



# FEMA

## Using Grants to Help Convert Overhead Electrical Lines to Underground

**Independence, MO**—For the City of Independence, removing power lines from utility poles and burying them underground is not just a matter of aesthetics; it’s also good business. Through mitigation grants, Independence Power and Light (IPL) buried power lines from distribution line poles to residential structures, proving that this tactic enhances power reliability, reduces property loss, and lessens risk to human life—and it saves money.

Continuously reinstalling downed power lines, which resulted from several storms that toppled trees and snapped branches, did not make financial sense for the municipally owned company. As replacement costs continued to escalate—along with the risk to life and property damages—reversing the “reinstalling” trend became a priority.

“We are not offering customers a service by repeating what we did three or four decades ago. We have to quit pouring money into [downed power lines in] storm after storm and start finding ways to benefit customers and reduce future damages,” said Jack Looney, district engineering planner supervisor at Independence Power and Light. “We can do that through underground utility services.”

The ice storm of 2002 crippled the area, leaving over 2,000 of IPL’s 47,000 residential customers without power and some of whom suffered utility-related property damages. For most, the average electrical outage was six days. Storm damages exceeded \$1.4 million. Transmission and distribution lines were down; one lineman was fatally injured while repairing services.

“It’s not the ice on the lines that causes the most damage, but the weight of ice on adjacent trees that fall and force power lines down,” Looney said.

The storm was declared a Federal disaster, and mitigation funds became available through the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP). HMGP provides funding to State and local governments to implement long-term hazard mitigation measures and recover from major disaster declarations. FEMA can fund up to 75 percent of the eligible cost of each project.

“By converting overhead electric services underground, our goal is to reduce our customers’ vulnerability to danger, restore power for more customers in a shorter period and reduce the expense of repairing services as well as property damages, additional crews and other overhead services,” Looney explained. “Reinstalling overhead lines following a major ice storm as 2002 is a 14-day event. It takes about seven days to repair the main distribution system and the rest of the time is spent putting services back up.”

Teaming with Missouri’s State Emergency Management Agency (SEMA), IPL sought mitigation grants to facilitate the underground conversion of service distribution lines to 1,200 high-risk residential customers. IPL set out to prove that moving utility lines underground is good mitigation.

Success of the grant application primarily rests on complying with FEMA guidelines—the project must conform to the State Hazard Mitigation Plan, provide beneficial impact upon the designated disaster area, conform to environmental regulations, solve a problem independently and be cost effective.



Jackson County,  
Missouri



### Quick Facts

- Year: **2002**
- Sector: **Public**
- Cost: **\$11,000,000.00 (Estimated)**
- Primary Activity/Project: **Utility Protective Measures**
- Primary Funding: **Hazard Mitigation Grant Program (HMGP)**