

Performance Based Ratemaking: Opportunity to align incentives with carbon dioxide reduction goals via EE and Peak Demand Reduction?

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§ 45.2-1706.1. Commonwealth Clean Energy Policy.

The Commonwealth further recognizes that addressing climate change requires reducing greenhouse gas emissions across the Commonwealth's economy sufficient to reach net-zero emission by 2045 in all sectors, including the electric power, transportation, industrial, agricultural, building, and infrastructure sectors. To achieve these objectives, **it shall be the policy of the**

Commonwealth to:

1. **Develop energy resources necessary to produce** 30 percent of Virginia's electricity from renewable energy sources by 2030 and **100 percent of Virginia's electricity from carbon-free sources by 2040;**

5. **Maximize energy efficiency programs** as defined in § 56-576, to the extent determined to be in the public interest, **that are the lowest-cost energy option to reduce greenhouse gas emissions**, in order to produce electricity cost savings and to create jobs and economic opportunity from the energy efficiency sector;

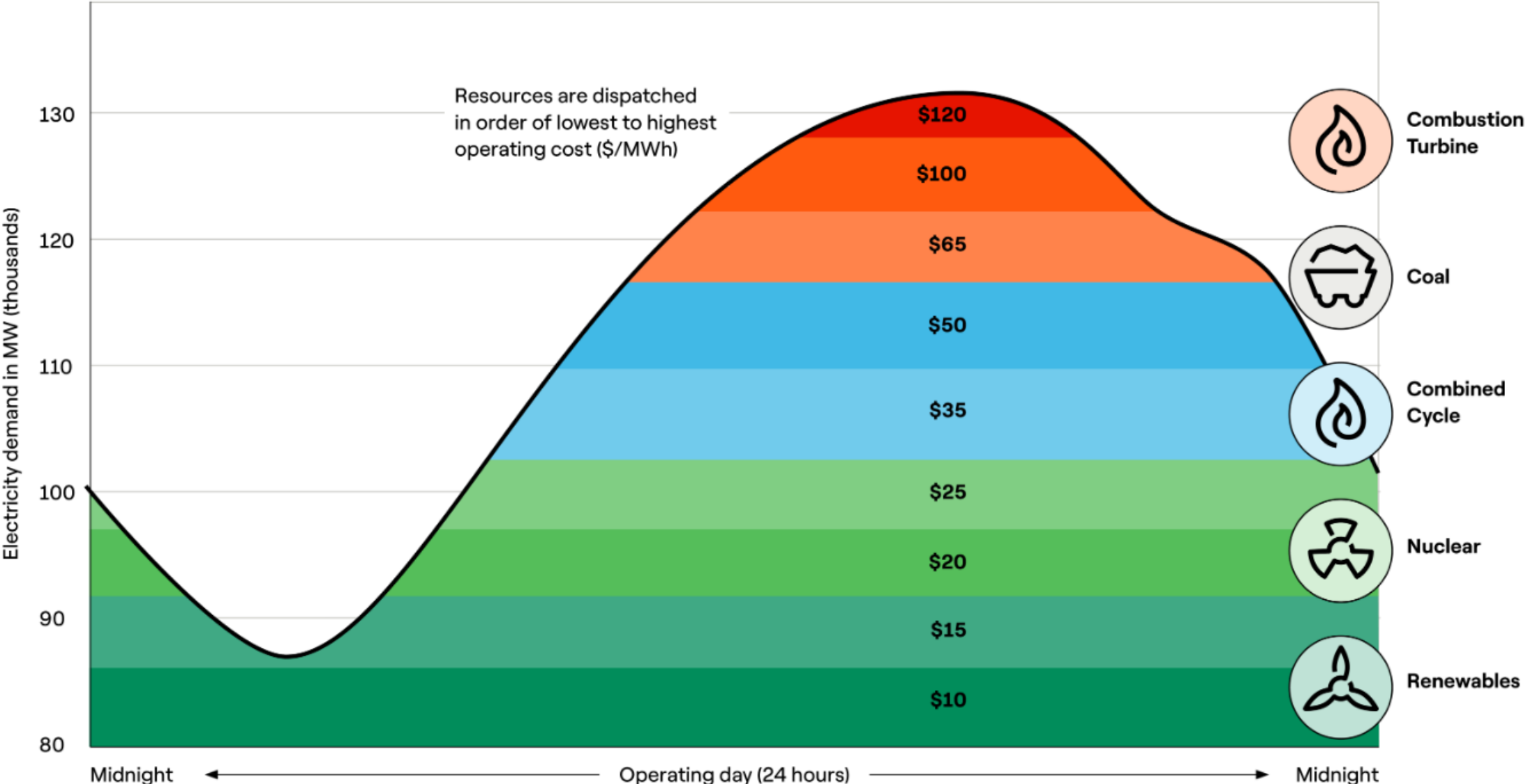
Cost of Service Regulatory Model (COSR)

$$\text{Revenue Requirement} = \text{ROE(Capital Costs)} + \text{Operating Costs} + \text{Depreciation}$$

PIM in VA: Energy Efficiency Resource Standard (EERS)

- IOUs required to meet energy savings targets through energy efficiency programs
- If targets are met, IOUs earn same ROE as on capital projects
- If targets are exceeded, bonus can be earned.
- If targets not met, no new CPCN for new fossil-fueled generation, unless SCC determines for reliability
- Questions:
 - Could this EERS PIM be designed to better incentivize meeting targets?
 - Would a “Comprehensive PBR” be more effective for achieving energy efficiency than this “Incremental PBR?”
 - What additional EE PIMS are used by other states?

Cost of various energy resources for the grid



Illustrative example from PJM

“What Is a Peaking Power Plant?” 2023. <https://www.enelnorthamerica.com/insights/blogs/what-is-a-peaking-power-plant>.

If any of these approaches to lowering peak demand cost less than new generation, they should be used instead.

If the current COSR process does not lead to this result, then PBR may help.

