



## Underground Power Line Conversion in Minnesota

### Full Mitigation Best Practice Story

#### *State-wide, Minnesota*

**The State of Minnesota** - High windstorms and ice storms have cause overhead power lines in Minnesota to become hazardous and at risk of failure. Statewide, the ice storms are heavy enough to break the lines and the windstorms are high enough to blow down the lines. Several electric cooperatives have experience repetitive outages during a single storm because the lines break in several areas from heavy ice and high wind.



The State of Minnesota has taken a pro-active role in providing some relief to communities that encounter repetitive power outages by converting damaged power lines to underground cables. Across the State, there have been more than 92 miles of damaged, overhead power lines converted to underground cable since 1995.

The underground cable will eliminate the problems associated with heavy ice breaking the lines, high wind blowing down the lines and manual, time-consuming labor to repair downed lines. Local electric cooperatives continue to express interest in power line conversions, and the State plans to continue supporting conversions to underground lines because they are a proven effective mitigation measure.

#### Activity/Project Location

Geographical Area: **State-wide**

FEMA Region: **Region V**

State: **Minnesota**

#### Key Activity/Project Information

Sector: **Public**

Hazard Type: **Winter Storm; Severe Storm**

Activity/Project Type: **Utility Protective Measures**

Activity/Project Start Date: **07/1995**

Activity/Project End Date: **Ongoing**

Funding Source: **Hazard Mitigation Grant Program (HMGP); Local Sources**

Funding Recipient: **Business/Industry**

Funding Recipient Name: **Various electric cooperatives statewide**

#### Activity/Project Economic Analysis

Cost: **\$3,585,308.00 (Actual)**

## Activity/Project Disaster Information

Mitigation Resulted From Federal  
Disaster? **Unknown**

Value Tested By Disaster? **Unknown**

Repetitive Loss Property? **Unknown**

## Reference URLs

Reference URL 1: <http://www.fema.gov/>

Reference URL 2: <http://www.epcra.state.mn.us/>

## Main Points

- Funding has been approved to address approximately 150 living snow fence sites, equating to approximately 36 miles, to reduce the threat of dangerous snowdrifts across roads and highways.
- Relieving communities that encounter repetitive power outages by converting damaged power lines to underground cables.
- Local electric cooperatives continue to express interest in power line conversions, and the State plans to continue supporting conversions to underground lines because they are a proven effective mitigation measure.