TRANSMISSION LINE UPRATING 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.

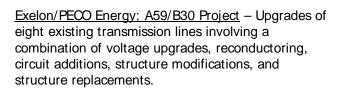
S&L has evaluated alternate conductors, including ACSS, checked electrical clearances, modified or replaced existing transmission structures and hardware assemblies, and installed real-time conductor monitoring systems.

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.





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.

<u>Public Service Electric & Gas; Cross Hudson Project</u> – Analysis of existing 230-kV line for conversion to 345-kV.

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

<u>Tennessee Valley Authority</u> – 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

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

<u>Transmission Line Uprating Services and Current Projects</u>