

# TRANSMISSION LINE UPGRATING SERVICES



## Sargent & Lundy Services:

- ❑ Transmission Line Engineering & Design
- ❑ Structure and Foundation Design & Analysis
- ❑ Conductor and Insulator Evaluation & Design
- ❑ Cost Estimating & Economic Analysis

Sargent & Lundy has been continually involved in projects to maximize the utilization of existing right-of-ways and upgrade the capacity of existing transmission lines. These projects have included ampacity upgrades, voltage conversions, and circuit additions. To achieve increased ROW capacity as cost effectively as possible, S&L has worked with our clients to evaluate all of the options available for upgrading.

S&L has evaluated alternate conductors, including ACSS, checked electrical clearances, modified or replaced existing transmission structures and hardware assemblies, and installed real-time conductor monitoring systems.

Current projects include:

American Transmission Company: Saukville-Granville and Whitewater-Mukwonago Transmission Upgrades – Reconductoring existing 138-kV transmission lines, requiring extensive structure analysis and replacement.

Exelon/Commonwealth Edison – Upgrades of 138-kV lines, including analysis of conductor options, analysis of structure capacities, design for reconductoring and replacement of aging wood H-frames with single-shaft steel poles.



Exelon/PECO Energy: A59/B30 Project – Upgrades of eight existing transmission lines involving a combination of voltage upgrades, reconductoring, circuit additions, structure modifications, and structure replacements.

PacifiCorp: Quantum Leap Projects – Increasing the capacity and reliability of PacifiCorp's system in the Salt Lake City area, including upgrading lines from 46-kV to 138-kV. These upgrades require complete redesign and/or reframing of structures.



Nevada Power Company: Pecos – Leavitt Reconductor Project – Ampacity upgrade of 138-kV transmission line by reconductoring with ACSS conductor.

Public Service Electric & Gas: Cross Hudson Project – Analysis of existing 230-kV line for conversion to 345-kV.

San Diego Gas & Electric: Miguel-Mission Conversion Project – Feasibility study, cost estimates, tower analysis and full-scale test procedure for a 138-kV to 230-kV voltage upgrade.

Tennessee Valley Authority – Upgrades of 161-kV circuits, including analysis for increased operating temperature, installation of tower extensions, replacement of wood structures and installation of real-time conductor tension monitoring systems.



[Sargent & Lundy :: Power Delivery :: Engineering & Design Services ...](#)

Conductor types that provide increased ampacity with little or no increased structural loads - trapezoidal wire used in bare **transmission conductors** provide ...

[www.sargentlundy.com/power-delivery/line-uprate.html](http://www.sargentlundy.com/power-delivery/line-uprate.html)

Call on Sargent & Lundy to help you jump-start the projects that will get the most out of your existing right-of-ways.

[Transmission Line Upgrading Services and Current Projects](#)