



Americans for a
Clean Energy Grid

Transmission: The Key to a Cheaper, Smarter, Cleaner Electricity Grid

December 13, 2017



Featuring



Jim Hoecker, Panelist

Advisor and Counsel to WIRES
Former FERC Chairman



Julia Frayer, Panelist

Managing Director of London Economics International
Co-author of “The Truth About the Need for
Transmission Investment: Sixteen Myths Debunked”



John Jimison, Moderator

Executive Director of Americans for a Clean Energy Grid



WIRES

**An International Non-Profit Trade Association
Working to Fulfill the Promise of a Twenty-First
Century North American Electric Economy**

Read more about WIRES and access their report library:
<http://www.wiresgroup.com/>

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A WIRES Report

THE TRUTH ABOUT THE NEED FOR ELECTRIC TRANSMISSION INVESTMENT: SIXTEEN MYTHS DEBUNKED



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SEPTEMBER 2017

Report available for download:

http://www.wiresgroup.com/wires_reports.html

Introduction to ACEG

- Americans for a Clean Energy Grid (ACEG) has been engaged since 2008 in building broad-based awareness of the need to expand, integrate and modernize America's high-voltage transmission system.
- Read more about our coalition and policy agenda: <https://cleanenergygrid.org/our-policy-agenda/>



Americans for a
Clean Energy Grid

Common Myths Around Transmission Investment

Figure 2. Common myths around transmission investment

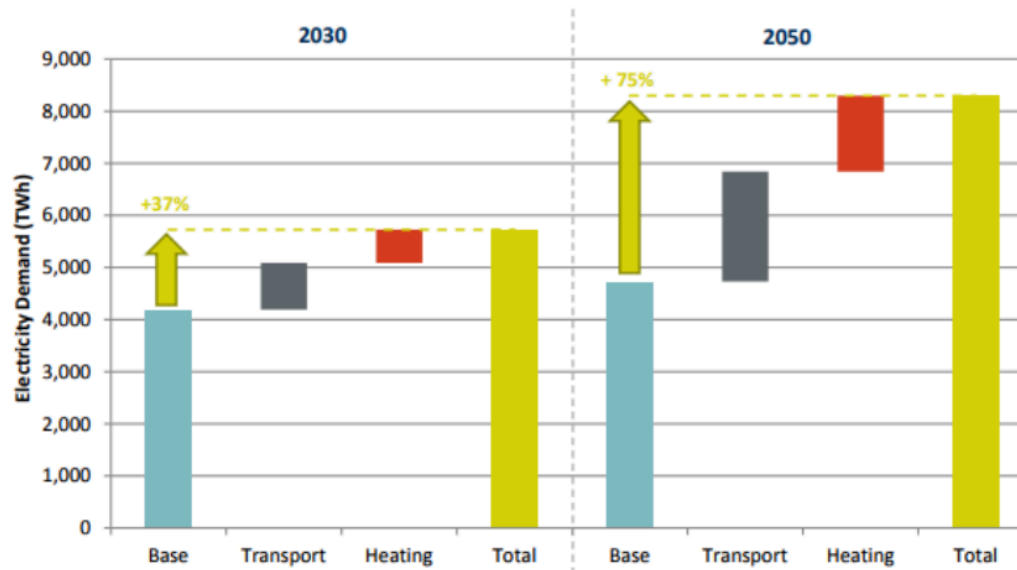
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	2	Demand is not likely to grow, no need for more transmission	
POWER SUPPLY	3	Generating plants retire and new ones can use the same transmission lines	
	4	No grid congestion, no need for more transmission	
ALTERNATIVES	5	Local reliability issues can be addressed using alternatives	
	6	Transmission is the most expensive option for resolving local reliability issues	
	7	Customers tend to opt for new technologies and bypass the grid if they can	
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BENEFITS	14	Customers on the receiving end are the only ones who benefit	
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Common Myths Around Transmission Investment

Myth: Transmission is only built to meet current demand, which is not likely to grow. Constructing more transmission in anticipation of the unforeseeable future is a waste.

Truth: Transmission is not only built to meet current demand, but also to manage evolving consumer behavior and new economic activities

Figure 4. Incremental electricity sales due to electrification of heating and transportation



Source: Brattle Group. "Electrification Emerging Opportunities for Utility Growth." January 2017.

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Common Myths Around Transmission Investment

Myth: Transmission by wire is old technology. There are new and more cost-effective substitutes for transmission

Truth: Market resource alternatives (“MRAs”), sometimes referred to as non-transmission alternatives (“NTAs”), generally rely on transmission

Figure 8. Services provided by transmission lines versus MRAs

		Transmission	Energy Efficiency	Demand Response	Distributed Generation	Energy Storage
What	Energy	●	◐	◐	◐	●
	Capacity	●	◐	◐	◐	●
	Ancillary Services	●	○	◐	◐	●
	Reduce system losses	●	◐	◐	◐	●
When	Long lifespan	●	◐	○	●	●
	Continuous basis	●	◐	○	○	●
Where	Regional	●	◐	◐	○	○
	Local	●	●	●	●	●
	Micro	●	●	●	●	●
How	System/Wholesale	●	○	○	○	●
	Customer/Retail	○	●	●	●	○
	TOTAL	●	◐	◐	◐	◐

● Provided ○ Not provided

Source: London Economics International. *A WIRES Report on Market Resource Alternatives: An Examination of New Technologies in the Electric Transmission Planning Process*. October 2014. Pg. 13.

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Common Myths Around Transmission Investment

Myth: Transmission projects may be prone to overbuilding

Truth: Transmission projects go through stringent and comprehensive cost-benefit evaluations to avoid overbuilding



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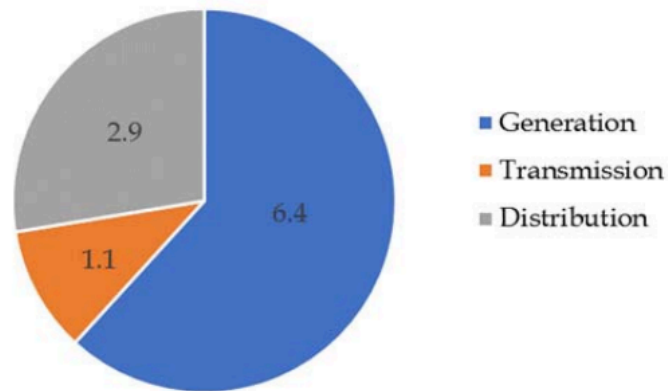
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Common Myths Around Transmission Investment

Myth: Transmission projects have large up-front costs which will be passed onto consumers

Truth: The 'price tag' for construction of new transmission projects is recovered gradually, with only modest impacts on consumers at any given point in time

Figure 11. Average retail electricity prices by service category, 2015 (cents per kilowatt hour)



Source: Energy Information Administration, Electricity Supply, Disposition, Prices, and Emissions.

<https://www.eia.gov/outlooks/aeo/data/browser>

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Common Myths Around Transmission Investment

Myth: Customers on the receiving end of a new transmission line are the only ones who benefit

Truth: Benefits can be geographically and demographically widespread

Figure 14. TransWest Express project route



Source: TransWest Express LLC. "Delivering Wyoming wind energy to the West."
<<http://www.transwestexpress.net/index.shtml>>

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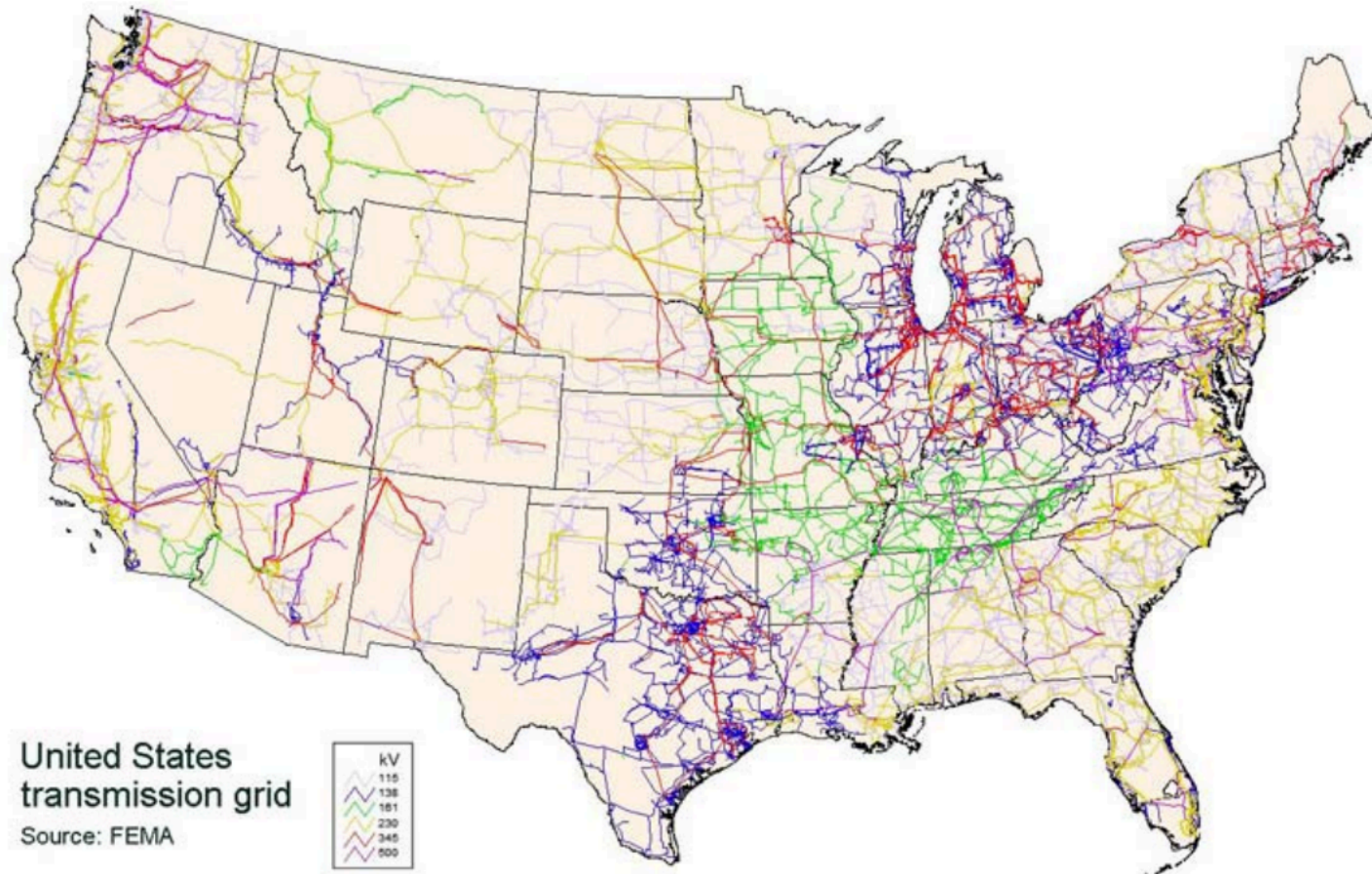
From myths to reality: recognizing and quantifying the benefits of transmission

Figure 17. Evaluation metrics should be comprehensive and consistent

Evaluation metric
Price reduction benefits
Production efficiency gains
Generation capacity cost savings
Environmental benefits
Competitive market benefits
Load diversity benefits
Public policy benefits
Macroeconomic benefits
Reliability benefits
Fuel diversity benefits

An Integrated National Transmission Grid?

Figure 1. The United States electric transmission grid



Source: Federal Emergency Management Agency ("FEMA")

Questions?

Please submit any questions through the GoToWebinar panel on the right side of your screen, and we will answer as many as possible.



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Thank you

To learn more about ACEG, visit <https://cleanenergygrid.org/>

Additional questions? Email: info@cleanenergygrid.org



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