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VIA ELECTRONIC FILING AND U.S. MAIL

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The Honorable Barbara Case
Administrative Law Judge
State of Minnesota Office of Administrative Hearings
600 North Robert Street
P.O. Box 64620
St. Paul, MN 55164-0620

**Re: In the Matter of the Applications of Xcel Energy and ITC Midwest for a
Certificate of Need and a Route Permit for the Huntley-Wilmarth 345 kV
Transmission Line Project
MPUC Docket Nos. E002,ET6675/CN-17-184 and E002,ET6675/TL-17-185
OAH Docket No. 82-2500-35157**

Dear Judge Case:

Enclosed for filing on behalf of Northern States Power Company, doing business as Xcel Energy, and ITC Midwest LLC (collectively, the Applicants), please find the Post-Hearing Reply Brief of Applicants in Support of their Route Permit Application.

Notably, the Applicants are not filing a reply brief in the Certificate of Need docket (Docket No. E002, ET6675/CN-17-184). The initial post-hearing briefs filed in that docket by the Clean Energy Organizations; the Department of Commerce, Division of Energy Resources; and the Midcontinent Independent System Operator, Inc. all support granting a Certificate of Need for the Huntley-Wilmarth 345 kV Transmission Project. The Applicants appreciate and agree with the analysis provided by these parties.

Please feel free to contact me with any questions regarding this filing.

Sincerely,

/s/ Valerie T. Herring

Valerie T. Herring

Enclosures
cc: Official Service Lists

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

IN THE MATTER OF THE APPLICATION
TO THE MINNESOTA PUBLIC UTILITIES
COMMISSION FOR A ROUTE PERMIT FOR
THE HUNTLEY-WILMARTH 345 kV
TRANSMISSION LINE PROJECT

DOCKET No. E002, ET6675/TL-17-185
OAH DOCKET No. 82-2500-35157

**POST-HEARING REPLY BRIEF OF
NORTHERN STATES POWER COMPANY AND ITC MIDWEST LLC
IN SUPPORT OF THEIR ROUTE PERMIT APPLICATION**

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I. INTRODUCTION

Northern States Power Company, doing business as Xcel Energy, and ITC Midwest LLC (ITC Midwest) (together, the Applicants) respectfully submit this Reply Brief to the initial brief submitted by the City of North Mankato (the City or North Mankato).

North Mankato requests that the northern portions of the Green and Red routes and Segment Alternatives A and B that pass through areas adjacent to North Mankato “be rejected” due to the potential impacts that these routes would have on the City’s future development plans for these areas.¹ While the Applicants appreciate the participation of North Mankato in this proceeding and acknowledge the investments this community has made in developing a comprehensive land use plan, potential impacts on future development do not require rejection of these routes. Rather, potential land use impacts are just one factor, among many, that the Commission needs to consider in selecting a route for the Huntley – Wilmarth 345 kilovolt (kV) Transmission Line Project (Huntley – Wilmarth Project or Project).²

In addition, in evaluating potential impacts to North Mankato’s future land use, the Commission should also take into account that these areas are located beyond the municipal boundaries of North Mankato with no pending annexation, the current

¹ North Mankato Initial Brief at 5 (eDocket No. [20193-151305-01](#)).

² As stated in their initial brief, Segment Alternatives A and B are not part of any of the Applicants’ recommended route configurations for the five routes. As a result, Applicants’ Reply Brief focuses on North Mankato’s arguments related to the Red and Green routes.

preliminary nature of these developments, and the fact that transmission lines have been shown to be compatible with development.

Based on the record, and after review of North Mankato's initial brief, the Applicants' position, as stated in the Applicants' initial post-hearing brief, remains unchanged. All of the Applicants' recommended route configurations are permissible by the Commission consistent with the Minnesota Power Plant Siting Act, Minn. Stat. § 216E, and the Commission's related routing rules, Minn. R. ch. 7850. However, the Commission has the discretion to determine how to consider its routing criteria to determine the route that best satisfies this criteria.³ The Applicants recognize that an analysis of the routing criteria can lead to different route selections depending on how the Commission's routing criteria are applied.

If the Commission decides to focus, at least in part, on the net economic benefits of this Project and select the least-cost route that provides the greatest benefit-to-cost ratio, this supports selection of the Green Route. The Green Route with a monopole design has the lowest cost (\$121.3 million (2016\$)) and the highest benefit-to-cost ratio (1.88 under MTEP17 and 1.47 under MTEP18). If the Green Route is selected, North Mankato requests that the portion of the route that traverses "through North Mankato's planned development areas" be constructed underground, at a cost of \$13 million

³ Minn. Stat. § 216E.02, subd. 7(b); Minn. R. 7850.4000 and 7850.4100.

(2017\$) per mile,⁴ more than quadruple the cost of the Applicants' proposed overhead design. The Applicants do not believe that such a costly mitigation is warranted based on the preliminary nature of North Mankato's development plans. Further, such a significant cost increase would no longer make this route the lowest cost route and would dictate selection of another route if the Commission determined that underground mitigation is necessary.

As pointed out by North Mankato, and acknowledged by the Applicants, the trade-offs with selecting the Green Route are that this route has more existing homes within 200 feet of its anticipated alignment; has potential for greater impacts to agriculture, forested land, and future development; and has the least amount of corridor sharing with existing transmission lines. Thus, if the Commission elects to employ a more holistic application of the routing criteria, the record supports approval of the Purple-BB-L Route⁵ for the Project. The Purple-BB-L Route avoids the current and future development areas in North Mankato; has a small number of existing residences within 200 feet and within 1,000 feet; follows existing transmission line corridors for half of its length; includes the fewest acres of forested land within its right-of-way; and has moderate agricultural impacts due to the double-circuit design. The Purple-BB-L

⁴ Ex. XC-6 at 121 (Certificate of Need Application) (eDocket No. [20181-139030-01](#)). The \$13 million per mile cost is the cost to underground the transmission line. It does not include the cost of the associated facilities, such as transition structures, that would be required to convert from overhead to underground and vice versa.

⁵ The Purple-BB-L Route is the Purple Route incorporating Segment Alternatives BB and L.

Route also has a moderate cost (\$140.1 million (2016\$)) and has a benefit-to-cost ratio well above 1.0 (1.63 under MTEP17 and 1.28 under MTEP18).

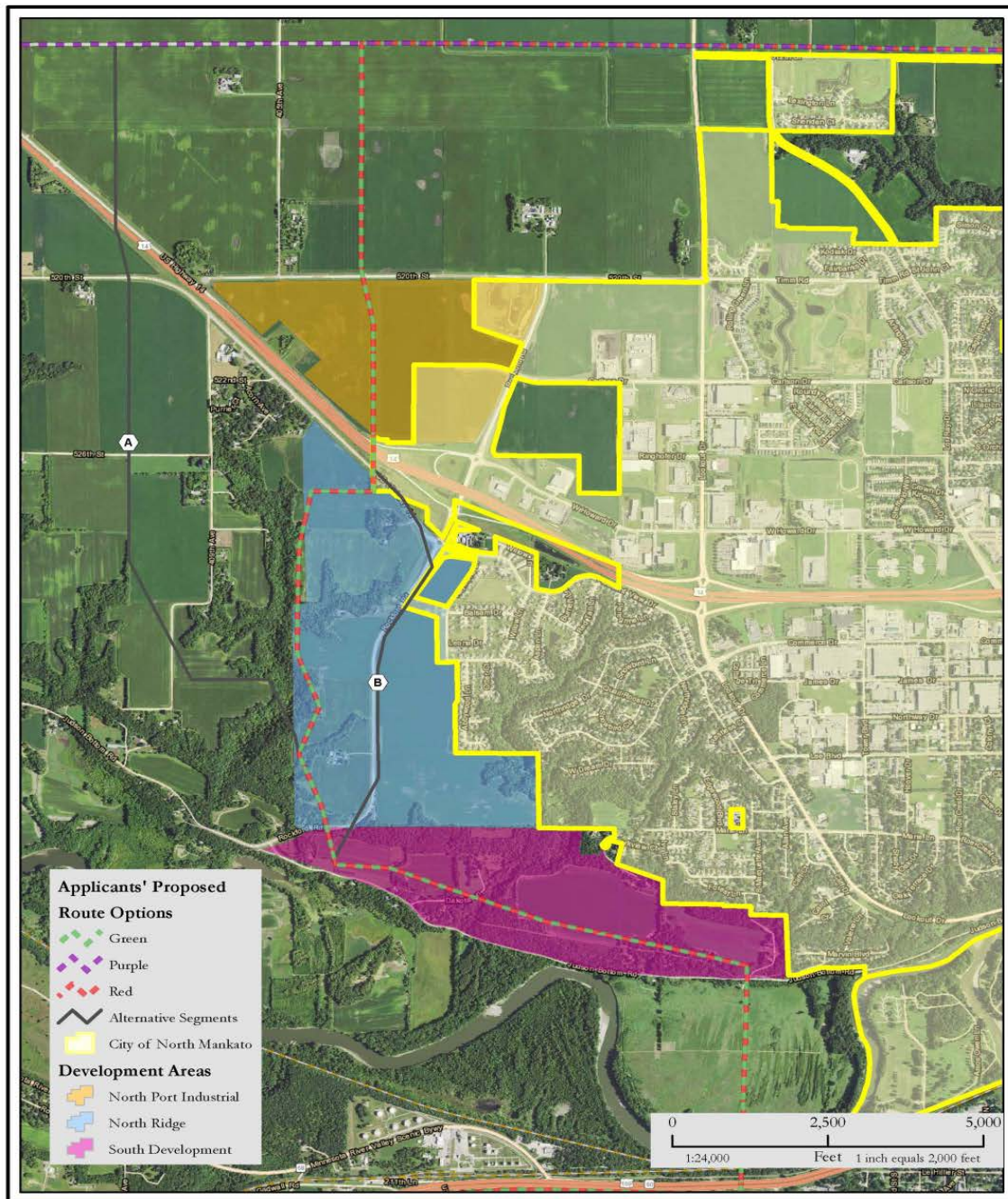
II. RED AND GREEN ROUTES ARE PERMITTABLE

A. Current Status of Future Development Should be Considered

North Mankato urges the Commission to “reject” the northern portions of the Green and Red routes and Segment Alternatives A and B, primarily on the basis of potential impacts that these routes may have on areas marked for future residential and commercial developments in North Mankato’s comprehensive land use plan. The northern portions of the Green and Red routes follow the same path leaving the Wilmarth Substation. Both routes follow the Lakefield Junction–Wilmarth transmission line to the east before heading south along property lines and then connecting with the existing South Bend – Wilmarth 115 kV line to cross the Minnesota River. As shown in **Figure 1**, below, the northern portions of the Red and Green routes are outside the current municipal boundaries of North Mankato (shown in yellow).⁶

⁶ Ex. NM-1 at Exhibit No. NM-4 (Fischer Direct) (eDocket No. [201811-147666-01](#)); Ex. XC-20 at 6, Figure 3 (Hillstrom Rebuttal) (eDocket No. [201812-148564-06](#)).

Figure 1⁷
City of North Mankato Potential Development Areas



⁷ Ex. XC-20 at 6, Figure 3 (Hillstrom Rebuttal) (eDocket No. [201812-148564-06](#)).

This figure also depicts the existing land use in this area and shows that there are currently few homes and businesses in proximity to the Red and Green routes in this area outside the city limits of North Mankato. However, this area has been slated by North Mankato for future residential and commercial/industrial development in the City's comprehensive land use plan. The areas shown in blue and pink have been zoned for residential development and the orange area has been planned for industrial development.

North Mankato argues that because the Red and Green routes cross areas marked by the City for future development, these route alternatives cannot be selected for the Project. While the Applicants agree that potential impacts to existing and future land uses are one of the factors considered by the Commission, this single factor does not require rejection of these route alternatives.⁸ In examining impacts to areas slated for future residential development, the report of the Administrative Law Judge (ALJ) for the Hampton – Rochester – La Crosse 345 kV Transmission Line Project noted, “[h]uman settlement is one of many factors, but it is certainly not determinative, and there is no legal presumption in routing a transmission line that residential areas and

⁸ See Minn. Stat. § 216E.03, subd. 7 (“The commission’s site and route permit determinations must be guided by the state’s goals to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts. . . .”); Minn. R. 7850.4100 (“In determining whether to issue a permit for a . . .high voltage transmission line the commission shall consider the following: (A) effects on human settlement . . .”).

hobby farms should be spared at the expense of prime farmland.”⁹ In other words, human settlement, including consideration of existing and future land use, is just one factor that must be considered, along with all other routing factors by the Commission, in selecting a route that best satisfies the route permit criteria set forth in Minnesota statutes and rules.¹⁰

In addition, in considering potential impacts to future land uses, the Commission has also examined the definiteness and likelihood of such development in its analysis. This examination is important as a municipality’s comprehensive land use plan does not guarantee that development will occur in the locations or in the manner dictated by a land use plan. As a result, the Commission has considered the current state of development in evaluating potential land use impacts.

For example, in 2012, the Commission considered arguments from the City of Oronoco that the Hampton – Rochester – La Crosse 345 kV transmission line would impact a planned residential area.¹¹ In that case, a township objected to a route that crossed an area zoned as “potentially suburban” but there was no evidence in the record

⁹ *In the Matter of Xcel Energy’s Application for a Route Permit for the CapX 2020 Hampton-Rochester-La Crosse High Voltage Transmission Line*, Docket No, E002/TL-09-1448, ALJ REPORT at Finding No. 416 (Feb. 8, 2012).

¹⁰ Minn. Stat. § 216E.03, subd. 7; Minn. R. 7850.4100.

¹¹ *In the Matter of Xcel Energy’s Application for a Route Permit for the CapX 2020 Hampton-Rochester-La Crosse High Voltage Transmission Line*, Docket No, E002/TL-09-1448, ORDER ISSUING ROUTE PERMIT AS AMENDED at 12 (May 30, 2012).

of any current home construction in that area. Ultimately, in examining all of its routing factors, the Commission selected this route over the township's objections.¹²

This is similar to the approach taken by the Commission for Minnesota Energy Resources Corporation's Rochester natural gas pipeline.¹³ The pipeline route ultimately selected by the Commission crossed through the center of the Westridge property that had a general development plan that was approved by the City of Rochester in 2007.¹⁴ The landowner-developer objected to the route due to potential impacts on the intended development.¹⁵ The Westridge property had not been annexed by the city at the time of the natural gas pipeline route permit proceedings and while the general development plan was still on file with Olmsted County, it had expired.¹⁶ The ALJ found that the speculative nature of the development of this property was not a sufficient reason to not select a route under the similarly-worded natural gas pipeline

¹² "And although Oronoco expressed concern that the preferred route would impact a planned residential area, Olmsted County's (where Oronoco Township is located) future land use map does not show the preferred route crossing any area identified as suburban development; it crosses less than one mile of an area identified as potentially suburban." *In the Matter of Xcel Energy's Application for a Route Permit for the CapX 2020 Hampton-Rochester-La Crosse High Voltage Transmission Line*, Docket No. E002/TL-09-1448, ORDER ISSUING ROUTE PERMIT AS AMENDED at 12 (May 30, 2012).

¹³ *In the Matter of the Application of Minn. Energy Res. Corp. for a Route Permit for the Rochester Nat. Gas Pipeline Project in Olmsted Cty.*, Docket No. G011/GP-15-858, ORDER ISSUING ROUTE PERMIT at Order Point 1 (May 5, 2017).

¹⁴ *In the Matter of the Application of Minn. Energy Res. Corp. for a Route Permit for the Rochester Nat. Gas Pipeline Project in Olmsted Cty.*, Docket No. G011/GP-15-858, ORDER ISSUING ROUTE PERMIT at Order Point 1 (May 5, 2017) (adopting the ALJ's Report at Finding 198).

¹⁵ *In the Matter of the Application of Minn. Energy Res. Corp. for a Route Permit for the Rochester Nat. Gas Pipeline Project in Olmsted Cty.*, Docket No. G011/GP-15-858, ORDER ISSUING ROUTE PERMIT at Order Point 1 (May 5, 2017) (adopting the ALJ's Report at Finding 200).

¹⁶ *In the Matter of the Application of Minn. Energy Res. Corp. for a Route Permit for the Rochester Nat. Gas Pipeline Project in Olmsted Cty.*, Docket No. G011/GP-15-858, ORDER ISSUING ROUTE PERMIT at Order Point 1 (May 5, 2017) (adopting the ALJ's Report at Findings 201-03).

routing statutes and rules; the Commission agreed and a route crossing through the Westridge property was selected after consideration of all routing criteria.¹⁷

This was in contrast to the consideration and weight given to a separate development in the same proceeding.¹⁸ The portion of the Willow Creek property that was bisected by the pipeline route was platted and active development was ongoing on those parcels and the rest of the development.¹⁹ The ALJ recommended, and the Commission agreed, that a route that avoided bisecting the Willow Creek property, but still following along the outer edges of the development areas, best met the routing criteria by avoiding impacts to this imminent development.²⁰

Here the record evidence demonstrates that North Mankato's future development of the areas crossed by the Red and Green routes is still in the early stages. As noted in the Rebuttal Testimony of Applicants' witness Mr. Thomas Hillstrom, all three of these future development areas have not yet been annexed by North Mankato and only a small portion of one of the residential developments has been platted by

¹⁷ *In the Matter of the Application of Minn. Energy Res. Corp. for a Route Permit for the Rochester Nat. Gas Pipeline Project in Olmsted Cty.*, Docket No. G011/GP-15-858, ORDER ISSUING ROUTE PERMIT at Order Point 1 (May 5, 2017) (adopting the ALJ's Report at Findings 204-07).

¹⁸ *In the Matter of the Application of Minn. Energy Res. Corp. for a Route Permit for the Rochester Nat. Gas Pipeline Project in Olmsted Cty.*, Docket No. G011/GP-15-858, ORDER ISSUING ROUTE PERMIT at Order Point 1 (May 5, 2017) (adopting the ALJ's Report at Findings 208-14).

¹⁹ *In the Matter of the Application of Minn. Energy Res. Corp. for a Route Permit for the Rochester Nat. Gas Pipeline Project in Olmsted Cty.*, Docket No. G011/GP-15-858, ORDER ISSUING ROUTE PERMIT at Order Point 1 (May 5, 2017) (adopting the ALJ's Report at Findings 212-14).

²⁰ *In the Matter of the Application of Minn. Energy Res. Corp. for a Route Permit for the Rochester Nat. Gas Pipeline Project in Olmsted Cty.*, Docket No. G011/GP-15-858, ORDER ISSUING ROUTE PERMIT at Order Point 1 (May 5, 2017) (adopting the ALJ's Report at Finding 214).

Nicollet County to follow the City’s conceptual plans.²¹ Specifically, there is a small area of eight residential lots within the North Ridge development that was platted in March 2018.²² This is known as the “Burnett’s Ravine Ridge No. 5 Subdivision” and it is located south of U.S. Highway 14 near County Road 14. However, none of these eight residential lots has been developed to date.²³ The Final Environmental Impact Statement also acknowledged the uncertainty surrounding North Mankato’s development plans, stating that “[t]he timeframe and extent of the development planned by North Mankato are difficult to predict.”²⁴

In examining the potential impacts on future land use development, the Applicants urge the Commission and the ALJ to take into account the preliminary nature of North Mankato’s development plans. In addition, given the fact that development is still in the planning stages, there is an opportunity for the Applicants to coordinate with the City and developers on structure placements to avoid or minimize any potential impacts. Further, residents that choose to move into new developments after the transmission line is in place would be aware of the existence of these lines in deciding whether to relocate to the area.

²¹ Ex. XC-20 at 6, Figure 3 (Hillstrom Rebuttal) (eDocket No. [201812-148564-06](#)).

²² Ex. XC-20 at 7 (Hillstrom Rebuttal) (eDocket No. [201812-148564-06](#)).

²³ Ex. XC-20 at 7 (Hillstrom Rebuttal) (eDocket No. [201812-148564-06](#)).

²⁴ Ex. EERA-21 at Appendix L, p. L-81 (FEIS) (eDocket No. [20194-151659-03](#)).

B. Future Development is Compatible with Transmission Lines

In advocating that the ALJ and the Commission eliminate from consideration the northern portions of the Red and Green routes, North Mankato argues that the impacts to the potential future commercial and residential developments detailed above would be “significant” and “unreasonable.”²⁵ Such a conclusion is not supported by the facts on the record.

While the Applicants understand that North Mankato has invested in road and infrastructure developments, as explained in the Rebuttal Testimony of Mr. Hillstrom, “development can and does occur near and around transmission facilities.”²⁶ To illustrate such development occurs in proximity to transmission facilities, Mr. Hillstrom identified an area in the City of Mankato, approximately one mile northwest of the U.S. Highway 169 and Minnesota Highway 14 interchange.²⁷ In 1991, this area was undeveloped but for two transmission lines (69 kV and 115 kV).²⁸ By 2014, much of this area had filled in with high density residential housing.²⁹ This example demonstrates that the construction of transmission lines does not mean development will not occur.

²⁵ North Mankato Initial Brief at 5 (eDocket No. [20193-151305-01](#)).

²⁶ Ex. XC-20 at 3 (Hillstrom Rebuttal) (eDocket No. [201812-148564-06](#)).

²⁷ Ex. XC-20 at 3 (Hillstrom Rebuttal) (eDocket No. [201812-148564-06](#)).

²⁸ Ex. XC-20 at 3-4, Figure 1 (Hillstrom Rebuttal) (eDocket No. [201812-148564-06](#)).

²⁹ Ex. XC-20 at 3 and 5, Figure 2 (Hillstrom Rebuttal) (eDocket No. [201812-148564-06](#)).

There are many other examples of such development near and around transmission lines across the State of Minnesota. Also, as previously mentioned, the Red and Green routes traverse the western edges of the conceptual development areas and potential impacts could be mitigated by the Applicants coordinating structure placement for the Project with developers if these routes are selected.

As outlined in their initial brief, the Applicants acknowledge that the Green Route and the Red Route do not perform the best under certain routing criteria. Specifically, the Green and Red routes, when compared to the other routes, are located in closer proximity to a greater number of existing residences, have higher potential impacts to agricultural and forested lands, and share a smaller percentage of their length with existing infrastructure.³⁰ Thus, if the Commission chooses not to select the Green Route or the Red Route, it should be on the basis of the comparative impacts across routing criteria and not solely on the basis of potential impacts to North Mankato's future and conceptual development plans for areas beyond the municipal boundaries of the City.

III. UNDERGROUND CONSTRUCTION IS NOT APPROPRIATE

North Mankato's initial brief requests that if the Green Route or the Red Route is selected, the Project be constructed underground for approximately four miles of the

³⁰ Applicants' Initial Route Permit Brief at 42-43, 55-57, 59-63 (eDocket No. [20193-151312-01](#)).

portion of these routes that cross through North Mankato and areas identified by the City for future development.³¹

Undergrounding a transmission line comes with significant increased costs and the Commission has never required undergrounding of a 345 kV transmission line. In addition, the Commission has only required undergrounding for lower voltage lines (115 kV or 161 kV) and in very limited and extraordinary circumstances.³² Such circumstances are simply not present here. For instance, for the Hiawatha Transmission Project, the Commission ordered undergrounding for 1.5 miles of a 115 kV line, in large part, to avoid impacts to a densely developed historic district that could not be mitigated by selection of an alternative route.³³ In contrast, North Mankato's future development is still preliminary and it is currently uncertain whether this anticipated development will materialize. Considering this uncertainty, there is no need to require undergrounding if either the Red Route or Green Route is selected.

³¹ North Mankato Initial Brief at 27 (eDocket No. [20193-151305-01](#)).

³² See *In the Matter of the Application of N. States Power Co. for a High Voltage Transmission Line Route Permit for the Hiawatha 115 kV Transmission Line Project*, Docket No. E002/TL-09-38, ORDER ISSUING ROUTE PERMIT AS AMENDED (Feb. 10, 2012); *In the Matter of the Petition of N. States Power Co. d/b/a Xcel Energy and Dairyland Coop. for a Route Permit for a 115 kV and 161 kV Transmission Line from Taylors Falls to Chisago Cnty. Substation*, Docket No. E002/TL-06-1677, ORDER GRANTING CERTIFICATE OF NEED, GRANTING ROUTE PERMIT, AND DEFERRING ACTION ON PORTION OF ROUTE PERMIT APPLICATION PENDING NEGOTIATIONS AND FURTHER FILINGS at 5 (Feb. 20, 2008) (adopting the ALJ's conclusion that undergrounding the 161 kV transmission line in the St. Croix National Scenic Riverway, except for the river crossing, in order to acquire necessary permits from the Minnesota Department of Natural Resources, the U.S. National Park Service, and the U.S. Army Corps of Engineers was appropriate).

³³ See *In the Matter of the Application of N. States Power Co. for a High Voltage Transmission Line Route Permit for the Hiawatha 115 kV Transmission Project*, Docket No. E002/TL-09-38, FINDINGS OF FACT, CONCLUSIONS, AND RECOMMENDATION OF ALJ at 97 (Oct. 8, 2010) (with Commission February 10, 2012, Order adopting recommendation of ALJ to underground the 115 kV line).

Further, undergrounding is not appropriate given the economic-based need for the Huntley – Wilmarth Project. In the Applicants’ evaluation of alternatives required for a certificate of need application, the Applicants examined an underground design for the Project.³⁴ As part of this analysis, the Applicants estimated the cost for overhead construction of the proposed 345 kV transmission line at \$2 million to \$2.8 million (2017\$) per mile.³⁵ By comparison, an open trench underground construction of the 345 kV line would be in excess of \$13 million (2017\$) per mile.³⁶ With approximately four miles of length through the future development areas identified by North Mankato, such a condition would increase the cost of the Green and Red routes by at least \$44 million (2017\$).³⁷

This cost increase would make the Green and Red routes the most costly routes under consideration at approximately \$165.3 million (2016\$) for the Green Route and \$185.2 million (2016\$) for the Red-Q Route.³⁸ This is compared to the current highest cost route, the Purple-E-AA1-Red-Q Route, at \$160.2 million (2016\$). Given the

³⁴ Minn. R. 7849.0260(B)(7).

³⁵ Ex. XC-6 at 121 (Certificate of Need Application) (eDocket No. [20181-139030-01](#)).

³⁶ Ex. XC-6 at 121 (Certificate of Need Application) (eDocket No. [20181-139030-01](#)).

³⁷ The \$13 million per mile cost is the cost to underground the transmission line. It does not include the cost of the associated facilities, such as transition structures, that would be required to convert from overhead to underground and vice versa. In their Certificate of Need Application, the Applicants noted that an alternative underground design would be more costly than the open trench method. Further, the Applicants concluded that any underground installation would also require a reactive compensation study at a cost between \$150,000 and \$300,000 (2017\$). Ex. XC-6 at 121 (Certificate of Need Application) (eDocket No. [20181-139030-01](#)).

³⁸ The Red-Q Route is the Applicants’ recommended configuration for the Red Route and incorporates Segment Alternative Q.

significant cost associated with undergrounding and the Project's economic-based need, the Applicants do not support undergrounding as a mitigation strategy.

The Project was approved by the Midcontinent Independent System Operator, Inc. as a Market Efficiency Project and provides economic benefits by reducing wholesale energy costs.³⁹ As costs for the Project increase, the net economic benefits provided by the Project are reduced. In developing possible routes for the Project, the Green Route was proposed by the Applicants as a lower cost route option to maximize the net economic benefits of the Project. Adding over \$44 million (2017\$) to the Green Route would vitiate the net economic benefits achieved by this route.

If the Commission decides to select the Green Route at least in part on the basis that the Green Route has the highest net economic benefits, the Applicants do not believe it is appropriate to add significant cost by requiring underground construction of the northern portion of this route through North Mankato. Rather, if the Commission determines that the potential impacts to the City's future land use require underground construction as a mitigation measure, Applicants would recommend selection of another route, such as the Purple-BB-L Route, that avoids such potential impacts.

³⁹ Applicant's Initial Route Permit Brief at 2 (eDocket No. [20193-151312-01](#)).

IV. COSTS OF NORTH MANKATO'S PREFERRED ROUTES

North Mankato supports the Commission issuing a Route Permit for either the Purple-E-Red, Purple, or Blue routes. North Mankato advocates for these routes as they are the routes under consideration with the shortest length through the municipal boundaries of the City or through the areas identified for potential future development beyond the municipal boundaries. The Applicants developed recommended route configurations for these three routes, as summarized in **Table 1**, along with their associated cost estimate.

Table 1: Applicants' Recommended Route Configurations for the Routes Preferred by the City of North Mankato⁴⁰

Route Alternative	Cost (Millions) (2016\$) ⁴¹	Cost (Millions) (Escalated to anticipated year spend \$) ⁴²
Purple-BB-L Route <i>Purple Route Modified to Use Segment Alternatives BB and L Double-Circuit Monopole Design</i>	\$140.1	\$155.8
Blue-CC-Q Route <i>Blue Route Modified to Use Segment Alternatives CC and Q Double-Circuit Monopole Design</i>	\$138.6	\$154.1
Purple-E-AA1-Red-Q Route <i>Purple-E-Red Route Modified to Use Segment Alternative Q and Alternative Alignment AA1 Double-Circuit Monopole Design</i>	\$160.2	\$178.2

The Purple-E-AA1-Red-Q Route is the most expensive route in the record, resulting in the lowest net economic benefits of the Applicants' five recommended route configurations. The benefit-to-cost ratios of each of the three routes preferred by North Mankato are summarized in **Table 2**.

⁴⁰ For ease of reference, the single-circuit, monopole-designed Green Route's cost in 2016 dollars is \$121.3 million, with anticipated escalated costs totaling \$134.9 million.

⁴¹ "2016 dollars" or "(2016\$)" assumes that the Project would have been constructed (and dollars spent) in 2016.

⁴² The escalated dollar figures account for inflationary pressures from 2016 until the dollars are actually spent. The majority of costs for this Project will be spent in 2020 and 2021.

Table 2: Costs and Benefit-to-Cost Ratios⁴³

Route Alternative	Cost (Millions) (2016\$)	Weighted Benefit- to-Cost Ratio (MTEP17)	Weighted Benefit- to-Cost Ratio (MTEP18)
Purple-BB-L Double-Circuit, Monopole Design	\$140.1	1.63	1.28
Blue-CC-Q Double-Circuit, Monopole Design	\$138.6	1.65	1.29
Purple-E-AA1- Red-Q Double-Circuit, Monopole Design	\$160.2	1.43	1.12

As shown in **Table 2**, the Purple-E-AA1-Red-Q Route has the lowest benefit-to-cost ratio of the three routes preferred by North Mankato. In fact, the Purple-E-AA1-Red-Q Route provides the lowest benefit-to-cost ratio of any of the Applicants' five recommended route configurations.⁴⁴ Further, the Purple-E-AA1-Red-Q Route has similar impacts as compared to the Purple-BB-L Route but has a much higher cost, i.e., \$20 million higher (2016\$). On balance, the Applicants believe that the record supports selection of either the Green Route or the Purple-BB-L Route depending on how the Commission elects to apply its routing criteria to this Project.

⁴³ For ease of reference, the Green Route's estimated cost totals \$121.3 million (2016\$), with a weighted benefit-to-cost ratio under MTEP17 of 1.88 and under MTEP18 of 1.47.

⁴⁴ Applicants' Initial Route Permit Brief at 66-67 (eDocket No. [20193-151312-01](#)).

V. CONCLUSION

The Applicants continue to respectfully request that the ALJ recommend that the Commission grant a Route Permit to the Applicants for either the Green Route or the Purple-BB-L Route between the Wilmarth Substation and the Huntley Substation for the Project.

Dated: April 15, 2019

Respectfully submitted,

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IN THE MATTER OF THE APPLICATION OF
XCEL ENERGY AND ITC MIDWEST FOR A
CERTIFICATE OF NEED AND A ROUTE
PERMIT FOR THE HUNTLEY-WILMARTH
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MPUC DOCKET No. E-002, ET-6675/TL-17-185

OAH DOCKET No. 82-2500-35157

Theresa Senart certifies that on the 15th day of April 2019, she filed a true and correct copy of Applicants **Post-Hearing Reply Brief in Support of Route Permit Application**, by posting the same on www.edockets.state.mn.us. Said **Post-Hearing Reply Brief** has also been served via U.S. Mail or e-mail as designated on the attached Official Service Lists on file with the Minnesota Public Utilities Commission in the above-referenced dockets.

s/Theresa Senart

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