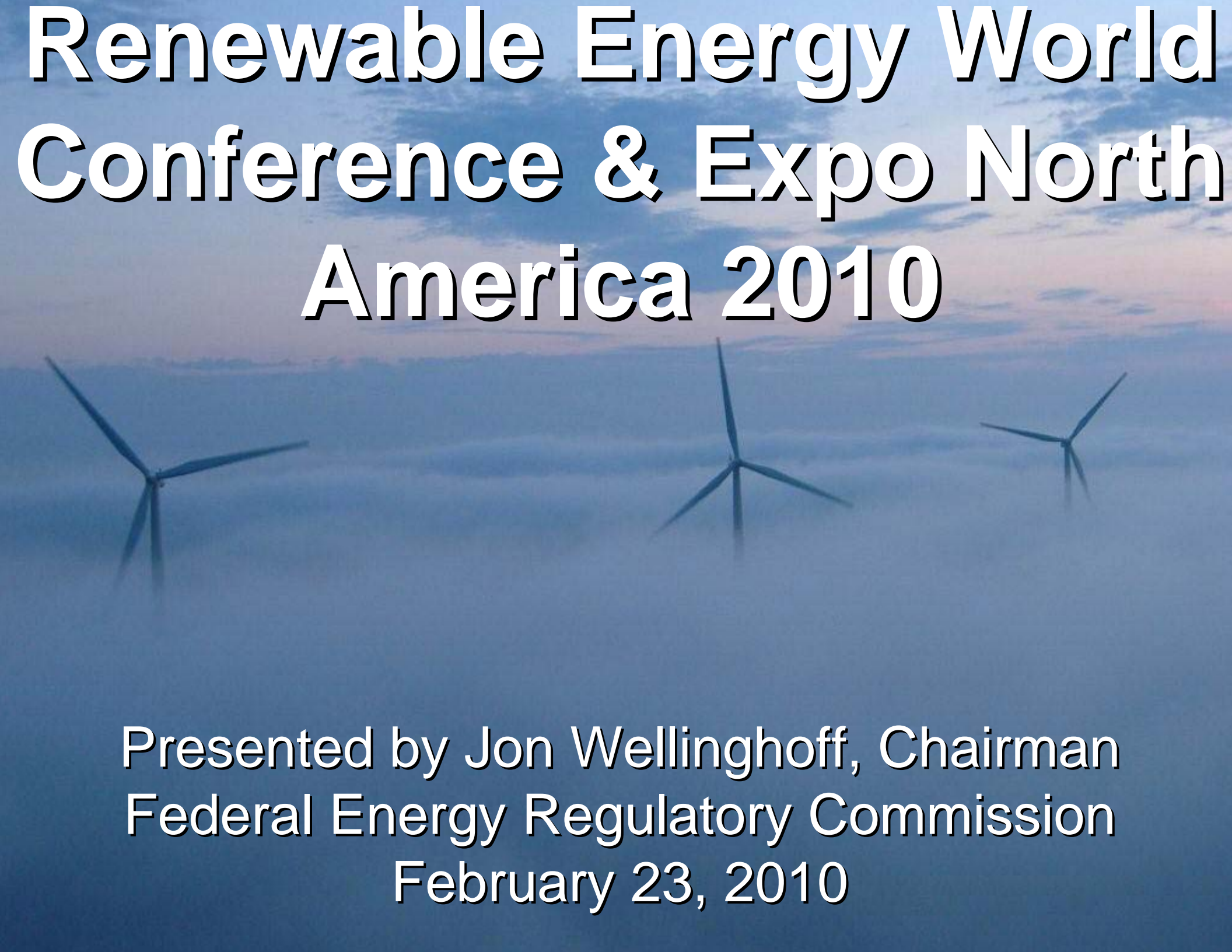


Renewable Energy World Conference & Expo North America 2010

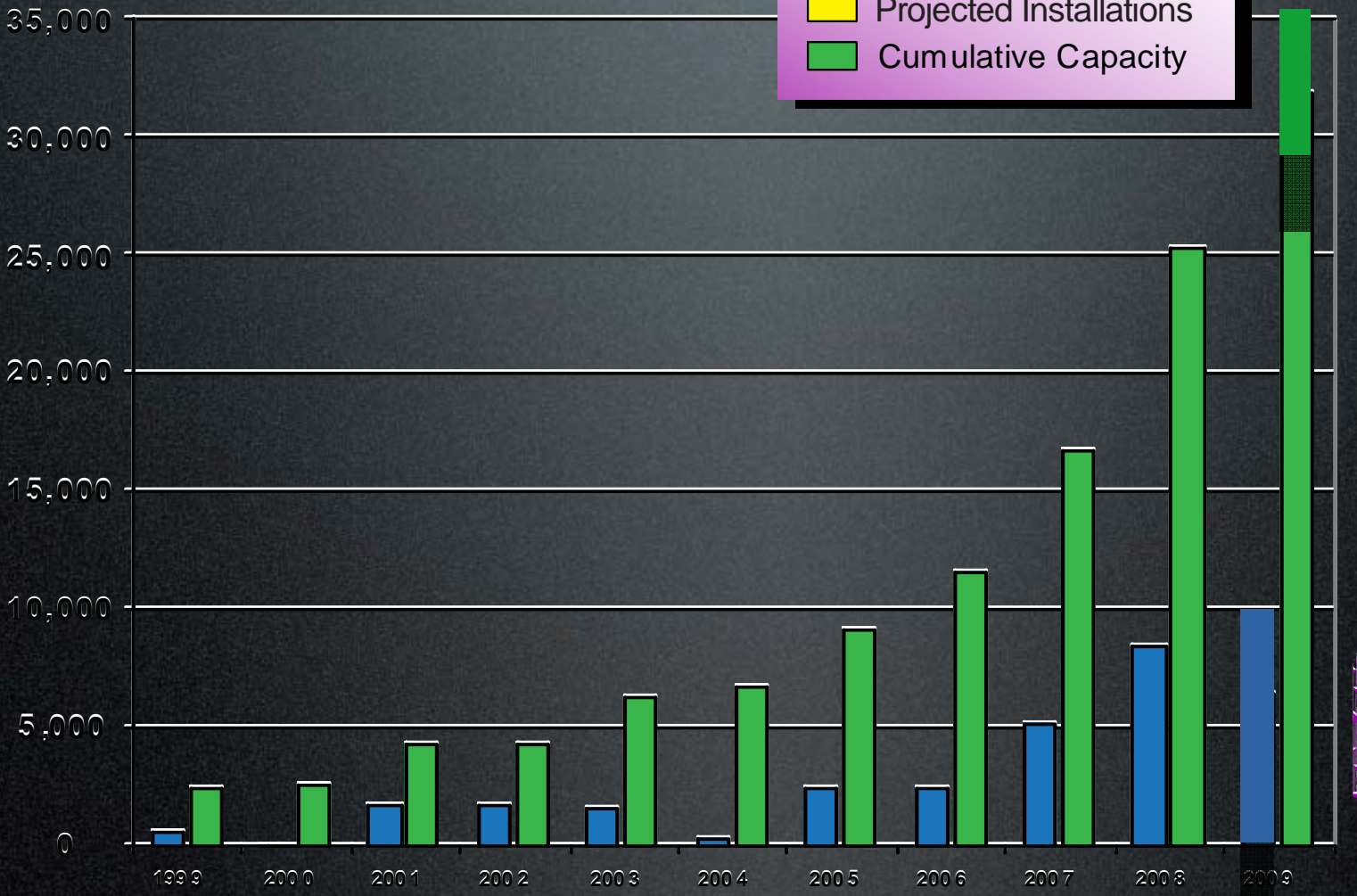
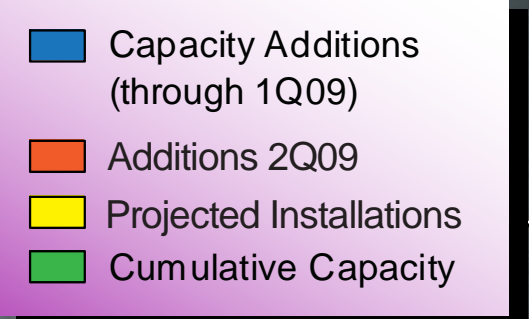
The background of the slide features a photograph of three wind turbines in a field. The turbines are dark in color and are positioned at different distances from the viewer, creating a sense of depth. The sky is a clear, bright blue, and the overall scene is well-lit, suggesting a sunny day.

Presented by Jon Wellinghoff, Chairman
Federal Energy Regulatory Commission
February 23, 2010

Large Wind Systems



New Wind Additions



Geothermal

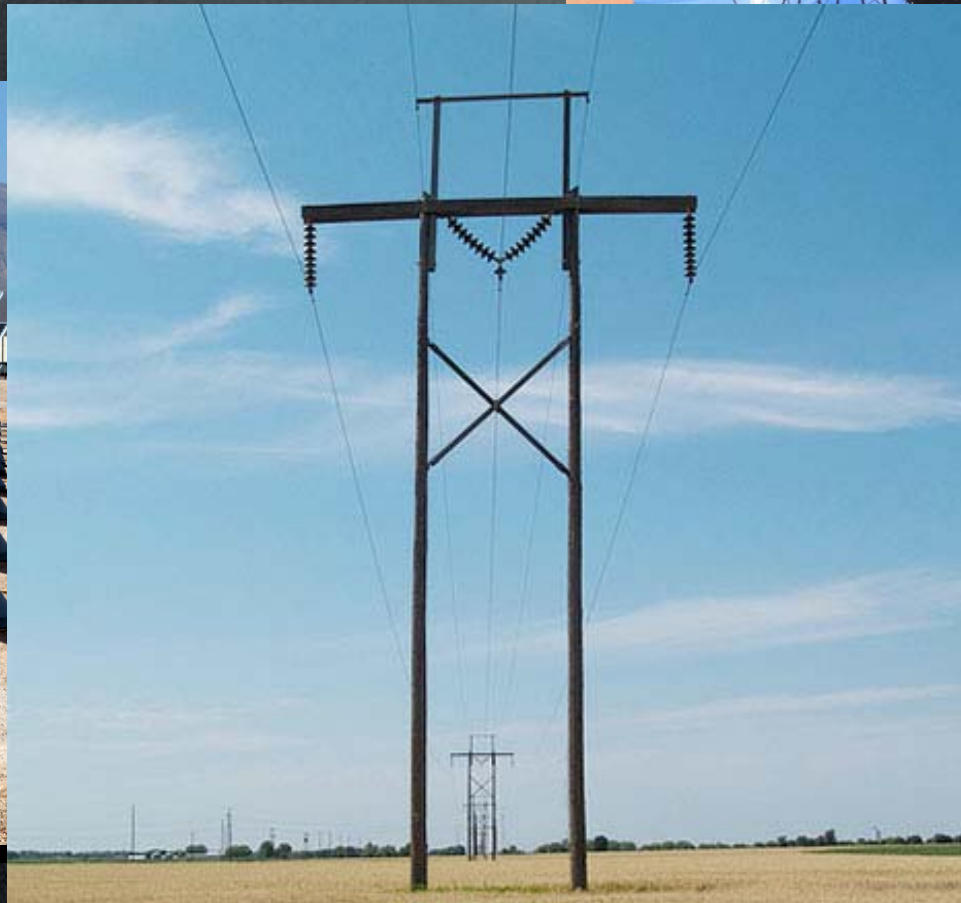


Central Solar



“Transmission is the Achilles heel of Renewable Energy.”

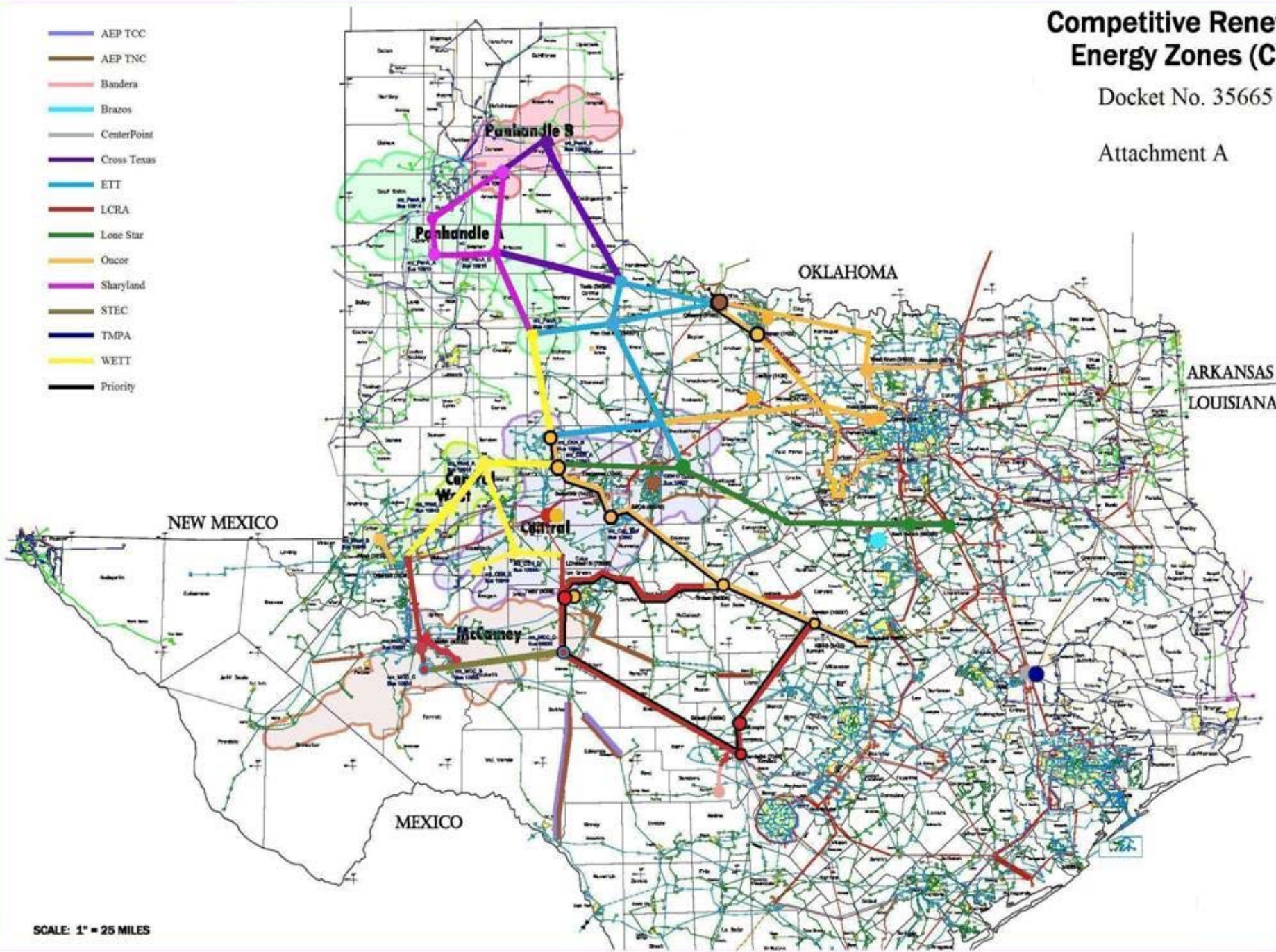
Bennett Johnson



Competitive Renewable Energy Zones (CREZ)

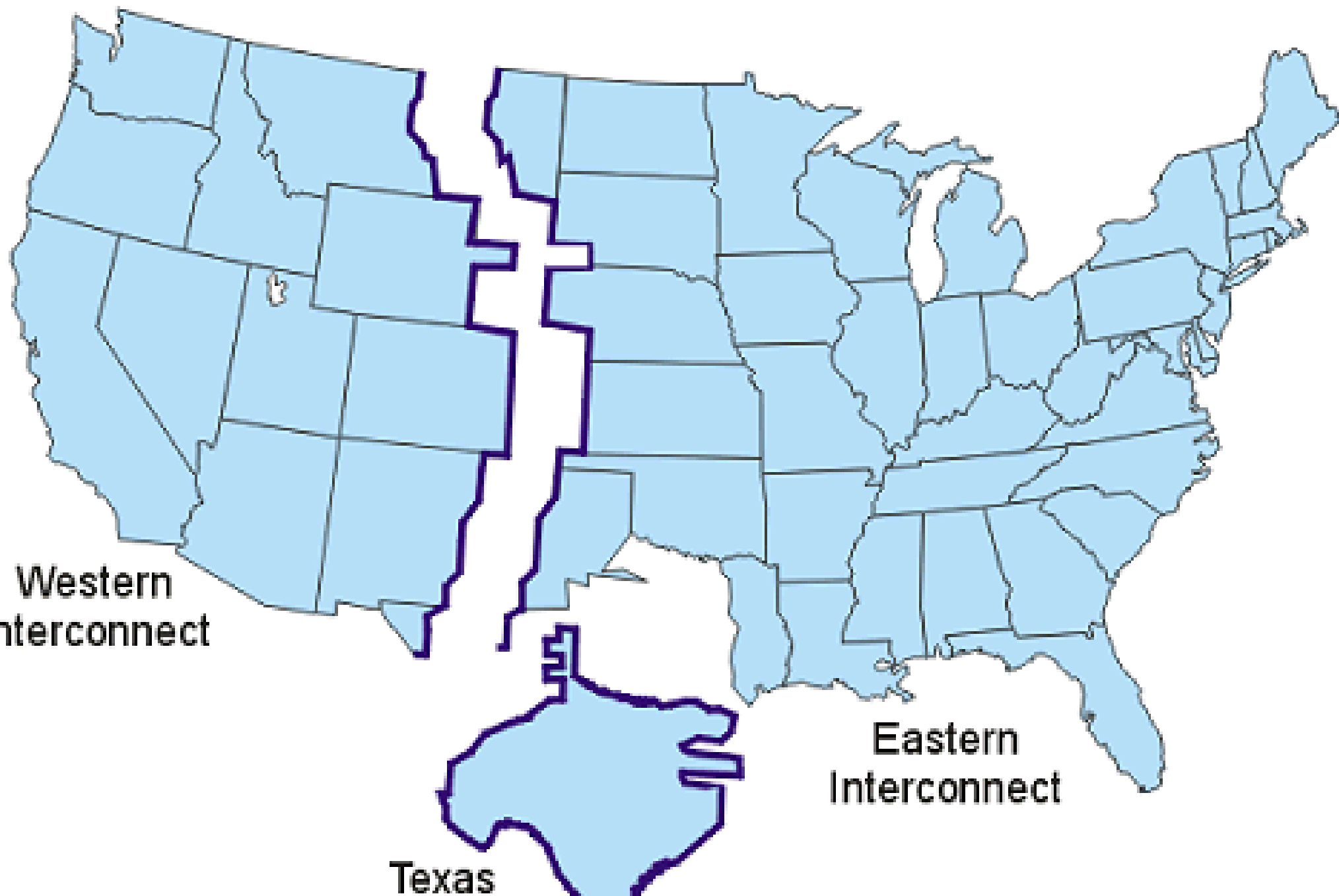
Docket No. 35665

Attachment A



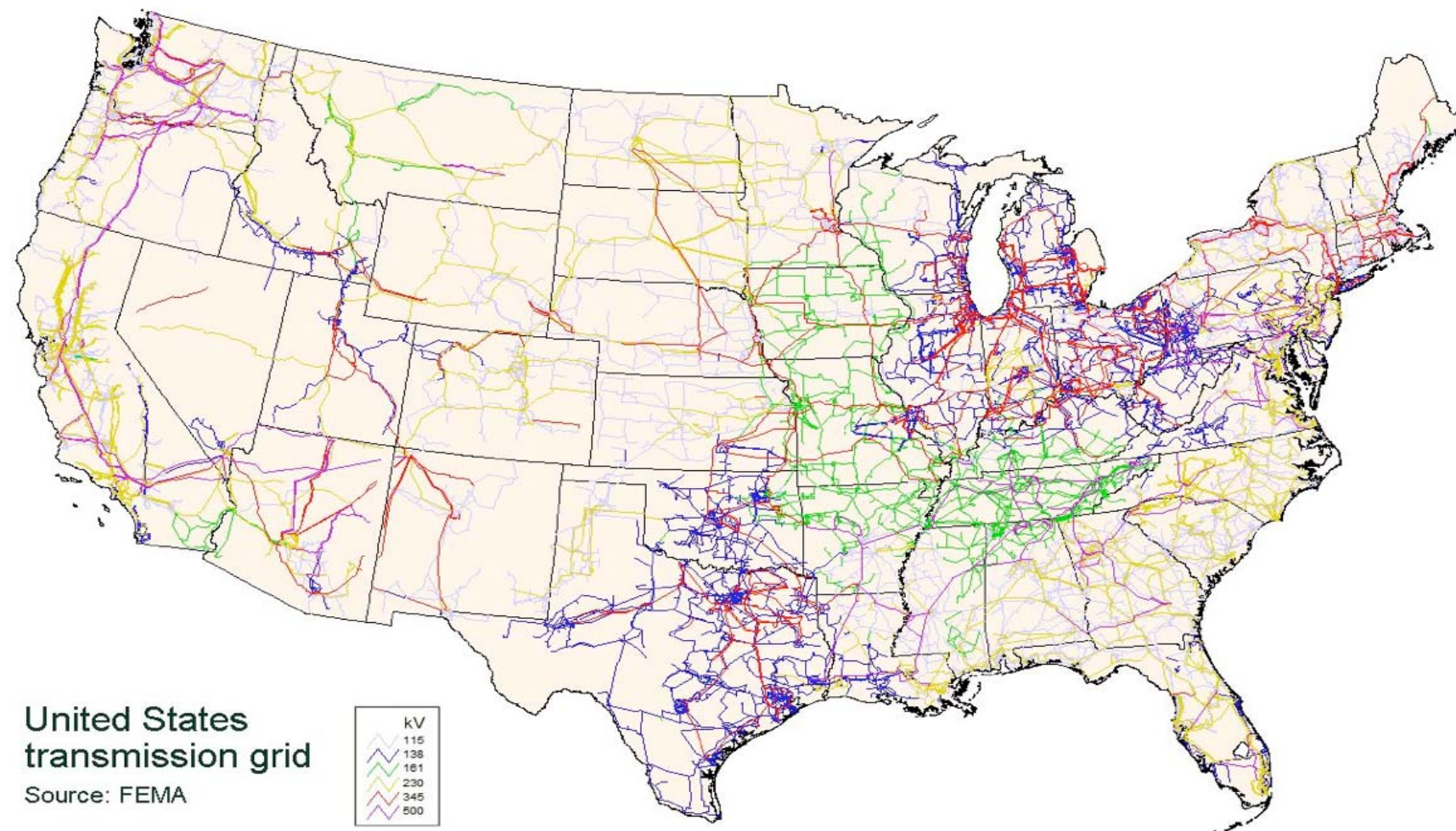
Transmission Initiatives Adapt to US Wind Growth

Transmission Project Examples



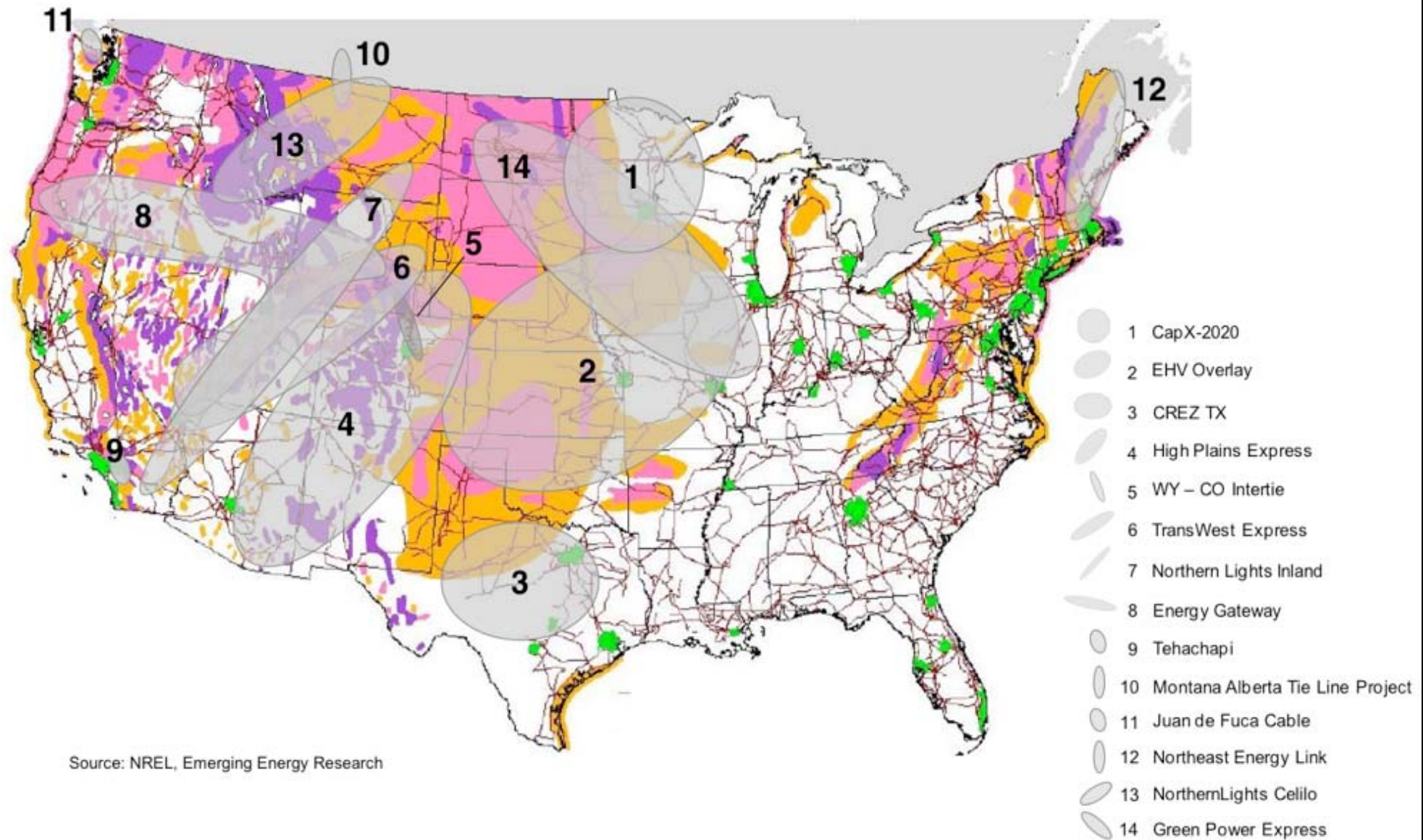
Transmission Initiatives Adapt to US Wind Growth

Transmission Project Examples



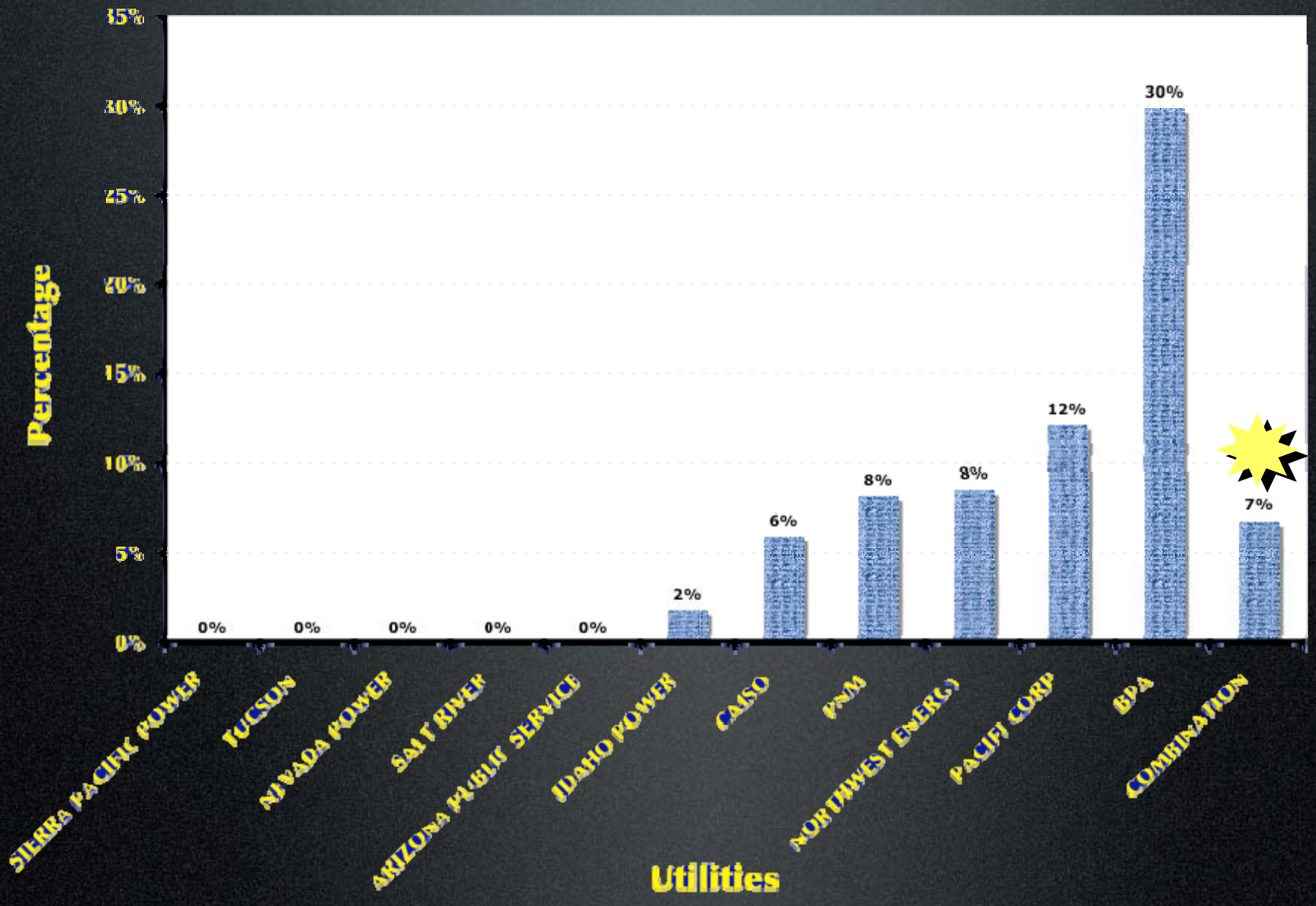
Transmission Initiatives Adapt to US Wind Growth

Transmission Project Examples

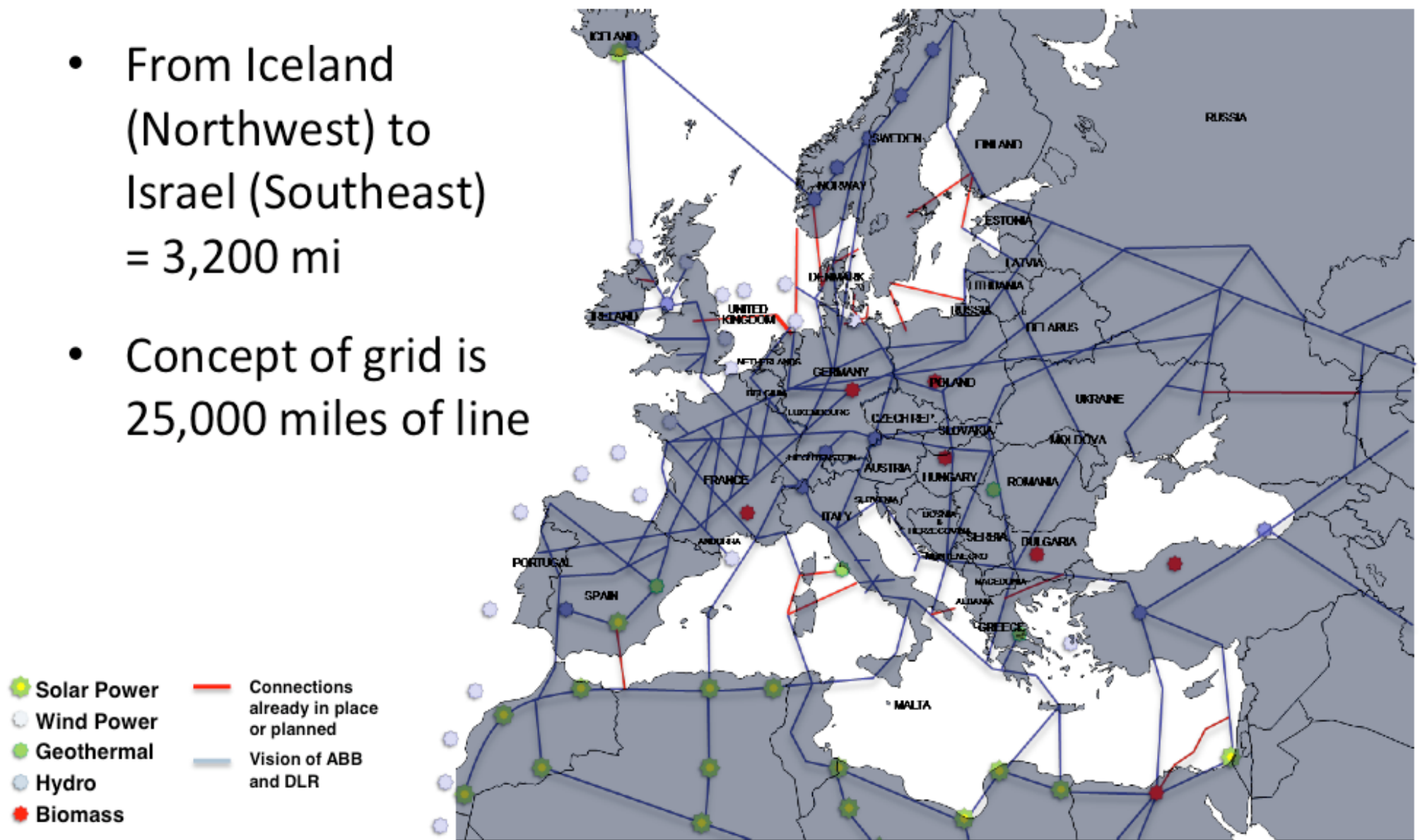


Source: NREL, Emerging Energy Research

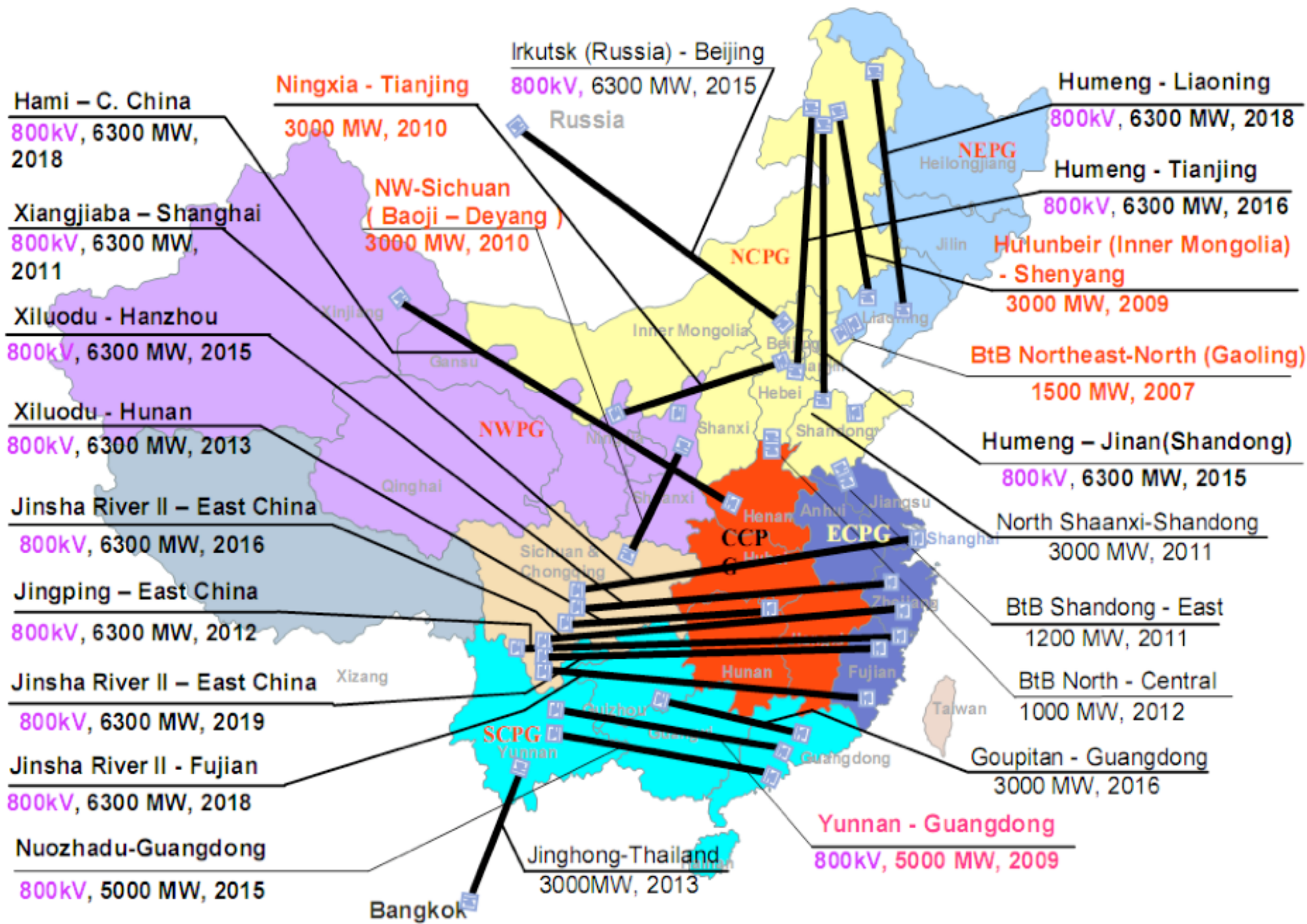
Wind Penetration as % of Peak Load- WECC



- From Iceland (Northwest) to Israel (Southeast) = 3,200 mi
- Concept of grid is 25,000 miles of line



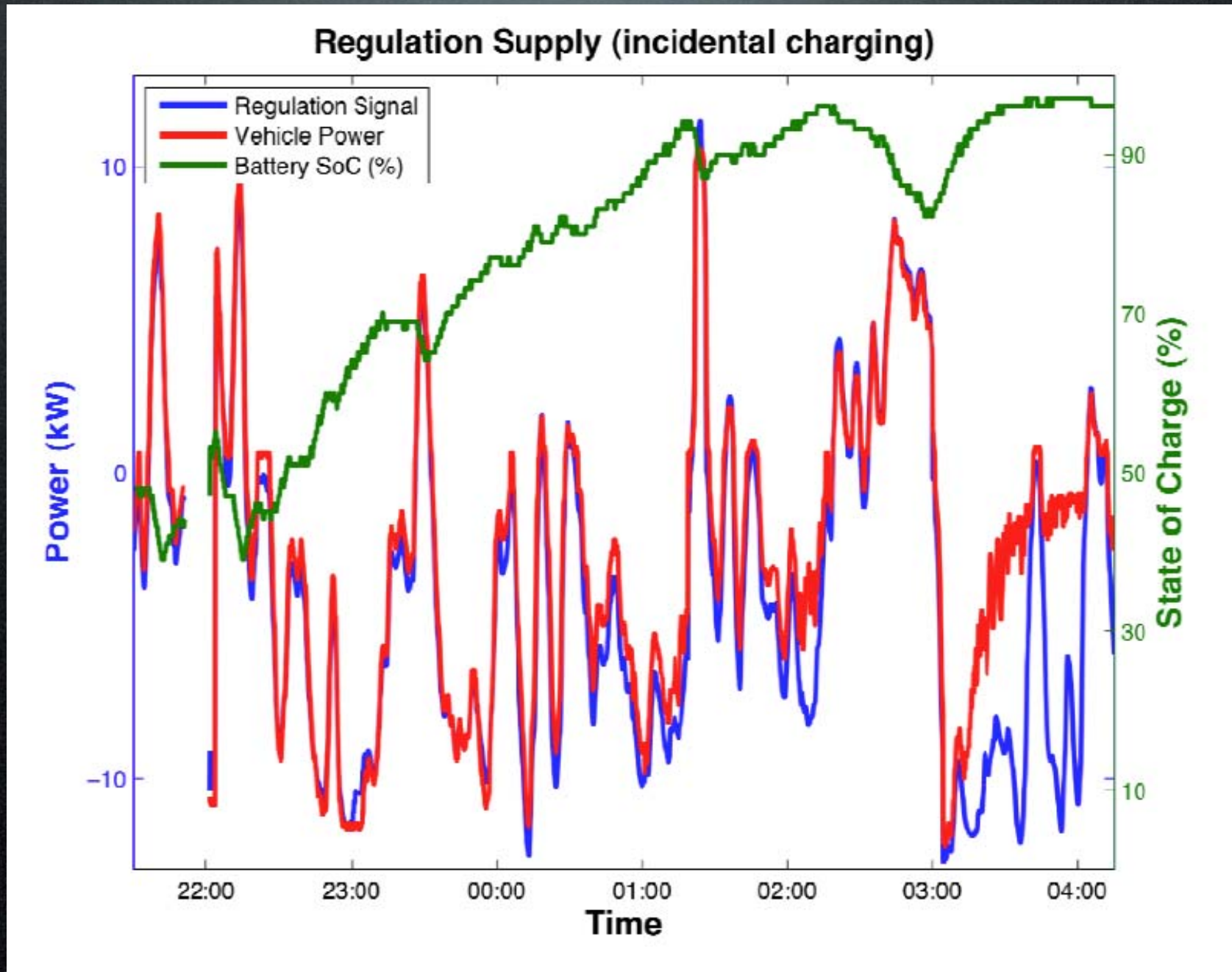
The new high-voltage network would range from the Sahara to the polar cap. The concept calls for main lines that are 40,000 kilometers long. And parts of it already exist.



Demonstration of Regulation Services



Regulation Service While Charging

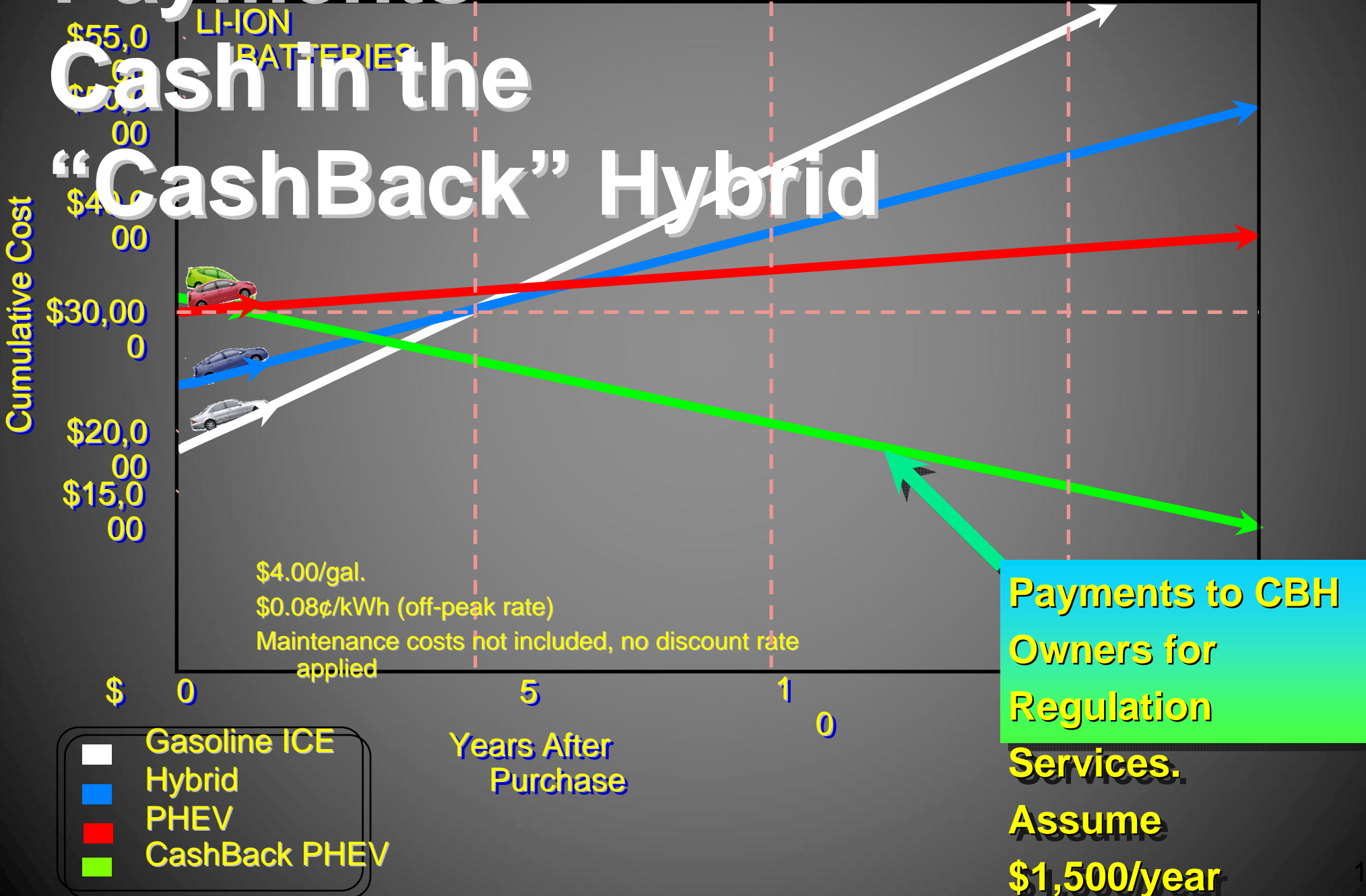


Regulation Service

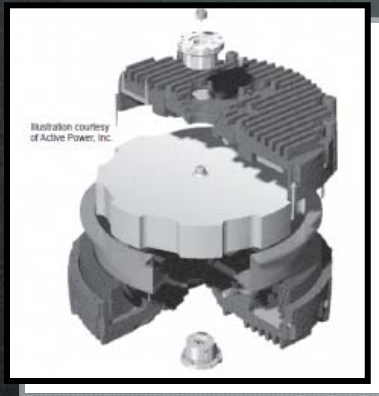
Payments-

Cash in the "CashBack" Hybrid

LI-ION
BATTERIES



Distributed Energy



Smart Controls for the Consumer



- A mobile application from Tendril, a start up in Boulder, CO will make it possible to control appliances and heating-and -cooling systems from an iPhone. The app is designed to work with Tendrils smart outlets (which Monitor and control individual appliances and lighting. and Smart thermostats. The devices communicate wirelessly into an internet connection-household hub, through which they can be

Consumer Appliances



Many utilities are considering tiered pricing based on demand at different times. GE Smart Refrigerator and other appliances going on sale this year can connect with energy management systems to receive real-time-pricing information and do things like delay a defrost cycle until prices go down.

21st Century Electric Grid

