RAP | Energy solutions for a changing world

The Clean Power Plan: A Climate Game Changer

Environmental Science (ENVS) 195 – *Introduction to Sustainable Energy* Policy, University of Vermont

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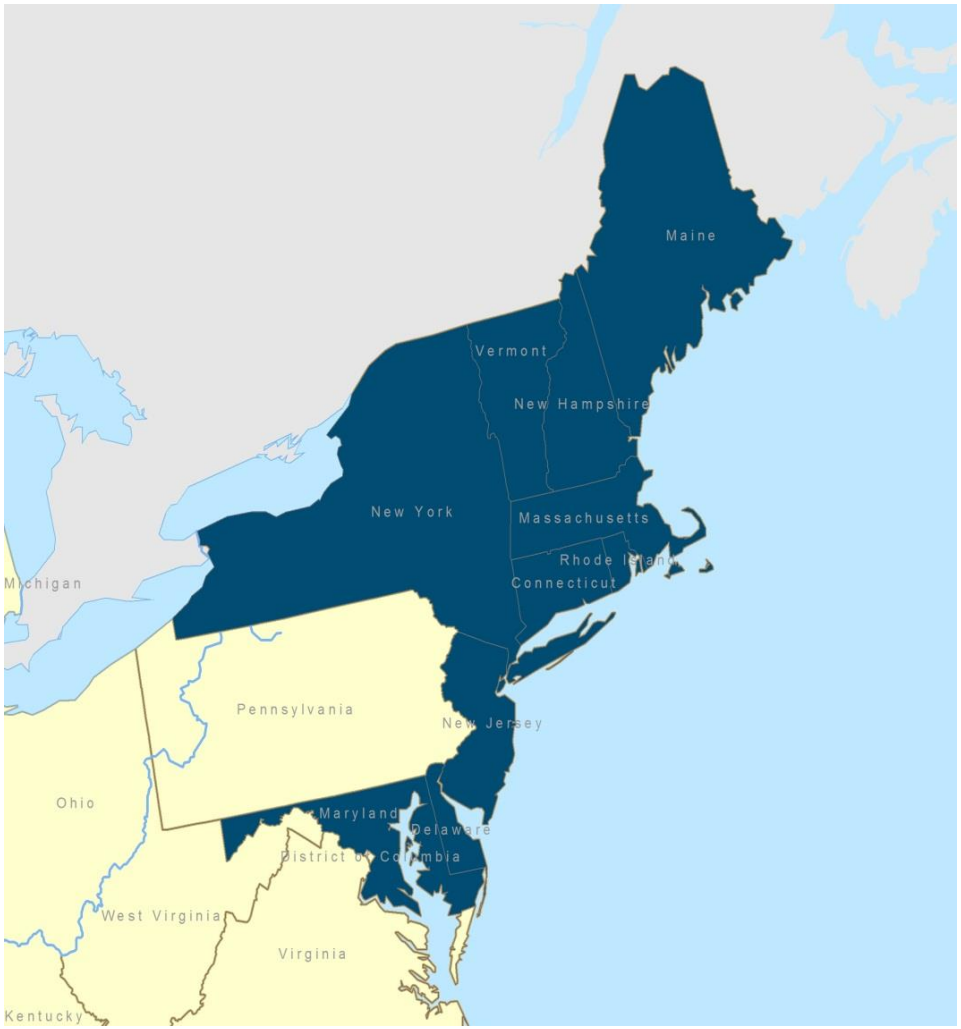
Overview

- Background
  - Let's Consider a Couple of Questions:
    - Why is there Federal Environmental Law?
    - What are the implications for climate change?
- The Clean Air Act and Clean Power Plan
  - Where does 111(d) fit in the Act?
  - Does it work like the other major sections?
  - How will the CPP work and how will States respond?

GHG Regulation in the US

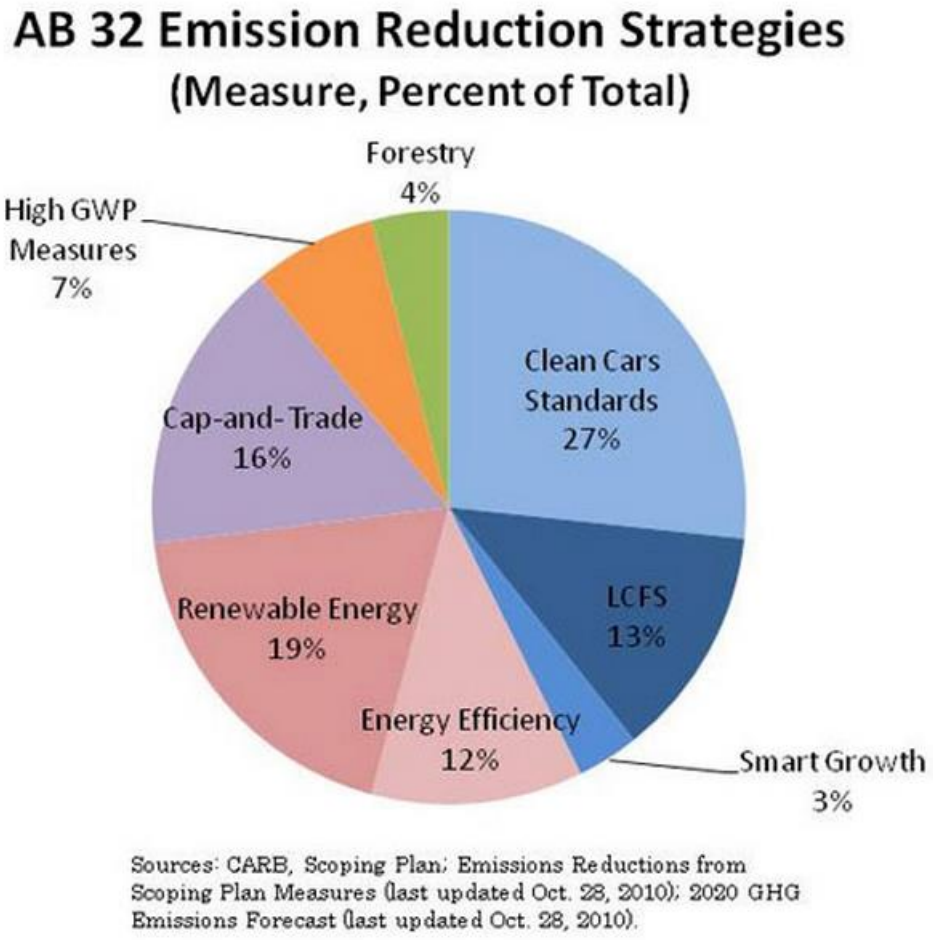
- The electric sector is the largest concentrated source of CO2 emissions in the United States, accounting for more than one third of all domestic GHG emissions.
- Before the EPA took steps to regulate under the Clean Air Act, there were no **federal** limits on those emissions.
- There were **state** programs: RGGI/AB32

The Regional Greenhouse Gas Initiative (2009)



- Mandatory cap on electric sector emissions
- Voluntary participation by states

AB32—California (2013)



- Elec. Sector (like RGGI and CPP)
- Plus other sectors: cars, transportation fuel, industry, RE, forestry, etc.

The States – Laboratories of Democracy

...a state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.

New State Ice Co. v. Liebmann, Supreme Court Justice Louis Brandeis

Implications for Climate Change: What We Learned from State CO2 Programs

- *Traditional Control Technology* for CO2 is lacking;
- *Complementary policies*: when we look beyond the generating unit at the electricity system broadly, we find additional ways to avoid CO2
- Since everyone uses electricity, *being cost-effective* in reducing electric-sector CO2 emissions is really important.

Background

- 2007 *Massachusetts v. EPA* Supreme Court requires EPA to regulate CO2

- EPA chose to do so using **Section 111(d)** of the Clean Air Act
  - *Clean Power Plan* (CPP) proposed June 2, 2014
  - Final rule expected late summer 2015 – for existing fossil electric generating units (EGU)

A Quick Look at the Clean Air Act (CAA)

42 U.S.C. §7401 et seq. (1970).

Some Major CAA Provisions

- The Clean Air Act
  - Generally, **Prescriptive**,
  - specific pollutants/sources anticipated in various sections of the Act.
    - Section 112 – Air Toxics (e.g., mercury)
    - Sections 108 and 109 – "Criteria Pollutants" (e.g., SO2 NOx, and particulates
    - Section 209 – Mobile Sources

Section 111 – the *Catch All* Provision

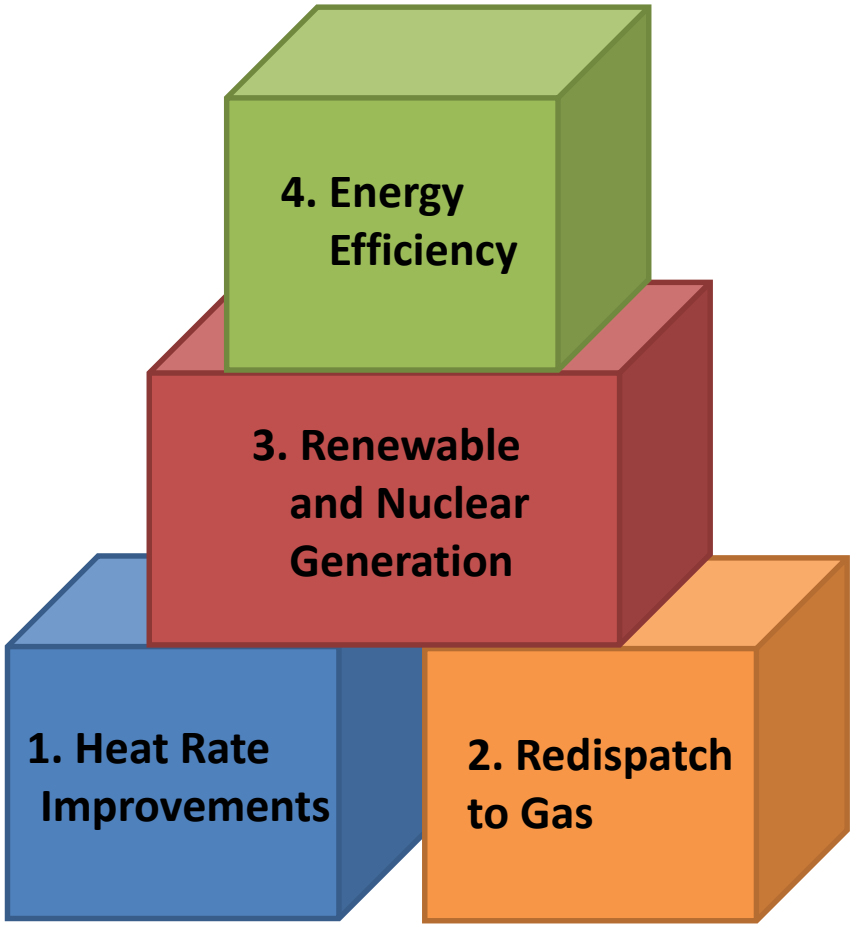
- Section 111(d) does not follow the typical CAA pattern.
- Section 111(d) designed to prevent pollutants not covered under the other, more prescriptive sections of the Act from going unregulated.

Section 111(d) in a Nutshell

- Requires "best system of emission reduction" (BSER)
  - i.e., EPA sets an emissions standard

- EPA must "establish a procedure similar to that provided by section 7410."
  - i.e., States develop a plan to meet the standard

The Best System of Emissions Reduction for Existing EGUs: EPA's Building Blocks

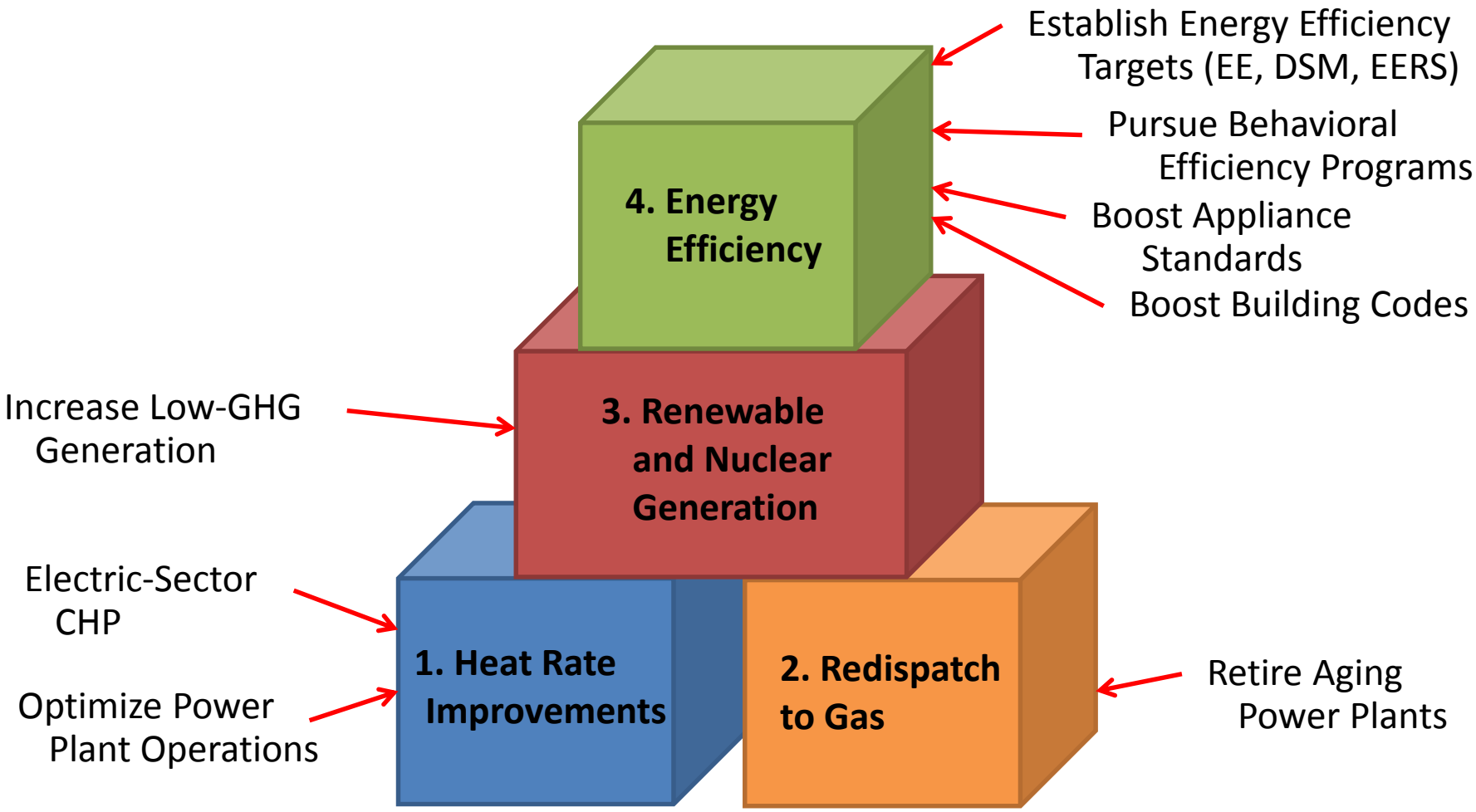


State strategies not necessarily limited to building blocks

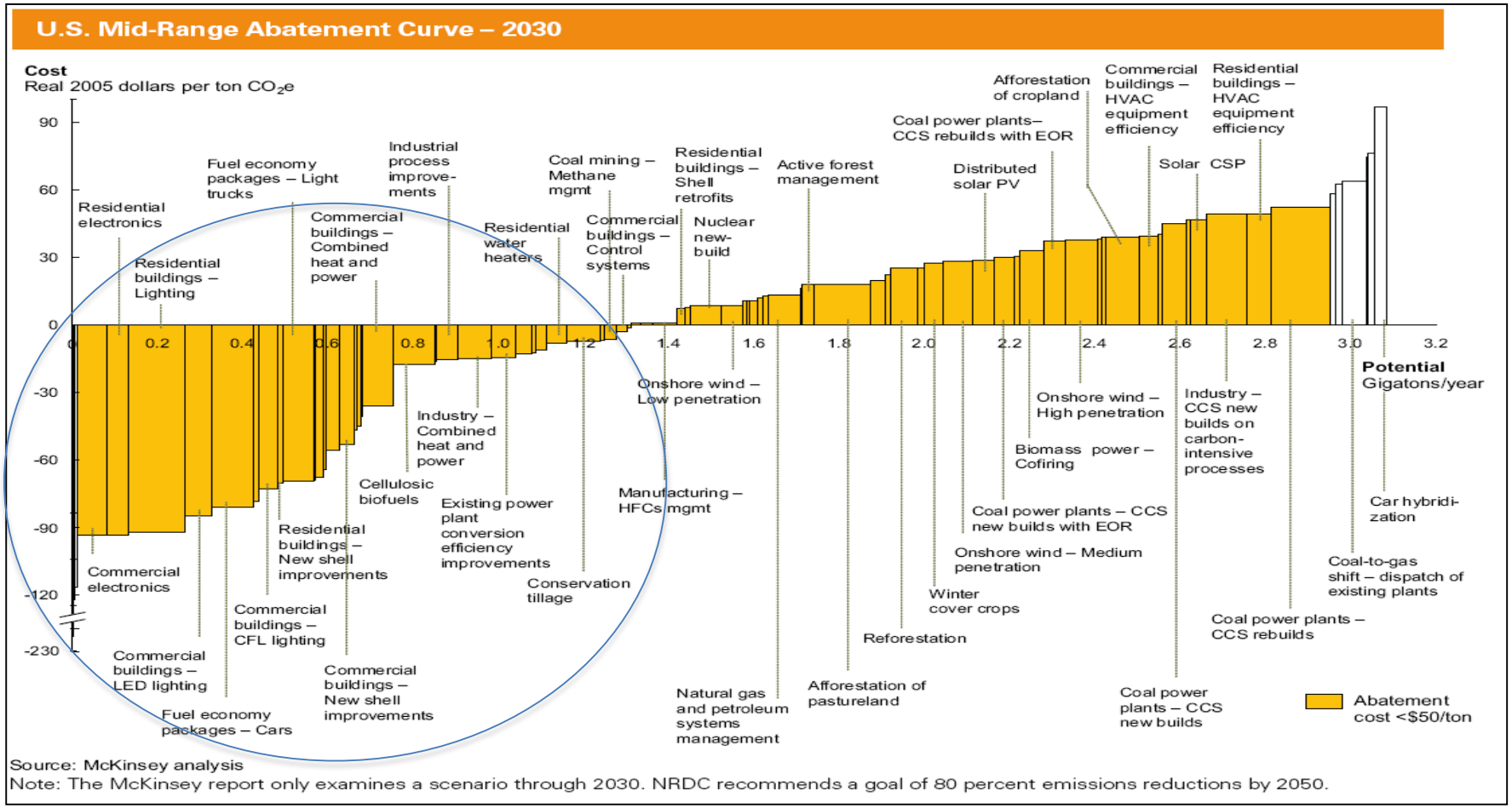
If a state prefers not to attempt to achieve the level of performance estimated by the EPA for a particular building block, it can compensate through over-achievement in another one, or employ other compliance approaches not factored into the state-specific goal at all.

Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," June 18, 2014,
79 FR 34918-34919, 34926

The Best System of Emissions Reduction: EPA's Building Blocks & Beyond



Many Efficiency Resources at Low Cost



Source: McKinsey analysis
Note: The McKinsey report only examines a scenario through 2030. NRDC recommends a goal of 80 percent emissions reductions by 2050.

There are Many Other Technology & Policy Options

- *Optimize Grid Operations*
- *Reduce Losses in the T&D System*
- *Foster New Markets for Energy*
- *Adopt Procurement Requiremen*
- *Encourage Clean Distributed G*
- *Revise Capacity Market Practic*
- *Adopt Environmental Dispatch*
- *Improve Utility Resource Plann*
- *Adopt Cap-and-Invest Program*
- *Revise Transmission Pricing an*

*See forthcoming publication from the National Association of Clean Air Agencies (NACAA) in **late April***

How Have States Responded?

- More carbon-intensive states are resistant
- States with clean energy investments are more supportive, but want to get all credit for their investments
- Consider the example of State Energy Regulators
  - National Association of Public Utilities Regulators (**NARUC**)

NARUC

Resolution on Increased Flexibility with Regard to the EPA's Regulation of Greenhouse Gas Emissions from Existing Power Plants

- urges the EPA … to recognize the primacy of States to **rely on both State utility and environmental regulators** to lead the creation of emission performance systems that **reflect the** policies, energy needs, resource mix, economic **conditions of each State and region**

National Association of Public Utilities Regulators – NARUC

- … the guidelines should be **flexible** enough to allow States **individually or regionally** to take into account, when establishing standards of performance, the different makeup of existing power generation in each State and region

National Association of Public Utilities Regulators – NARUC

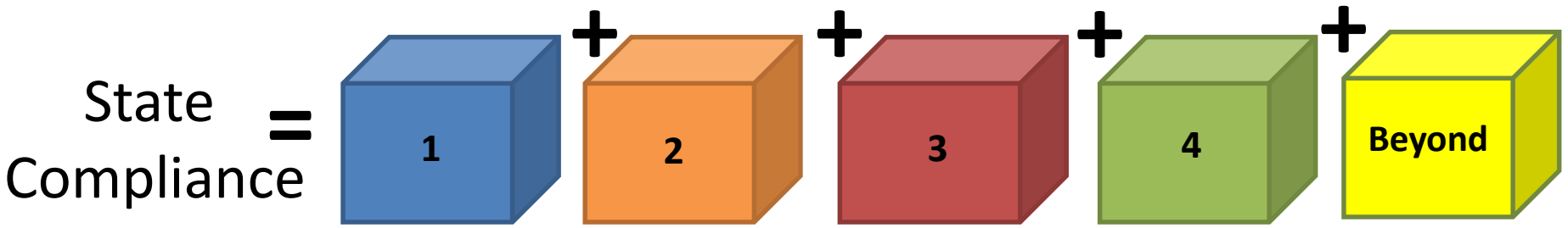
- … the guidelines should provide **sufficiently flexible compliance pathways or mechanisms** that recognize State and regional variations to achieve the most cost-effective emissions reductions in each State

- … the guidelines **recognize and credit States' emissions reduction achievements to date,** recognize any and all existing State emission reduction programs, and shall not intrude on the States' jurisdiction

http://www.naruc.org/Resolutions/Resolution%20on%20Increased%20Flexibility%20with%20Regard%20to%20the%20EPAs%20Regulation%20of%20Greenhouse%20Gas%20Emissions%20from%20Existing%20Power%20Plants.pdf

State 111(d) Compliance Plans: The Actual Opportunity

~~Conventional Wisdom:~~ **Actual Opportunity:**



Keys: States will need to

- Think outside the "Building Block Box"
- If states don't focus on **least-cost** and trending **economic opportunity**, who will?

Bottom Line

- EPA developed its "Building Blocks" approach to provide a consistent, legally-defensible way to determine state-specific rate targets…
- …*NOT* to constrain states to those options alone!
- States will need to think outside the "Building Block Box"
  - Consider your options and
  - Target ***least-cost*** solutions

Thank You

About RAP

The Regulatory Assistance Project (RAP) is a global, non-profit team of experts that focuses on the long-term economic and environmental sustainability of the power sector. RAP has deep expertise in regulatory and market policies that:

- Promote economic efficiency
- Protect the environment
- Ensure system reliability
- Allocate system benefits fairly among all consumers

Learn more about RAP at www.raponline.org

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