

# Environmental Impact Statement

Delaware Water Gap National Recreation Area  
Middle Delaware National Scenic and Recreational River  
Appalachian National Scenic Trail

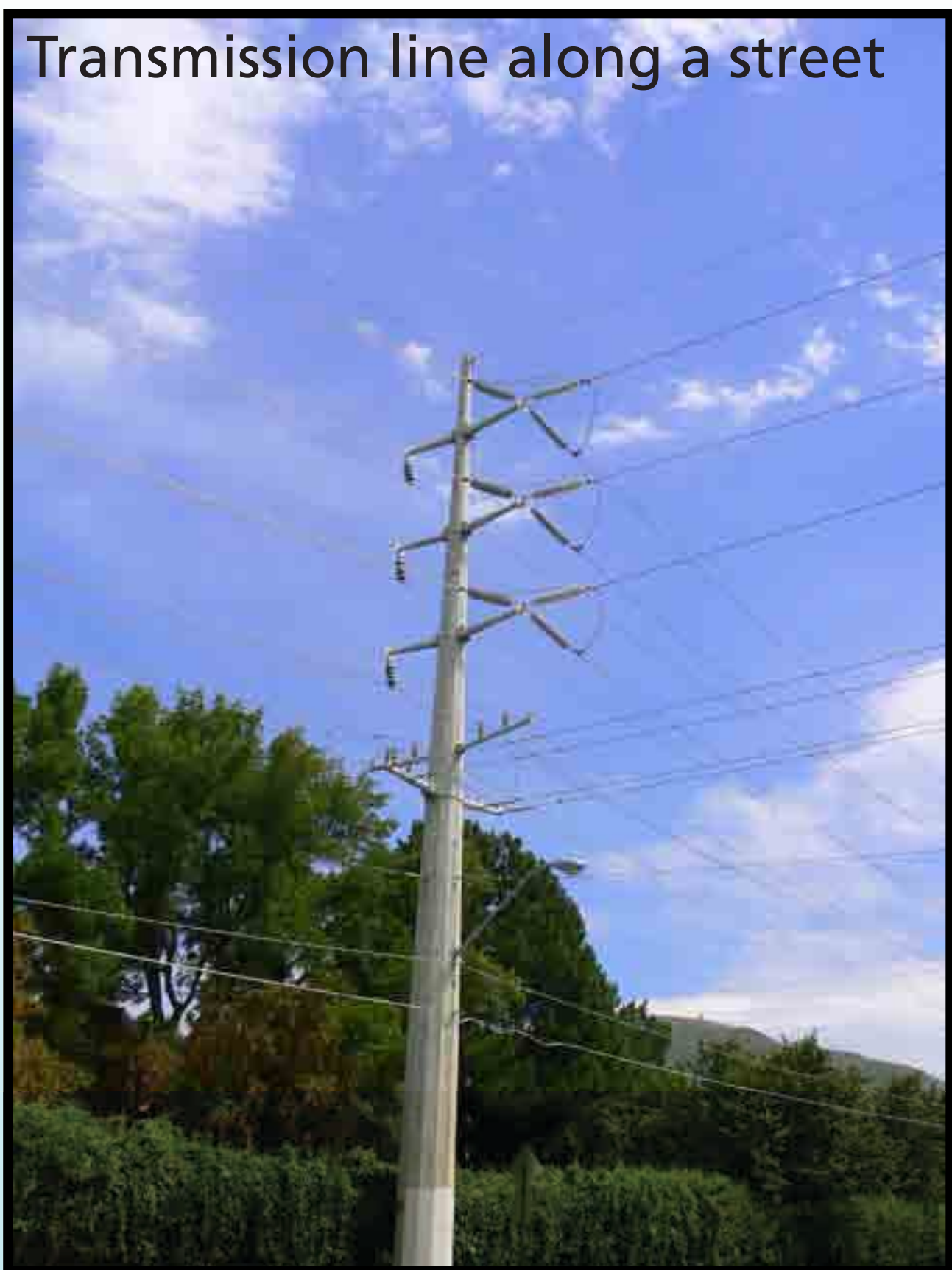
National Park Service  
U.S. Department of the Interior



## Powering the Grid

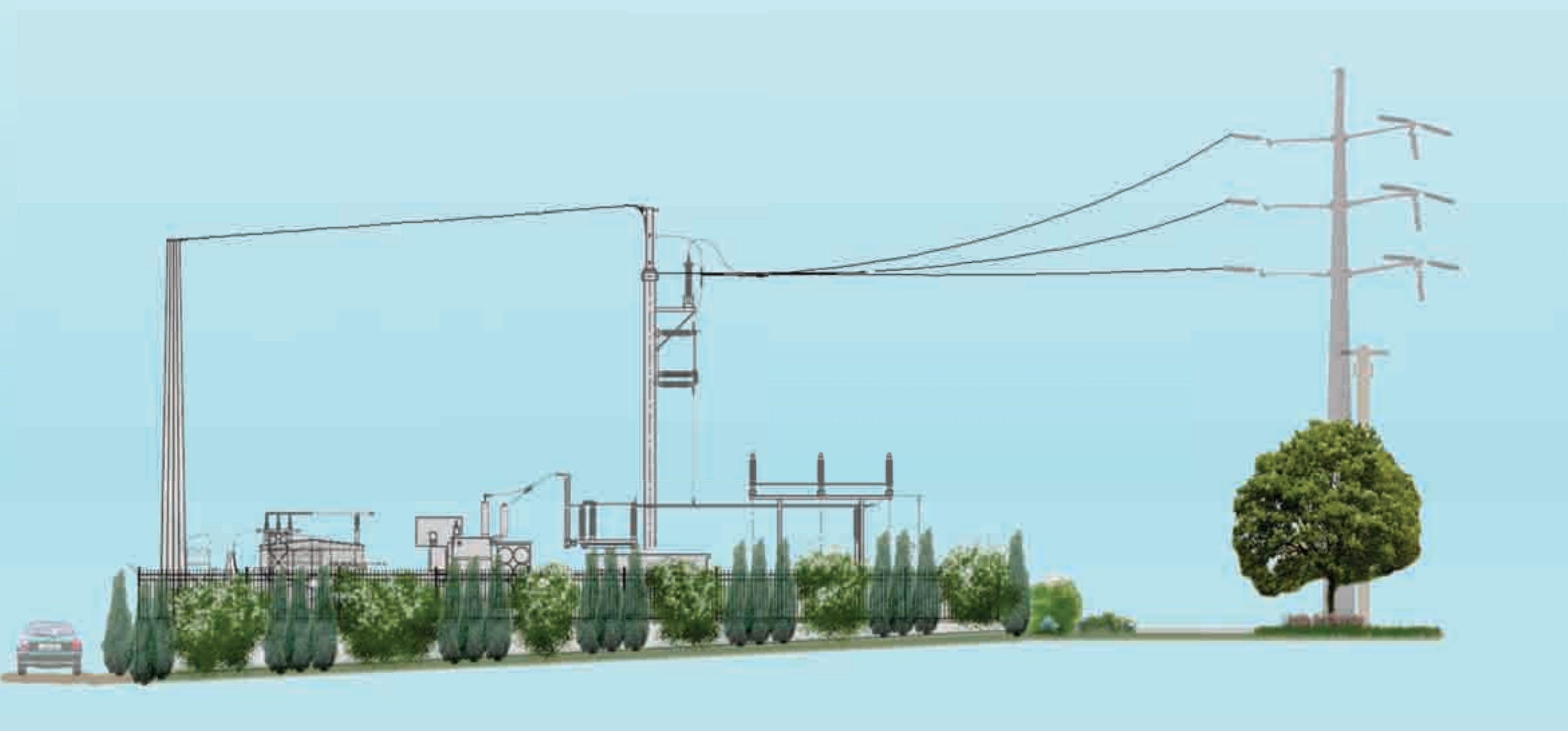
### Structure

- Typical 500kV structure height: 180-200 feet single pole or lattice towers.
- Most 500kV towers are made of galvanized steel to support large loads (wind, ice, and conductors).
- Transmission conductors carry current from generator (source) to load (substation), where it is reduced to usable power and placed on distribution lines as energy for end users.
- Conductors are typically made of aluminum, steel, and copper.
- Other structures help carry the conductor in angles and straight lines (tangent) to minimize costs and impacts.
- Larger wires can carry larger capacity but require much larger structures.



### Reliability

- Reliability standards are federally mandated.
- Utilities must report periodically to National Electric Reliability Commission (NERC) to ensure standards are implemented and maintained.
- The regional “main grid” transmission system must be able to survive the single worst condition.



### Transmission Lines

A 500kV (500,000 Volt) transmission line carries 1,000 to 1,500 Megawatts — about 1-1.5 million homes.

500kV is efficient for long-distance bulk energy transmission, similar to a major interstate highway.

