

## When Neighbors Ask Underground Power Lines



After storms that produce significant outages, many customers ask why all power lines are not installed underground. There are pros and cons.



After a 2002 storm that knocked out electricity to 2 million customers in North Carolina, regulators there took a look at what it would cost to bury the three major power companies' overhead lines. The state utilities commission concluded the project would be "prohibitively expensive," costing approximately \$41 billion and taking about 25 years to complete. Customers' rates would more than double to pay for the project, the commission staff found.

### Why doesn't Duke Energy convert more overhead power lines underground?

At first take, this makes sense. During storms, fewer outages seem to occur in areas where lines are underground. However, underground service is significantly more expensive to install, which can result in higher electric rates. When there is an underground outage, the repair normally takes much longer and it is at a higher cost.

Here are some additional points to consider:

- Installing underground lines is best done as part of comprehensive planning for new developments. This way, the cost is less expensive than converting later from overhead to underground.
- When problems arise underground, earth moving equipment is often required to correct the issue – taking significant time and impacting the customer's property.
- Overhead systems, while susceptible to more outages, can be repaired more quickly, even after major storms.
- There is no true underground system. At some point, underground service comes back to the overhead system. When outages occur on the overhead system, underground service may also be disrupted.
- As underground lines age, failure rates may occur and problems can be harder to find and repair.

### How does Duke Energy prioritize restoration efforts?

Duke Energy addresses outages in a manner that enables power restoration to public health and safety facilities and to the greatest number of customers as safely and quickly as possible. A typical sequence:

- Locate downed power lines to ensure power is no longer flowing
- Restore high-voltage lines and substations that service large, densely populated areas
- Restore emergency facilities (e.g., hospitals) and critical infrastructure
- Service distribution lines that serve smaller numbers of customers

### How do I contact Duke Energy if I am without power?

- Duke Energy Carolinas: 800.POWERON
- Duke Energy Progress: 800.419.6356
- Duke Energy Florida: 800.228.8485
- Duke Energy Indiana: 800.343.3525
- Duke Energy Ohio/Kentucky: 800.543.5599