

**AN OFFICIAL FILING
BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN**

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

Docket No: 05-CE-136

DIRECT TESTIMONY OF CHARLES A. THOMPSON

1 **Q. Please state your name and business address.**

2 A. Charles A. Thompson. My business address is 3200 East Avenue South, La Crosse,
3 Wisconsin 54601.

4 **Q. By whom are you employed and what is your position?**

5 A. I am employed as the Manager of Siting and Regulatory Affairs for Dairyland Power
6 Cooperative (“Dairyland”).

7 **Q. Please summarize your qualifications and experience.**

8 A. I received a Bachelor of Arts degree in Biology from Concordia College (Moorhead,
9 Minnesota) and Master of Natural Resource Management (Botany) degree from North
10 Dakota State University. I worked for the North Dakota Public Service Commission in
11 the Reclamation and Utilities Division for 5 years. In 1985 I joined the staff of Dairyland
12 where I am responsible for obtaining permits and approvals for transmission lines,
13 substations, and communications facilities. My experience in North Dakota and
14 Wisconsin has included review of 500 kV, 400 kV DC, 345 kV, 250 kV DC, 230 kV, 161

1 kV, 115 kV, and 69 kV facilities. I have participated in state processes or testified on
2 transmission facilities siting in North Dakota, South Dakota, Minnesota, Iowa, and
3 Wisconsin. I have also participated in the transmission planning process in Minnesota
4 (Biennial Plan) and Wisconsin (Advance Plan and Strategic Energy Assessment (“SEA”)
5 process). In addition, I have obtained permits for facilities in Illinois.

6 **Q. For whom are you testifying?**

7 A. I am providing testimony on behalf of Dairyland, one of the Applicants (with Northern
8 States Power Company, a Wisconsin corporation and WPPI Energy) in this docket.

9 **Q. What is the purpose of your testimony in this proceeding?**

10 A. The purpose of my testimony is to provide a summary of Dairyland’s role in the proposed
11 Hampton-Rochester-La Crosse 345 kV Project (the “Hampton-Rochester-La Crosse 345
12 kV Project” or the “345 kV Project”). The Applicants seek a Certificate of Public
13 Convenience and Necessity (“CPCN”) to construct the Wisconsin portion of the Project.
14 The Wisconsin portion includes a 345 kV line from Alma, Wisconsin to a new
15 transmission substation located in Holmen, Wisconsin and associated 161 kV system
16 interconnections at the new substation (“La Crosse 345 kV Project” or “Project”). I am
17 also testifying about the need for the rebuild of Dairyland’s Alma-Marshland-La Crosse
18 Tap 161 kV transmission line (“Q1 Line”) which is included in the federal Environmental
19 Impact Statement (“EIS”) being prepared by the U.S. Department of Agriculture Rural
20 Utilities Service (“RUS”) as the lead federal agency.

21 **Q. Were you involved in the preparation of the current Application?**

22 A. Yes. I contributed background information and data that was used in compiling the
23 CPCN Application and the federal submissions.

1 **Q. Are you sponsoring any exhibits?**

2 A. Yes. I am sponsoring Ex.-Applicants-Thompson-1: “Dairyland Power Cooperative Q-1
3 Rebuild Comparison of Alternatives Technical Memorandum.”

4 **Q. Please provide a brief description of Dairyland Power Cooperative.**

5 A. With headquarters in La Crosse, Wisconsin, Dairyland is a not-for-profit generation and
6 transmission (“G&T”) cooperative that provides the wholesale electrical requirements
7 and other services for 25 electric distribution cooperatives and 16 municipal utilities.
8 Dairyland’s service area encompasses 62 counties in four states (Wisconsin, Minnesota,
9 Iowa, and Illinois).

10 **Q. How did Dairyland become involved in the 345 kV Project?**

11 A. As noted in Ms. Amanda King’s direct testimony, Dairyland became involved in the 345
12 kV Project as a result of its local La Crosse area load serving study that was completed in
13 2006. At the same time that Dairyland was conducting the La Crosse area study,
14 Rochester Public Utilities (“RPU”) was conducting a similar study for the City of
15 Rochester, Minnesota. When RPU initiated its local 161 kV study work, Dairyland was a
16 joint participant in the study based on its load in the Rochester area (via Dairyland
17 member Peoples Cooperative Services) as well as its 161 kV and 69 kV transmission
18 lines that serve the area. While working on the Rochester area study, RPU and Dairyland
19 determined that if the Rochester and La Crosse study areas were combined, more robust
20 solutions could be evaluated than analyzing the Rochester and La Crosse areas
21 separately. After expanding the study area, the final study concluded that the 345 kV
22 Project could improve local community reliability of the transmission system in the

1 Rochester, Minnesota area, the La Crosse, Wisconsin area, and the surrounding areas, as
2 well as improve the regional reliability of the bulk electric system.

3 **Q. Has Dairyland identified other benefits of its participation in the 345 kV Project in**
4 **addition to the local community reliability benefits discussed above?**

5 A. Yes. When identifying potential routing options for the 345 kV Project, Dairyland
6 recognized that many of the potential routes could positively impact existing Dairyland
7 transmission facilities. The most significant routing option that would benefit Dairyland
8 is if the Project ultimately co-located with and rebuilt Dairyland's Q1 Line. However,
9 even if the Project does not ultimately follow the Q1 Line right-of-way, other Dairyland
10 161 kV and 69 kV transmission lines are potential routing options and could receive
11 similar benefits if they are co-located with and rebuilt as part of the Project.

12 **Q. How do Midwest Independent Transmission System Operator's ("MISO")**
13 **transmission cost sharing rules impact Dairyland for this Project?**

14 A. While Dairyland is now a MISO Transmission Owner member, the 345 kV Project was
15 approved by the MISO Board of Directors in 2008 before Dairyland became a member.
16 Therefore, Dairyland will bear its share of the Project costs outside of the MISO cost
17 sharing rules known as Regional Expansion Criteria and Benefits I.

18 **Q. How was the Dairyland participation percentage in the 345 kV Project determined?**

19 A. Dairyland has a history of jointly planning and developing the local transmission system,
20 and cost-sharing in projects with other utilities where the service areas overlap. This
21 approach avoids building duplicate facilities, promotes least cost, single system planning,
22 and provides savings for Dairyland's consumer-members.

1 When the Southeastern Minnesota – Southwestern Wisconsin Reliability Enhancement
2 Study was finalized in 2006, the geographic area for local load serving and reliability
3 benefits to be provided by the 345 kV Project was identified. The total electric load of
4 each of the participants within this benefit area was calculated. From that exercise
5 Dairyland's load ratio share of the benefit area's total electric load was approximately 11
6 percent, resulting in Dairyland participation percentage being 11 percent of the 345 kV
7 Project.

8 **Q. Will Dairyland be seeking RUS financing for the 345 kV Project?**

9 A. Dairyland anticipates applying for financing assistance from RUS for its anticipated 11%
10 share in the 345 kV Project and the two 161 kV lines located by Rochester Minnesota.
11 Dairyland also anticipates that RUS financing will be requested for the rebuild of its Q1
12 Line, which is located in the Project area. If the Project is ultimately co-located with a
13 portion of the Q1 Line on existing right-of-way, the costs of rebuilding the affected
14 portion of the Q1 Line will be included in the 345 kV Project's costs. Dairyland's costs to
15 participate in the 345 kV Project will be approximately \$40 to \$50 million depending on
16 the route selected. If the Project's facilities are not co-located with all or a portion of the
17 Q1 Line on the existing right-of-way, Dairyland will need to seek additional loan funds
18 from RUS to finance the portion of the Q1 Line that is not included in the Project in the
19 2014-2015 time frame. If a route that results in co-location is not utilized, the
20 Applicants' consumers will also bear the incremental costs to develop and construct the
21 Project on an alternate route.

1 **Q. Has Dairyland evaluated the various scenarios of co-location that may occur**
2 **depending on the route of the Project?**

3 A. Yes. As part of the RUS Draft EIS process, Dairyland submitted a Technical
4 Memorandum dated November 8, 2011 (**Ex.-Applicants-Thompson-1**) which was
5 prepared by the Project team, including Mr. Tom Hillstrom and I.

6 **Q. How does the amount of co-location differ among the routes under consideration for**
7 **the Project?**

8 A. The length of the Q1 Line that would have to be rebuilt as a stand-alone project is highly
9 dependent on the route selected for the Project. If the Q1-Highway 35 route were
10 selected, for example, no separate project would be needed. In contrast, if the Arcadia or
11 Arcadia-Ettrick route were selected, 39 to 46 miles of the Q1 Line would have to be
12 rebuilt separately. The table below excerpted from **Ex.-Applicants-Thompson-1** shows
13 the various La Crosse Project routes/Q1 Line stand-alone rebuild scenarios:

Table 1: Q-1 Scenarios for Various CapX Project Routing Decisions

CapX Project Route or Segment	Post CapX Q-1 Rebuild Required (Miles)				Comment
	Q-1 Rebuild Total Length	Section A Alma-Milton	Section B Milton-Trempealeau	Section C Trempealeau-Holmen	
Complete CapX Routes					
Arcadia Route	39 to 46	10	16	13 to 20	Complete stand-alone rebuild of the Q-1 would be required. Length depends upon alternative.
Arcadia Ettrick Route	39 to 46	10	16	13 to 20	Complete stand-alone rebuild of the Q-1 would be required. Length depends upon alternative.
Q1-Highway 35 Route	0	0	0	0	CapX Project rebuilds entire Q-1.
Q1-Galesville Route	13 to 20	0	0	13 to 20	CapX Project rebuilds approximately 27 miles of the Q-1.
CapX Route Segment					
Highway 88 Connector	10	10	0	0	This length is added to the Q1-Highway 35 Route requirements or the Q1-Galesville Route requirements described above.

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Q. What are the associated costs with these scenarios?

A. Dairyland estimates it will cost its consumer-members an additional \$34-\$40 million dollars to rebuild the Q1 Line if a non-Q1 route is selected for the Project.

Q. If all or a portion of the Q1 Line is not rebuilt as part of the Project, what is the anticipated route that would be used for the Q1 Line stand-alone rebuild?

A. Dairyland’s Q1 Line needs to be rebuilt due to age and condition irrespective of the 345 kV Project and it needs to stay on or near its existing right-of-way to provide local service to the Winona, Minnesota area, because the Q1 Line is the source for the Marshland 161-69 kV transmission substation. Rebuilding the Q1 Line in a new location would impact more homes, increase the length of the line, would be substantially more

1 costly, and have greater environmental impacts. For these reasons, Dairyland plans to
2 rebuild its Q1 Line in its present location if an alternate route is selected for the Project.

3 **Q. Isn't it true that agencies have expressed concerns about using the existing Q1 Line**
4 **alignment in the U.S. Fish and Wildlife Service's ("USFWS") Upper Mississippi**
5 **River National Wildlife and Fish Refuge ("Refuge")?**

6 A. Yes. Wisconsin Department of Natural Resources, the Wisconsin Department of
7 Transportation, and the USFWS have expressed concerns with the existing Q1 Line
8 alignment through the Refuge. Dairyland believes that those concerns have been
9 addressed in the federal Draft EIS and the Wisconsin CPCN application, and that **Ex.-**
10 **Applicants-Thompson-1** demonstrates that there is no viable alternative that would
11 enable the Q1 Line to be moved out of the Refuge.

12 **Q. Does Dairyland have a preferred route for the Project?**

13 A. When considering the proposed Project's size and scope, state of the technology,
14 economic considerations, legal considerations, socioeconomic concerns, availability of
15 resources, and the timeframe in which the identified need must be fulfilled, the Q1-
16 Highway 35 route is Dairyland's preferred route for the Project.

17 **Q. Does this complete your direct testimony?**

18 A. Yes.

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