Plymouth-area power grid upgrade alternatives

### Alternative A
**Construct 34.5 kV distribution lines from new Pomerleau Lake Substation to Hollydale Substation**
- 8 miles of new distribution line
- 1 mile where no lines exist
- 7 miles where there are already lines
- 140 homes along new distribution line routes
- 12 new pad-mounted transformers (approximately 9x1x10 feet) & up to 12 switching cabinets (5x6x7 feet)
- New Pomerleau Lake substation site

### Performance
- Provides good solution for near term (roughly 20 years)
- Pomerleau Lake Substation makes future improvements to meet future needs east of I-494 less challenging and expensive.
- Provides limited ability to efficiently increase load serving capacity long-term to serve additional electrical demand

### Alternative B
**Construct 34.5 kV distribution lines from Parkers Lake Substation to Hollydale Substation**
- 10 miles of new distribution line
- 6 miles where no lines exist
- 10 miles where there are already lines
- 96 homes along new distribution line routes
- 12 new pad-mounted transformers (approximately 9x1x10 feet) & up to 12 switching cabinets (5x6x7 feet)
- Expansion of Parkers Lake Substation site would occur on privately-owned land (parking lot, drainage easement)
- No new substation site

### Performance
- Provides adequate solution for near term (roughly 20 years)
- Additional improvements will be needed east of I-494 and will be more challenging and expensive without a new Pomerleau Lake Substation.
- Does not provide ability to efficiently increase capacity if needed in the long-term to serve additional electrical demand.
- A large amount of load would be served from Parkers Lake Substation which increases reliability risk.

### Alternative C
**Re-energize existing 69 kV line east of Hollydale Substation and construct 13.8 kV distribution lines from Hollydale Substation & 0.7 miles of 69 kV line to connect existing line to new Pomerleau Lake Substation.**
- 4 miles of new distribution line
- 0 miles where no lines exist
- 4 miles where there are already lines
- 26 homes along new distribution line routes
- 0.1 miles of new transmission line
- No new pad-mounted transformers needed
- Vegetation management required on unmaintained 69 kV line right-of-way east of Hollydale Substation (4 miles / approximately 63 residential lots)
- New Pomerleau Lake Substation site

### Performance
- Provides good solution for near term (roughly 20 years)
- Pomerleau Lake Substation makes additional improvement needs east of I-494 less challenging and expensive.
- Provides ability to efficiently increase capacity if needed in the long-term to serve additional electrical demand.