

IEA: Electricity Security Advisory Panel

Federal Energy Regulatory Commission

Washington D.C.



**Commissioner
John Norris**

**Federal Energy Regulatory
Commission**

June 11, 2014

Paris, France

*The statements herein do not
necessarily reflect the views of
the Commission or the United
States Government*





The Federal Energy Regulatory Commission, or FERC, is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil.

FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licensing hydropower projects.

FERC Responsibilities

- **Regulates the transmission and wholesale sales of electricity in interstate commerce;**

- **Regulates the transmission and sale of natural gas for resale in interstate commerce;**

- **Regulates the transportation of oil by pipeline in interstate commerce;**

- **Reviews the siting application for electric transmission projects under limited circumstances;**

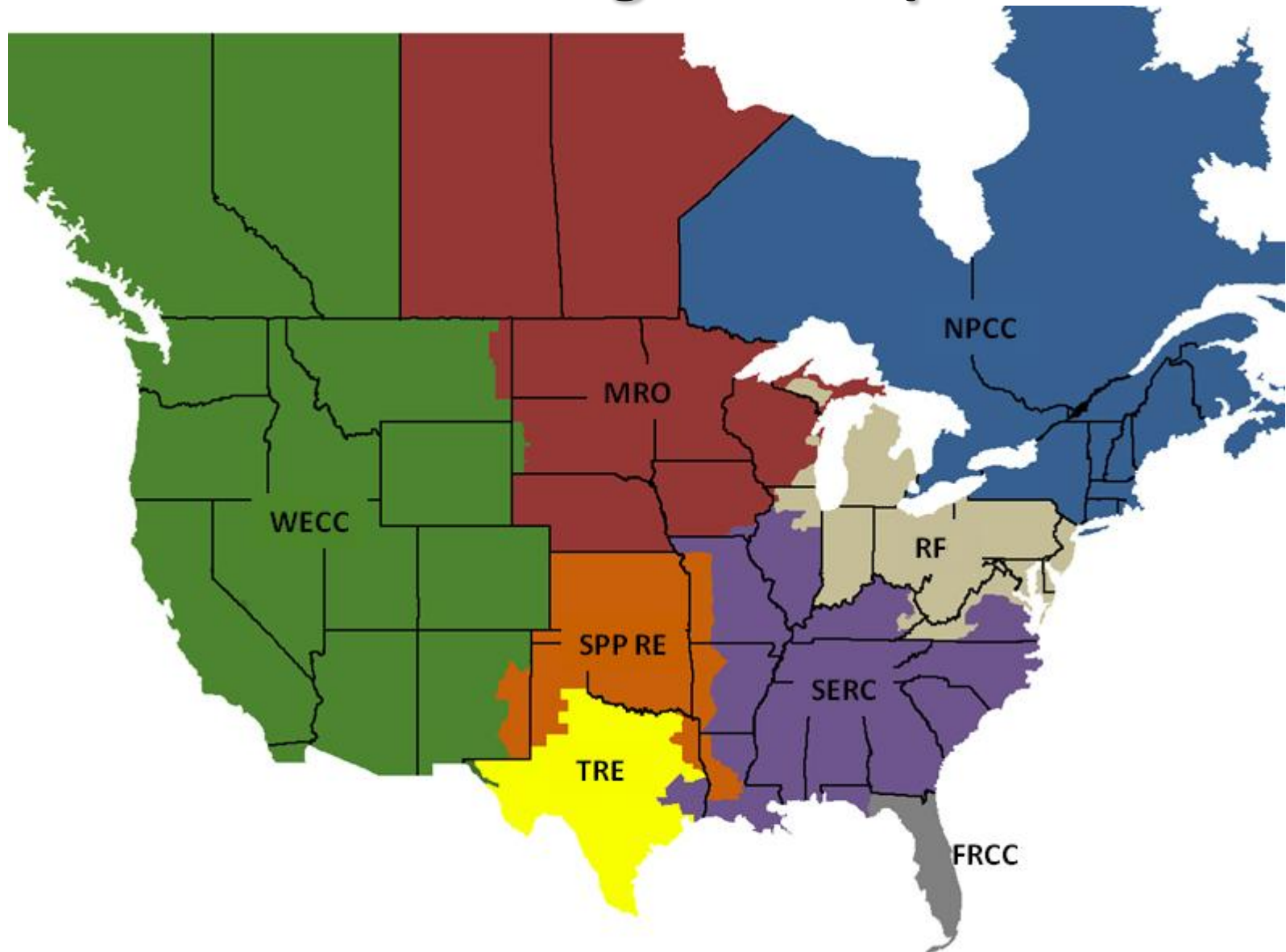
- **Protects the reliability of the high voltage interstate transmission system through mandatory reliability standards;**

- **Enforces FERC regulatory requirements through imposition of civil penalties and other means;**

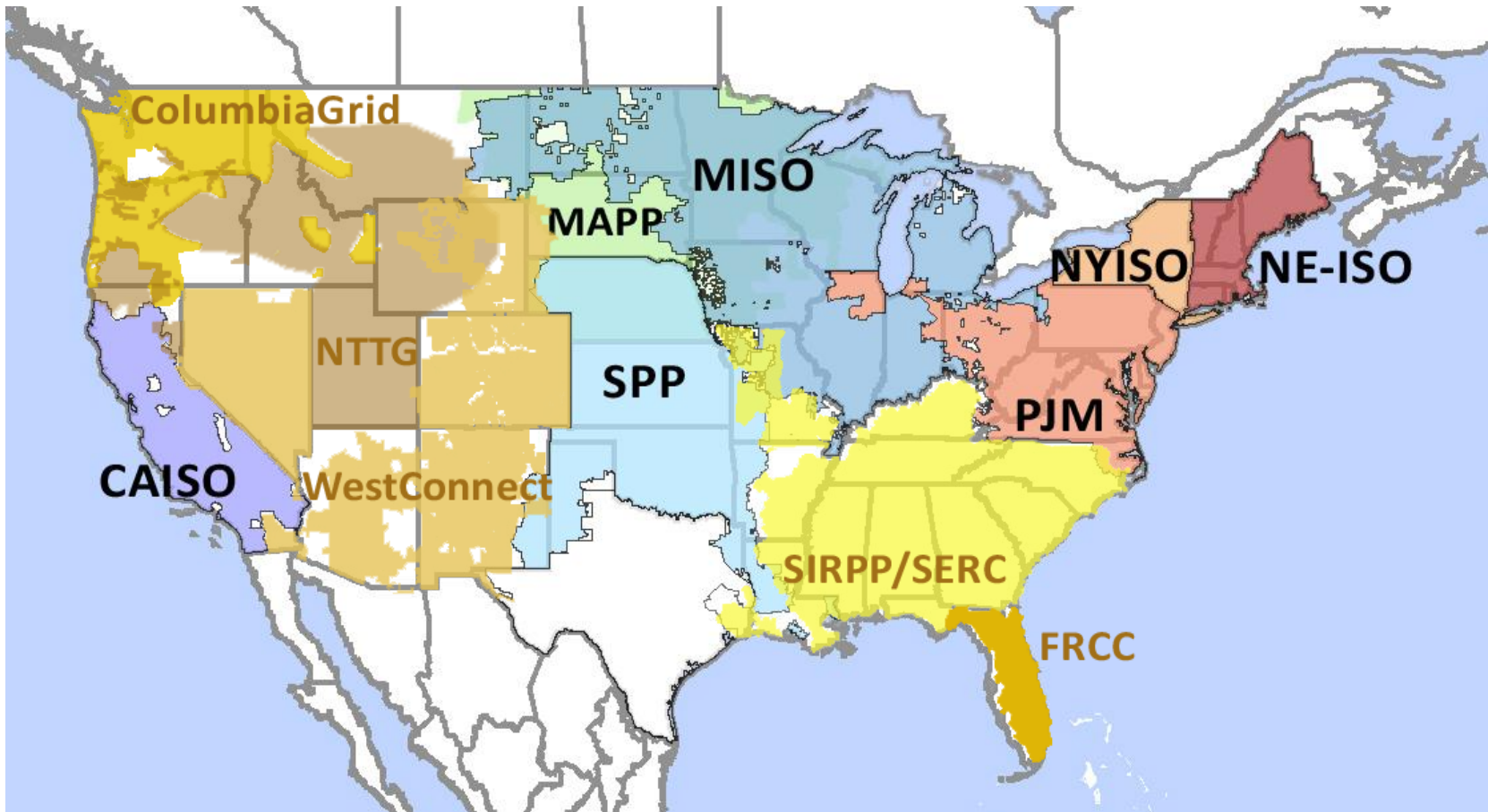
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NERC Regions Map

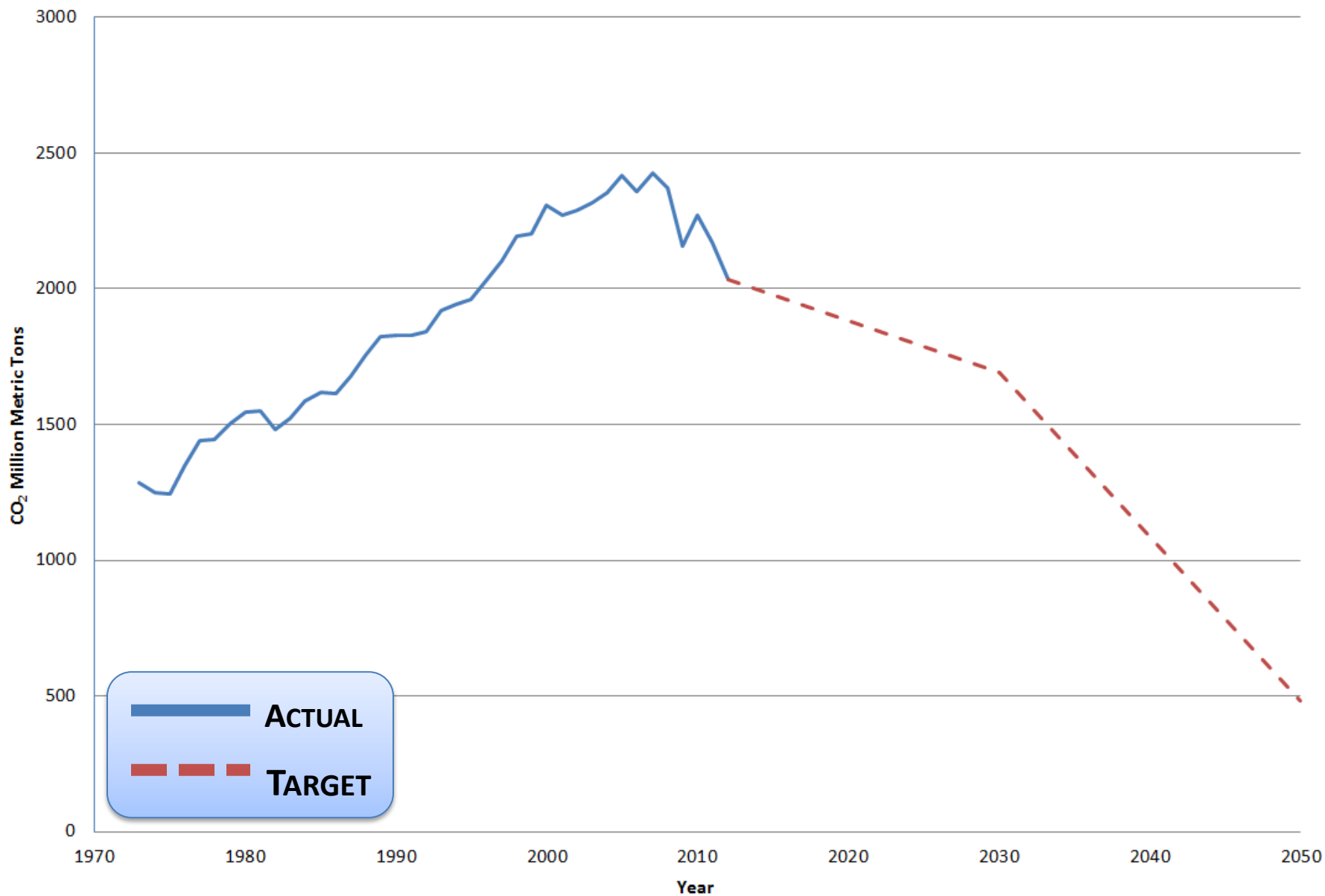


Current Transmission Planning Regions *



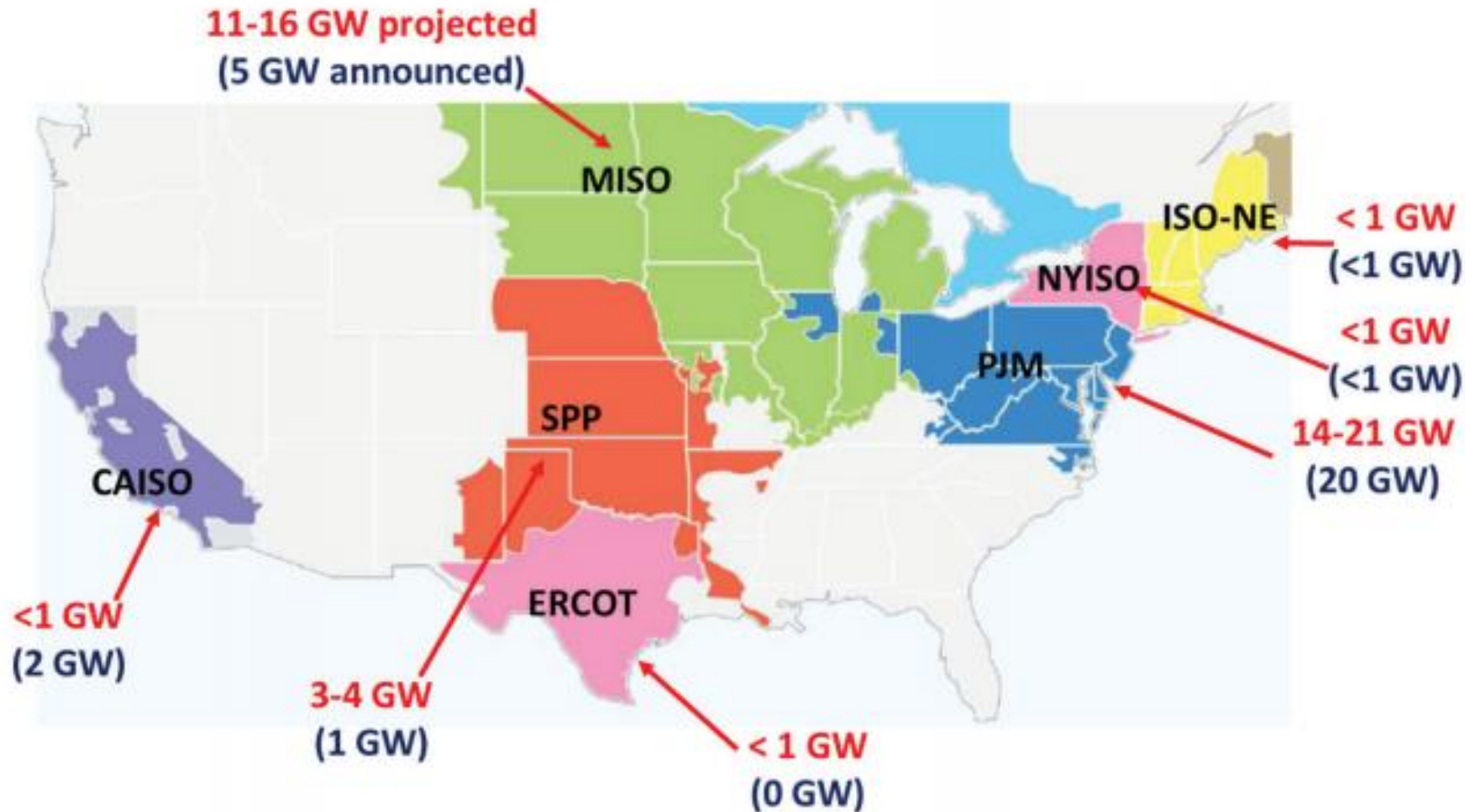
- This map is for illustration purposes only. This map generally depicts the borders of regional transmission planning processes through which transmission providers have complied with Order No. 890. Those borders may not be depicted precisely for several reasons (e.g., not all transmission providers complying with Order No. 890 have a defined service territory). Additionally, transmission planning regions could alter because transmission providers may choose to change regions.
- Source: Derived from Energy Velocity

US Electric Power Sector Actual and Target CO₂ Emissions



Coal Retirements – November 2013

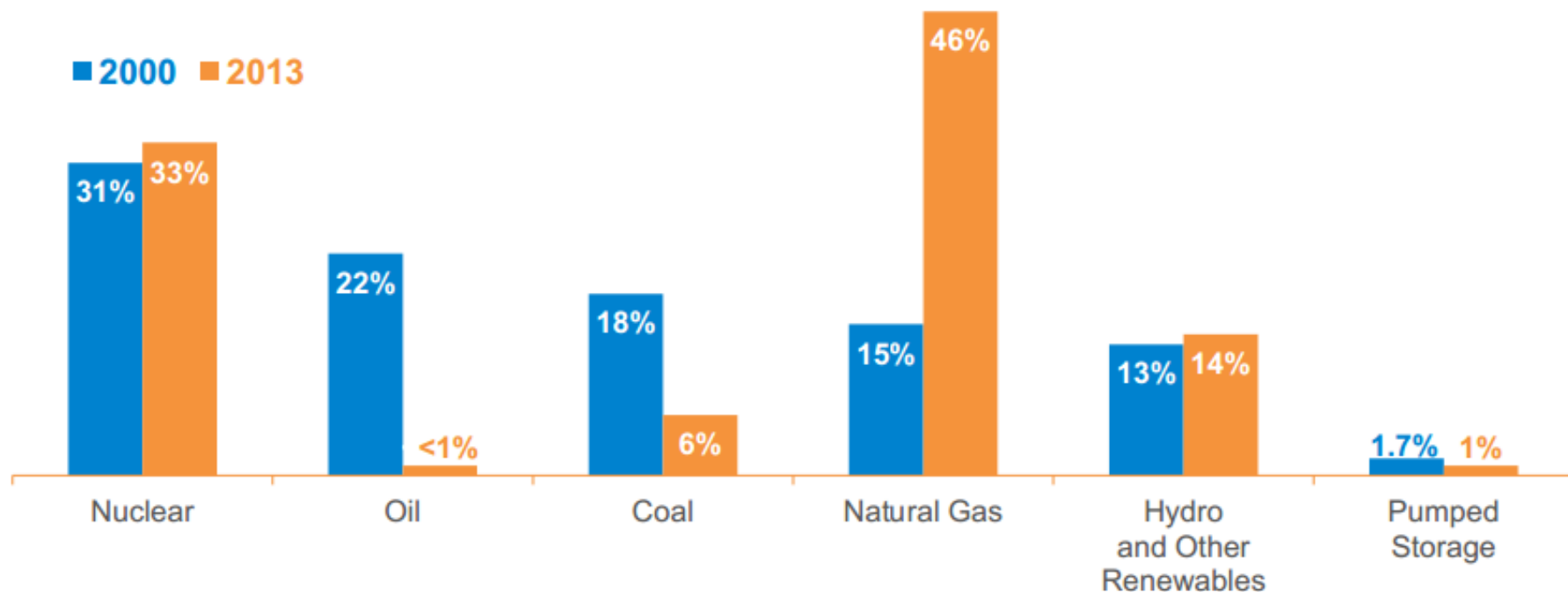
Figure 3 Announced and Projected Coal Retirements by ISO/RTO Region



Dramatic Changes in the Energy Mix

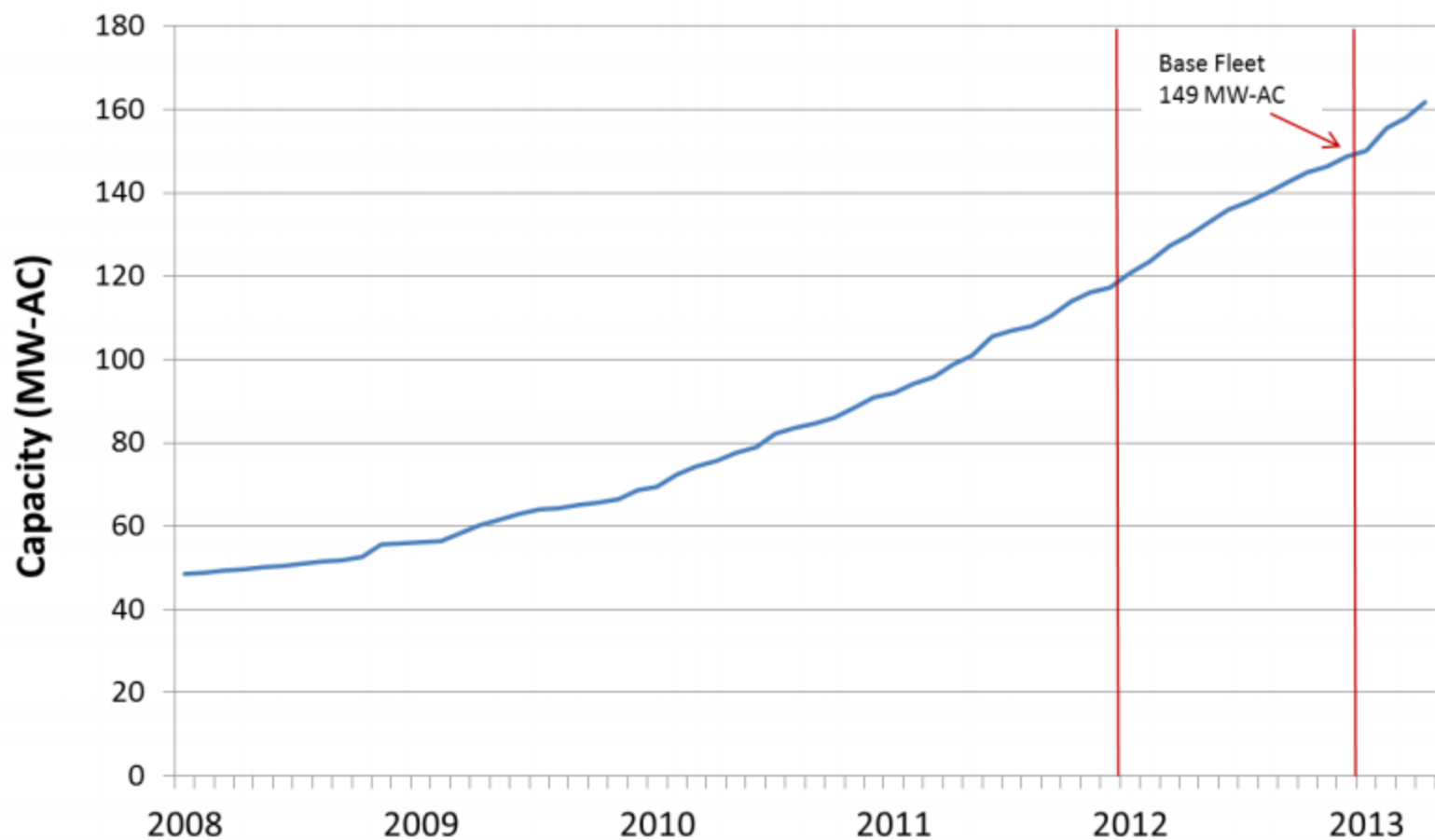
The fuels used to produce New England's electric energy have shifted as a result of economic and environmental factors

Percent of Total **Electric Energy** Production by Fuel Type
(2000 vs. 2013)



Source: ISO New England 2014 Regional Electricity Outlook

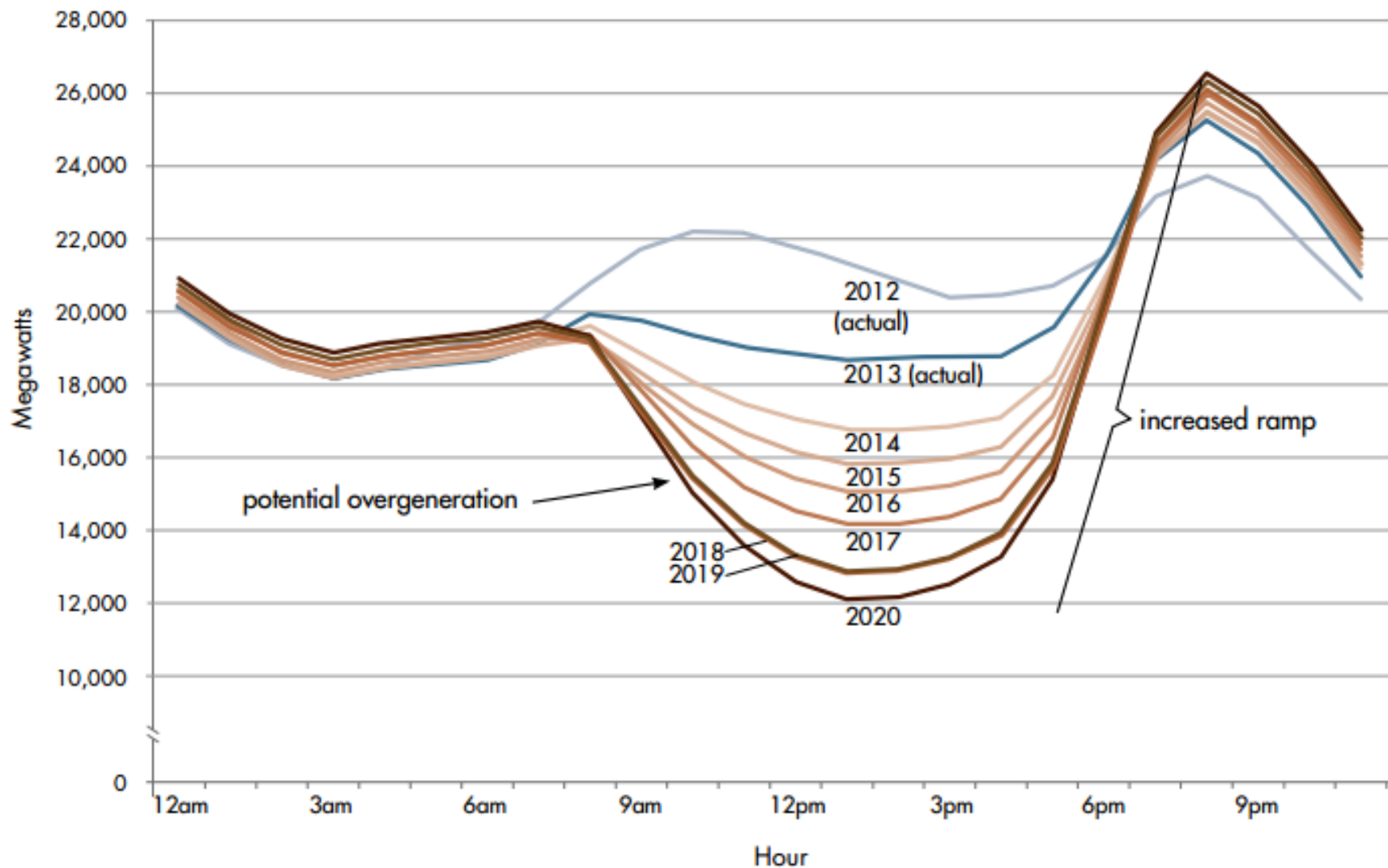
Figure 3. SDG&E Distributed PV Fleet Capacity Over Time



The Duck Curve

(Net load chart)

Net load - March 31



Scarcity Pricing

- A methodology for accurately pricing energy and reserves to reflect when a system is approaching a shortage in reserves
- Important even when capacity adequacy requirements are met because capacity adequacy is based on forecast assumptions that may not hold for a particular day