



## Alternatives Considered But Dismissed From Further Analysis

### Do Not Meet Technical Reliability Requirements

A **smart grid** provides automated switching for transmission lines, aiding in overload and outage management, but is not a solution to the proposed action which is to strengthen the reliability of the existing transmission grid.

**Distributed energy generation sites** were dismissed because **distributed generation (DG)** would not meet the requirements of the proposed action. **DG sites** typically create power through small generators on the lower voltage distribution system. This does not reduce

Transmission tower

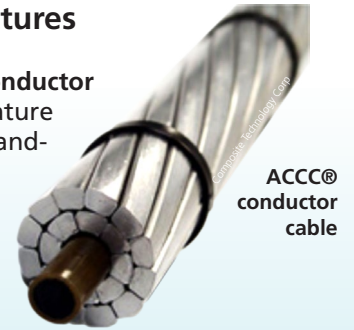


the loading on the transmission grid enough to meet the system reliability requirements of the North American Electric Reliability Corporation (NERC).

**Localized renewable energy sources** do not meet the technical reliability requirements, for similar reasons that **DG sites** do not meet the requirements.

### Require New Tower Structures

**ACCC® conductor (aluminum conductor composite core)**, a high temperature conductor, was dismissed as a stand-alone alternative because the existing 230 kV towers would still have to be replaced with 500 kV towers in order to meet clearances required by the National Electric Safety Code.



ACCC® conductor cable

An effort to **refurbish the existing 230 kV line to meet energy needs** would not work because the existing structures are only rated at 230 kV and have to be replaced with new structures that meet the NESC required clearances for 500 kV transmission lines.

### High Cost

An **underground 500kV transmission line** was dismissed because its construction cost would be significantly higher than the cost of conventional above ground construction methods.

The use of **superconductor lines (direct current)** was dismissed because of the cost required to place AC / DC converter stations at Susquehanna and Roseland, in addition to the 500 kV transmission substations at each location.

### Unacceptable Adverse Impacts

**Alternatives 8, 9, and 10** were dismissed as a result of their unacceptable adverse impacts to socio-economic resources, in addition to natural and scenic resources.

### Redundant Alternatives

Similar to Alternatives 3 and 4, **Alternative 11** showed a greater potential for having more environmental impacts.

**Alternative 12** was similar to Alternative 7, but showed the potential for having more impacts to the Appalachian Trail.

