

Impacts of a 15 Percent RPS

Chris Namovicz

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EESI Briefing



Background

- EIA is an independent statistical and analysis agency within the U.S. Department of Energy
- EIA analyzes policy proposals for policy makers
 - EIA does not develop, design, or advocate policy
 - This presentation should not be construed as an endorsement for or against any policy



The Proposal

- 15 Percent Renewable Generation by 2020
 - Utilities with fewer than 4,000,000 MWh of sales are exempt
 - Existing hydro and MSW generation is excluded from sales base
- Triple credits for customer-sited renewables
- Requirement expires in 2030
- Compliance with renewable energy credits
 - Utilities may purchase credits from other generators in lieu of generating with renewable resources
 - Utilities may purchase credits from the government at 1.9 cents per kilowatthour, adjusted for inflation

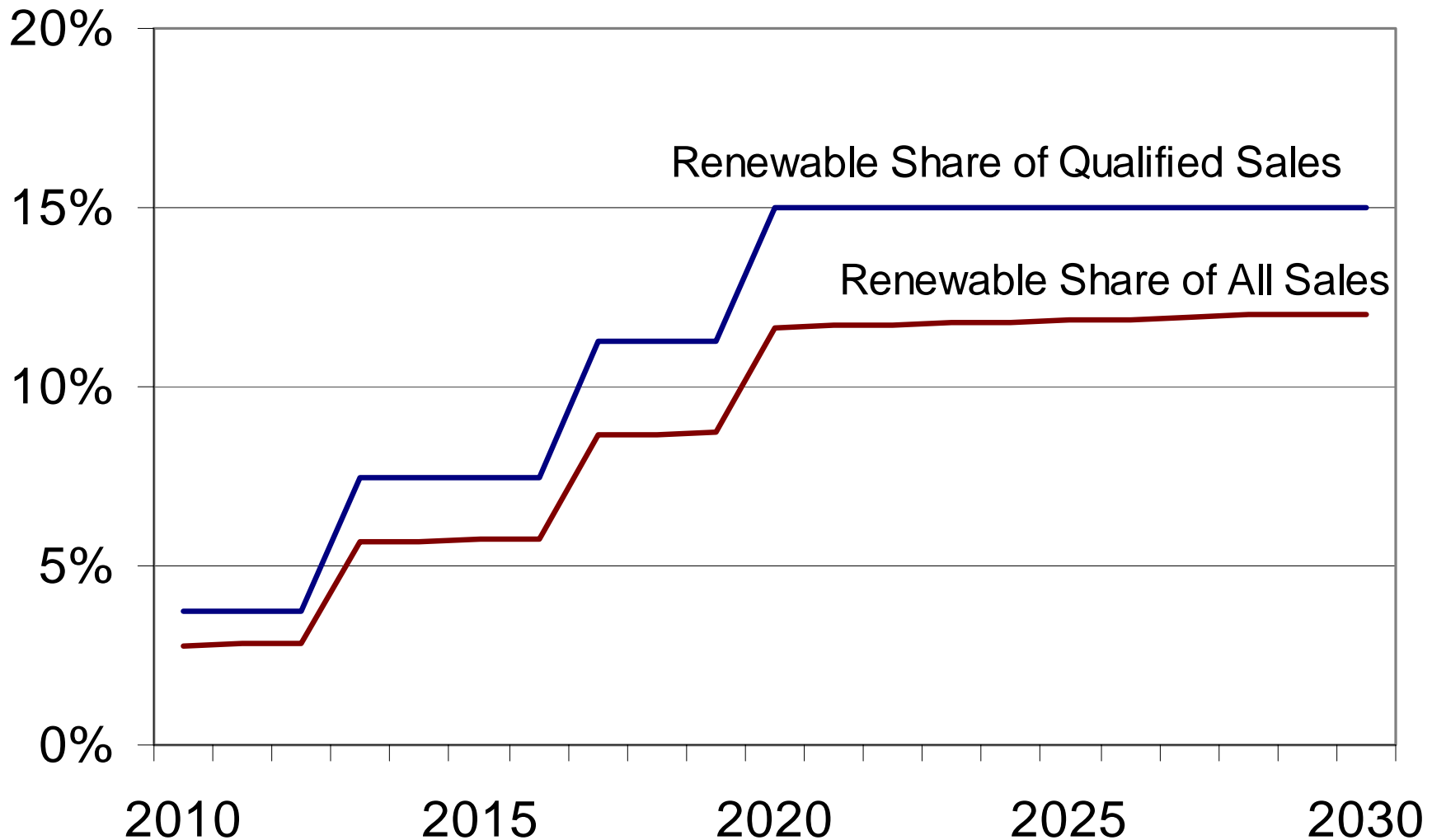


EIA's Analysis

- NEMS - National Energy Modeling System
- A comprehensive model of the U.S. energy economy through 2030
- Represents supply, demand, and conversion sectors
 - Energy price feedback to macroeconomic parameters
 - Endogenously determined energy prices and quantities
 - World oil price is exogenous
- Models most energy policies, including RPS programs
- Not able to model double credits for Indian Lands
- State RPS programs not included in reference case



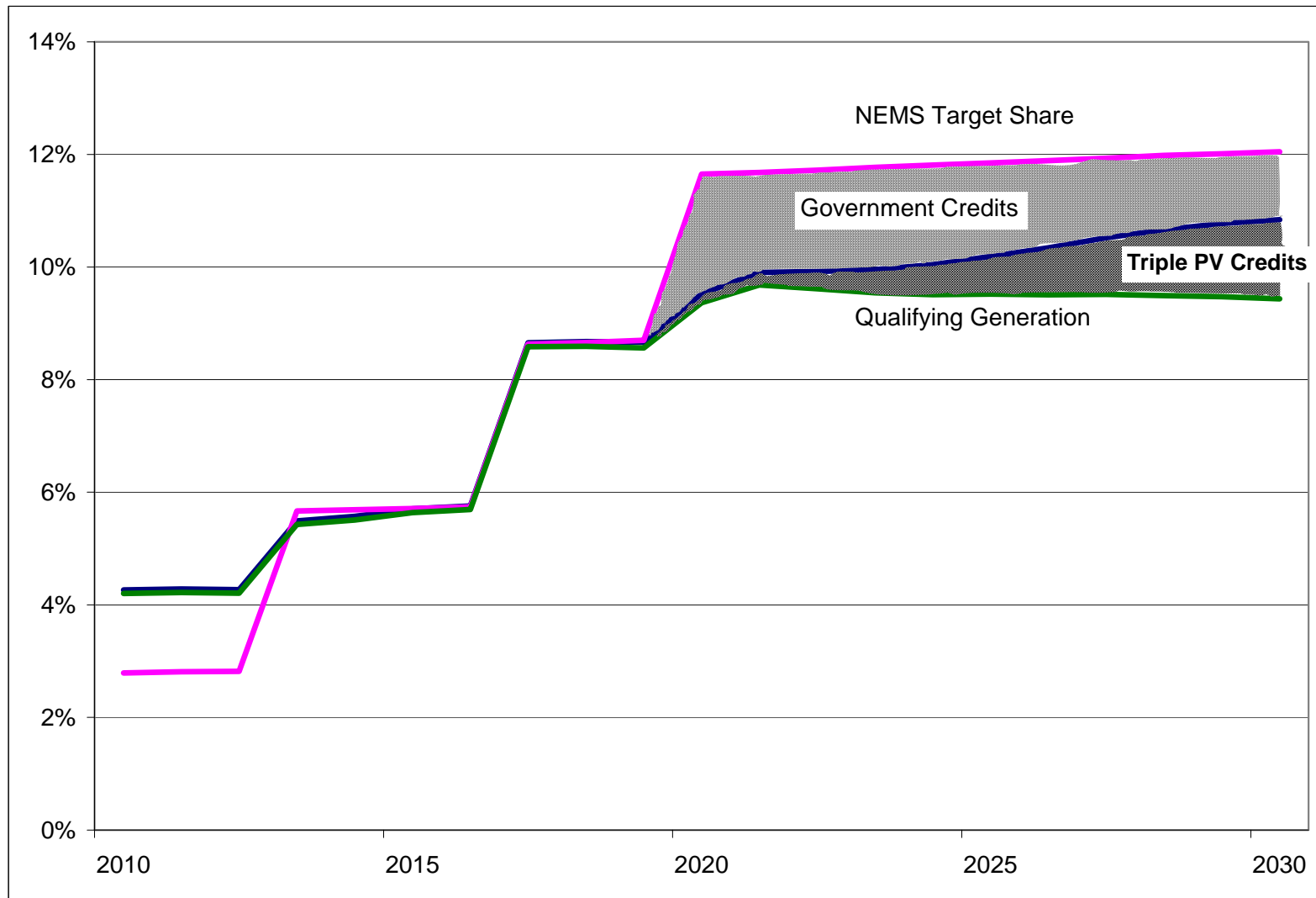
Exemptions and Exclusions Are Reflected in the Target Share



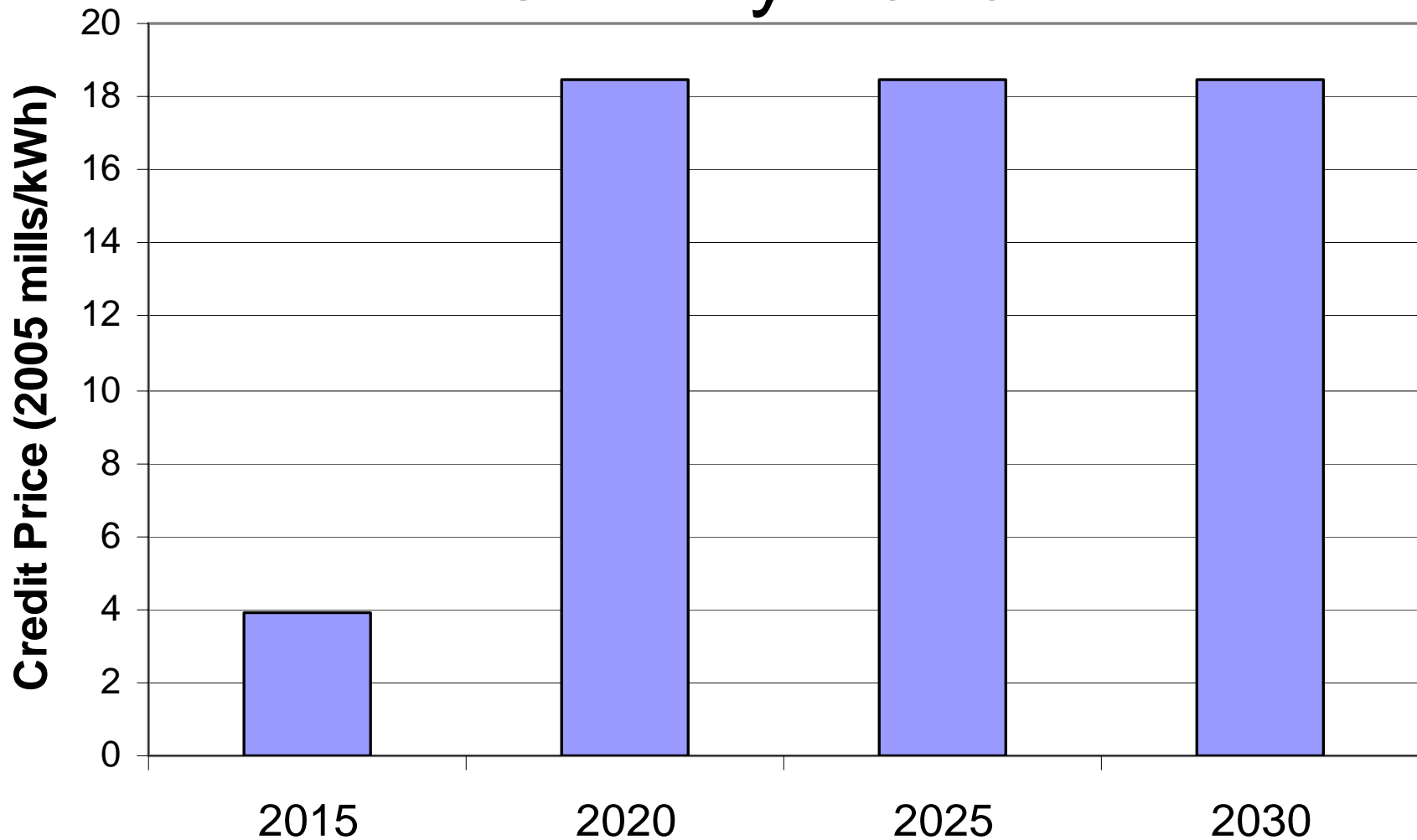
Key Results



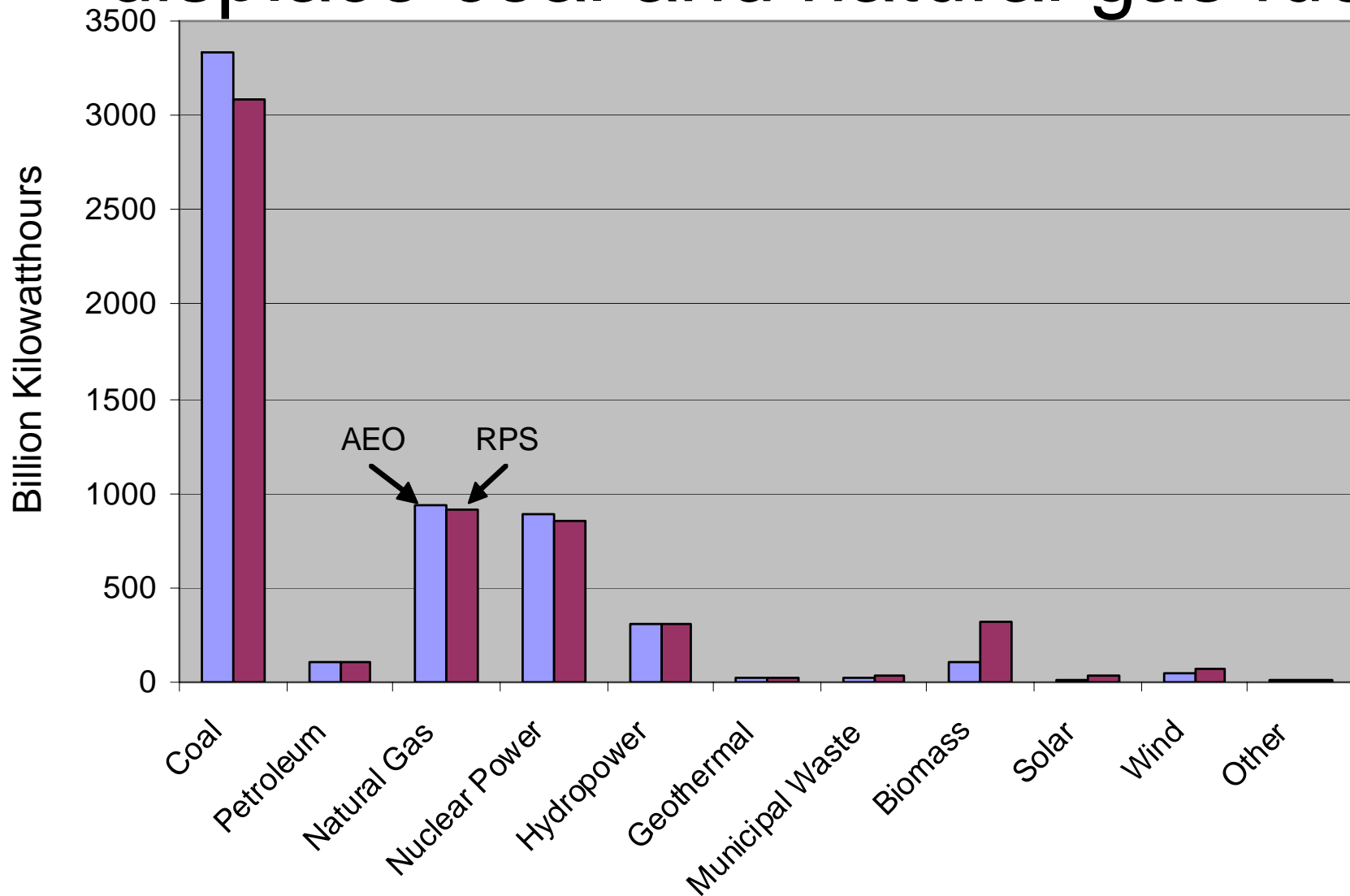
The target is achieved through a combination of renewable generation, bonus credits, and government issued credits



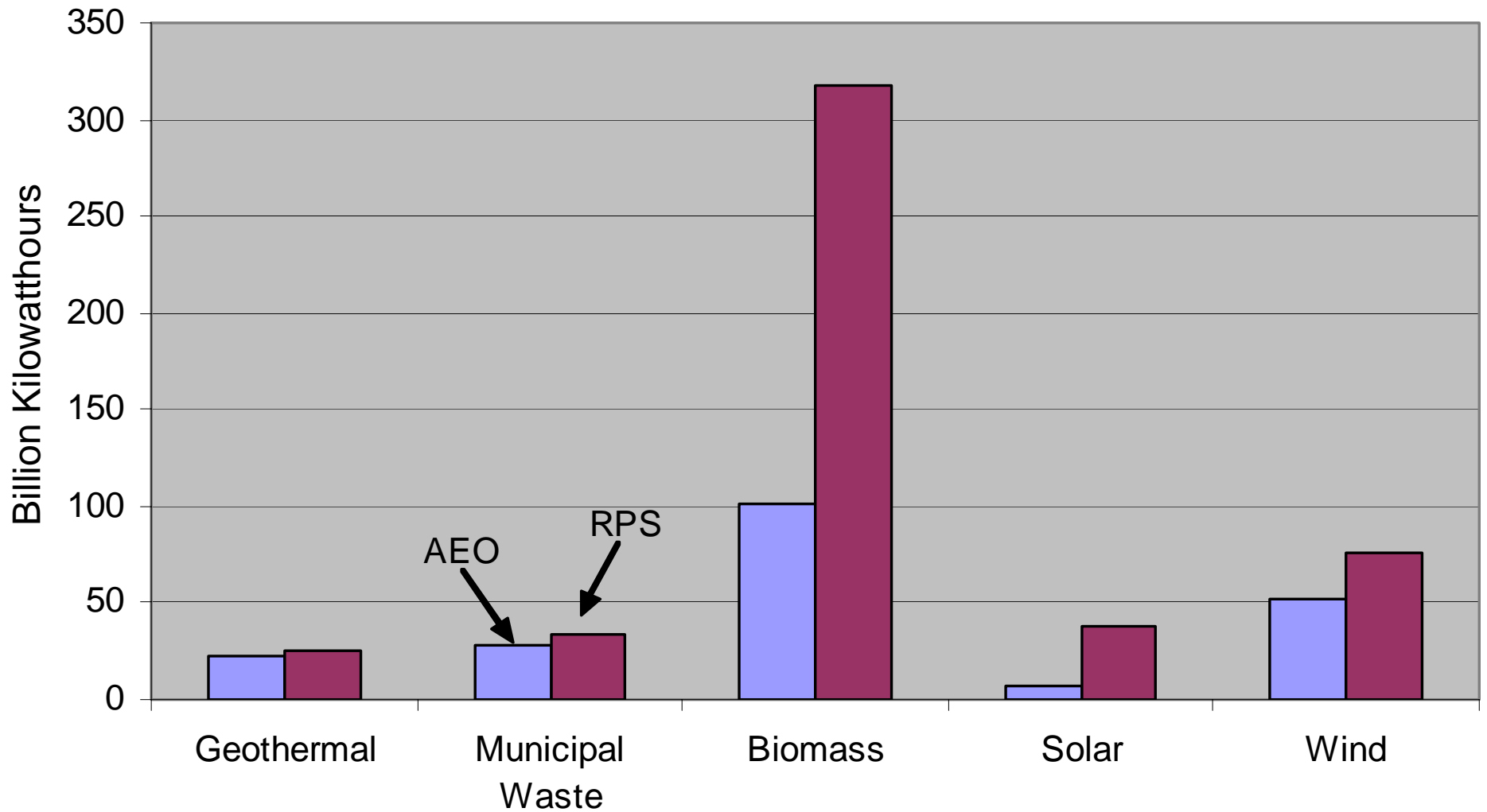
Credit Prices Reach Gov't Credit Cost by 2020



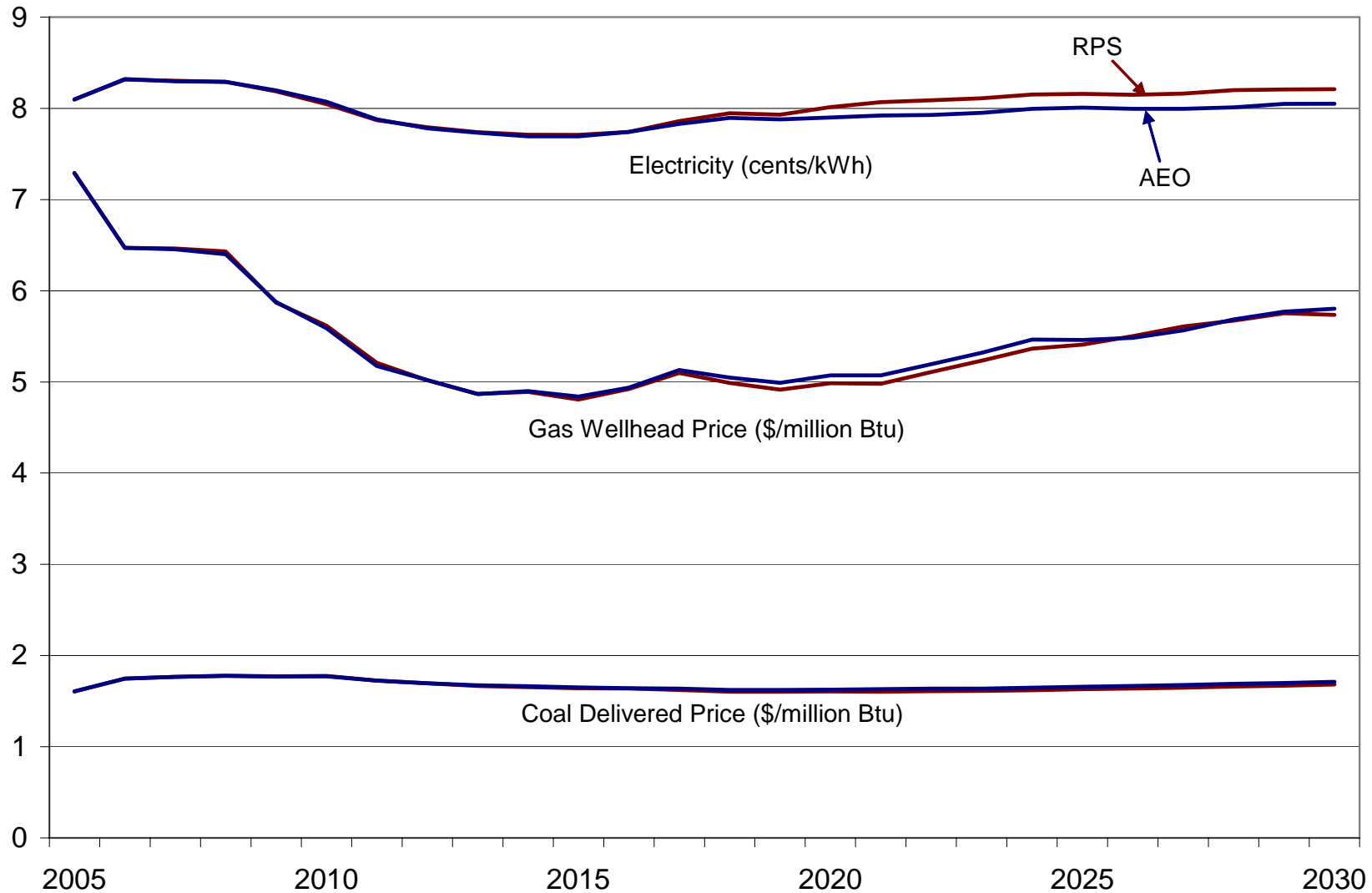
By 2030, Renewable resources displace coal and natural gas fuel



Biomass is the primary renewable resource utilized, but wind and solar also increase



Minor impact on electricity and natural gas prices

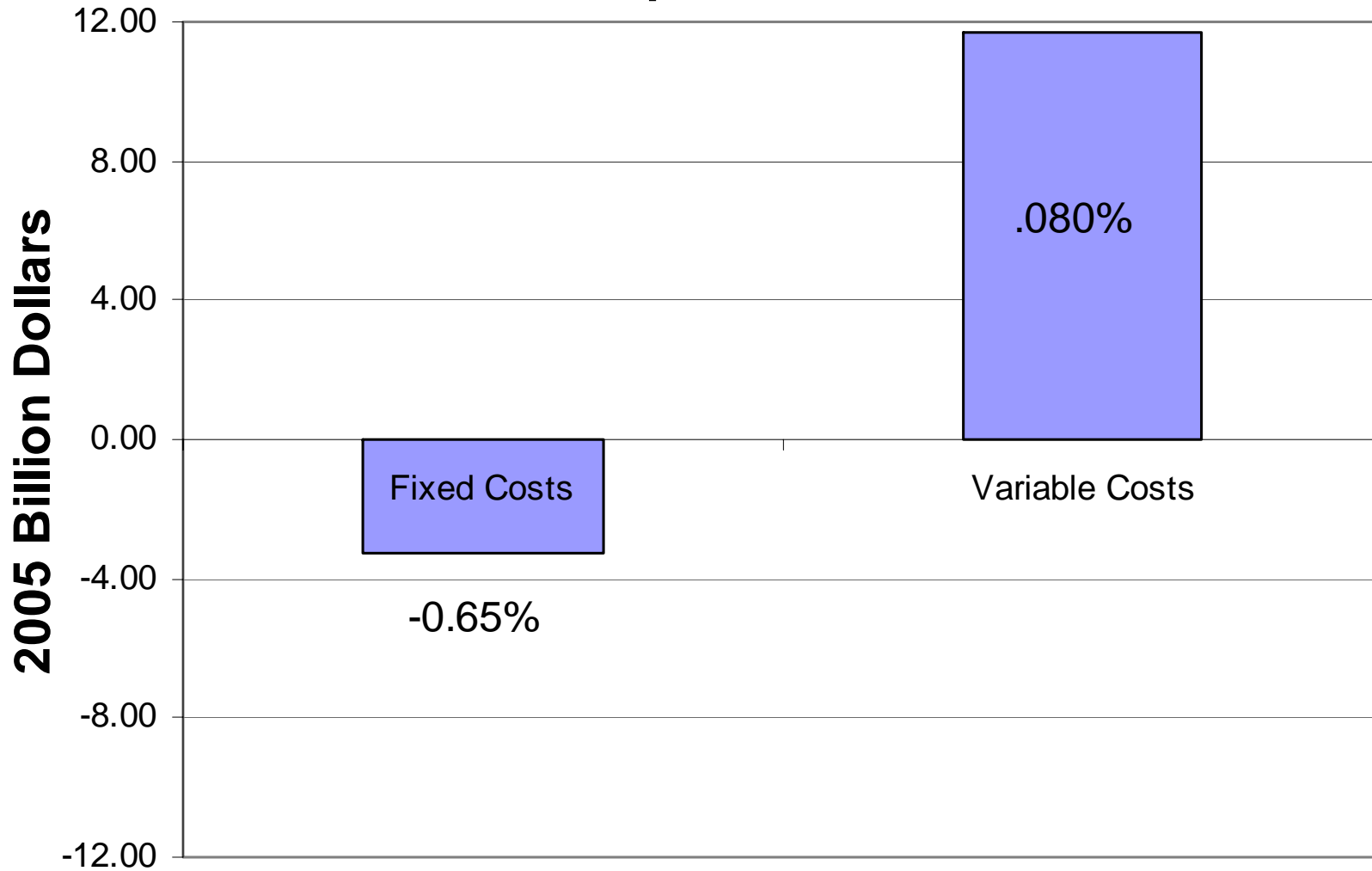


Cumulative electricity and natural gas expenditures increase by 0.3% (\$18 billion)

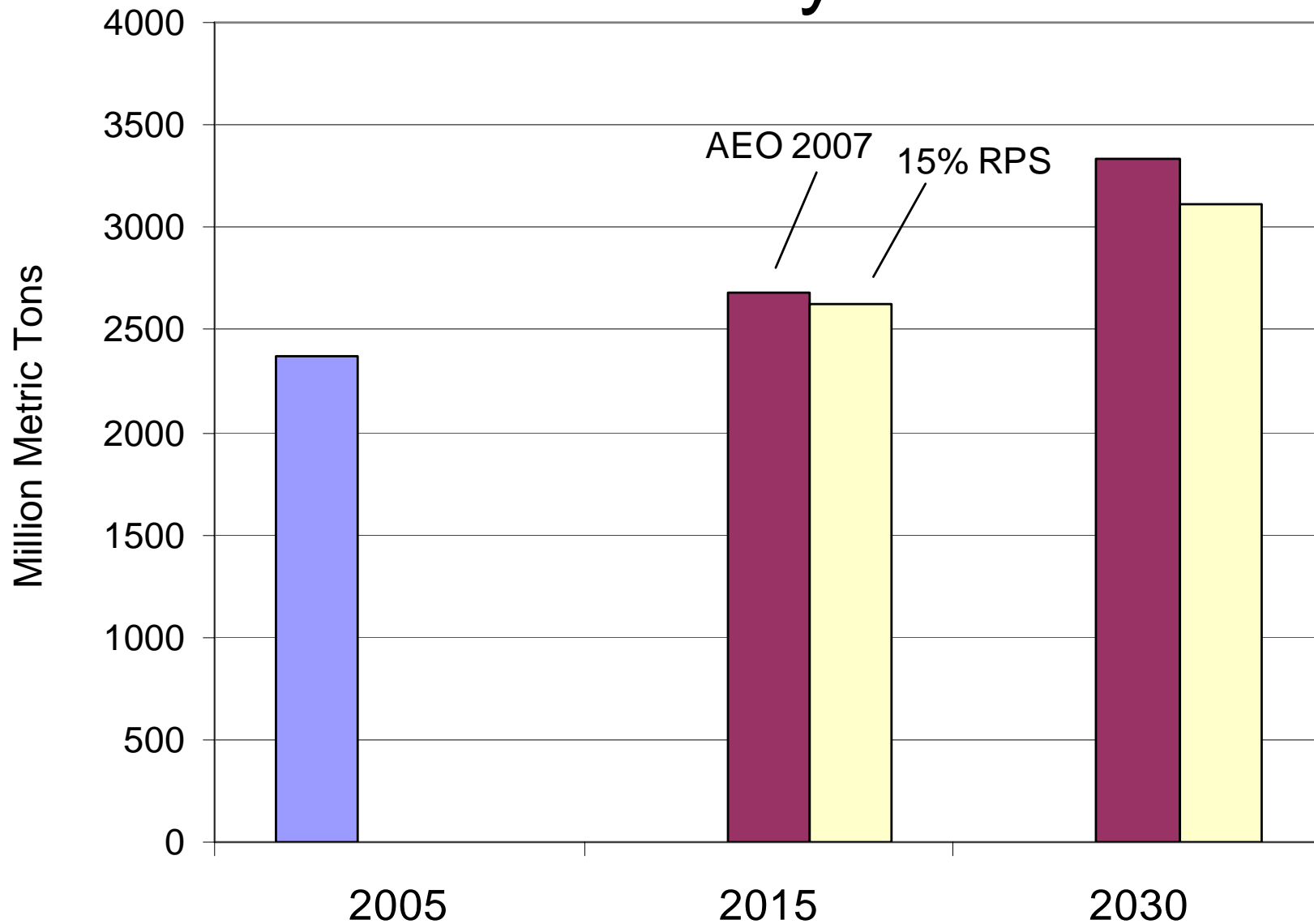


Power industry costs increase slightly

**Difference In Cumulative Cost (2005-30)
Compared to AEO**



Carbon Dioxide emissions are reduced by 2030



Uncertainties

- Indian lands provision
 - Extensive use of Indian lands with double credit could decrease compliance costs, reduce generation achieved
- Future cost and performance
 - Current costs for all power-sector construction is higher than historical trend
 - Some renewables have little commercial experience
 - Costs tend to be location-specific, and depend on uncertain resource cost and quality
- Natural gas price will affect competitiveness of renewable resources
 - However, the impact may not be intuitive
 - Higher gas prices may make coal the resource of comparison

Contact

Chris Namovicz

cnamovicz@eia.doe.gov

202-586-7120

General web site: www.eia.doe.gov

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