

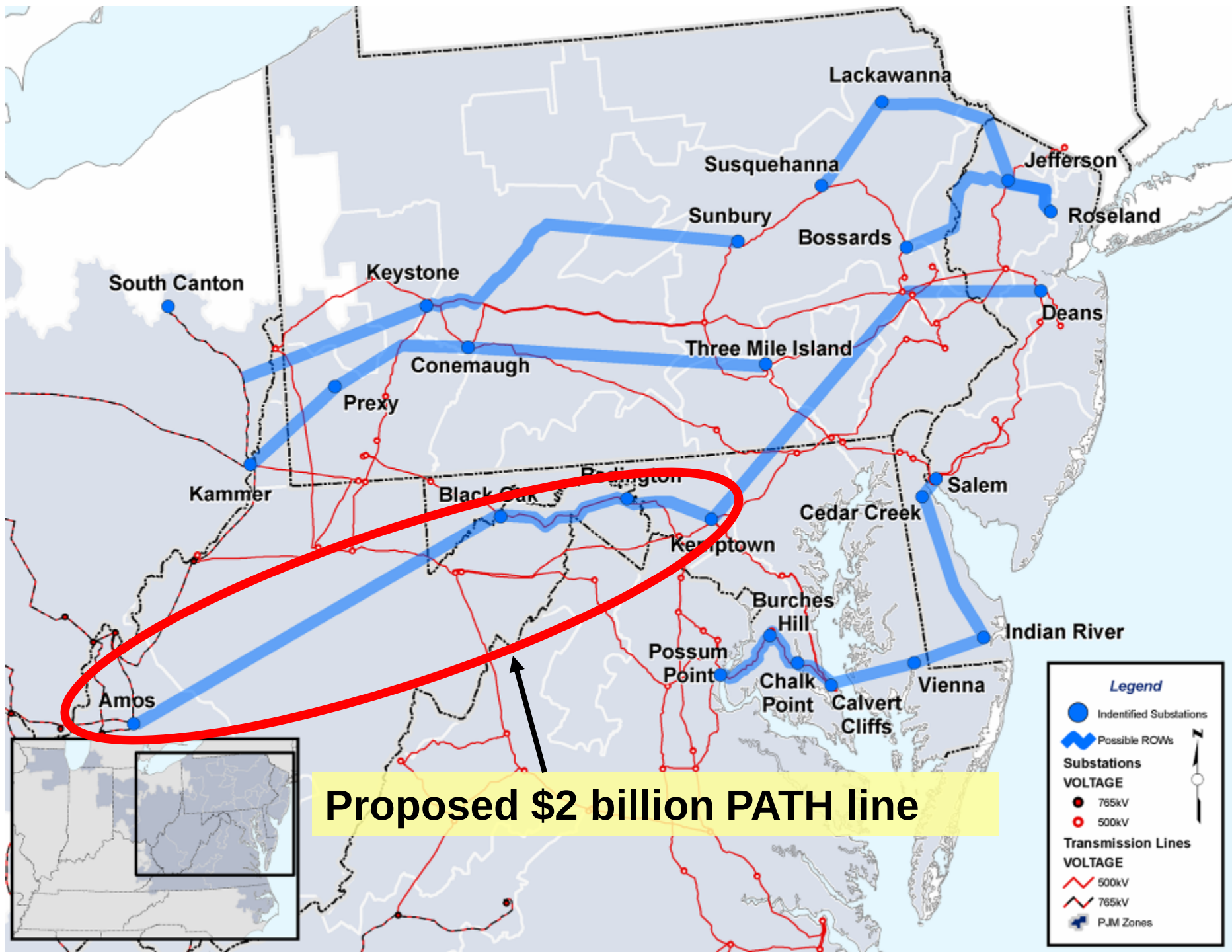
An aerial photograph of a dense, green forest. A multi-lane road winds through the center of the image, with several vehicles visible. In the background, rolling hills and mountains are visible under a hazy, golden sky, suggesting a sunrise or sunset. The overall tone is serene but also highlights the intersection of nature and infrastructure.

Transmission Planning for Environmental Organizations?

Wil Burns, Burns Law Firm, LLC

Litigation against specific lines





Proposed \$2 billion PATH line



Proposed Transmission Lines would Serve Some of the Nation's Dirtiest Power Plants

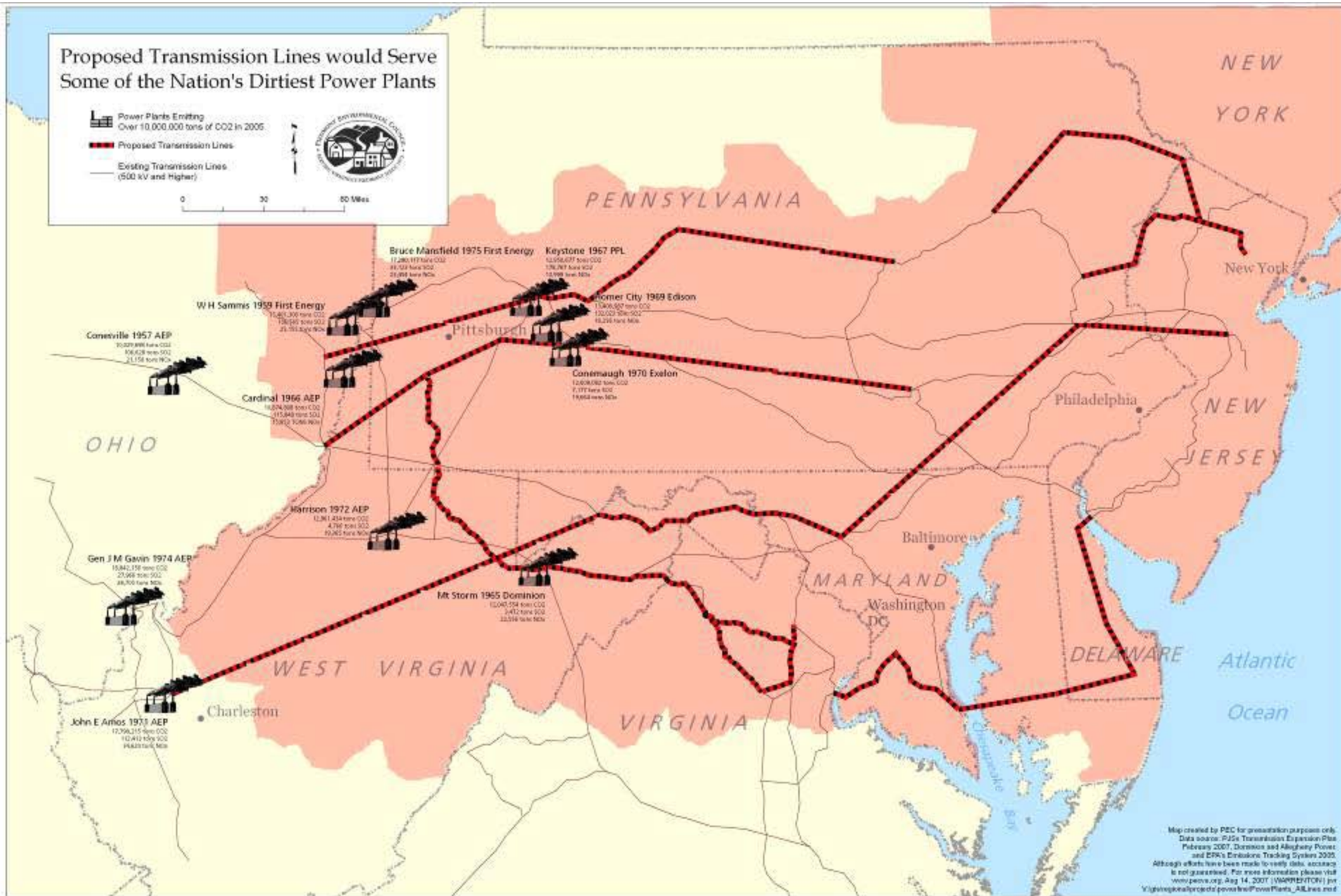
Power Plants Emitting Over 10,000,000 tons of CO2 in 2005

Proposed Transmission Lines

Existing Transmission Lines (500 kV and Higher)



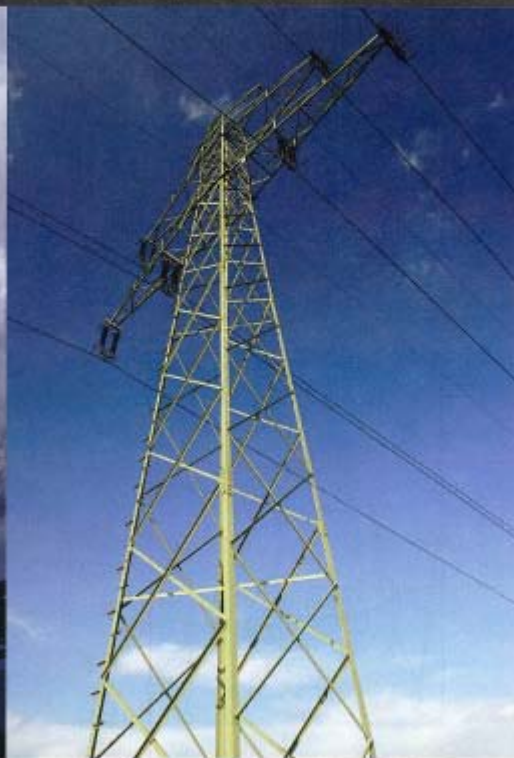
0 30 60 Miles



Map created by PEC for presentation purposes only.
Data source: PJM's Transmission Expansion Plan February 2007; Dominion and Allegheny Power, and EPA's Emissions Tracking System 2005.
Although efforts have been made to verify data, accuracy is not guaranteed. For more information please visit www.pecnyc.org. Aug 14, 2007 (V:\NRP\EST\TORV) jrv
V:\jg\anal\project\powerline\PowerPlants_Alt.wmz.mxd

IMPORTING POLLUTION

COAL'S THREAT TO CLIMATE
POLICY IN THE U.S. NORTHEAST

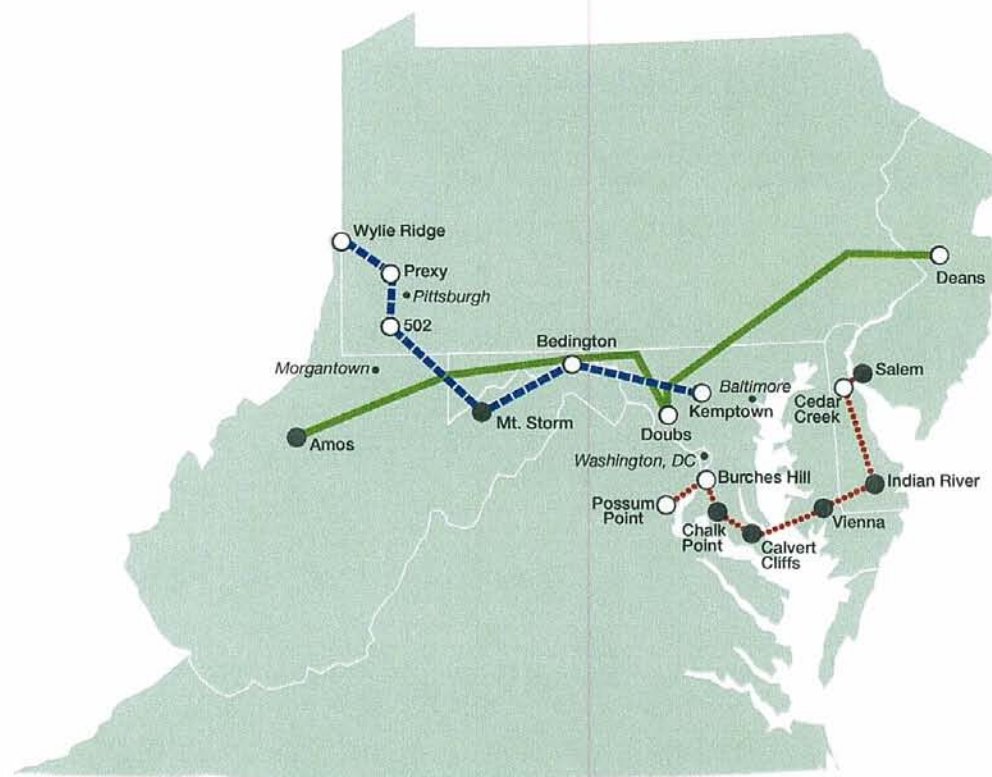
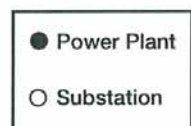


Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

FIGURE 9:
Leakage Highways

While expanding transmission is critical for incorporating large amounts of renewable energy generation, and climate legislation will help ensure greater use of lines for renewable energy, proposed projects such as those shown in this map (the TrAIL project is indicated by the dashed line) could lead to higher global warming emissions for an extended period of time.

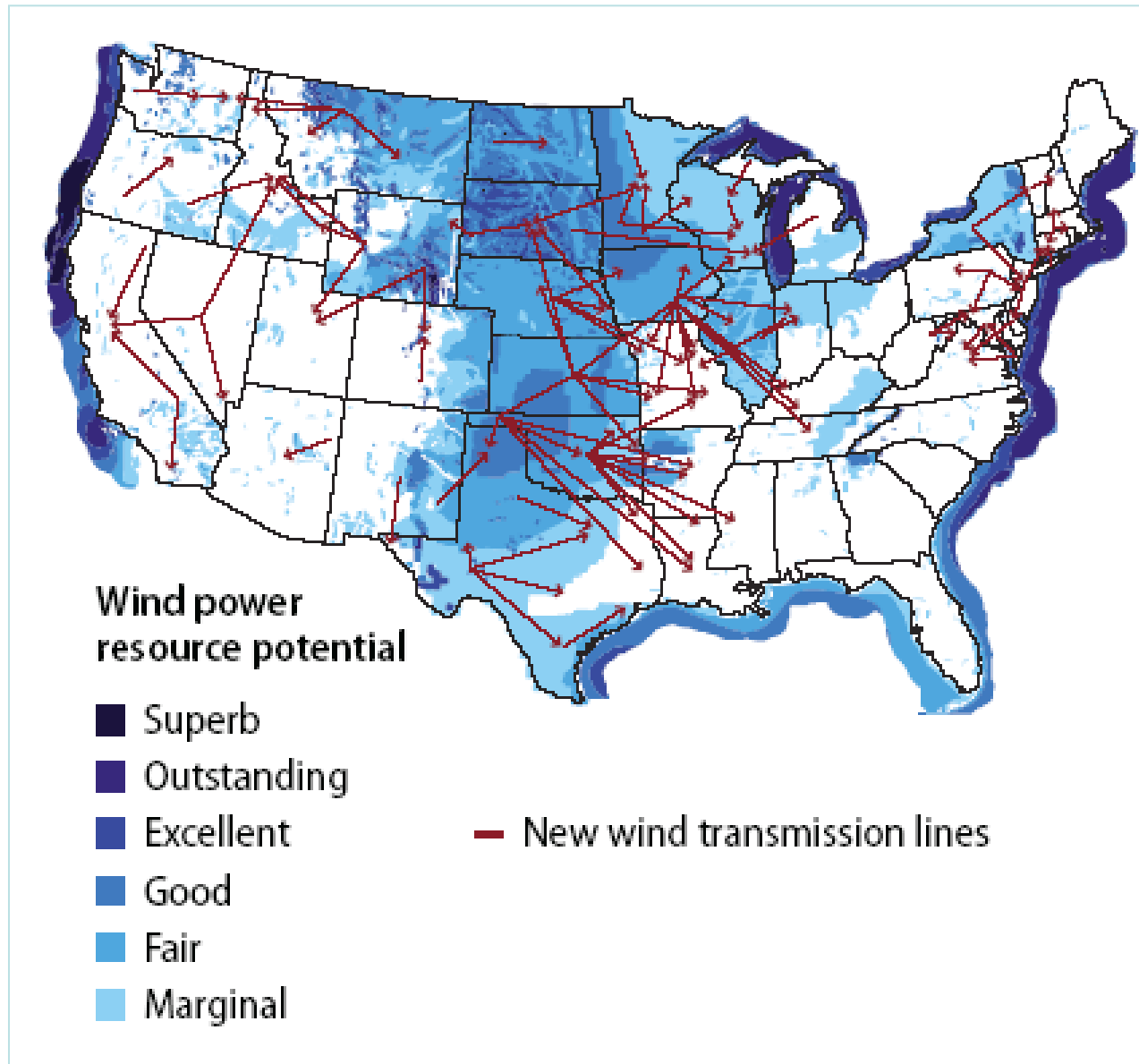
SOURCE: Adapted from Ferenz, G.,
RGGI workshop, June 15, 2006,
www.rggi.org/docs/ferenz.ppt.



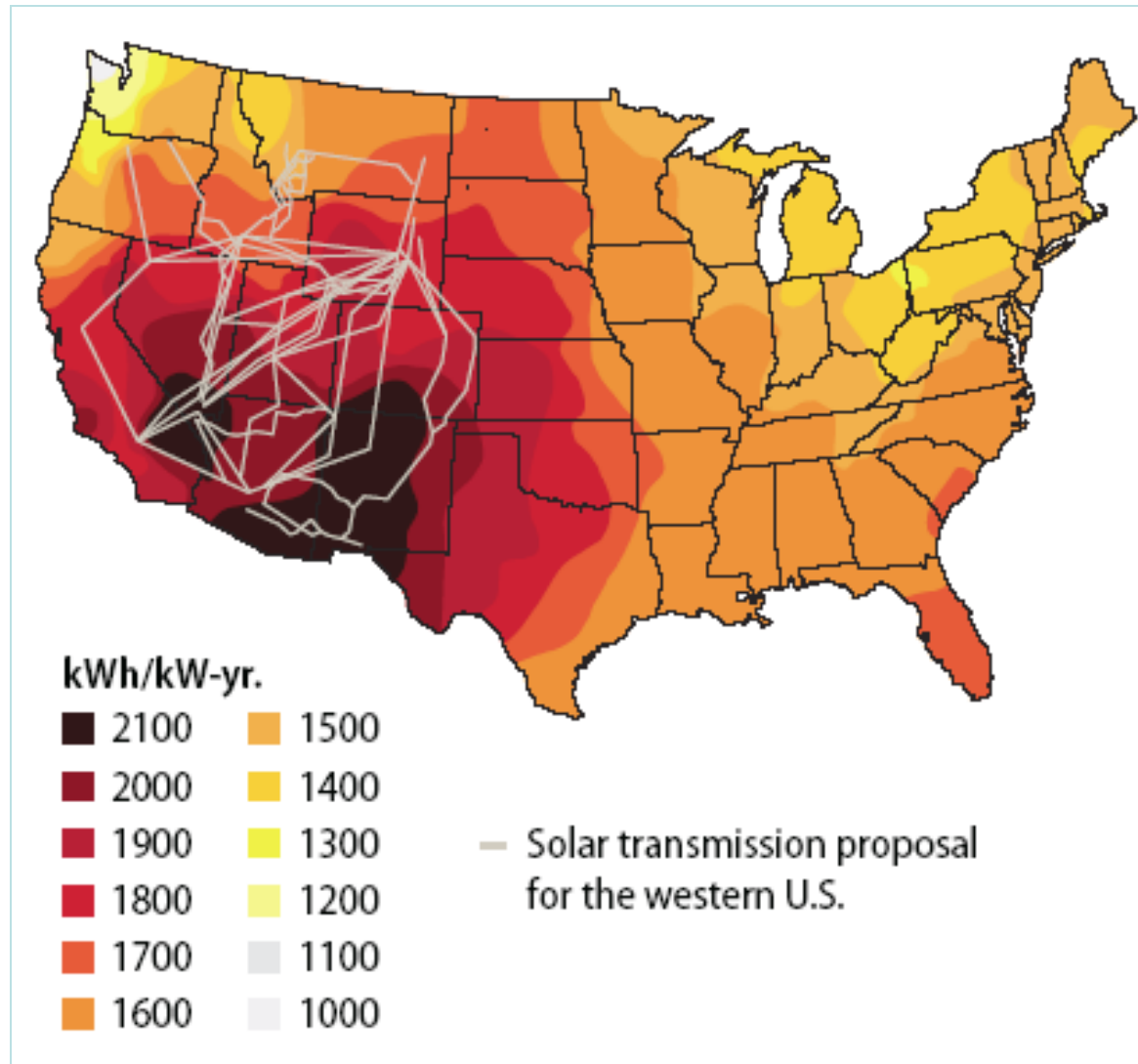
An aerial photograph of a lush, green forested valley. A multi-lane highway winds through the center of the valley, with several vehicles visible. The surrounding hills are covered in dense trees. In the far distance, a range of mountains is visible under a hazy, golden sky, suggesting a sunrise or sunset. The overall scene is peaceful and scenic.

**Supporting transmission that
can benefit renewable generation**

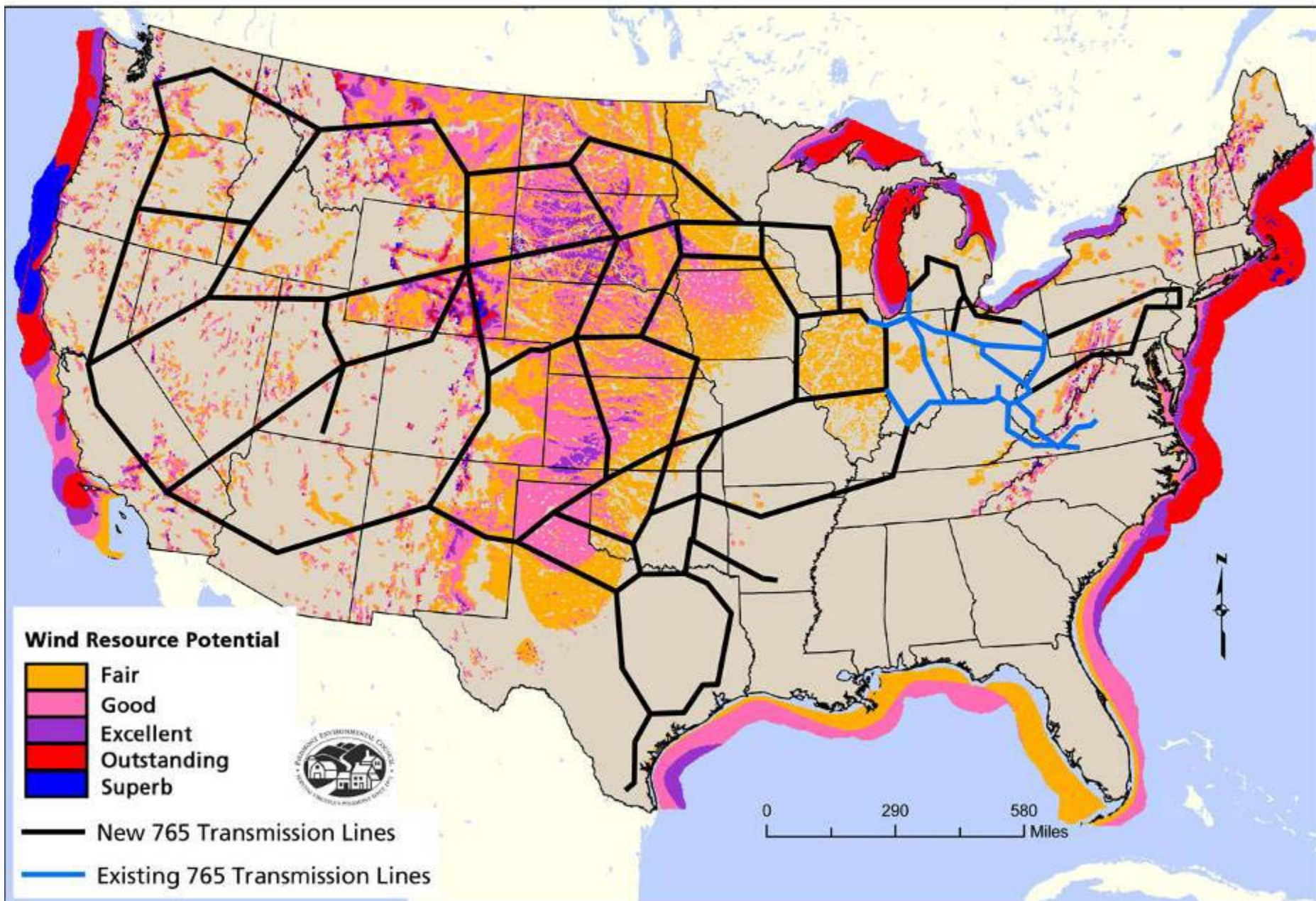
Is new Transmission needed for wind?



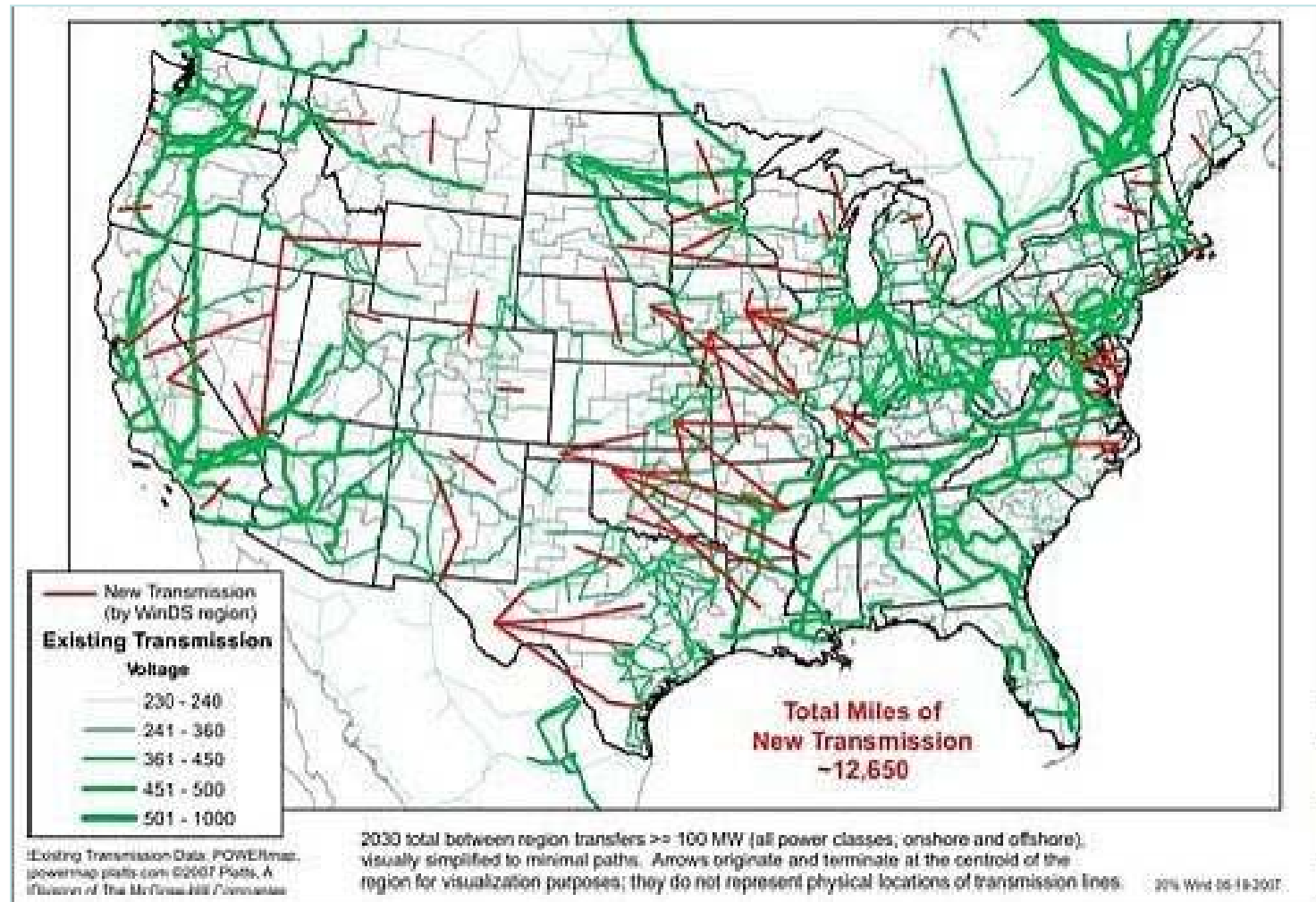
Is new transmission needed for Solar?



AEP Conceptual Transmission Plan for Wind Energy



But There is Already A Strong Backbone Transmission System



What type of transmission build-out will the future require?



Eastern Interconnection Planning Collaborative

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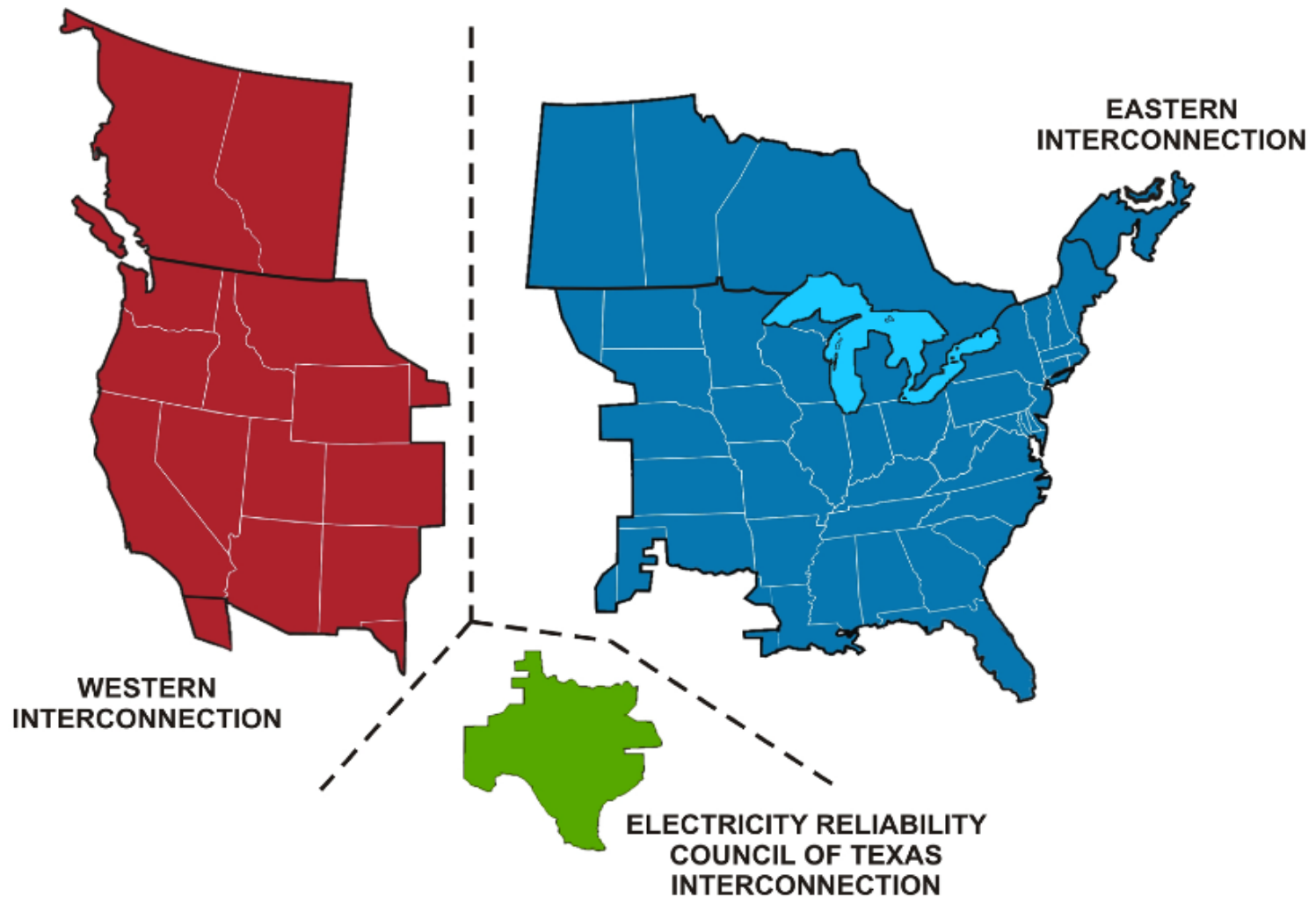
PLANNING AUTHORITIES

- Alcoa Power Generating
- American Transmission Company
- Duke Energy Carolinas
- Entergy *
- E.ON (Louisville/Kentucky Utilities)
- Florida Power & Light
- Georgia Transmission Corporation
- IESO (Ontario, Canada)
- International Transmission Company
- ISO-New England *
- JEA (Jacksonville, Florida)
- MAPPCOR *
- Midwest ISO *
- Municipal Electric Authority of Georgia
- New York ISO *
- PJM Interconnection *
- PowerSouth Energy Coop
- Progress Energy – Carolinas
- Progress Energy – Florida
- South Carolina Electric & Gas
- Santee Cooper
- Southern Company *
- Southwest Power Pool
- Tennessee Valley Authority *

** Also a Principal Investigator on the DOE proposal*

The Eastern Interconnection

North American Electric Reliability Corporation Interconnections



Eastern Interconnection Planning Collaborative

- *Mission:* to develop transmission expansion plans to encourage the development of “clean electricity.”
- More than 27 Environmental groups are participating.
- We are working with economic modeling and transmission planning experts.

Eastern Interconnection Planning Collaborative

- Why is the EIPC, and regional transmission planning, important for environmental groups?
 - there will not be significant coal plant retirements, or wind/solar additions, without transmission changes.
 - Coal plants that want to retire sometimes must wait until transmission is added to ensure reliability.
 - “Lessons learned” from the EIPC process can help shape public policy, and transmission planning, throughout the country.

EIPC – Lessons Learned



EIPC - Lessons Learned

- There will not be enough CO₂ reductions without a CO₂ cap or price.
- CO₂ reduction can be cost-effective if CO₂ price is recycled (i.e., used for energy efficiency or other emission reductions).
- Energy Efficiency and Demand Response are the most cost effective ways to reduce emissions, and are *undervalued* in transmission planning.
- National vs. Regional Implementation of policies makes a big difference in the amount of new transmission needed.

EIPC - Lessons Learned

- There are significant differences in the planning assumptions (and definitions) among the various transmission planners.
 - we should push for adoption of the best practices.
- More modeling is needed to determine what new transmission may be required for various clean energy futures.



Summary

- Transmission Planning is very important for environmental groups – there will not be significant coal plant retirements, or wind/solar additions, without it.
- Evaluating proposed new transmission lines requires experts – transmission planning engineers, and sometimes economic modeling experts.
- We should oppose some transmission projects, but also support the needed infrastructure to move to a clean energy future.

BURNS LAW FIRM, LLC

wburns@burnslegal.net

ISO NE Lessons Learned

- Energy Efficiency and Demand Response must clear the ISO NE “capacity auction”, or it will not be accounted for in planning.
- “Active” Demand Response that clears the capacity auction is modeled. But they subtract it out after 3 years, and ignore any DR that is not “active”.
- Does not model state or federal Energy Efficiency or Demand Response requirements, or estimated EE or DR.