ADVANCED ENERGY UNITED™

Advanced Reconductoring

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October 29, 2024

About Advanced Energy United & Transmission Possible

- National Trade Association
- 100+ member companies across the clean energy space
- Federal, Regional, and State Advocacy
- New Mexico Team
- Transmission Possible

TRANSMISSION POSSIBLE

Educate decisionmakers about the need for new, improved, and additional transmission;

Build momentum and support across the United States for transmission policies, including Grid-Enhancing Technologies, storage as transmission, and advanced conductors;

Accelerate the planning, siting, and permitting procedures for transmission projects and resolve procedural bottlenecks;

Upgrade the transmission grid swiftly so we bring more renewable resources online and sustain a clean energy economy.

Engage with local decisionmakers and stakeholders about the transmission needs within their state and region

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Advanced Transmission Technologies

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What Are Advanced Transmission Technologies

Advanced Transmission Technologies (ATTs) are infrastructure, hardware, and software that cost-effectively increase the capacity and resilience of the transmission grid but are not yet default solutions considered by most U.S. transmission owners.

They Include:

- Grid Enhancing Technologies (GETs
- High Performance Conductors (also known as Advanced Conductors
- Other ATTs

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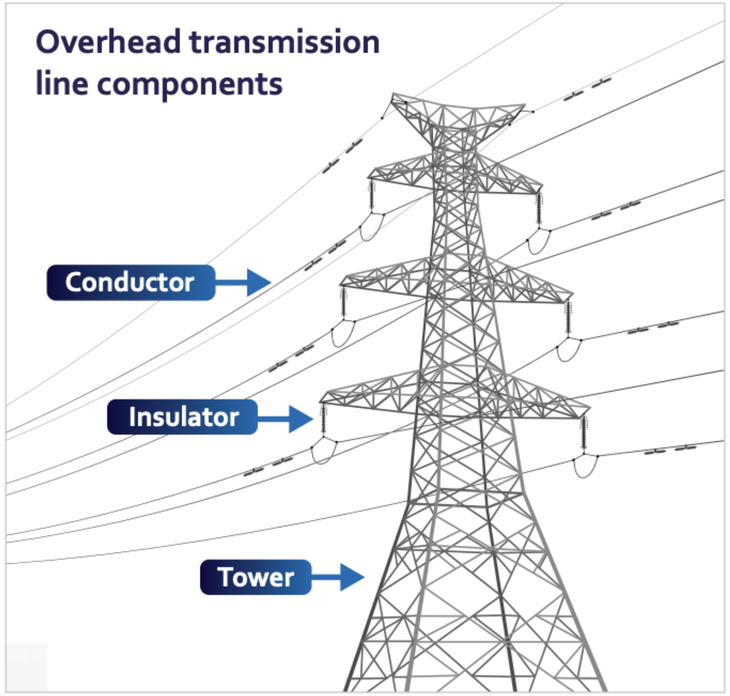
Benefits of Advanced Transmission Technologies

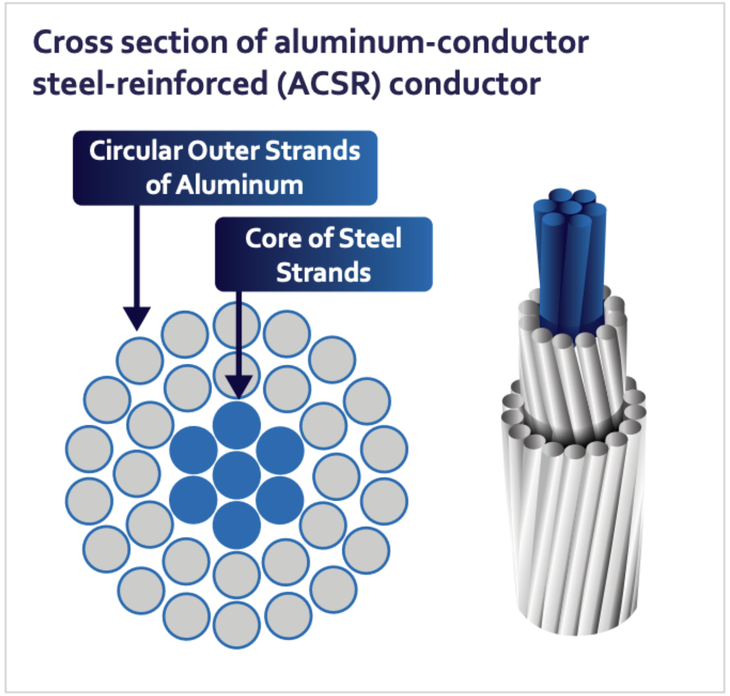
These solutions can help quickly respond to accelerating grid pressures

- Cost effectively expand transmission system and distribution system capacity
- Enhance system reliability and resilience
- Support integration of utility-scale and distributed clean energy resources
- Most solutions could be deployed on the existing grid in under 3-5 years and at lower cost and greater value than conventional approaches
- Barrier: Deployment is underway, but adoption at scale and associated industry know how is lagging largely due to a lack of industry incentives, prioritization, and unfamiliarity of these technologies.

High Performance Conductors/Advanced Conductors

Power lines are the physical wires that deliver electricity from generators to customers. They are typically composed of two parts, a core, which provides the strength for the line to hang between transmission towers, and the electrical wire, which carries the electricity.





ACORE - *Unlocking the Grid: A Playbook on High Performance Conductors for State and Regional Regulators and Policymakers*

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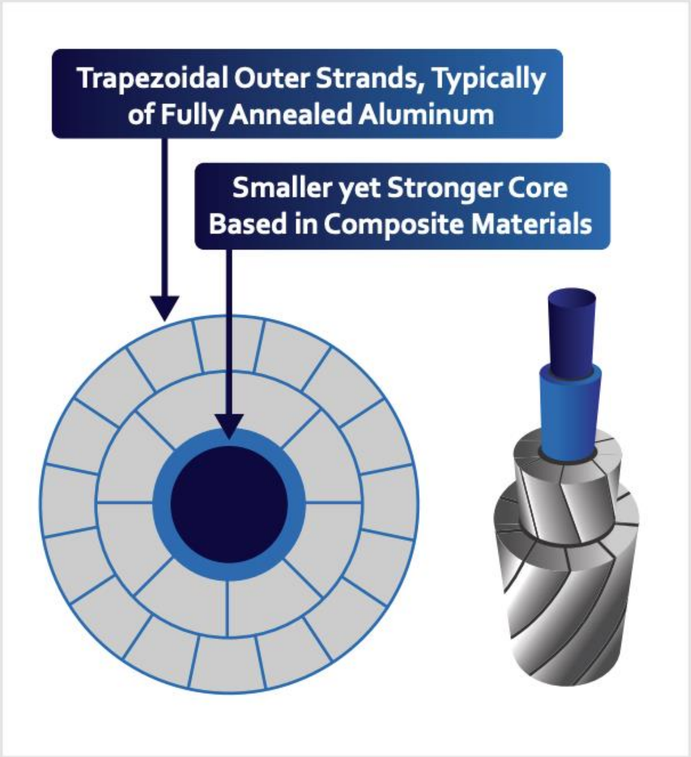
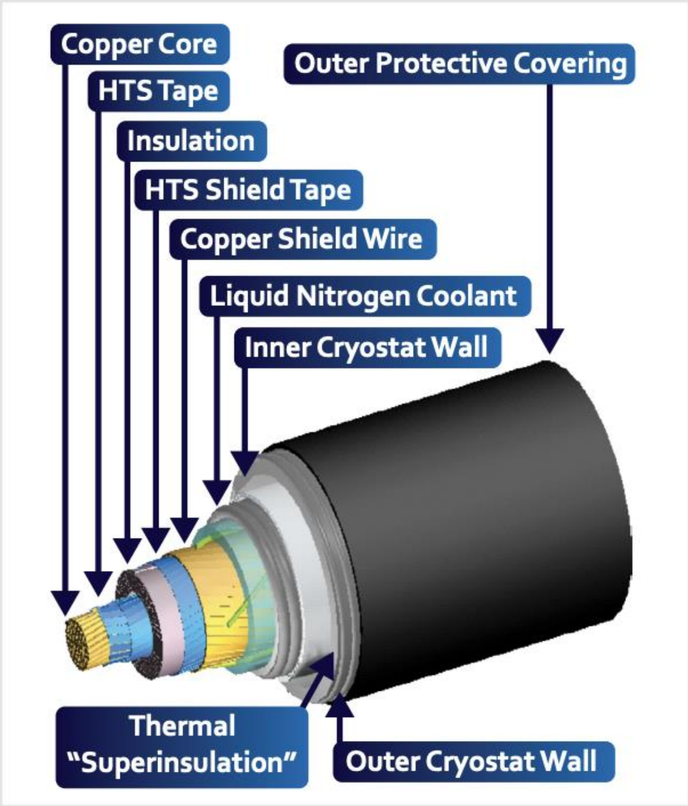
High Performance Conductors/Advanced Conductors

Cross section of Carbon/Composite Core Conductor



Superconducting Cable



ACORE - [Unlocking the Grid: A Playbook on High Performance Conductors for State and Regional Regulators and Policymakers]

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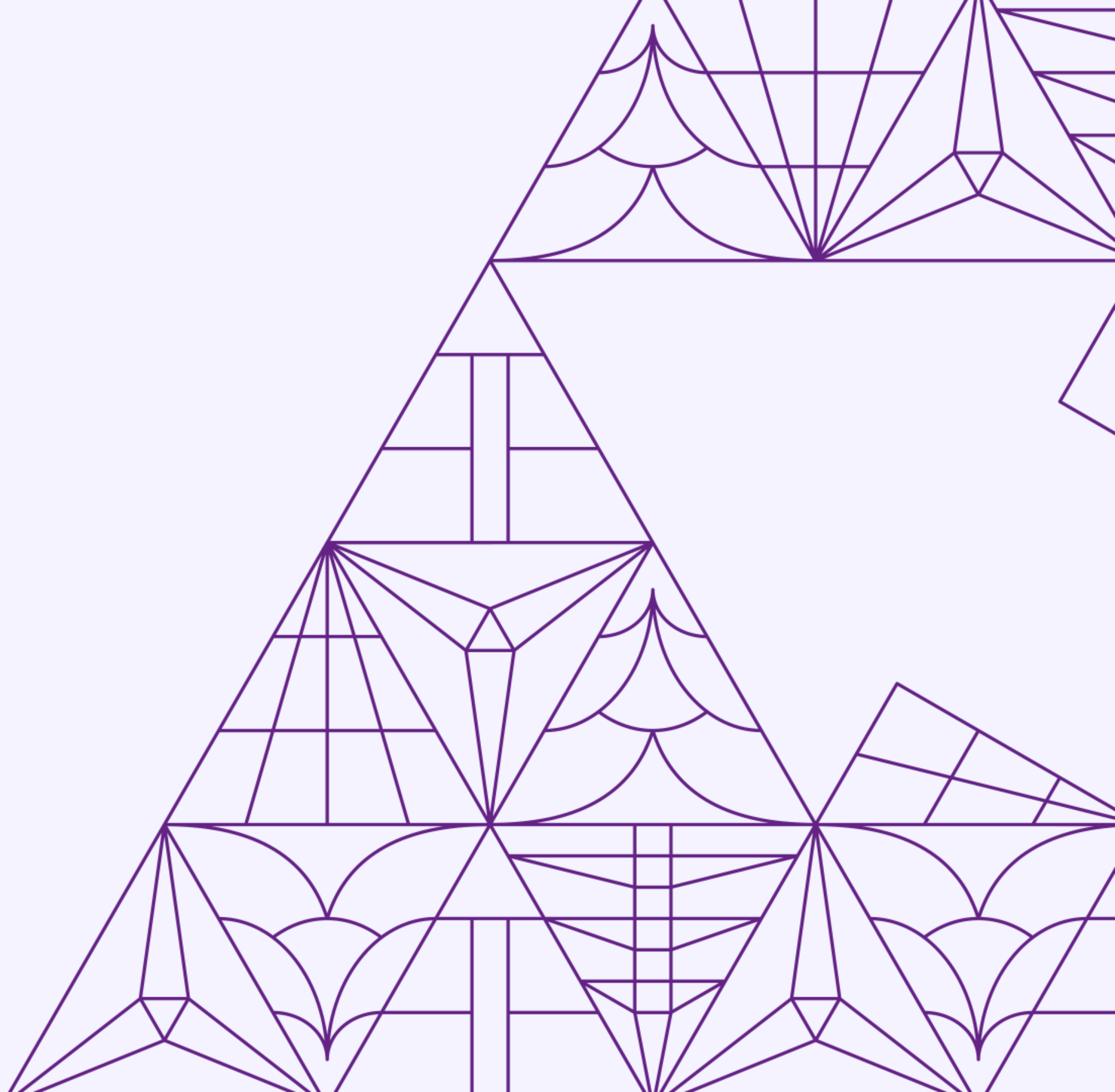
Reconductoring

- Transmission lines have limited life expectancy and need to be replaced over time – due to changes or new needs of the line, including load growth.
- Reconductoring is the act of replacing an old conductor with a new one, often reusing the original tower and right-of-way.
- However, under the current status quo, many lines are reconductored with the same type of conductor previously used on the line, usually a conventional steel-core conductor.
- **Advanced Reconductoring** uses the same process described above, but instead of a “like-for-like” replacement, the existing transmission line’s conductor is replaced with a HPC using the existing towers and right-of-way.

Reconductoring Benefits

- Reconductoring generally takes 1-3 years and can double the capacity of a transmission line at approximately half the cost of a new transmission line.
- Maximizing the use of HPCs in reconductoring can add ~4x the transmission capacity when compared to the current rate of new transmission development.
- Connected West study - significant portion of new transmission capacity achievable with enhancements to existing infrastructure
- Though Advanced Transmission Technologies can ensure we get more out of the grid, we still need significant new transmission across the west and the country.

Thank you.



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