

PowerOn Midwest™

PowerOn Midwest

Minnesota Department of Natural Resources
December 2, 2025

Agenda

- Introductions
- Project Need
- MISO Tranche 1 and 2.1 Projects in Minnesota
- Project Design
- Project Schedule
- Open Discussion

Utility team

Great River Energy | ITC Midwest | Otter Tail Power Company | Xcel Energy

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ITC
A FORTIS COMPANY

OTTER TAIL
POWER COMPANY

Xcel Energy®

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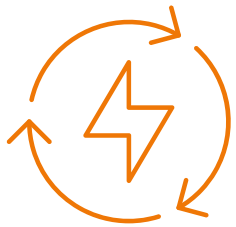
Electricity use is growing throughout the Upper Midwest and **demand is expected to increase significantly** over the next two decades.

This increase in electric use, combined with the changing ways electricity is generated, requires new long-term solutions to meet the needs of our communities, states, and region to ensure we can continue delivering the reliable service you need to power your daily lives.

PowerOn Midwest—tomorrow's reliability starts today.

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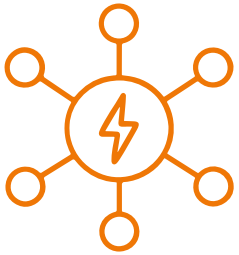
Project benefits



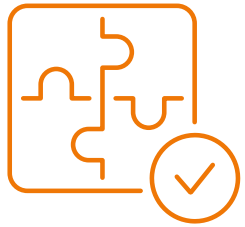
Reliable electricity



Customer and economic benefits



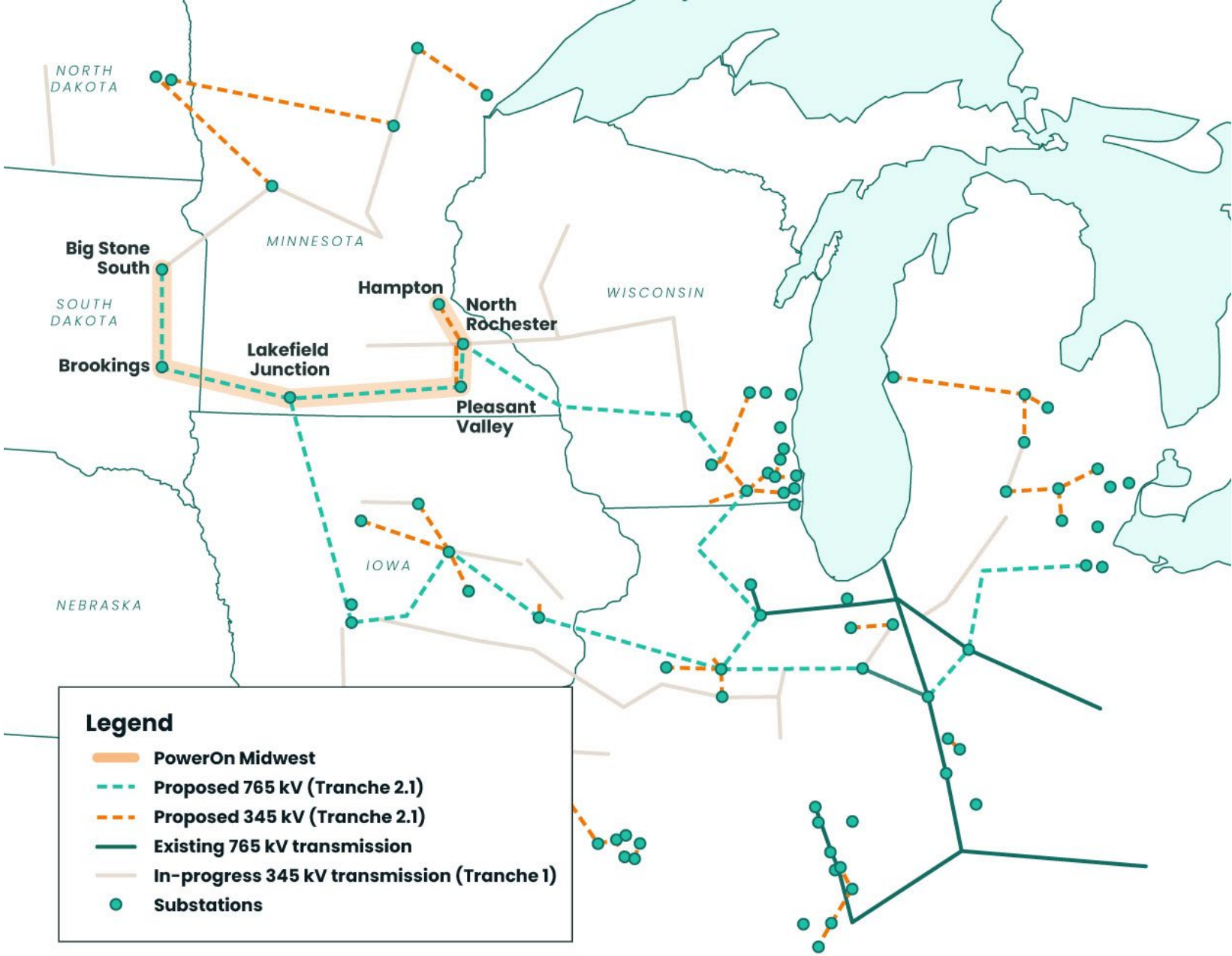
Future-ready grid



Access to new generation

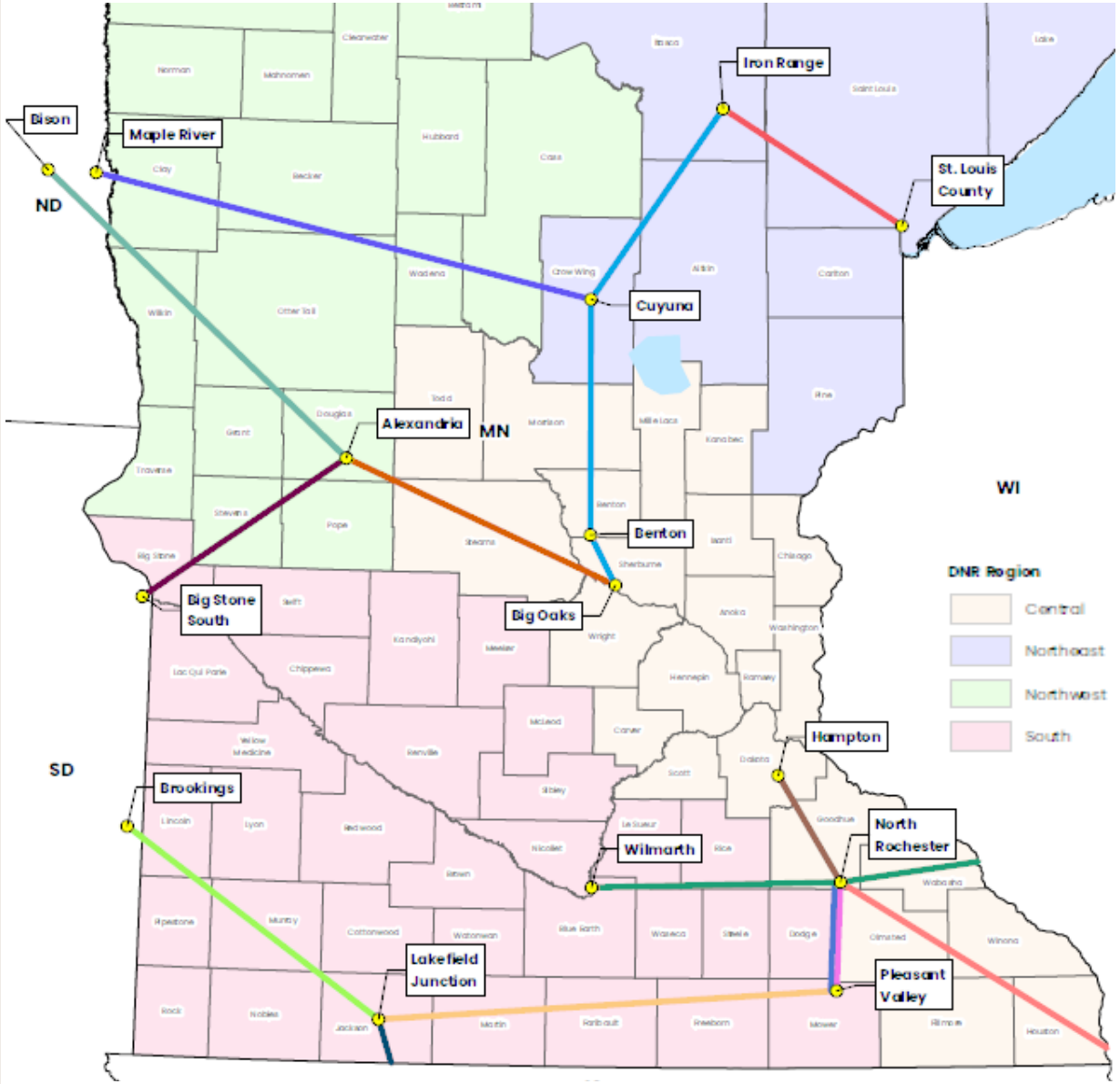
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MISO Tranche 1 & 2.1



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MISO's Long Range Transmission Planning Projects (Tranche 1 and Tranche 2.1) across Minnesota

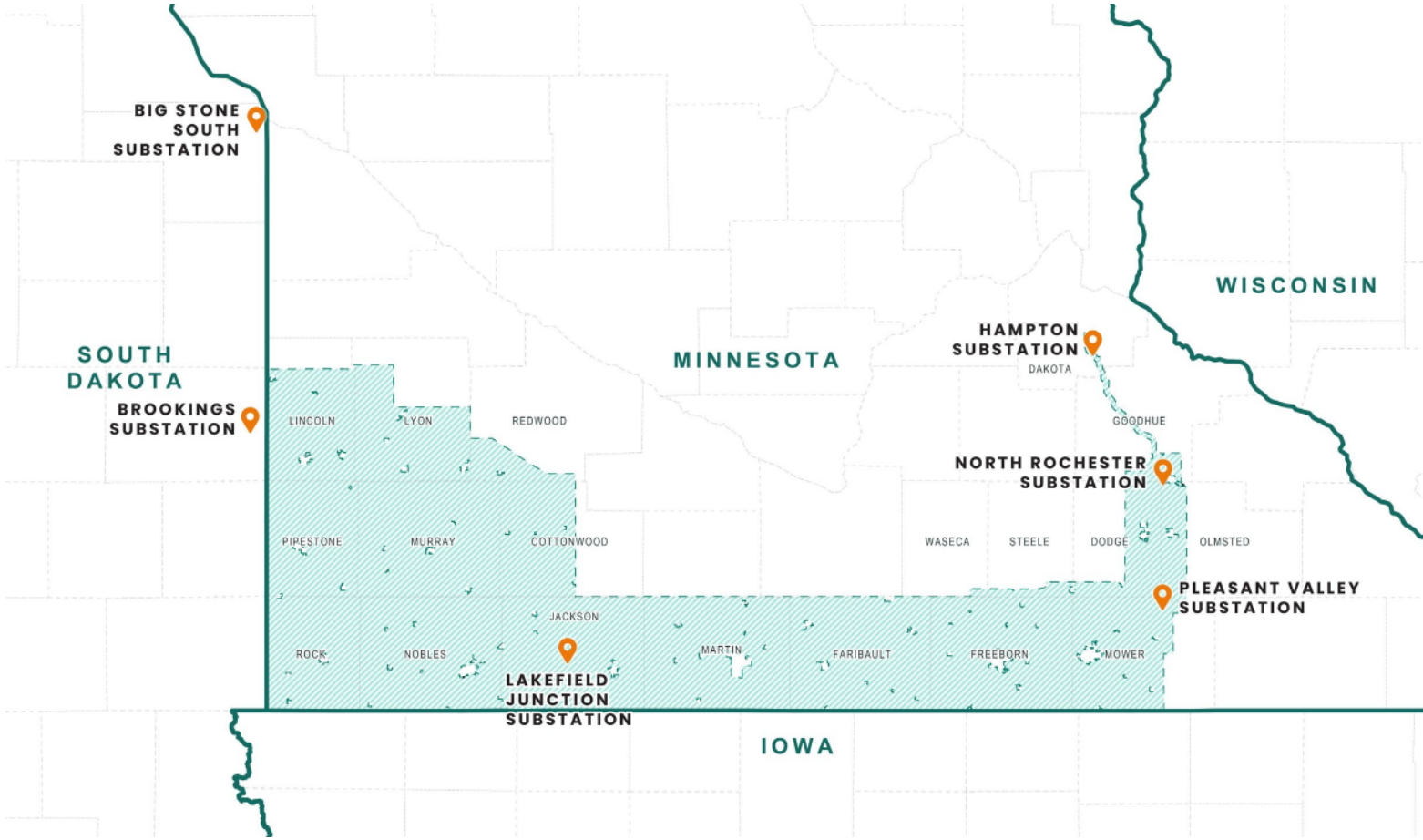


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Proposed Notice Area

The Certificate of Need includes:

- Big Stone South-Brookings County-Lakefield Junction 765 kV **(MISO LRTP#22)**
- Lakefield Junction-MN/IA border 765 kV **(MISO LRTP#23)**
- Lakefield Junction-Pleasant Valley-North Rochester 765 kV **(MISO LRTP#24)**
- Pleasant Valley-North Rochester-Hampton 345 kV **(MISO LRTP#25)**



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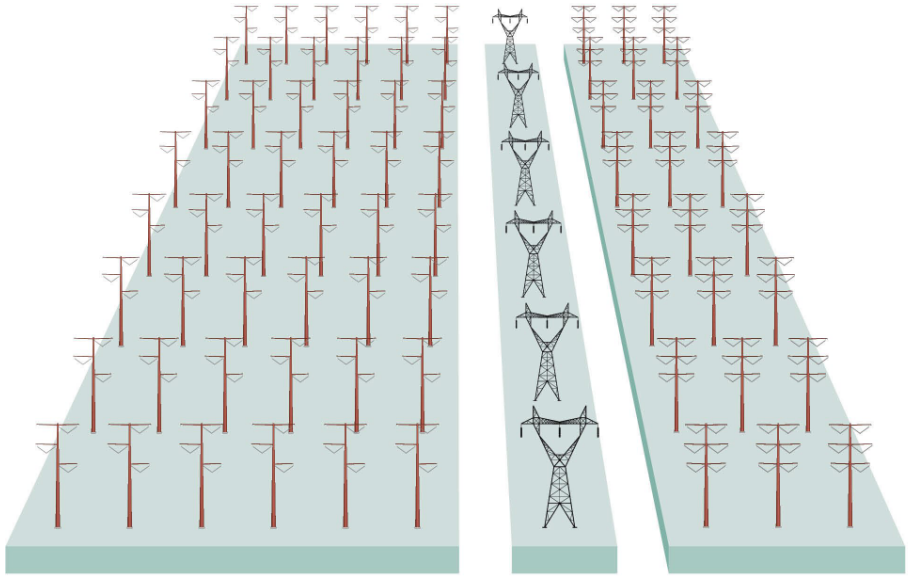
Technology

765 kV technology was identified in the planning process as the preferred solution for the region, presenting several advantages:

- Efficiently carries power over long distances
- Fewer transmission lines needed to carry the same amount of power
- Fewer structures reduce impact on land, communities, and the environment
- Resilient infrastructure that can consistently deliver power
- Provides backup power pathways

A 765 kV transmission line can carry as much power as:

- **Six single circuit 345 kV lines**
- **Or three double circuit 345 kV lines**

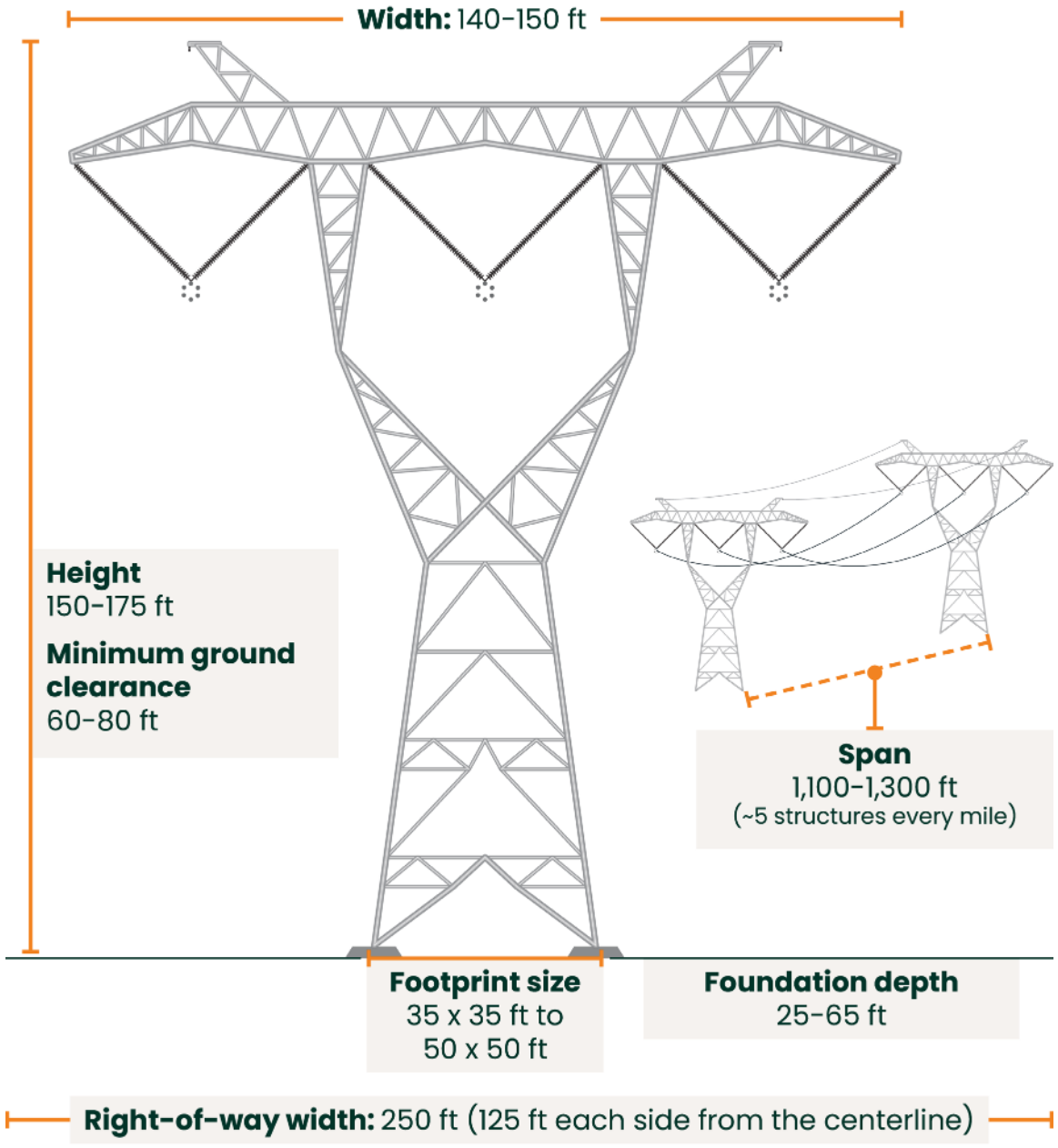


345 kV
SIX SINGLE CIRCUIT TOWERS
(900 ft of total right-of-way)

765 kV
ONE SINGLE CIRCUIT TOWER
(250 ft of total right-of-way)

345 kV
THREE DOUBLE CIRCUIT TOWERS
(450 ft of total right-of-way)

765 kV Structure

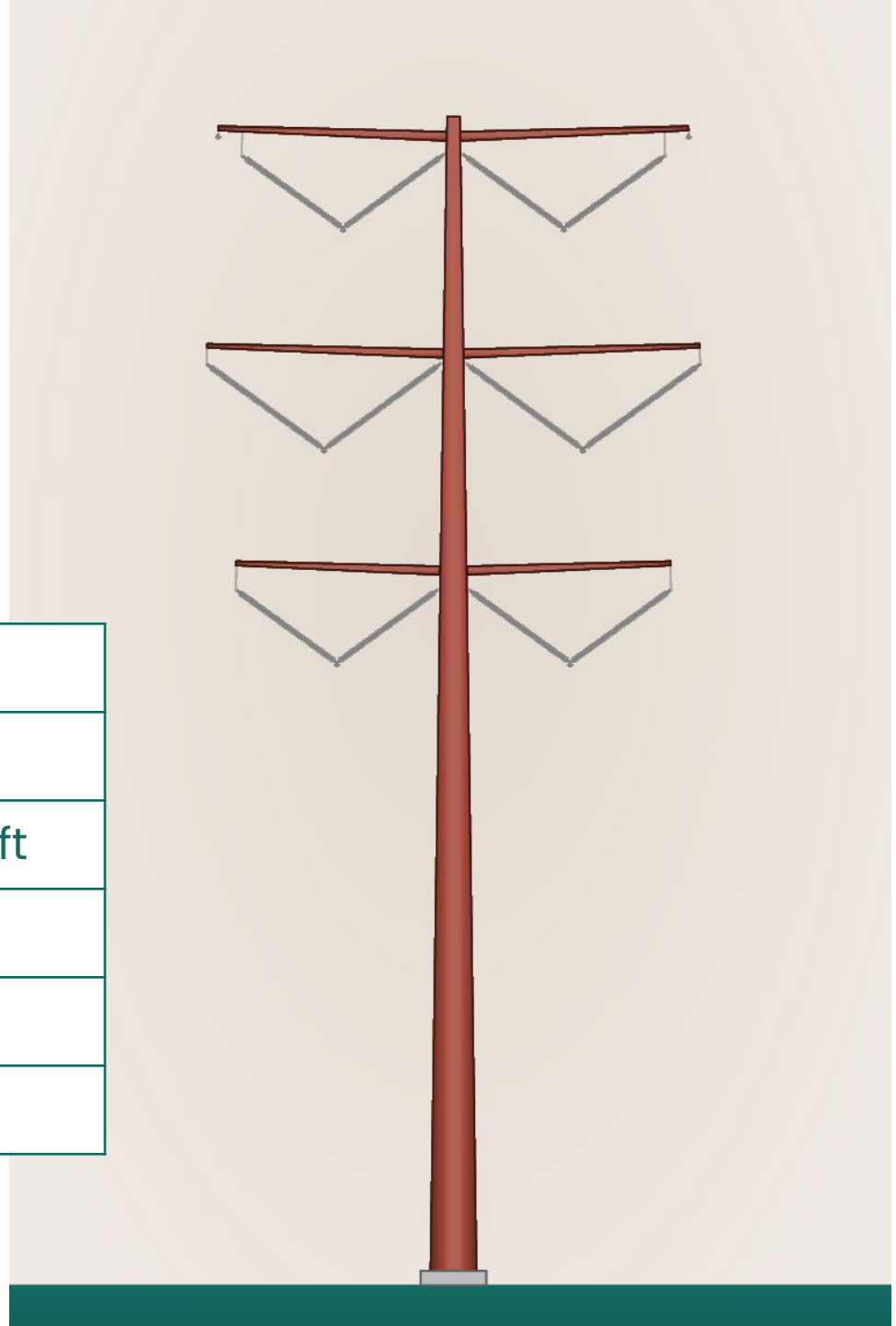


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345 kV Structure

- Replace existing single-circuit structures (Pleasant Valley to North Rochester).
- Second circuit added to existing structures (North Rochester to Hampton).

Height:	90-160 ft
Width:	14-50 ft
Span:	800-1,200 ft
Minimum Ground Clearance:	26-38 ft
Foundation Depth:	30-40 ft
Right-of-way Width:	150 ft



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PowerOn Midwest permitting

Two approvals needed from the Minnesota Public Utilities Commission – Certificate of Need and Route Permits

Certificate of Need

(typically a 12-15-month process)

Route Permits

(typically a 12-15-month process for each permit)

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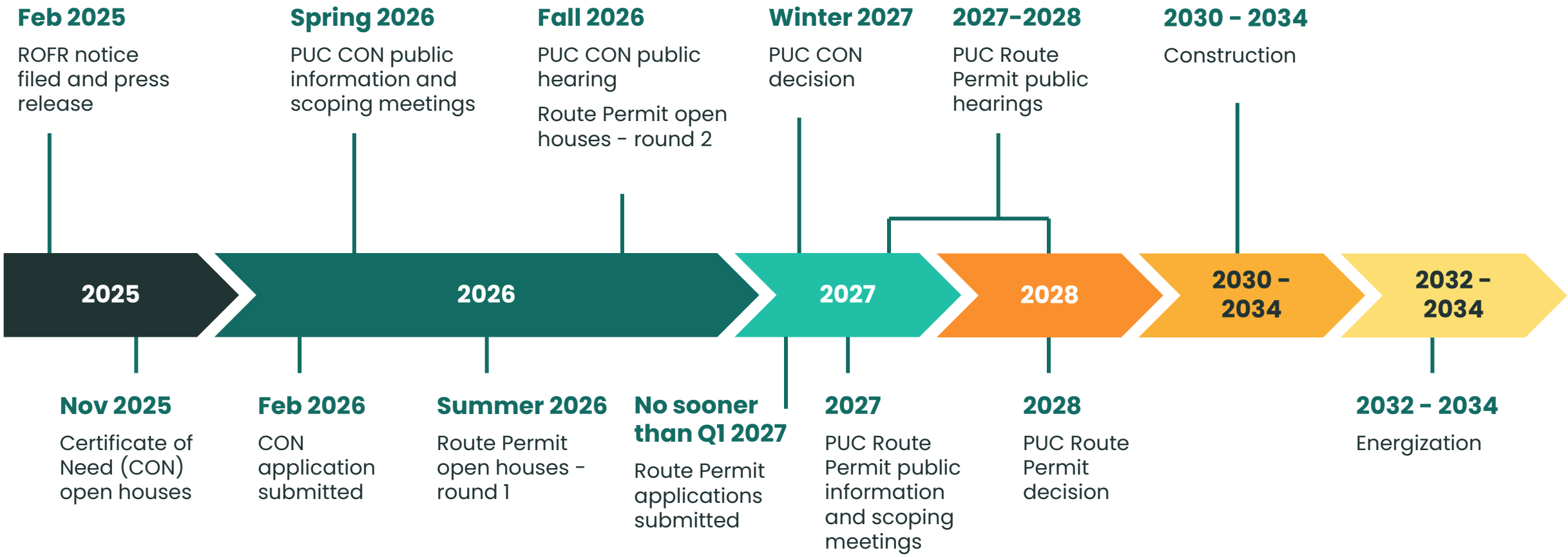
PowerOn Midwest permitting

Permit amendment

The North Rochester to Hampton segment requires one approval from the Minnesota Public Utilities Commission—a permit amendment.



Preliminary schedule



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Open Discussion

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Thank You

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