic importance to ATC. The
22 role includes leading internal cross-functional teams of executives and staff and
23 collaborating with leaders of local distribution companies that are direct customers of ATC,

1 end-use customers in our footprint, fellow transmission owners, MISO, and state and
2 federal regulators. Of particular relevance to this docket, this work includes a leadership
3 role in ATC's involvement in MISO's Long Range Transmission Planning effort, including
4 the current phase (Tranche 2). Over time in my current role, I also have led the real estate,
5 local relations, and business development functions of ATC's business.

6 **Q. What is the purpose of your testimony?**

7 A. My testimony introduces ATC's proposed Arrowhead Substation Alternative and
8 addresses certain specific matters related to it. My testimony provides: (1) background
9 information on ATC, our facilities and operations in Minnesota, and our work with MISO,
10 MP, and others on regional transmission issues; (2) an overview of the HVDC
11 Modernization Project, ATC's overall support of the Project, and a high-level summary of
12 the Arrowhead Substation Alternative; (3) background on our discussions with MP
13 regarding the Project generally and the Arrowhead Substation Alternative specifically; (4)
14 an overview of ATC's overall filing in this matter and why we believe the Project, as
15 modified by the Arrowhead Substation Alternative, should be approved; (5) discussion of
16 the ownership and other issues associated with selection of the Arrowhead Substation
17 Alternative; and (6) introduction of the other ATC witnesses who will provide testimony
18 in this proceeding, along with a description of the issues they will address.

19 **Q. Are you sponsoring any exhibits in support of your testimony?**

20 A. Yes. I am sponsoring the following exhibit:
21 Schedule 1: ATC Response to Minnesota Power Information Request 008.

22 **III. BACKGROUND ON ATC**

23 **Q. Please provide background on ATC and its Minnesota facilities.**

1 A. ATC is a limited liability company created in accordance with Wisconsin state law over
2 twenty years ago as a single-purpose, *transmission-only* company. That is, ATC does not
3 and cannot provide retail electric power to end-use customers. ATC's sole purpose is to
4 plan, construct, operate, maintain, and expand the high-voltage electric transmission
5 system in portions of Wisconsin, Michigan, Minnesota, and Illinois. The company owns,
6 operates, and maintains over 10,000 miles of electric transmission lines and more than 580
7 electric substations across these states. ATC is a transmission owning member of MISO
8 and transmission service is provided over the facilities owned and operated by ATC under
9 the terms of the MISO's Open Access Transmission, Energy and Operating Reserve
10 Markets Tariff ("MISO Tariff"), with ATC operating its transmission facilities in
11 accordance with the direction of the MISO.

12 In Minnesota, ATC is a Minnesota Transmission Owner and owns the Arrowhead
13 345/230-kV Substation located in Hermantown. ATC also owns two 230 kV circuit
14 breakers and switches that are physically located in what is generally referred to as MP's
15 230/115 kV Arrowhead Substation (located immediately adjacent to ATC's Arrowhead
16 Substation), 12 miles of 345 kV line within Minnesota that connects to the Arrowhead
17 Substation and runs southeast into Wisconsin, as well as a short jumper line that connects
18 the ATC Arrowhead Substation to MP's 230/115 kV Substation.

19 **Q. Please generally describe ATC's work with MP and other regional transmission**
20 **owners.**

21 A. ATC interacts with MP and other neighboring transmission owners as a normal course of
22 business on such matters as planning new transmission facilities and real time system
23 operations. Formally, this relationship and obligations are spelled out in the transmission-

1 to-transmission (or T-T) interconnection agreements and ATC's local planning process
2 described in MISO's tariff. Beyond that, ATC interacts with MP and all transmission
3 owning members of MISO through the Transmission Owners Committee on a broad range
4 of matters such as planning, rates and cost recovery, and operational issues.

5 **Q. As part of this ongoing work, has ATC had discussions with MISO, MP or others**
6 **regarding the Project?**

7 A. Yes. I describe those discussions below, and ATC provided a detailed description of these
8 discussions in response to Minnesota Power Information Request 008 to ATC. I have
9 attached that response as Schedule 1.

10 **III. OVERVIEW OF THE HVDC MODERNIZATION PROJECT AND ARROWHEAD**

11 **SUBSTATION ALTERNATIVE**

12 **Q. What is the HVDC Modernization Project?**

13 A. ATC witness Tom Dagenais provides further discussion of the Project, but at a high level,
14 MP describes the Project as upgrading and modernizing the HVDC converter stations on
15 either end of its approximately 465-mile long Square Butte HVDC 550-megawatt (MW)
16 transmission line (HVDC Line). MP states that, in recent years, it has experienced outages
17 in the HVDC terminals due to failures in various aging equipment and components. MP
18 states that the Project is needed to modernize equipment in the HVDC terminals to ensure
19 continued delivery and expansion of its renewable carbon-free energy resources.

20 **Q. Please describe the scope of your involvement with the HVDC Modernization Project**
21 **generally.**

22 A. My direct involvement in the HVDC Modernization Project is focused solely on MP's
23 proposed new St. Louis County 345/230 kV Substation (as opposed to using ATC's

1 existing Arrowhead Substation), which is a relatively small component of the overall
2 Project. I became involved during the course of two processes/forums that ATC
3 participates in as part of the normal course of business as a transmission owner in MISO:
4 (1) ongoing coordination discussions between interconnected transmission owners; and (2)
5 participating in Tranche 2 of MISO's Long Range Transmission Planning (LRTP) effort.

6 Regarding the first process, ATC and MP are neighboring transmission owners and
7 have a T-T interconnection agreement between us, so it is common for us to communicate.
8 I and others from ATC first heard of MP's intentions with respect to the Project in a
9 meeting on September 23, 2022. At that meeting, MP notified ATC of its intent to upgrade
10 the converter stations on both ends of its HVDC Line and, regarding the eastern converter
11 station located in Minnesota, informed ATC that it intended to interconnect the upgraded
12 converter station and HVDC Line to ATC's existing 345/230 kV Arrowhead Substation.
13 Therefore, in that meeting, MP and ATC also discussed the need to coordinate our efforts
14 going forward.

15 That changed in an October 10, 2022 meeting and an October 14, 2022 follow up
16 e-mail, when MP informed ATC of its intention to build a new St. Louis County Substation,
17 adjacent to ATC's Arrowhead Substation, rather than to interconnect the Project to the
18 Arrowhead Substation, contrary to its statement in September 2022. MP also indicated
19 that, at an upcoming meeting with MISO transmission owners in Eagan, Minnesota, MP
20 would provide an update regarding the HVDC Modernization Project and ask that MISO
21 evaluate how the new substation and HVDC system could be further interconnected with
22 the surrounding 345 kV system and incorporated into MISO's plans for northeastern

1 Minnesota. In my experience, this abrupt turn, over a span of just a couple of weeks, is
2 unusual and ATC was surprised at MP's apparent sudden change of course.

3 The second process that led to my involvement with the Project is MISO's LRTP
4 process and the development of what is referred to as the Tranche 2 transmission portfolio
5 that is a part of those efforts¹. On October 17, 2022—just a few days after MP told ATC
6 of its intent to build a new substation next to ATC's Arrowhead Substation, rather than
7 interconnect to it—MISO convened the meeting of transmission owners referenced by MP.
8 At that meeting, MP described its plans to upgrade the HVDC Line and associated
9 converter stations and to construct the new St. Louis County Substation. ATC expressed
10 concerns about locating this new substation adjacent to the existing Arrowhead 345/230
11 kV Substation and stated that ATC supports leveraging that existing substation to
12 interconnect the HVDC Modernization Project, as there is more than adequate room within
13 the substation for expansion.

14 I have been involved in this issue in these two processes/forums since that time,
15 communicating directly to Minnesota Power leadership and in the LRTP Tranche 2
16 planning effort that ATC's existing Arrowhead substation should be leveraged to
17 interconnect Minnesota Power's new HVDC converter station rather than building a new,
18 neighboring substation less than a mile away.

¹ Over the past several years, MISO has worked with its members on a Long Range Transmission Planning (LRTP) effort to strengthen the electric grid by identifying and including in the regional plan new projects that will boost electric reliability for communities and consumers. The first two phases – or “Tranches” – have focused on the central and north areas of MISO. Tranche 1 was approved for inclusion in the regional plan by MISO's board of directors in July of 2022 and includes 18 projects – an investment totaling \$10.3 billion. MISO is currently working with stakeholders on developing the Tranche 2 portfolio. It is currently anticipated the MISO board will consider including the Tranche 2 portfolio in the regional plan in 2024. See <https://www.misoenergy.org/planning/long-range-transmission-planning/>.

1 **Q. As an initial matter, does ATC support the purpose and need for the HVDC**
2 **Modernization Project?**

3 **A.** Absolutely. I want to be very clear that ATC supports the overall purpose and goals of the
4 Project to modernize the current HVDC assets. From ATC's perspective, the Project will
5 better position the transmission grid for the ongoing clean energy transition and improve
6 the overall reliability of the transmission system in Minnesota and North Dakota. ATC has
7 consistently communicated its general support for the Project to MP senior leadership.

8 **Q. Why, then, is ATC participating in this docket?**

9 **A.** ATC is participating in this docket to present the Arrowhead Substation Alternative, a
10 modification to one aspect of the overall Project. As noted above, as part of the Project,
11 MP proposes to construct an entirely new substation, the St. Louis County 345/230 kV
12 Substation (St. Louis County Substation), and to construct it about a half mile from ATC's
13 existing 345/230 kV Arrowhead Substation. From first hearing of MP's change in plans
14 and intent to build a new substation adjacent to Arrowhead, I and others at ATC have
15 expressed to MP our view that prudent transmission planning should leverage existing
16 transmission assets and avoid constructing duplicative transmission facilities, thereby
17 avoiding unnecessary costs to customers and unnecessary environmental and human
18 impacts. And while ATC would have welcomed continued collaboration with MP on the
19 Arrowhead Substation Alternative, as is the normal course of business between
20 transmission owners, MP's filing of the Certificate of Need application has moved this
21 discussion to the current docket.

22 **Q. Please generally describe the Arrowhead Substation Alternative.**

1 A. The Arrowhead Substation Alternative is a modification to MP's proposed point-of-
2 interconnection for the Project; it would involve interconnecting the Project through ATC's
3 existing 345/230 kV Arrowhead Substation, as originally discussed by MP and ATC. This
4 involves construction of a new, approximately one mile long double-circuit 345 kV
5 transmission line from the new HVDC converter station to ATC's Arrowhead Substation.
6 Within the substation, ATC would also add a new 345/230 kV transformer, remove and
7 decommission the existing 345/230 kV phase shifting transformer, remove and
8 decommission the existing capacitor banks, and other miscellaneous work. ATC witnesses
9 Michael Bradley and Tobin Larsen provide additional details regarding the work associated
10 with construction of this alternative.

11 In contrast, MP proposes to build an entirely new 345/230 kV substation, construct
12 a new 345 kV transmission line to connect the new HVDC converter station to this new St.
13 Louis County Substation; and to construct two new parallel 230 kV lines to connect the
14 new St. Louis County Substation to MP's 230/115 kV Arrowhead Substation.

15 **Q. What does ATC see as the major benefits of the Arrowhead Substation Alternative,**
16 **relative to interconnecting the Project through MP's proposed new St. Louis County**
17 **Substation?**

18 A. As I and other ATC witnesses discuss, the Arrowhead Substation Alternative leverages the
19 use of existing infrastructure to meet the purpose and need of the Project and deliver several
20 significant benefits when compared to MP's proposal to build a new substation—reducing
21 Project costs and environmental and other impacts, while providing equivalent or better
22 reliability benefits than MP's proposal. Therefore, ATC asks that the Commission approve
23 Certificate of Need (CN) for the Project, modified by including the Arrowhead Substation

1 Alternative rather than MP's proposed St. Louis County Substation and its associated
2 facilities.

3 **IV. ATC'S INVOLVEMENT IN THE PROJECT**

4 **Q. You discussed ATC's general involvement in discussions regarding the Project, but**
5 **did ATC and MP also have specific discussions to explore interconnecting the Project**
6 **to the transmission system through ATC's 345/230-kV Arrowhead Substation, rather**
7 **than through MP's proposed new St. Louis County Substation?**

8 A. Yes. As I indicated above, interconnecting the Project through ATC's Arrowhead
9 Substation was MP's initial approach. MP representatives scheduled a kickoff meeting
10 with me and other ATC representatives on September 23, 2022 and conveyed that, as part
11 of its upgrades to the HVDC Line, it would connect at ATC's Arrowhead 345/230 kV
12 Substation. The MP representatives described the overall project and a plan for
13 coordinating with ATC going forward. In this discussion, among other things, MP
14 indicated that it wanted to move its HVDC converter station from its 230 kV Arrowhead
15 station to ATC's 345/230 kV Arrowhead Substation so the converter transformers would
16 not need to be replaced at a later date, and showed us a design it had developed for doing
17 so. MP expressed the "urgent need" for upgrading the Square Butte converter stations and
18 indicated key next steps in coordinating with ATC, including identifying what
19 modifications would be required at ATC's Arrowhead substation to facilitate the
20 interconnection, determining the analysis that would be needed, and determining ATC's
21 role in the 345 kV portions of the overall HVDC upgrade project. MP representatives
22 indicated they would schedule a subsequent meeting to discuss, among other things, studies
23 needed for interconnecting at ATC's Arrowhead 345 kV sub and commercial aspects such

1 as ownership of the facilities. MP scheduled a follow-up meeting for October 10, 2022
2 with me and other ATC representatives.

3 At that October 10 meeting, MP representatives indicated that the company had
4 considered other options for connecting the new converter station and was now considering
5 an alternative to develop a new 345 kV/230 kV St. Louis County Substation just west of
6 ATC's Arrowhead Substation and connecting that directly to MP's 230 kV Arrowhead
7 substation. MP suggested this new approach would satisfy MP's needs and allow the
8 company to move the project forward more quickly. MP also contended that ATC's
9 Arrowhead Substation was limited in terms of accommodating the interconnection to the
10 new converter station, a contention ATC disputed.

11 ATC next heard from MP on this matter on Friday, October 14, 2022, when a MP
12 representative e-mailed ATC and indicated that the company had decided to move forward
13 with a new St. Louis County Substation that MP would develop, rather than using the
14 existing ATC substation. MP also indicated in that e-mail that it would provide an update
15 on its Square Butte project, including the proposed new St. Louis County Substation, at a
16 MISO meeting with ATC, Minnesota Power, and other transmission owners the following
17 Monday, October 17, 2022. MP stated in the e-mail: "While the HVDC Upgrade project
18 as we have discussed it will be an MP rate base project, one of our comments to MISO
19 regarding LRTP Tranche 2 is for them to take into consideration the fact that we will be
20 upgrading the HVDC system and establishing the St Louis County 345 kV substation
21 (outside of LRTP), and for MISO to evaluate how the new substation and VSC-HVDC
22 system may be further interconnected with the surrounding 345 kV system and
23 incorporated into MISO's plans for Northeastern Minnesota."

1 **Q. Did that effectively end the discussions between MP and ATC on this matter?**

2 A. No. I and another ATC representative had a conversation with MP representatives on
3 February 7, 2023 in which we again expressed our position that ATC's Arrowhead
4 substation should be leveraged to its full extent rather than building a new substation
5 adjacent to it. ATC also agreed, at MP's request, to further discussions with MP and MISO
6 concerning overall HVDC development and both parties indicated their continued desire
7 to work together.

8 **Q. When did you next hear from MP on this matter?**

9 A. During a July 20, 2023 conversation with an MP representative about an upcoming MISO
10 meeting with transmission owners related to Tranche 2 of MISO's Long Range
11 Transmission Planning effort, I was informed that MP had initiated this docket by filing a
12 certificate of need application with the Minnesota Public Utilities Commission for the
13 Project, including constructing the new St. Louis County Substation. I reiterated ATC's
14 position that our Arrowhead 345/230 kV Substation should be leveraged to the fullest
15 extent possible. While a number of discussions took place between MP and ATC after this
16 date, as discussed in Schedule 1, ATC and MP continue to have different views on this
17 particular aspect of the overall HVDC Modernization Project and that has led to ATC's
18 intervention in this proceeding.

19 **V. OVERVIEW OF ATC'S FILING**

20 **Q. Please provide an overview, or a "road map," to ATC's overall Direct Testimony**
21 **filing and exhibits.**

22 A. While I am not an attorney, on advice of counsel, my understanding is that the
23 Commission's certificate of need rules call for the Commission to apply four general

1 criteria in evaluating a certificate of need applications and any proposed alternatives, such
2 as the Arrowhead Substation Alternative modification. I understand that Minnesota Rule
3 7849.0120 lists those criteria (which I address, in turn, below) and requires the Commission
4 to grant a certificate of need if it determines that:

5 A. the probable result of denial would be an adverse effect upon the future adequacy,
6 reliability, or efficiency of energy supply to the applicant, to the applicant's
7 customers, or to the people of Minnesota and neighboring states;

8 B. a more reasonable and prudent alternative to the proposed facility has not been
9 demonstrated by a preponderance of the evidence on the record;

10 C. the proposed facility, or a suitable modification of the facility, will provide benefits
11 to society in a manner compatible with protecting the natural and socioeconomic
12 environments, including human health; and

13 D. the record does not demonstrate that the design, construction, or operation of the
14 proposed facility, or a suitable modification of the facility, will fail to comply with
15 relevant policies, rules, and regulations of other state and federal agencies and local
16 governments.

17 The Project, modified to include the Arrowhead Substation Alternative, meets each of these
18 criteria.

19 First, with respect to Criterion A, ATC agrees with MP that the probable result of
20 denial of a certificate of need for the overall Project would adversely affect the future
21 adequacy, reliability or efficiency of energy supply. That is why ATC supports the Project.
22 ATC witness Tom Dagenais discusses how the Arrowhead Substation Alternative meets
23 the purpose and need for the Project, thereby meeting the energy needs of MP's customers,

1 the people of Minnesota, and neighboring states by making an efficient use of resources
2 through leveraging existing transmission assets. In addition, Mr. Larsen discusses the
3 ability of ATC's Arrowhead Substation to accommodate potential future transmission
4 expansion in the area.

5 Regarding Criterion B, the Arrowhead Substation Alternative provides a more
6 reasonable and prudent alternative to constructing a new substation, based on its lower cost
7 and lower environmental and other impacts. ATC witnesses Tom Dagenais, Mike Bradley,
8 Tobin Larsen and Dustin Johanek address various factors related to the size, type and
9 timing of the Arrowhead Substation Alternative , and Mr. Dagenais addresses its expected
10 reliability. Mr. Bradley and ATC witness Amy Lee address the effects of the proposed
11 facility on the natural and socioeconomic environments. Finally, Mr. Johanek addresses
12 the cost of this modification, as compared to MP's proposal.

13 With respect to Criterion C, ATC again agrees with MP that the Project provides
14 benefits to society by providing greater transmission reliability and grid strength and by
15 modernizing aged infrastructure. However, the Arrowhead Substation Alternative
16 modification will increase the overall benefits to society by making efficient use of existing
17 resources, imposing lower costs on customers, and having less environmental and human
18 impacts than building a new substation. Mr. Dagenais addresses the impact of the
19 Arrowhead Substation Alternative on the transmission system, Mr. Johanek addresses cost
20 and constructability issues, and Mr. Bradley, Mr. Larsen and Ms. Lee all address its
21 compatibility with the natural and socioeconomic environments.

1 Finally, regarding Criterion D, Mr. Johanek addresses the ability of work related to
2 the Arrowhead Substation Alternative to comply with relevant policies, rules and
3 regulations.

4 While not directly identified under any of the Commission criteria, I also discuss
5 the ownership of the various facilities comprising the Arrowhead Substation Alternative
6 and the process for implementing this alternative.

7 VI. OWNERSHIP AND OTHER ISSUES

8 **Q. If the Commission approves the Arrowhead Substation Alternative modification to**
9 **the Project, describe the ownership of the various facilities comprising that**
10 **alternative.**

11 A. ATC would own the facilities that would be constructed within ATC's Arrowhead
12 Substation, as described by ATC witness Mr. Larsen. MP would own the 345 kV double-
13 circuit transmission line that would interconnect the HVDC converter station to ATC's
14 Arrowhead Substation, as well as the facilities associated with the second HVDC 345 kV
15 Line Entrance into that new converter station.

16 **Q. Why would MP own the transmission assets?**

17 A. This double-circuited 345kV line is essentially a tie-line between MP's new converter
18 station and ATC's Arrowhead Substation—i.e., it is a "Network Upgrade" that would be
19 required to interconnect the Project to the transmission system. ATC's typical practice is
20 for the interconnecting customer or transmission owner to own such tie-line facilities and
21 we see no reason to vary that practice here. I would also note that there does not appear to
22 be disagreement between ATC and MP on this point, as MP indicated in a discovery
23 response to the Department of Commerce that it would own this line.

1 **Q. Please also describe what additional steps would be required to effectuate the**
2 **selection of the Arrowhead Substation Alternative and complete the Project.**

3 A. From a regulatory/commercial perspective, interconnecting MP's new converter station to
4 ATC's Arrowhead Substation is fairly quick and straight-forward process. ATC has an
5 existing transmission-to-transmission interconnection agreement with MP (dated January
6 8, 2008). If the Commission approves the Arrowhead Substation Alternative, ATC, MP,
7 and MISO would need to amend that agreement. Specifically, any amendment would
8 consist of edits to Appendix A, "Points of Interconnection," which is a two-page document
9 appended to the existing agreement that describes the various facilities owned, operated,
10 and maintained by either utility at their respective Arrowhead substations; this appendix
11 would be edited to describe the facilities approved by the Commission in this proceeding,
12 which utility is responsible for owning, operating, and maintaining those facilities, and a
13 "one-line" diagram depicting the updated facilities. Again, this is nothing extraordinary—
14 ATC negotiates and enters into amendments to such agreements with neighboring
15 transmission owners in the ordinary course of business. The process of amending the
16 agreement would likely only take a few days to accomplish. The amended agreement
17 would be filed with the Federal Energy Regulatory Commission (FERC) for approval
18 under Section 205 of the Federal Power Act. As the relevant Regional Transmission
19 Organization, MISO would submit the documents for filing to FERC on behalf of the
20 parties. It generally takes 60 days to get an order from FERC, but the amended agreement
21 would not need to be effective until shortly before the Project goes into service. Thus, the
22 process of updating our transmission-to-transmission interconnection agreement with
23 Minnesota Power will not delay the construction work for interconnecting Minnesota

1 Power's new HVDC converter station. It is also important to note that, if MP proceeds
2 with constructing the new St. Louis County Substation, ATC and MP would need to
3 evaluate whether the existing transmission-to-transmission interconnection agreement
4 should be amended.

5 **VII. INTRODUCTION OF WITNESSES**

6 **Q. Please introduce the other ATC witnesses and the topics they discuss.**

7 A. In addition to my testimony, ATC is providing Direct Testimony from the following
8 witnesses:

- 9 • Thomas Dagenais, Director – System Planning, describes the planning analysis
10 ATC has conducted that demonstrates the Arrowhead Substation Alternative meets
11 the purpose and need of the overall Project in terms of the reliability, efficiency and
12 adequacy of energy supply;
- 13 • Tobin Larsen, Team Leader – Contracted Engineering Services, discusses ATC's
14 345/230 kV Arrowhead Substation, the work that would need to occur within that
15 substation to interconnect the Project, the substation site's ability to accommodate
16 future expansion, and other substation-related issues;
- 17 • Dustin Johaneck, Consultant Project Manager, provides ATC's cost estimate for the
18 Arrowhead Substation Alternative, construction-related issues, and the ability to
19 complete the related work by the current April 2030 in-service date for the Project;
- 20 • Amy Lee, Principal Environmental and Regulatory Advisor, addresses the
21 environmental impacts of the Arrowhead Substation Alternative; and.

- 1 • Michael Bradley, Consultant Transmission Line Engineer, addresses the
2 transmission facilities included in the Arrowhead Substation Alternative and the
3 route selected.

4 Collectively, these witnesses demonstrate that modification of MP's proposed Project to
5 include the Arrowhead Substation Alternative meets the purpose and need for the Project
6 at lower cost and with lower impacts. Therefore, we ask that the Commission grant MP's
7 request for a Certificate of Need and Route Permit, modified to incorporate the Arrowhead
8 Substation Alternative, including the approval of the route as proposed by ATC.

9 **Q. Does that conclude your testimony?**

10 A. Yes, it does.

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