NARUC

EPA Technical Forum

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# A Thrill Packed Introduction To State Public Utility Commissions


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# NARUC & Grants & Research

- NARUC members are the State PUCs
- G&R Dept. addresses research and facilitates dialogue on key questions facing Commissions
- 17 current projects covering infrastructure, environment, regulatory design, finance, security and other issues for the gas, water, electric, telecom sectors
- Demand-side & Clean Energy plays some role in about 1/2 of our projects

Federal Funders: EPA, Dept. of Energy, Dept. of Homeland Security

Partnerships with FCC, NCS, FERC, private sector, non-governmentals

# Disclaimer

- These are opinions, not NARUC policy, nor policy of its members.
- There are 50 states + DC, with over 200 Commissioners. So there are at least 201 perspectives on everything, so I've had to be general.
- Everything will apply to some state, but there are exceptions to everything in here in some state too.

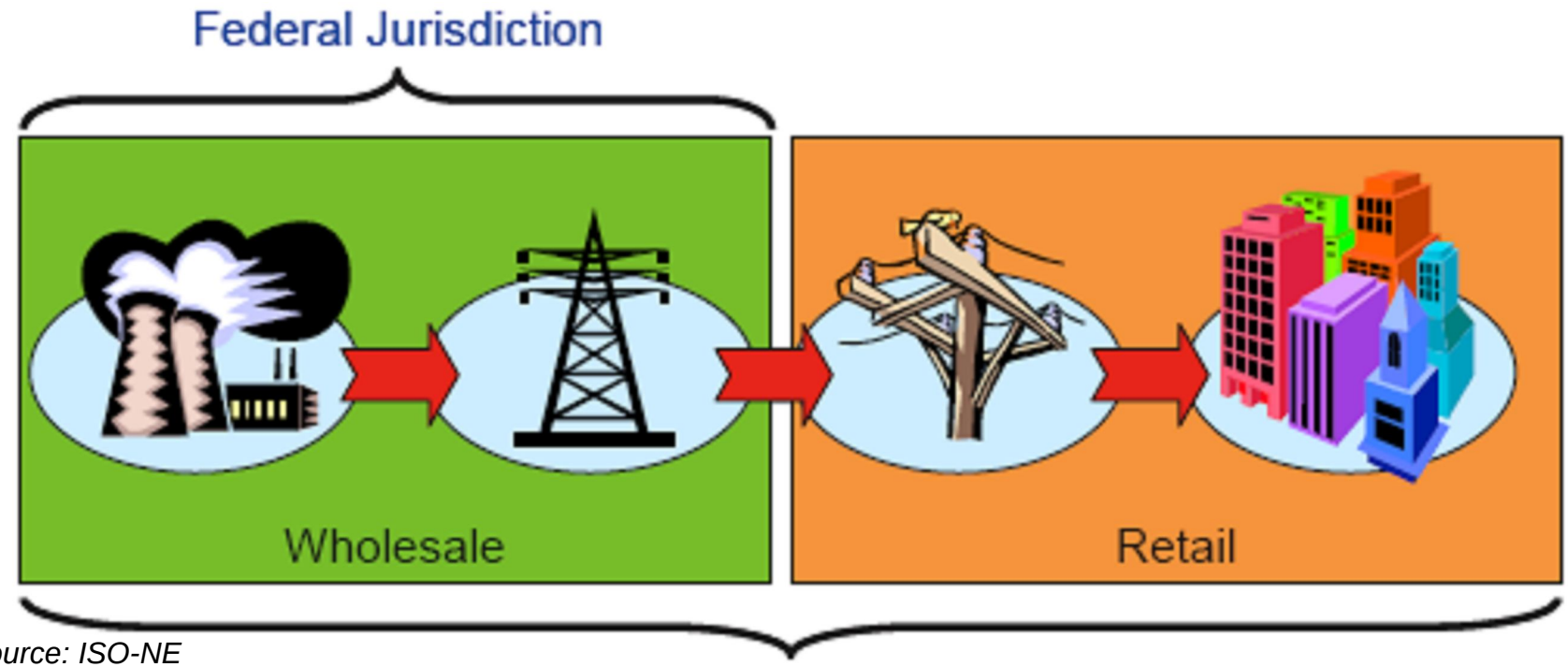
# What is a Public Utility Commission?

- A quasi-judicial panel that sets the rates, terms, and conditions for the provision of essential services in the regulated utility sectors
  - (electric, gas, water, telephone, and sometimes transportation, ports, banks, petroleum, etc etc.)
- A commission has 3-7 members, staggered terms, bipartisan representation, appointed by Governors, Legislatures, or directly elected
- Focus on transparency, accountability, public participation, due process

# IOUs, Coops, and Munis

| | Investor-Owned | Publicly Owned | Cooperatives | Total |
|---|---|---|---|---|
| Number of Organizations | 220 | 2,000 | 930 | 3,150 |
| Number of Total Customers | 102 m | 20 m | 17 m | 140 m |
| Size (median number of customers) | 400,000 | 2,000 | 12,500 | |
| Customers, % of total | 73% | 15% | 12% | |
| Revenues, % of total | 76% | 14% | 10% | |
| kWh sales, % of total | 74% | 16% | 10% | |

# Federal & State Jurisdiction



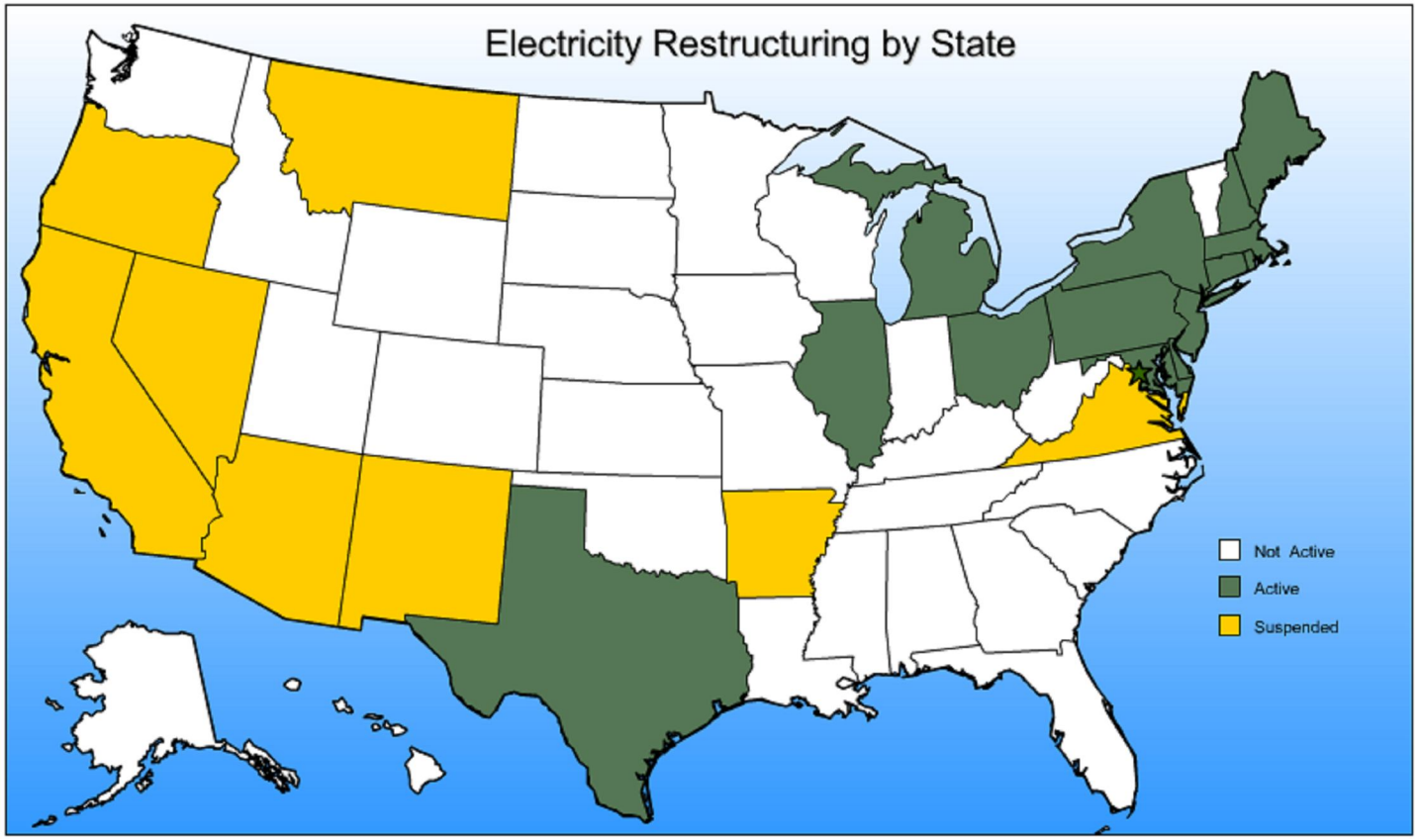

*Source: ISO-NE*

State Jurisdiction – Facility Siting, Distribution, Retail Rates

Who needs a mnemonic?
FERC jurisdiction is over “sale for resale”*

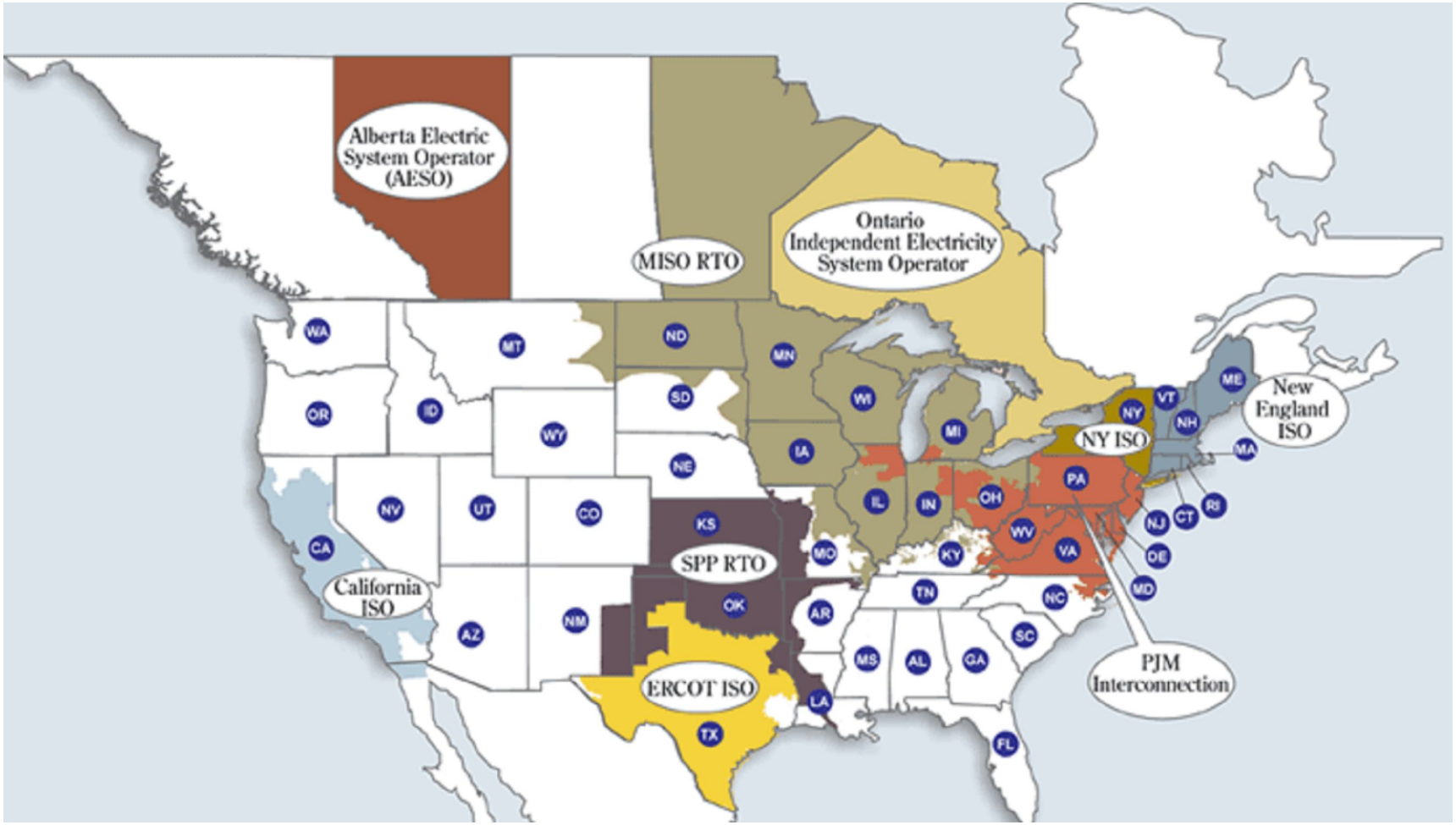
* Who doesn’t know what a mnemonic is?

# Status of Electricity Restructuring




*Source: Energy Information Administration, status as of April 2007*

# RTOs


Alberta Electric System Operator (AESO)
MISO RTO
Ontario Independent Electricity System Operator
New England ISO
NY ISO
SPP RTO
California ISO
ERCOT ISO
PJM Interconnection
WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
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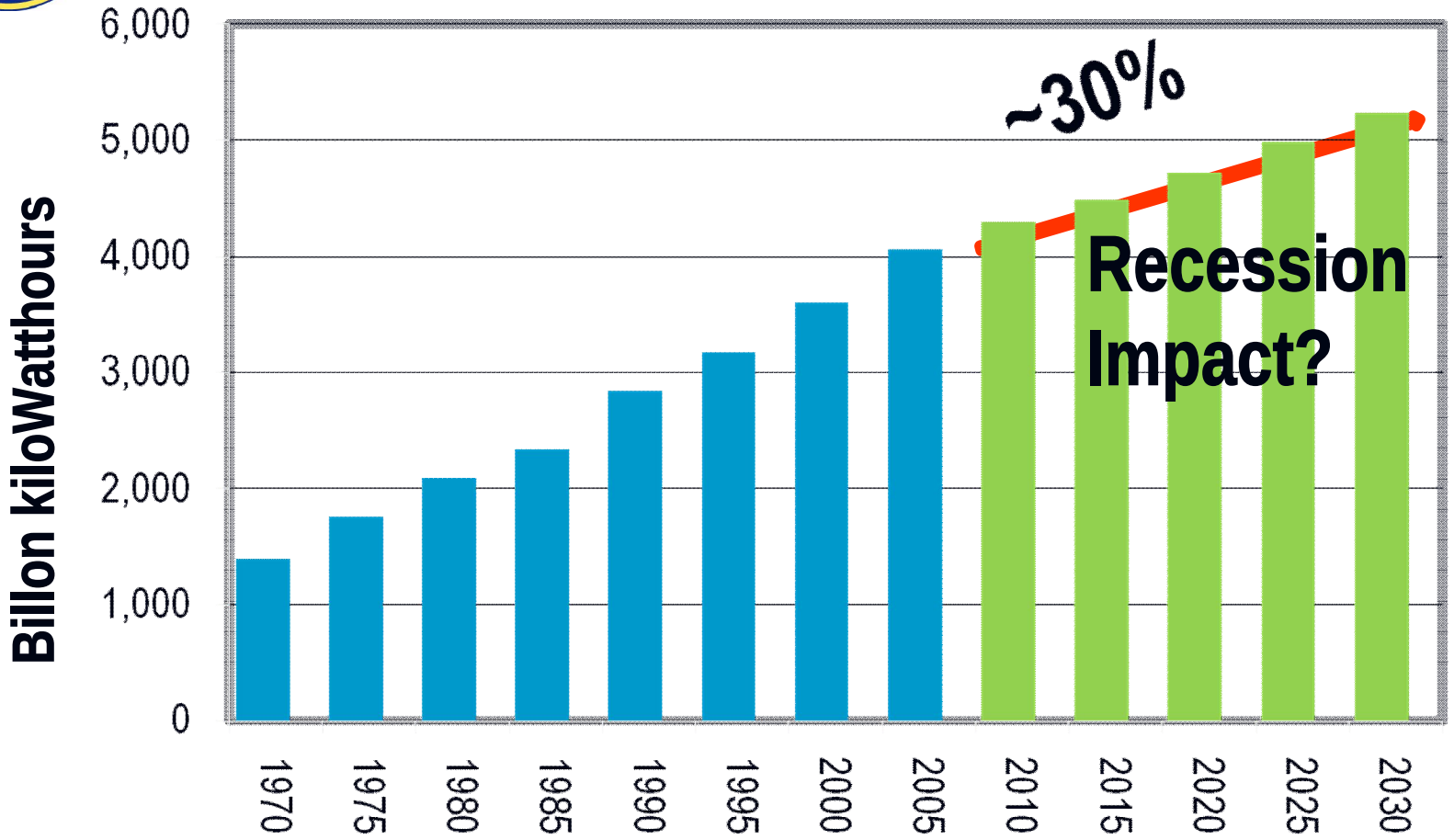
CT
NJ
DE
MD

# Commission Activities in Electricity

- Set the rates, terms, and conditions of monopoly utility services
- Ensure reliable, affordable, clean electricity
- Specific activities:
  - Planning
  - Siting
  - Cost allocation and cost recovery
  - Other stuff

# Reliable:



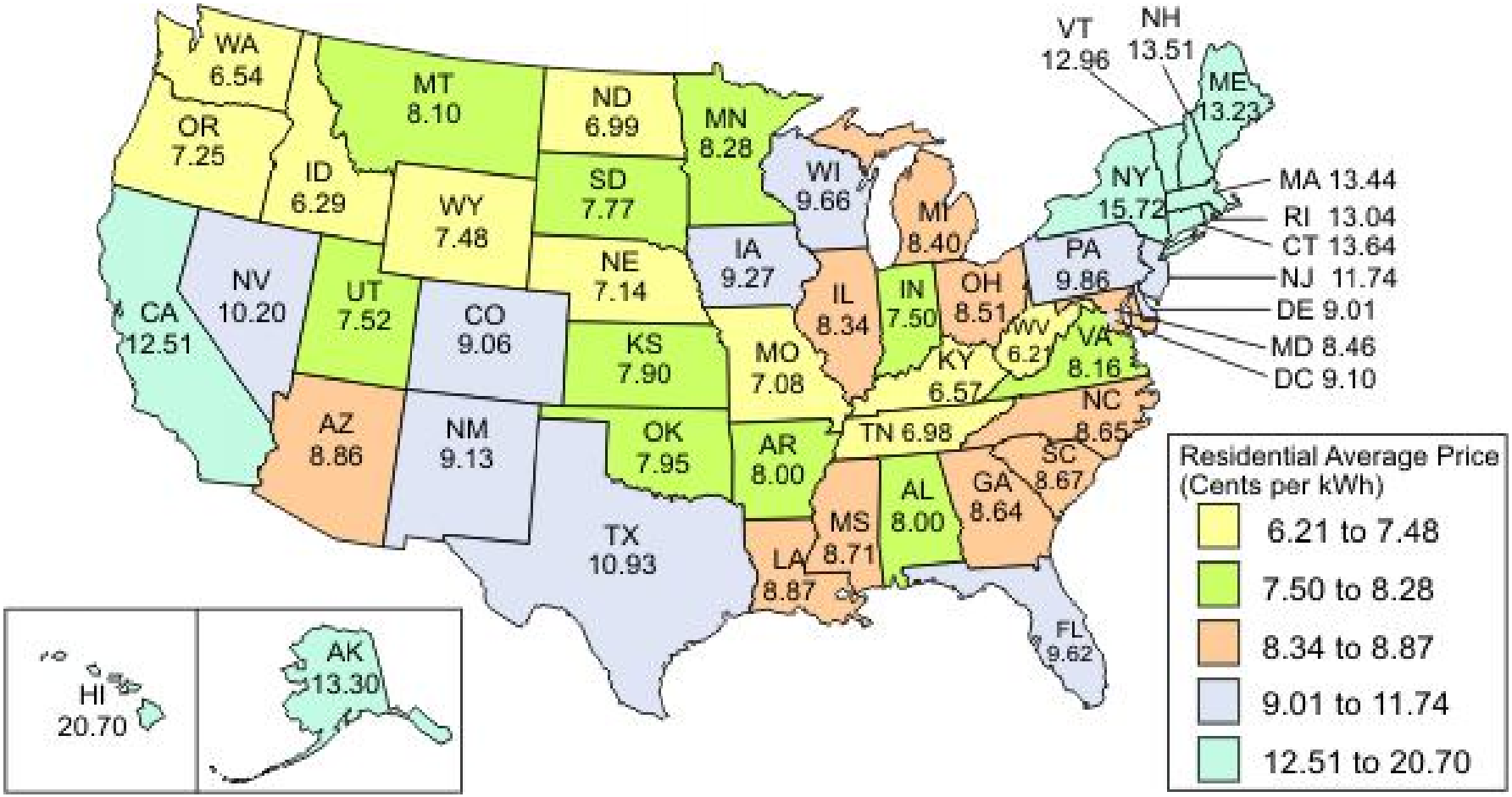

Sources: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 2006* and *Annual Energy Outlook 2008 Early Release*

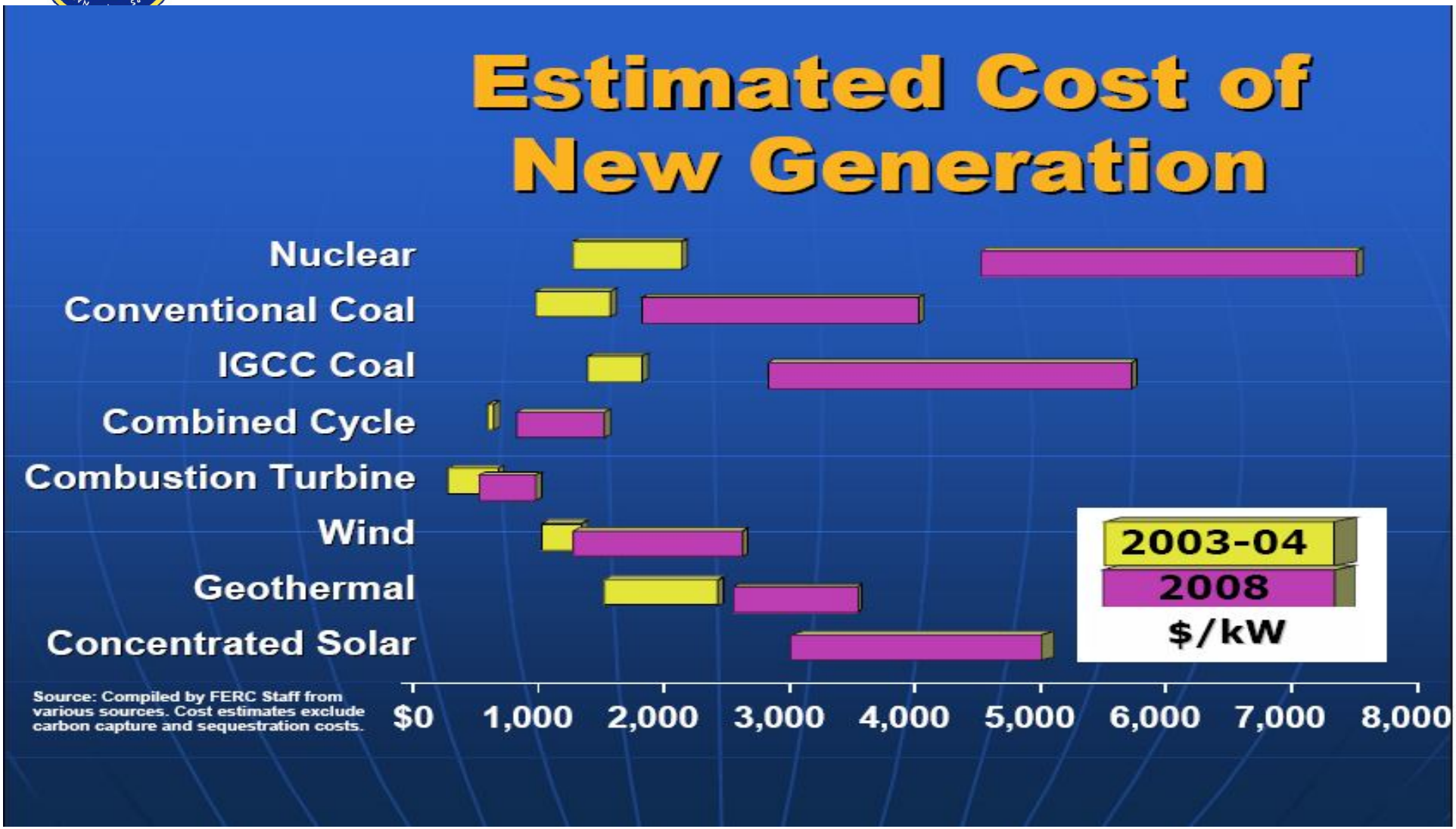
*Electricity demand projections based on expected growth between 2006-2030

# Reliability

- Standard setting
  - Technical: NERC
  - Resource adequacy
  - Safety & security
- Review and approve plans
- Regular updates (annual or otherwise)
- Penalties for non performance; incentives for high achievement

# Affordable:


WA 6.54
OR 7.25
CA 12.51
ID 6.29
NV 10.20
MT 8.10
WY 7.48
UT 7.52
AZ 8.86
CO 9.06
NM 9.13
ND 6.99
SD 7.77
NE 7.14
KS 7.90
OK 7.95
TX 10.93
MN 8.28
IA 9.27
MO 7.08
AR 8.00
LA 8.87
WI 9.66
IL 8.34
MS 8.71
MI 8.40
IN 7.50
KY 6.57
TN 6.98
AL 8.00
OH 8.51
WV 6.2
VA 8.16
NC 8.65
SC 8.67
GA 8.64
FL 9.62
PA 9.86
NY 15.72
VT 12.96
NH 13.51
ME 13.23
MA 13.44
RI 13.04
CT 13.64
NJ 11.74
DE 9.01
MD 8.46
DC 9.10
HI 20.70
AK 13.30
Residential Average Price (Cents per kWh)
6.21 to 7.48
7.50 to 8.28
8.34 to 8.87
9.01 to 11.74
12.51 to 20.70




Per Eric Holdsworth, EEI

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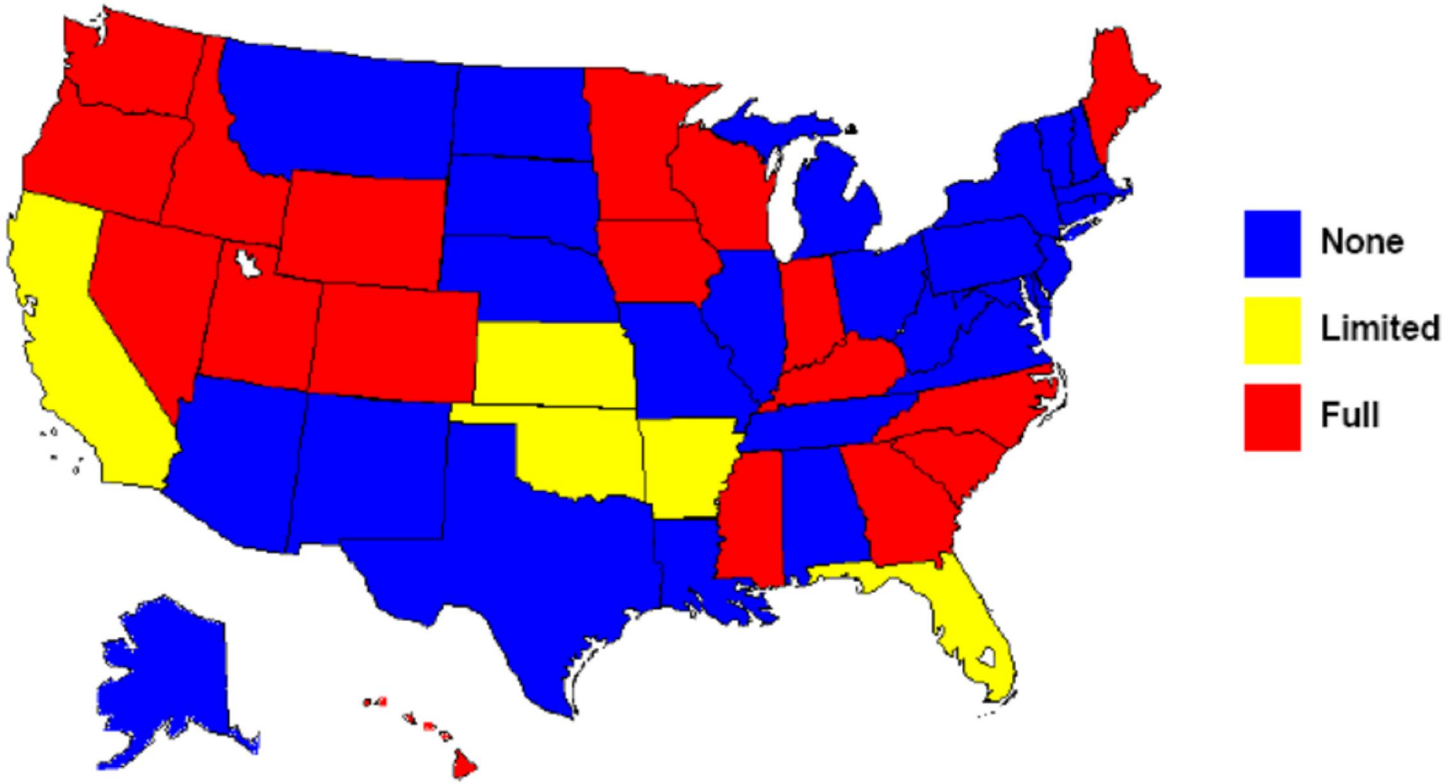
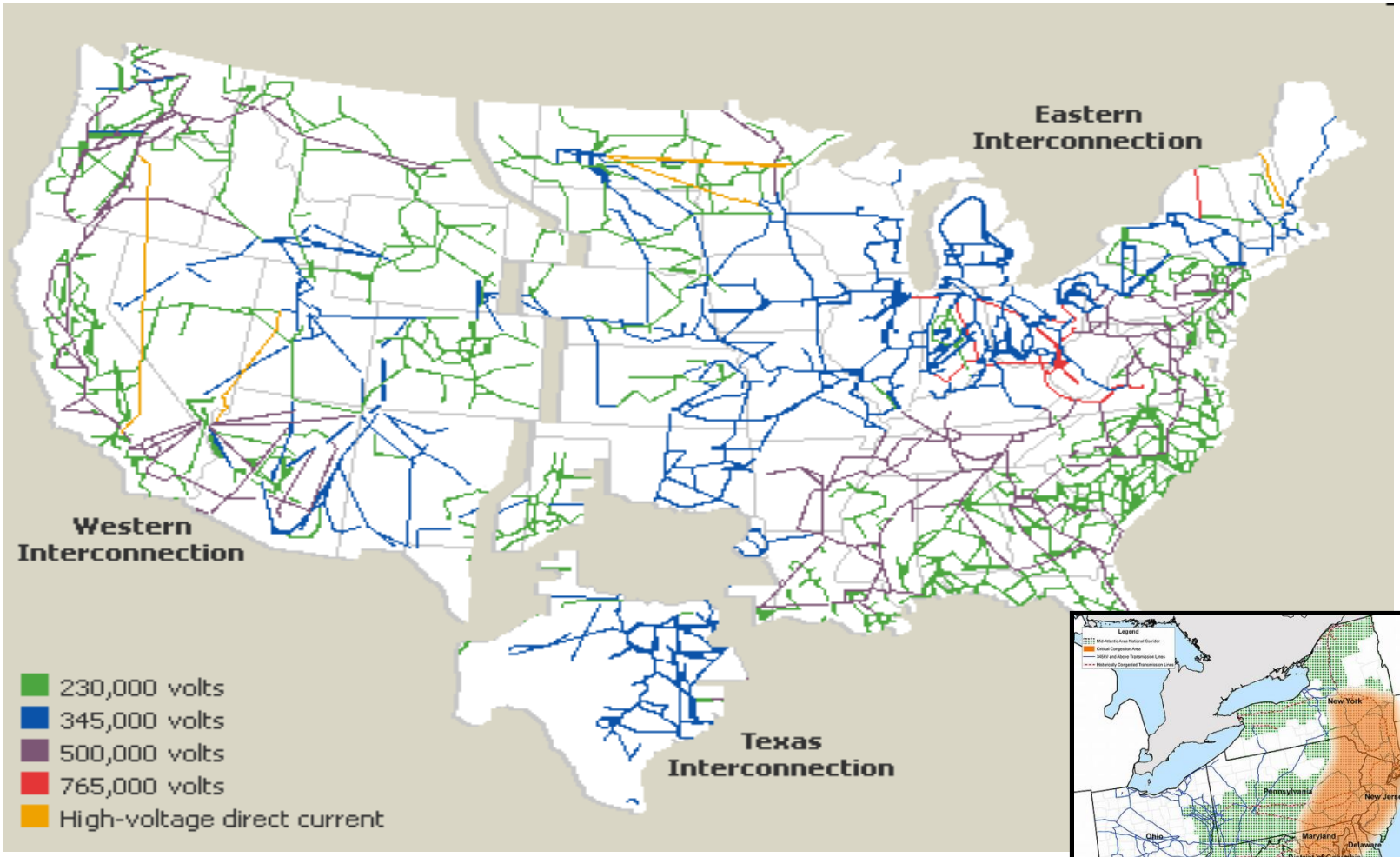
# Resource Planning

- IRP evaluates scenarios and chooses resource mix that has best reliability, affordability, and other desired attributes
- Even without IRP, portfolio management is gaining ground



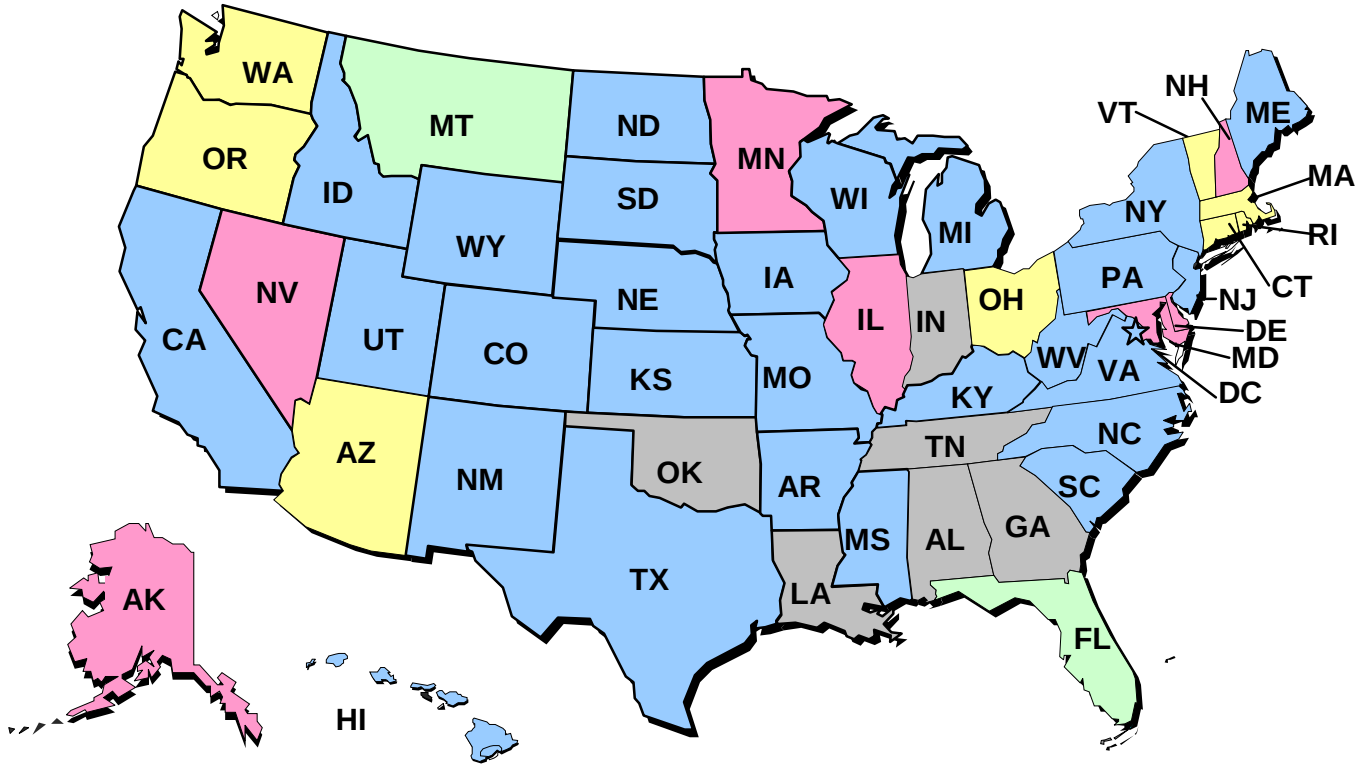
# Transmission Planning



# Infrastructure Siting

- Several Commissions have specific Siting Boards
- All commissions have some role in siting, even if indirect
  - Generation
  - Transmission
  - Inside the “city gates” gas infrastructure
  - Demand-side programs
- Local role in some states
- Quasi-judicial proceedings
  - Evidentiary hearings, site visits, conditional approvals
- Coordination among states
- Backstop interstate siting authority

# Transmission Siting Authority by State




*Source: EEI, Transmission Line Siting Regulations 2001, updated by J. McGarvey*

# Cost recovery

- The regulatory compact is that a utility will have a monopoly and will have a hard time going broke because the rates are set to cover cost of service and revenue requirement
- A description of a rate case
- Warren Buffet: “This should be a good business to be in, but not a Great business.”
- Cost recovery as a balance between regulatory certainty and a risk-based incentive for innovation
- Efficiency and decoupling and revenue, oh my!

# Administer other programs

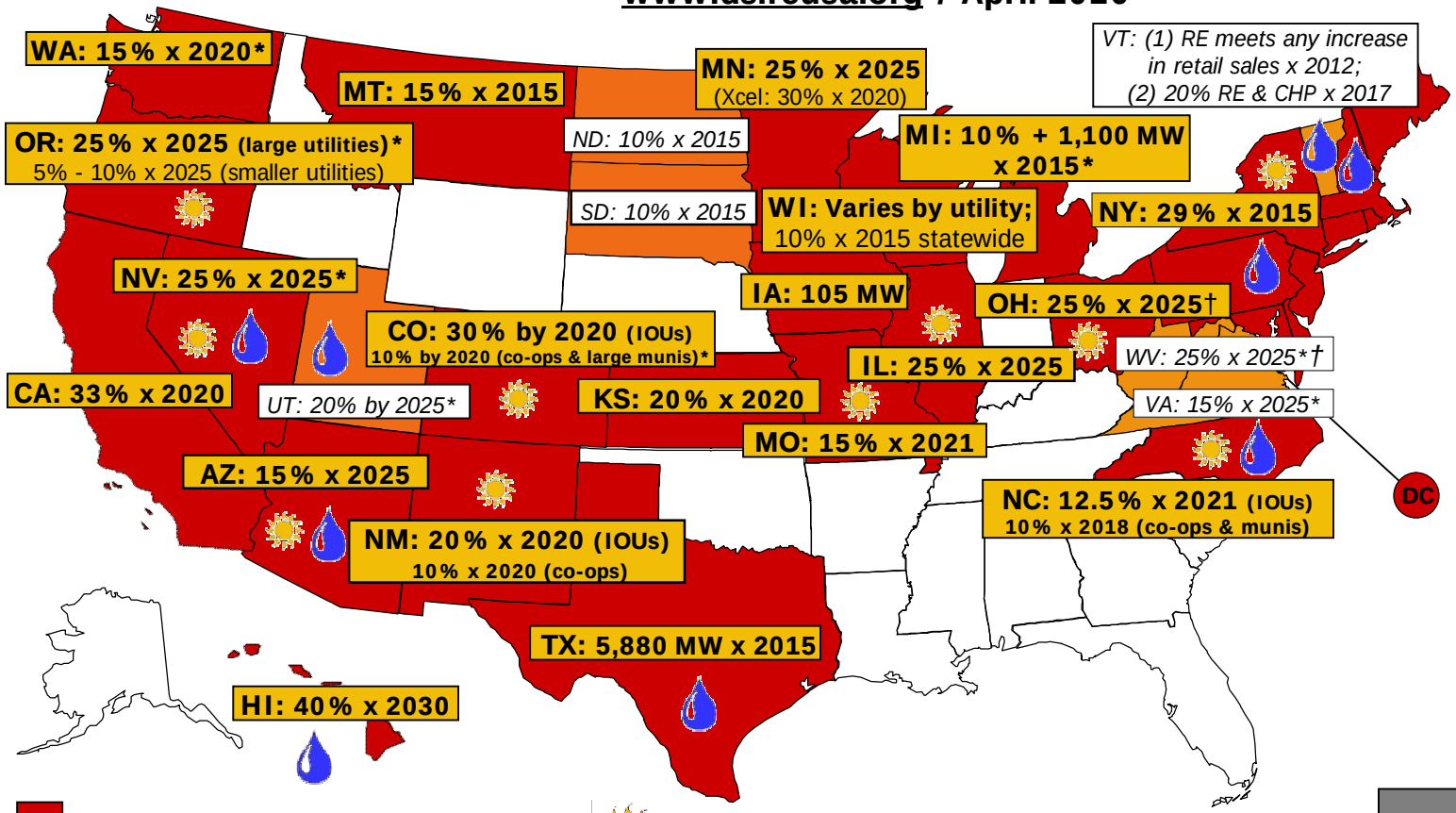
- Gas
- Managing RPS
- Managing efficiency programs
- Managing climate- and enviro-related programs (RGGI, loading orders, etc.)
- Overseeing public benefits funds
- Emergency preparedness & interdependencies
- Coordinate with other agencies

DSIRE
Database of State Incentives for Renewables & Efficiency

U.S. Department of Energy Energy Efficiency and Renewable Energy
North Carolina Solar Center
IREC

# Renewable Portfolio Standards

**www.dsireusa.org / April 2010**




VT: (1) RE meets any increase in retail sales x 2012; (2) 20% RE & CHP x 2017

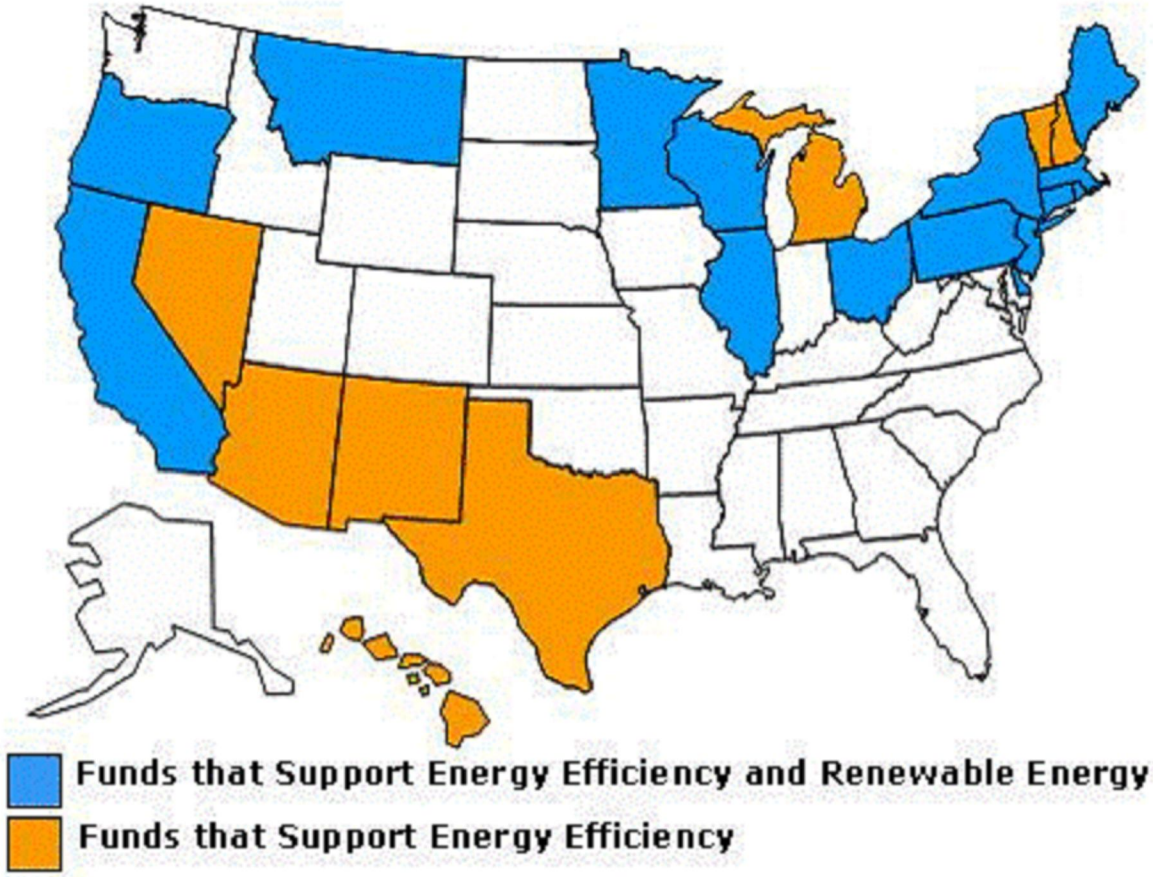
ME: 30% x 2000
New RE: 10% x 2017
NH: 23.8% x 2025
MA: 22.1% x 2020
New RE: 15% x 2020
(+1% annually thereafter)
RI: 16% x 2020
CT: 23% x 2020
PA: ~18% x 2021†
NJ: 22.5% x 2021
MD: 20% x 2022
DE: 20% x 2020*
DC: 20% x 2020

State renewable portfolio standard
State renewable portfolio goal
Solar water heating eligible

Minimum solar or customer-sited requirement
* Extra credit for solar or customer-sited renewables
† Includes non-renewable alternative resources

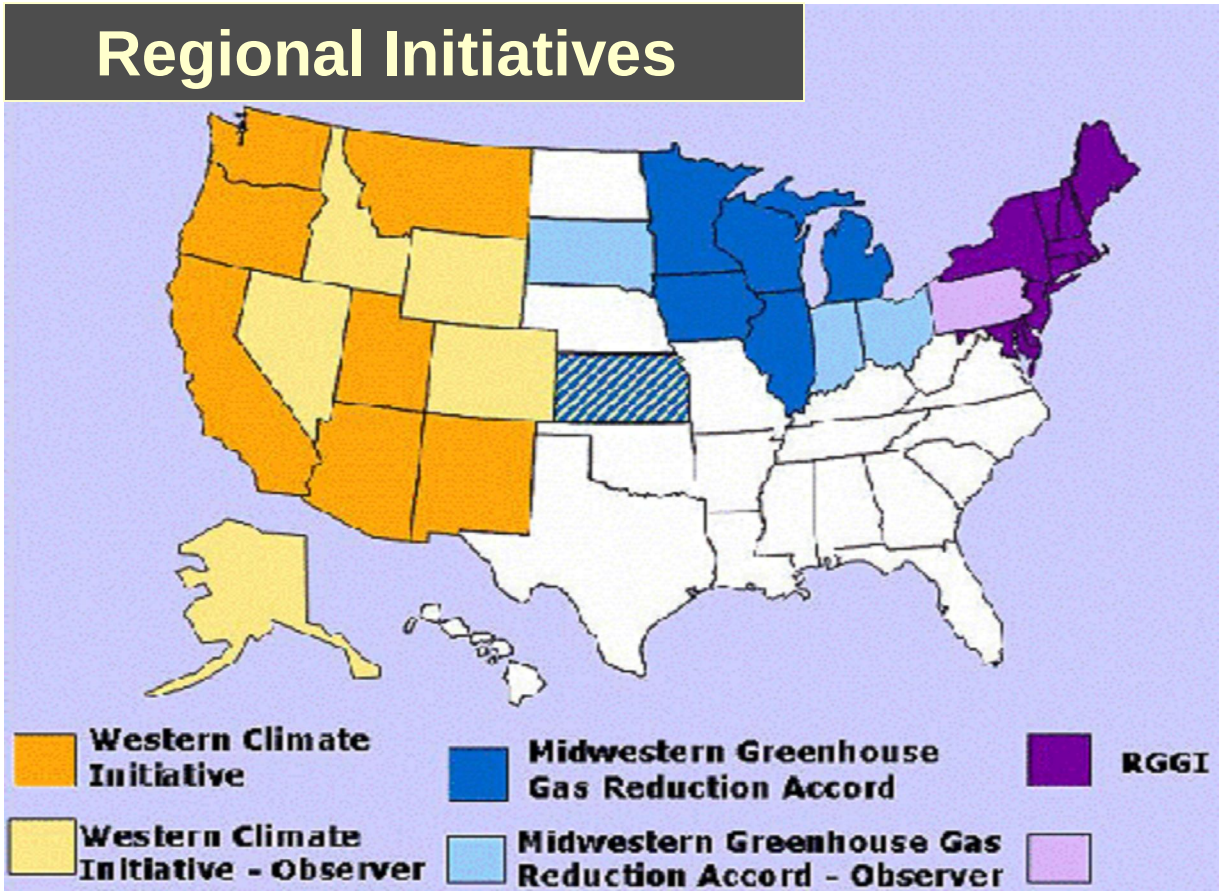
**29 states + DC have an RPS**
*(6 states have goals)*

# States with System Benefits Funds




*Source: Pew Center on Global Climate Change*

# Climate Policy by State




*Source: Pew Center on Global Climate Change*

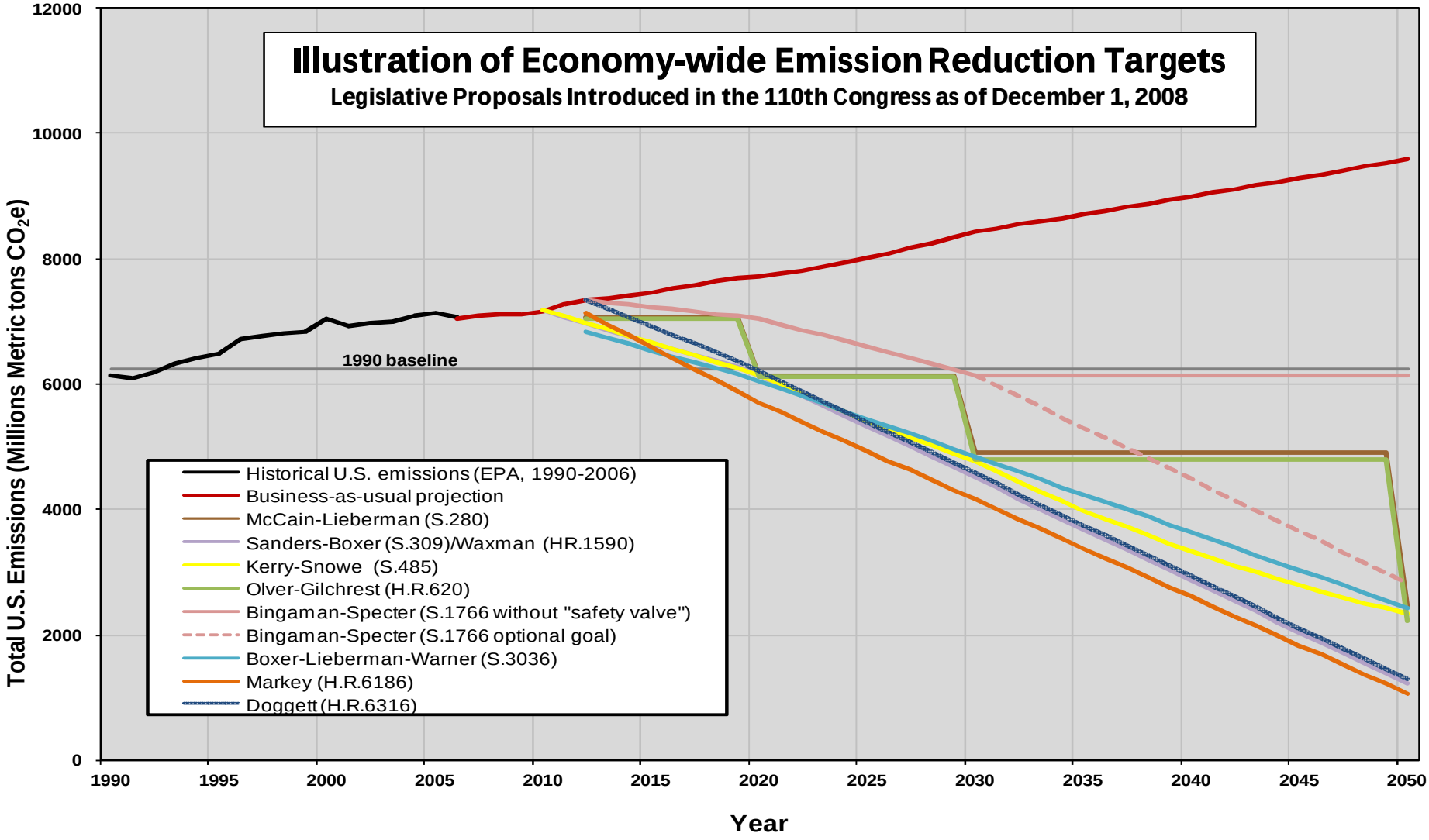
# Challenging Reliable, Affordable, Clean

- Regulators care about resource adequacy first and foremost, demand is growing and new supply is tough to get.
- The “golden era” of declining prices is probably over, and some big bills are coming due.
- Climate seen as a revolution-sized challenge facing the sector. Is it a trumping constraint or a third, equal factor in review?

*“We cannot solve the most serious problems using the same thinking that created them.”*

*- Albert Einstein*

# Climate Legislation



# The Many Charms Of Efficiency

**Costs less than a power plant!**

**Pays you back – now with local benefits!**

**NIMBY-proof!**

**Terrorist-proof!**

**Hurricane-proof!**

**Hugo Chavez-proof!**

**Easy to install: no wires or pipes!**

**100% NOx and SOx-free!**

**Legal everywhere, and Yucca-free!**

**Bird / Bat-friendly!**

**Good-looking!**

**More Popular Every Day!**

# Conclusions

- State regulators play a broad role with wide-ranging responsibilities
- Regulatory policy has been an important driver for choices made about the electric system we have today
- The electricity system is changing and regulatory policy may need to change with it
- All supply choices are important to consider
- Energy efficiency appears to be the “no regrets” choice no matter what supply choices we make

# I Will Now Confront Your Most Challenging Questions!

## Or! Later if you prefer!

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