



# EPA Carbon Reduction Plan

**Energy Commission Business Meeting**  
Hearing Room A

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# The Presidents Climate Action Plan

- Climate Action Plan announced June 2013
- Blueprint to Slow Climate Change:
  - ✓ Accelerate renewable energy permitting on public lands.
  - ✓ Upgrade and modernize the grid to facilitate clean energy and improve reliability.
  - ✓ Promulgate rules to address GHG emissions associated with new and existing power plants.



# EPA Rules for Power Plants

- Rule 111(b) for New Power Plants
  - ✓ Originally released in April, 2012 (withdrawn)
  - ✓ New Proposed Rule released in January 2014
  - ✓ Finalized Rule expected by June 2015
- Rule 111(b) for Modified or Re-constructed power plants released June 2014
  - ✓ Final Rule expected by June 2015



# EPA Rule 111(d) for Existing Power Plants

- Proposed Rule 111(d) for Existing Power Plants released June 2, 2014
  - ✓ Expected to reduce CO2 emissions 30% from 2005 levels by 2030.
  - ✓ Limits the carbon intensity of state's electrical grid as a whole
  - ✓ Credit is given for demand-side energy efficiency and renewable energy programs.



# Major Features of Rule 111(d)

- Establishes allowable GHG emissions reduction targets for each state
- Requires states to develop a state plan to achieve the target using a range of measures chosen by each state (multi-state also allowed)
- Applies to existing coal and natural gas-fired combustions turbines (CTs and CCs) located in each state



# Establishing BSER

- Targets that limit GHG emissions to the level that can be attained by the “best system of emission reductions.”
- EPA determined that BSER is based on “system-wide” rather than “within the fence line” plant level measures.
- Assessed combinations of electricity production or demand reductions that were technically feasible at a reasonable cost.



# 4 Building Blocks

1. Improving Heat Rates at Existing Coal Plants by 6 % through both O&M and plant upgrades.
2. Increased Utilization of Existing Natural Gas Plants (up to 70% capacity factor) to Displace Coal
3. Increased Use of Zero Carbon Resources
  - ✓ Renewables consistent with average regional targets
  - ✓ Preserve 6% of existing nuclear slated for retirement
4. Achieve 1.5 % Energy Savings from End-use Energy Efficiency (increase at a rate of 0.2% percent per year)



# Proposed 111(d) GHG Target

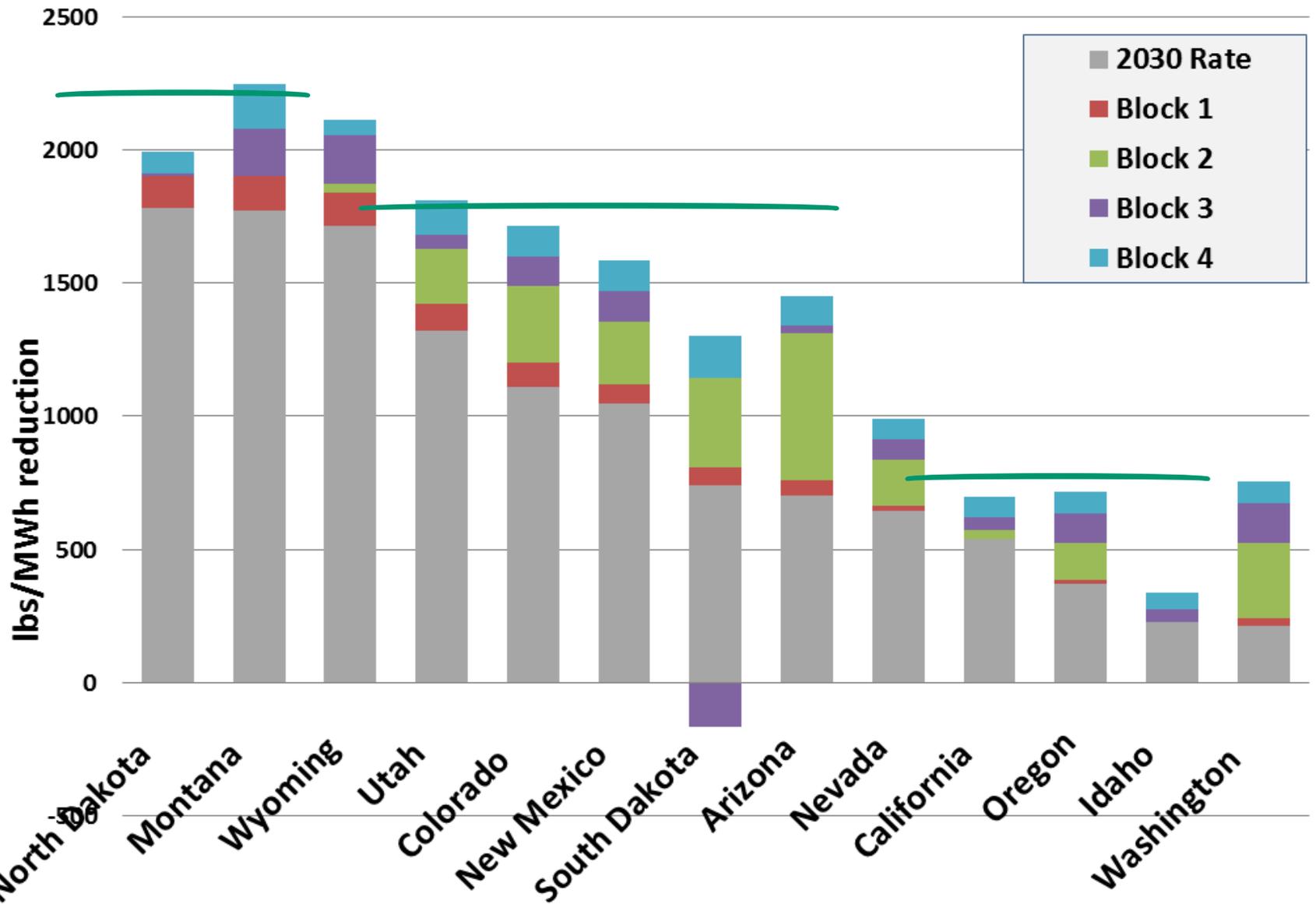
EPA proposed emission baseline for California:

**698 lb CO<sub>2</sub>/MWh in 2012**

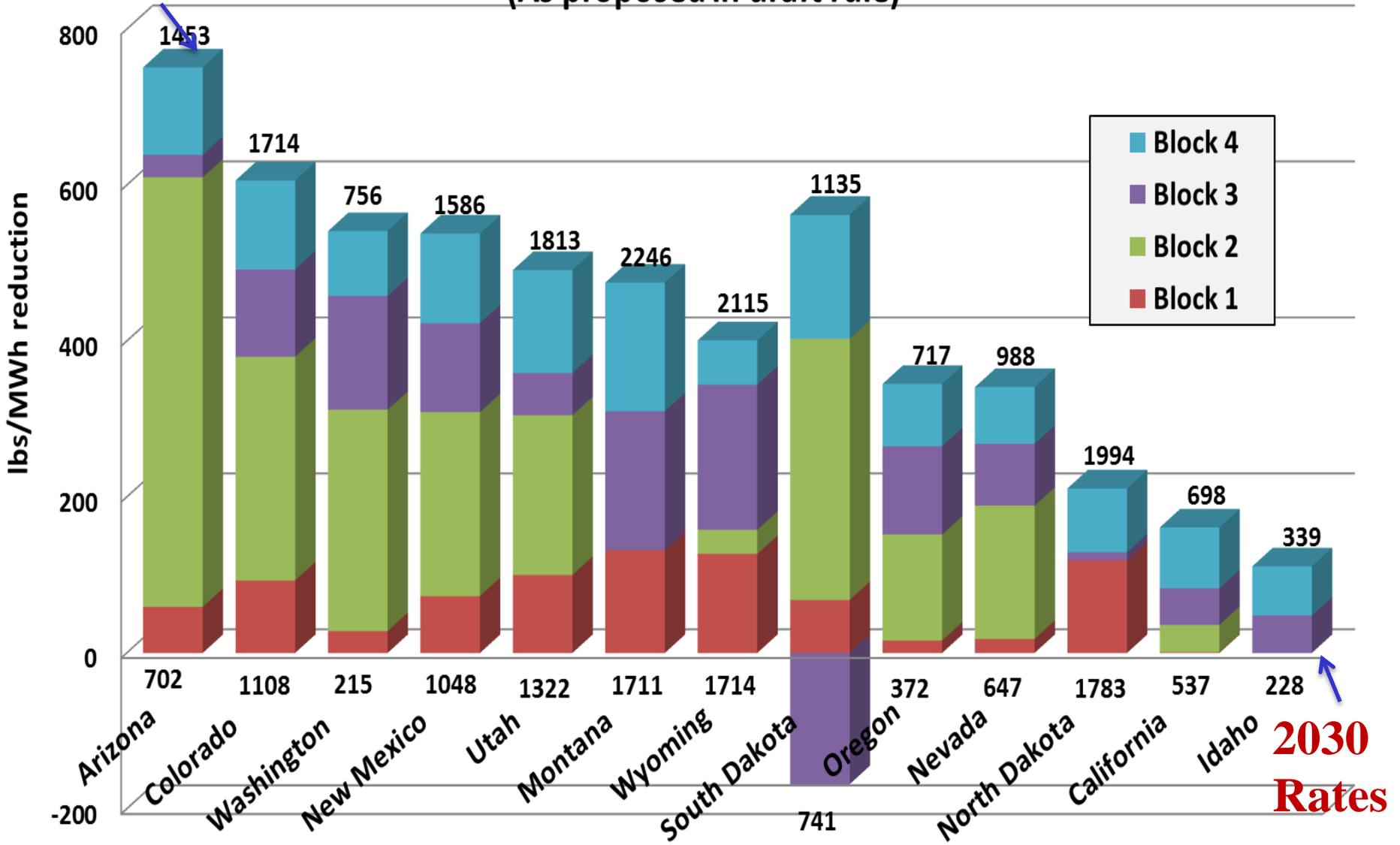
California's proposed target:

**537 lb CO<sub>2</sub>/Mwh in 2030**

# State 2012 to 2030 Emissions Rates



# State Reductions by Block in 2030 (As proposed in draft rule)



**2030 Rates**



# State Compliance Plans

- Flexibility to select measures or combinations of measures that each state prefers
- No requirement to use levels from the building blocks EPA proposed, as long as targets are met
- Any measures resulting in GHG reductions can apply toward targets
- Mass-based programs such as cap-and-trade can be counted toward achieving state targets



# EPA Criteria for Approving Plans

- Enforceable measures that reduce emissions to meet state's GHG reduction target
- State targets are achieved on a timeline equivalent to proposed rule
- Quantifiable and verifiable emission reductions are achieved
- Process for biennial reporting on plan implementation and progress toward goals



# EPA Seeking Comment on Issues

- There are numerous areas that parties are being asked to provide comments including:
  - ✓ Methodology for Renewable Energy Targets
  - ✓ MV&E Practices or Protocols for Energy Efficiency Measures
  - ✓ Federal Enforceability Issues



# EPA Timelines for Rule 111(d)

- EPA must finalize 111(b) rules prior to (or concurrent with) finalizing Rule 111(d) – anticipated in June 2015
- States submit compliance plans by June 2016
- States are allowed until June 2018 for multi-state or regional plans
- Rule 111(d) compliance beginning in 2020



# California's Interagency Effort

- ARB is collaborating with the Energy Commission, CPUC, and the CA-ISO to provide input to EPA
- In December, 2013, California provided comments on Rule 111(d)
  - ✓ supporting a flexible, system-level approach and ensuring credit for existing GHG reduction programs
- In March, 2014, California provided comments on Rule 111(b)
  - ✓ recommending sub-categories for emission performance standards based on plant operations



# Next Steps

- ARB proposes to solicit input from California stakeholders on proposed EPA rules
- ARB & Energy Agencies continue to evaluate proposal and will prepare draft comments
- ARB is working with other states to evaluate opportunities for regional collaborations
- Comments on Proposed Rule 111(d) due to EPA on October 16, 2014