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ANS Washington DC Section November 2014 Meeting

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2014 Election Takeaways

There is no such thing as ... “federal nuclear energy policy”

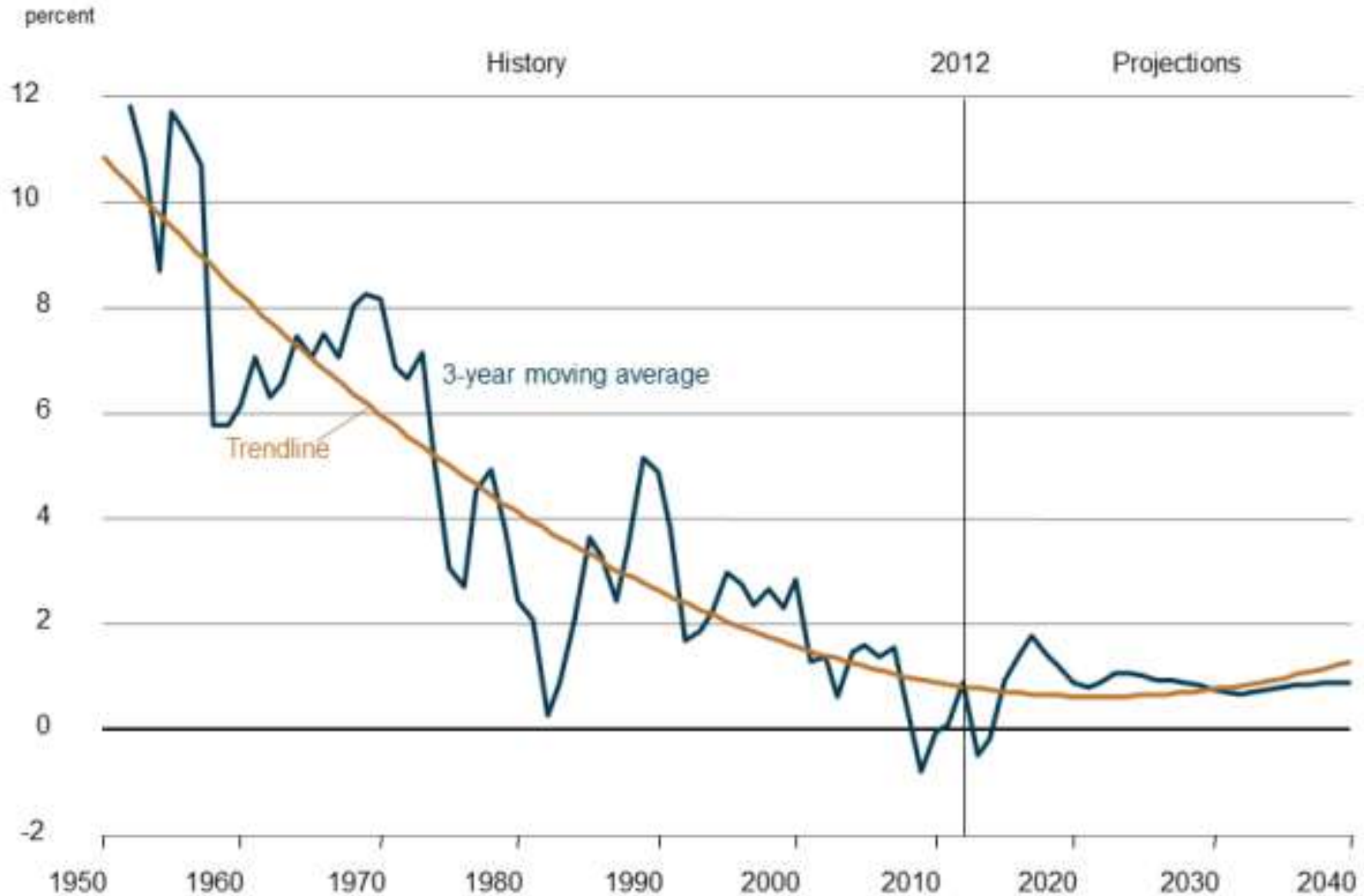
Federal responsibilities...

- Waste Management (DOE)
- Safety and security regulation (NRC)
- Research & Development (DOE)
- Insurance (Price-Anderson)
- “All-of-the-above” (Loan guarantees, production tax incentives)
- Export promotion (Commerce/Ex-Im bank)
- Export Control (123 and 810)
- Regional economic development (TVA)
- Regulation of CO₂ as a pollutant (EPA)

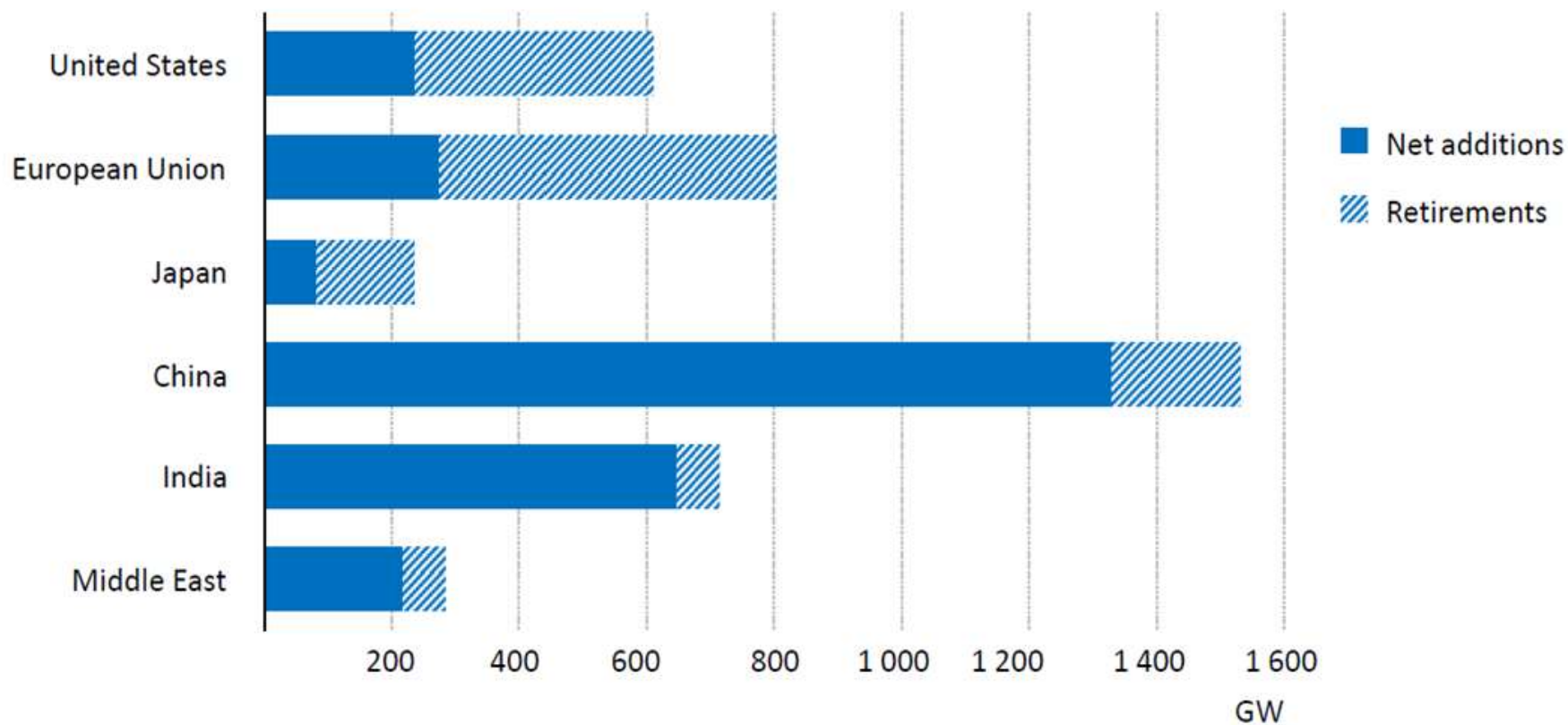
What the feds don't do...

- Provide “sovereign commitment” for nuclear
- Define generation mix
- Provide direct subsidies/
strike prices

US Electricity Demand Growth



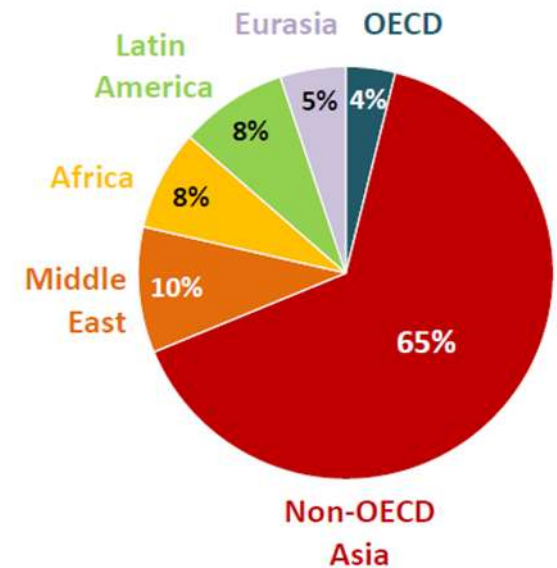
Power generation capacity additions and retirements, 2013-2035



Primary energy demand, 2035 (Mtoe)

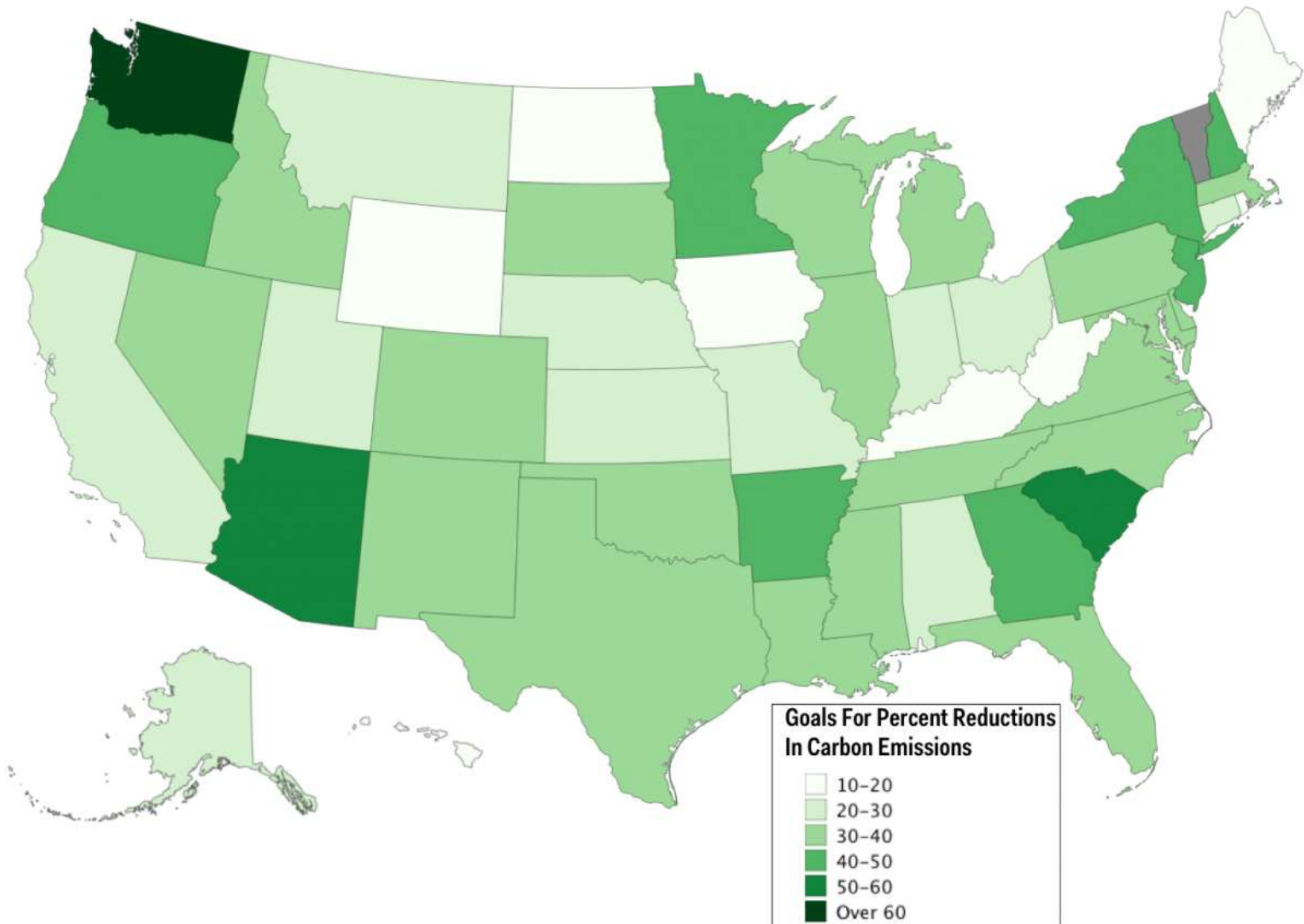


Share of global growth 2012-2035



China is the main driver of increasing energy demand in the current decade, but India takes over in the 2020s as the principal source of growth

EPA Clean Power Plan



EPA Clean Power Draft Rule

- States given individualized “performance” targets based on baseline emission rate, minus four “building blocks”:
 1. Heat rate improvement
 2. Coal-to-gas redispatch
 3. Renewable and nuclear generation (at-risk and new)
 4. End-use energy efficiency
- States with NPPs given credit for 5.8% of “at risk” existing nuclear capacity.
- Under the rule, if all U.S. nuclear plants were shut down and replaced with NGCC, 15 states would “lower” their emission rates.

What's our "ask"?

1. Treat existing nuclear plants equally with other non-emitting energy sources
 - ANS recommendation: amend Best System of Emission Reduction (BSER) baseline rate determination formula to include 100 percent of each state's existing nuclear generation.
2. Acknowledge and reward states with new nuclear plants under construction.
 - ANS recommendation: remove new U.S. nuclear plants under construction from the BSER formula and allow states to count the avoided emissions toward their compliance plans once they are operational.

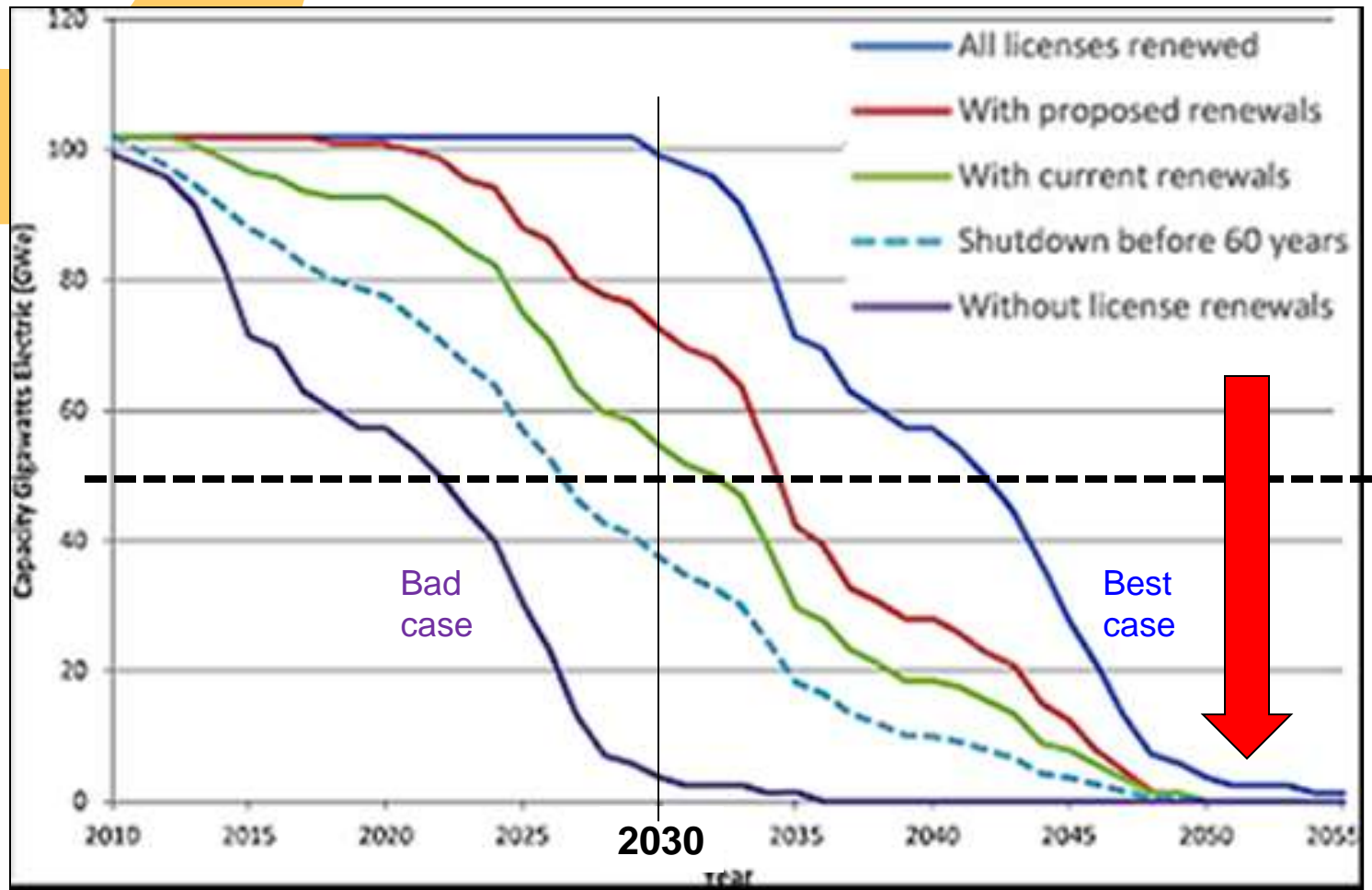
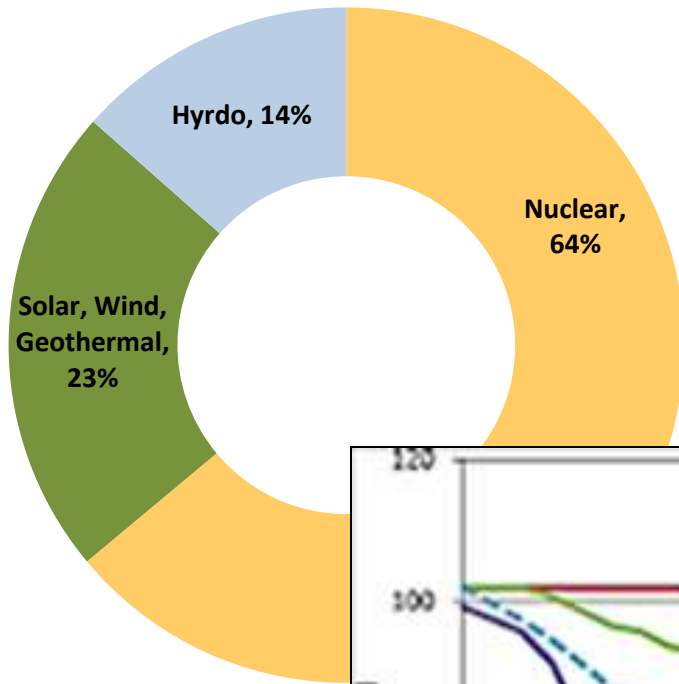
**SUPPORT
NUCLEAR
EQUALITY**

ACT BEFORE DEC. 1!

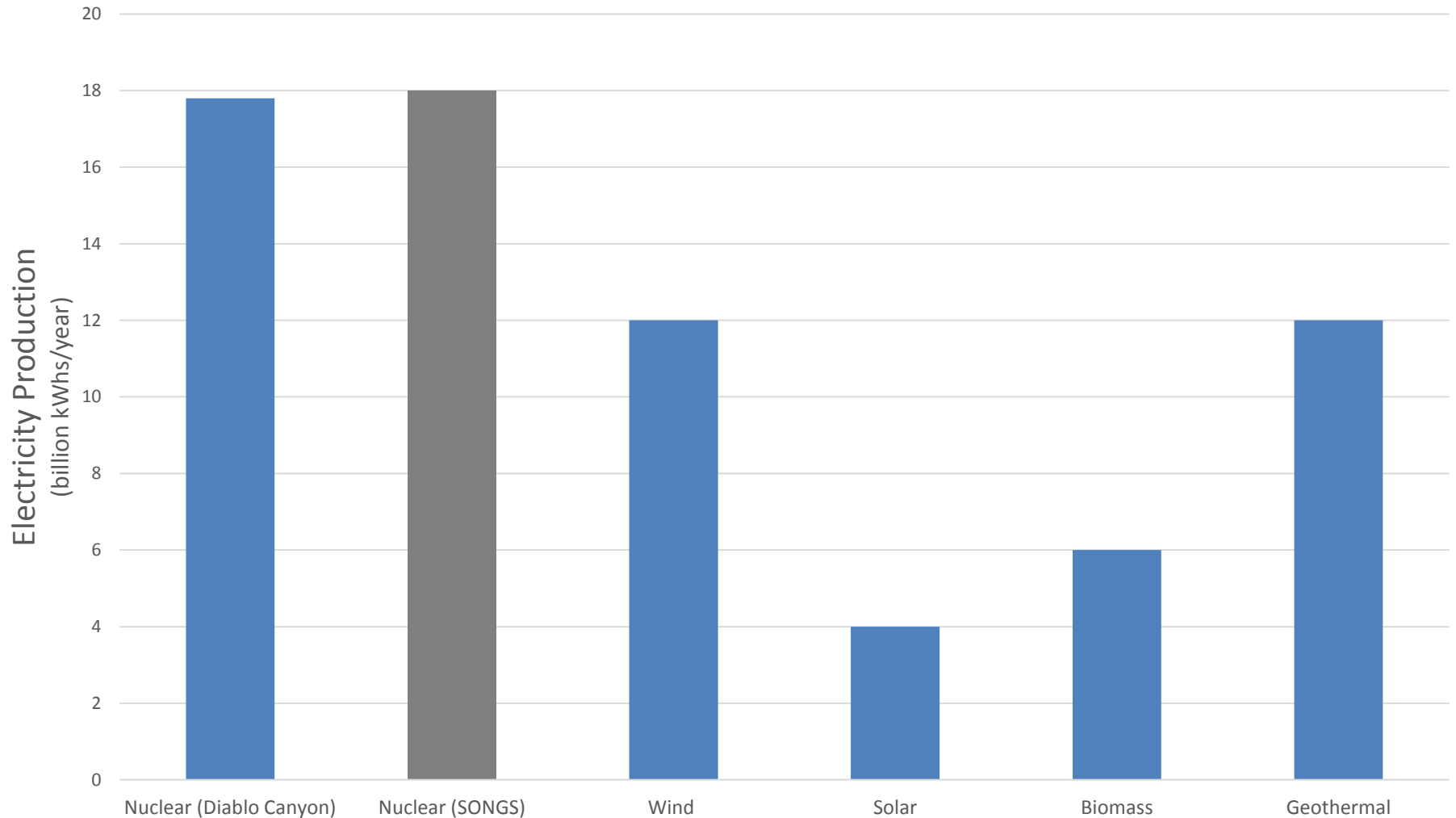


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US Carbon Free Electricity Generation



CA Non-Hydro Low Carbon Energy Generation (for the last full year of operation)



Effects of VT Yankee shutdown

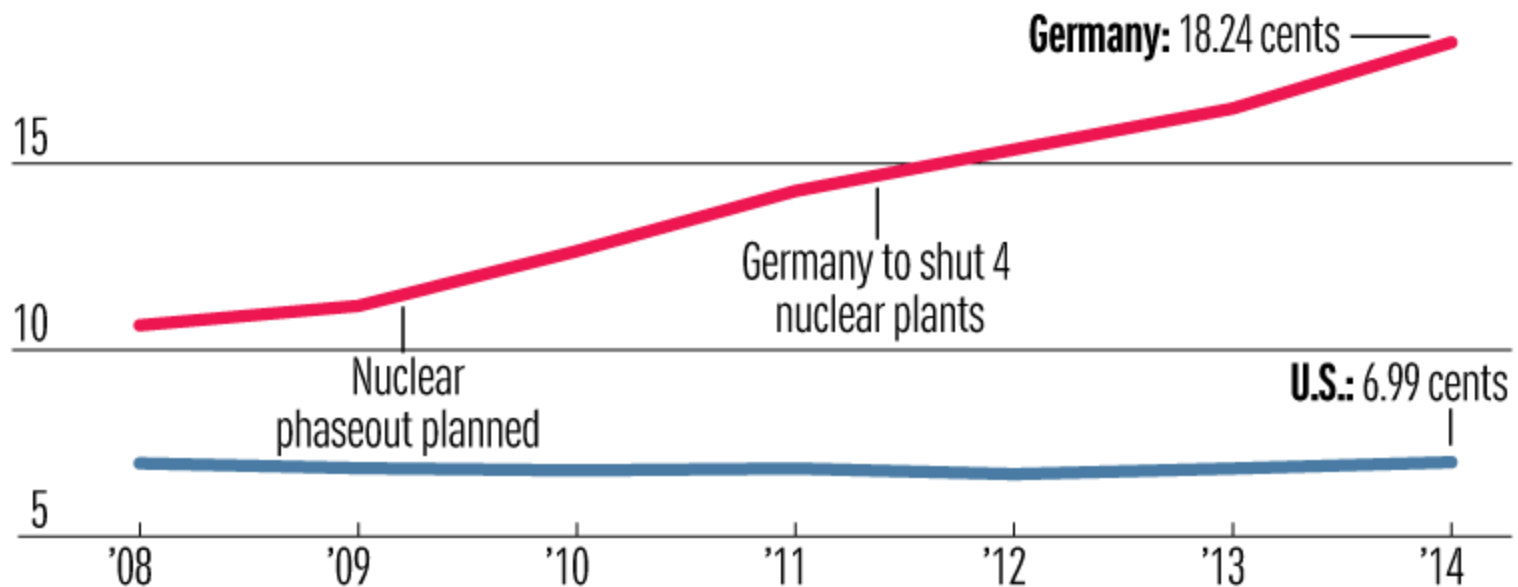


- MA: National Grid (MA) 37% rate increase effective November 1.
- NH: Liberty Utility energy charge from 7.73 cents per kilowatt hr to 15.4 cents per Kwh.

Energy Gap

Average industrial electricity costs per kilowatt-hour

20 cents



Sources: Europe's Energy Portal; U.S. Energy Information Administration; IBD calculations

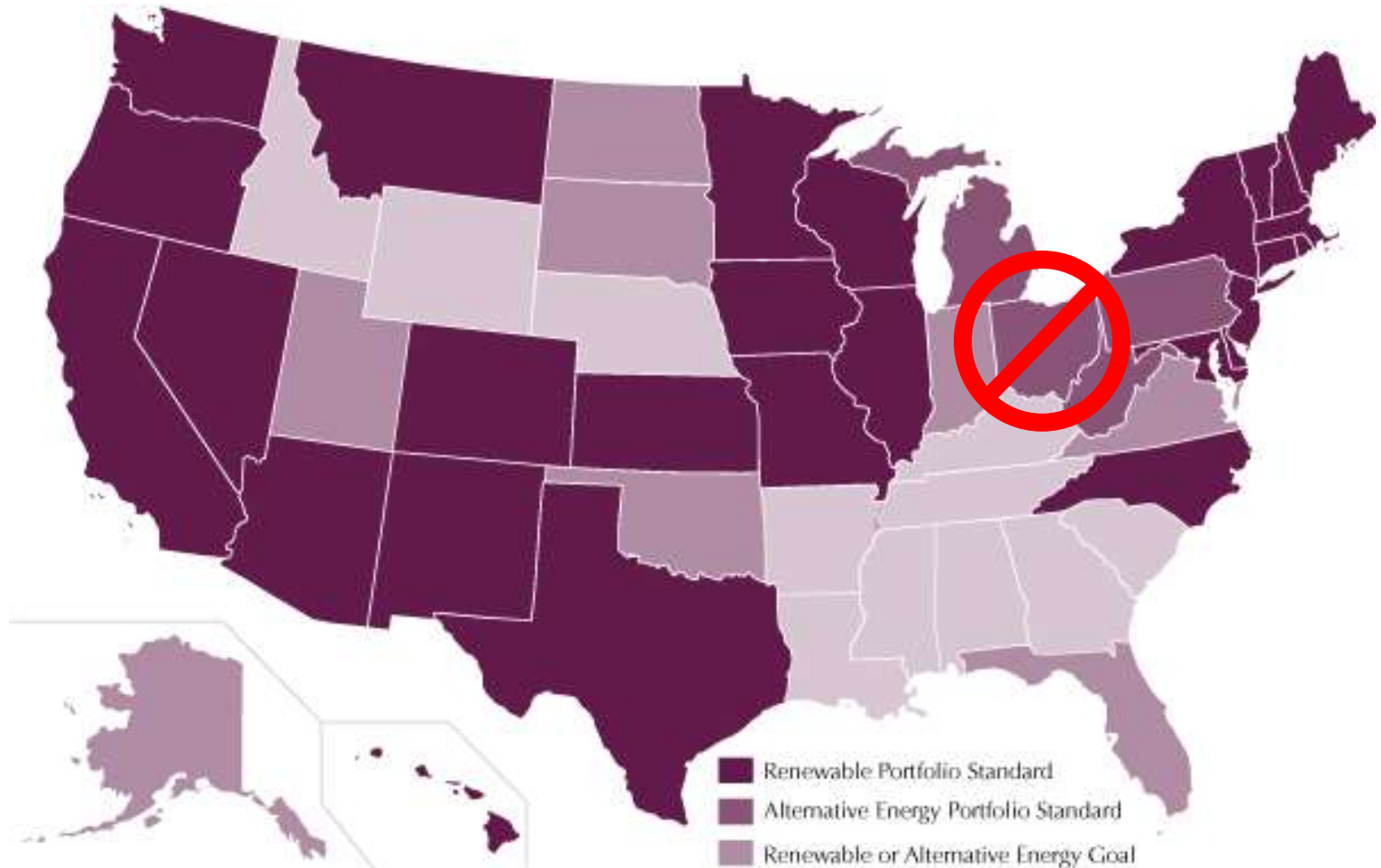


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Special Committee on Nuclear and the States

- Review regional economic factors, generation mix, power grid structure and market mechanisms
- Identify state-specific barriers to new nuclear construction
- Provide recommendations on new nuclear generation.

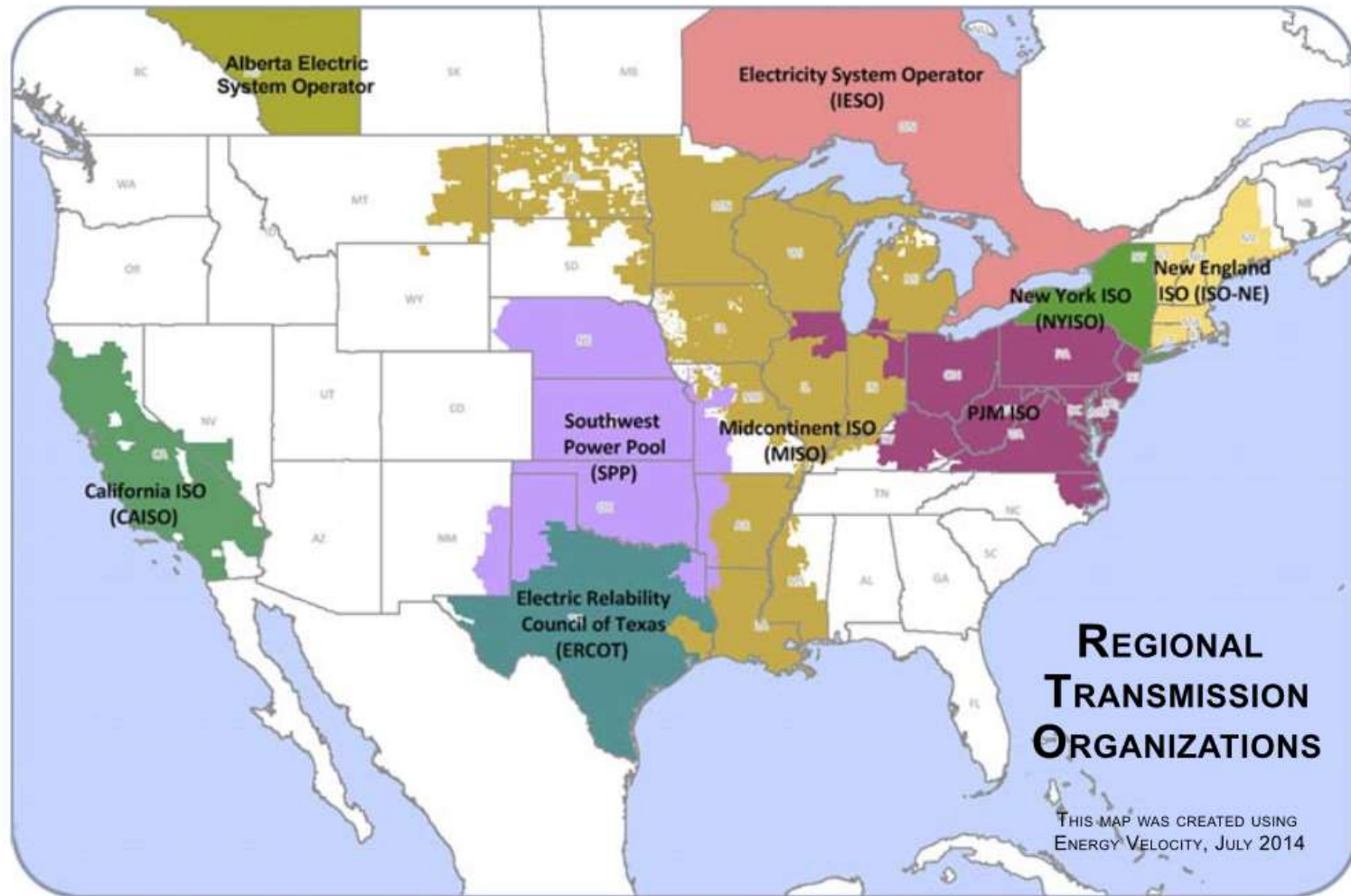
State Renewable Energy Standards



New Nuclear in the States: Regulatory Structure of the Electric Utility Industry

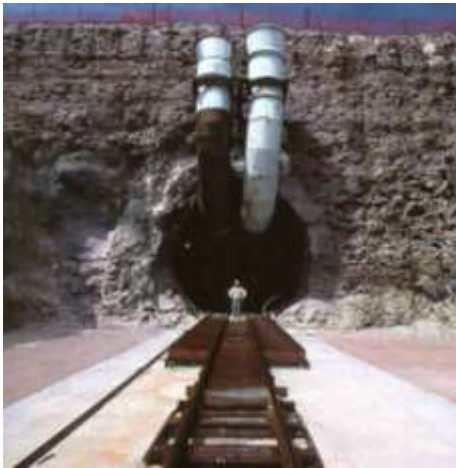
State regulation and New Nuclear Power	# of States	# of active NRC apps	# under const.
State with Restrictions on Nuclear Power Plant Construction: CA, CT, HI, KS, KY, ME, MA, MN, MT, NJ, OR, RI, VT, WV, WI	16	0	0
Rate-of-Return Regulated State with AFUDC: AK, IA, MO, ND, SD, WY	6	0	0
Rate-of-Return Regulated State with CWIP: AL, AZ, AR, CO, FL, GA, ID, IN, LA, MS, NE, NV, NM, NC, OK, SC, TN, UT, VA, WA	20	12	5
Deregulated States: DE, MI, NH, NY, MD, OH, PA, TX	8	5	0
TOTALS	50	17	5

Regional Transmission Orgs.

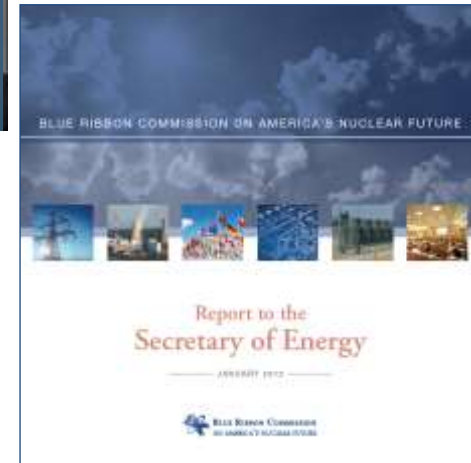


Nuclear waste policy

Yucca
Fundamentalism



BRC
Realpolitik





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You can always count on
Americans to do the right
thing - after they've tried
everything else.

Winston Churchill

Thank you / Questions