

Underground lines: Facts-at-a-Glance

Costs:

Installation:

Underground distribution lines: 7,300 miles @ average of \$1.6 million per mile:	\$12 billion
Underground Transmission lines: 600 miles @ average of \$7 million per mile:	\$ 4.2 billion
Remove existing overhead lines:	\$530 million
Ground mounted transformers and equipment:	\$ 1.3 billion

Total approximate installation costs: **\$18 billion**

Annual underground maintenance costs: \$5 million per year

Cost savings with underground system:

Tree trimming and storm-related costs:	\$18 million per year
Operation and maintenance costs of overhead system:	\$10.5 million per year

Net increase to customers

Approximate permanent annual revenue requirement: \$3.24 billion per year

Approximate permanent annual increase in electric utility bills, average per customer: **\$10,000 per year**

Reliability of current overhead system:

With major storms:	99.92 percent reliability
Without major storms:	99.96 percent reliability

Additional customer costs:

One-time underground service line, provided by electrician: **\$2,000 per residence** (higher for businesses); Telephone and cable television line would also have to be buried, at an additional high cost.

Other factors

- Underground lines are:
 - not immune to outages due to environmental conditions;
 - susceptible to accidental contact by excavators;
 - more expensive to maintain, and five to ten times more expensive to replace or upgrade when that should become necessary;
- Streams, wetlands and environmentally sensitive areas along roadsides must be crossed;
- Underground lines may have to run along two sides of the road to reach homes on both sides, or frequent road crossings must be trenched;
- Transformers and other facilities now located on top of poles must be relocated on the ground, almost always on private property;
- Trees near underground lines would be completely removed, as root systems will impact lines and interfere with the installation and access;
- Power outages, when they do occur, would take much longer to find and repair, possibly weeks.