DPS Staff Analysis of the Proposed RGGI Program's Impact on Select Coal and Gas/oil-fired Generating Facilities

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Overview

- DPS Staff's reliability analysis estimated the incremental impact that RGGI could have on the net revenues of specific individual generators in 2009, 2012, and 2015, as a check on ICF's IPM results.
    - DPS staff used General Electric's Multi-Area Production Simulation (MAPS) model to forecast the changes in net energy revenues resulting from RGGI.
    - Total net revenues were developed by combining the projected net energy revenues with net revenue estimates relating to electric capacity markets, the latter of which were assumed to be identical in the RGGI and non-RGGI scenarios.
- On the following slides, we describe input assumptions, study scope, and results.

Input Assumptions

- DPS Staff's analysis used the following input and output data from the IPM analysis presented by NYSERDA at the October 24, 2006 NY Stakeholders' meeting:
  - Carbon allowance price projections
  - Generator build schedules
  - Load Forecast

Input Assumptions

- The following inputs were developed by DPS staff:
  - Natural gas price forecast is based on EEA's October 2005 reference case forecast. Gas prices (Henry Hub) are approximately $7 per DT in 2003 dollars.
  - SO_2 and NO_x allowance prices were based on recent market price indicies from Cantor Fitzgerald.
  - NY Wind additions were based on assumptions used in the RPS proceeding rather than on IPM's projections.
  - Historical plant production costs were updated to study years.

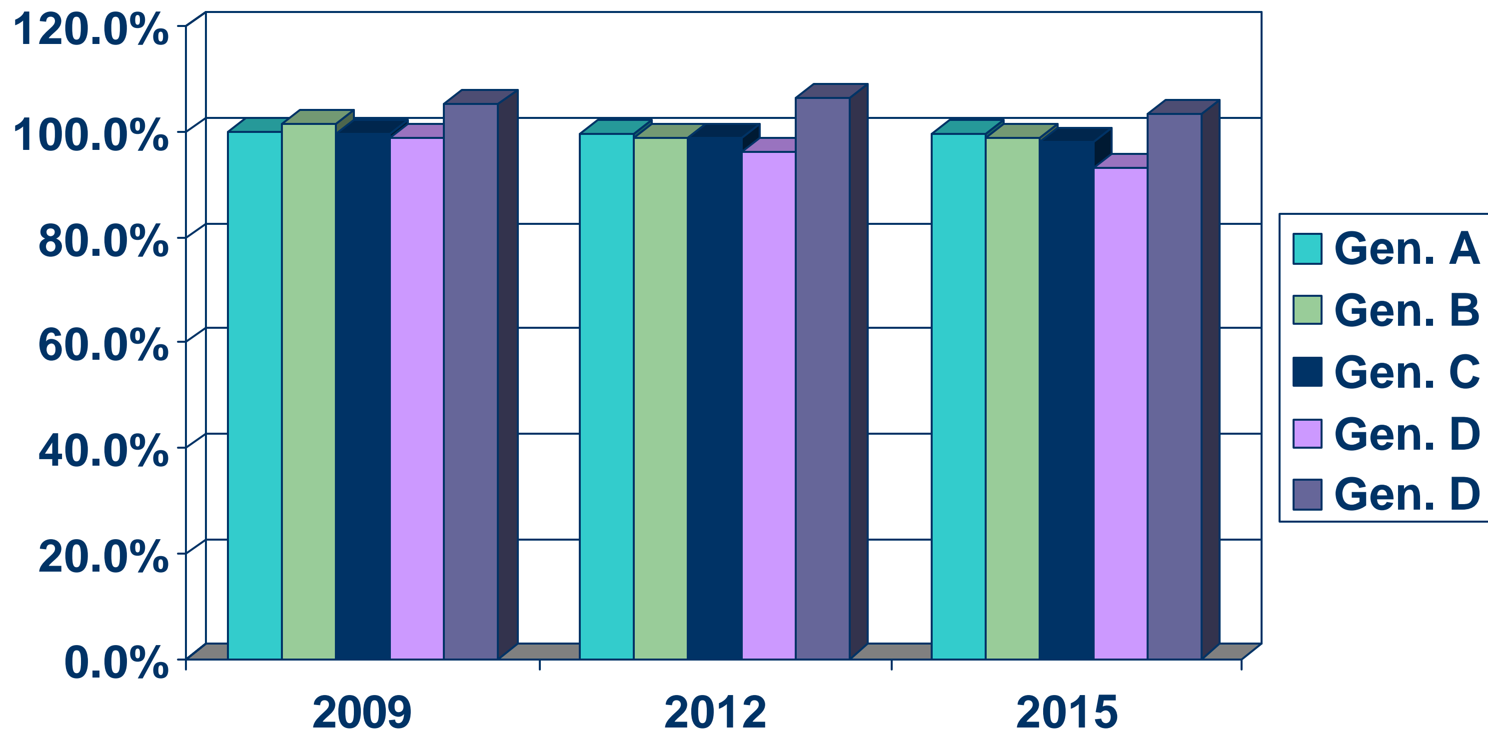
Study Scope

- DPS Staff's study focused on four upstate coal-fired facilities and five downstate oil/gas-fired facilities which are required to operate under specific conditions per the "TO applications of NYSRC Reliability Rules".
- The study looked at impacts for the years 2009, 2012 and 2015.

Results

- Most of the facilities showed net revenue reductions under the RGGI scenario, vs. the non-RGGI scenario, for the three study years.
- Incremental losses in net revenues generally increased over time due to the impact of increases in carbon allowance costs.
- Coal-fired facilities were impacted significantly more than oil/gas-fired facilities.

Percent of net revenues retained for Oil/Gas-fired Facilities
(Base vs RGGI scenarios)



Percent of net revenues retained for Coal-fired Facilities

(Base vs RGGI Scenarios)