

# Hollydale CN-12-113 DISTRIBUTION NEED

Figure 3.9: Existing Major Growth Corridors in Focused Study Area



Figure 4.13: Focused Study Area 2006 N-1 Feeder Circuit Risks – Single Contingency



“Need” is based on 2006 data, where 2020 scenario not markedly different from 2006. “Need” is focused in the industrial and commercial corridors along the highways:

- East and West of 494
- Along Hwy 55

## Supply Side Fixes

- Transformers in existing substations
  - Increase MVA of 13.8 & 34.5
  - Increase voltage of all to 34.5
- Space – a limiting factor at Gleason Lake
  - Switch out xfmrs 13.8 to 34.5, more capacity in less space
  - Gas insulated substation equipment
  - Underground
- Upgrade Gleason Lake-Parkers Lake line
  - Bump up timing from 2016 & 2020
  - Bump up timing of GL/PL feeder lines

## Demand Side Fixes

- Efficiency upgrades
- Intermittent agreements
- Solar installation in corridors on big boxes

“Desire” in corridor – distinct from “need”

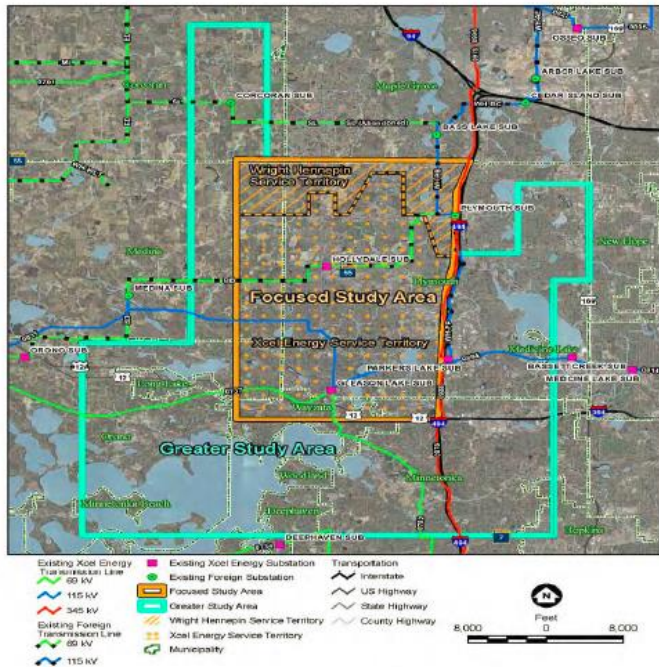
- 115 kV system integration
- Ownership of line & easement
- Beef up 115 kV system to absorb outage of growing 345 kV system
- Rate recovery scheme more favorable for xmsn than distribution

# Hollydale CN-12-113 TRANSMISSION NEED

“Need” of transmission to alleviate low voltage conditions on the transmission system serving the Area of Concern under certain contingency conditions.

Each option presented includes Gleason Lake and Parkers Lake substation upgrades and a rebuild and/or new Gleason Lake-Parkers Lake 115kV transmission line.

Figure 1: Focused and Greater Study Area



The Parkers Lake transmission line was a fairly recent project...

Hollydale Appendix H, Table 2 (p. 14) focuses on the Gleason Lake – Parkers Lake 115/115 kV Rebuild and new 115 kV line.

Isn't the Gleason Lake – Parkers Lake rebuild and new line the project that needs to be done?

What does the modeling show for a Gleason Lake – Parkers Lake rebuild completed first, with proposed additions of feeders to the Gleason Lake and Parkers Lake substations? Would “need” for Hollydale transmission be eliminated???

Table 2: Timing of Transmission Facilities

| Gleason Lake – Parkers Lake 115/115 kV Rebuild  | 2015/2016<br>Gleason Lake – Parkers Lake 115/115 kV Rebuild | 2020/2021<br>Gleason Lake – Parkers Lake 115/115 kV Rebuild | 2025/2026<br>Gleason Lake – Parkers Lake 115/115 kV Rebuild | 2038<br>Gleason Lake – Parkers Lake 115/115 kV Rebuild |
|---|---|---|---|--|
| New Transmission Lines  |   |   |   |  |
| 2015/2016<br>Medina – Hollydale – Pomedean Lake 115 kV line<br>or<br>Gleason Lake – Hollydale – Pomedean Lake 115 kV line |   |   | Hollydale Project, S11                                      |  |
| 2026<br>Medina – Pomedean Lake 115 kV line (no Hollydale connection yet)  |   | S5, S6 S7, S8, S9   |   |  |
| 2026/2031/2033<br>Gleason Lake – Parkers Lake new 115 kV line   |   | S2, S3, S4  |   |  |
| 2037<br>Medina – Pomedean Lake 115 kV line (no Hollydale connection yet)  |   | S10   |   |  |
| No New Transmission Line in Project Area  |   |   |   | S1   |

“Desire” for xmsn – distinct from “need”

- 115 kV system integration
- Ownership of line & easement
- Beef up 115 kV system to absorb outage of growing 345 kV system
- Rate recovery scheme more favorable for xmsn than distribution