

# **EPA/ERTAC MEETING**

## **ERTAC/IPM Fuel Mix**

- Similarities and Difference in Approach
- National and Regional Generation Comparisons

June 9, 2014

# Some Similarities



- Both make significant use of AEO Projections for the Forecast Year
  - IPM uses AEO forecast of **net energy for load** by EMM region over the forecast horizon. This is the MWh load on the bulk power system. IPM allocates this to each of the 64 IPM regions for the US.
  - ERTAC starts with a base year and uses **growth rate in generation by fuel** for each EMM region (e.g., AEO 2013 growth in generation from natural gas and from coal for 2001 to 2018) adjusted for peak growth using NERC data.
  - Although net energy and generation are different concepts in principle, one would expect some broad agreement in practical outcomes, given similarities between IPM and AEO approaches.
- In the near term, both use inputs to drive the composition of the generating fleet
  - ERTAC starts with a base historical year for the fleet using EPA/CAMD data, and makes changes for future years from retirements, new units and controls base primarily on input data.
  - IPM does not use an historical year in the way ERTAC does, but does adjust the fleet from its current status for the first forecast year (generally 3 to 5 years away, currently 2016) based on reported retirements, new units, and changes in controls.

# And Important Differences

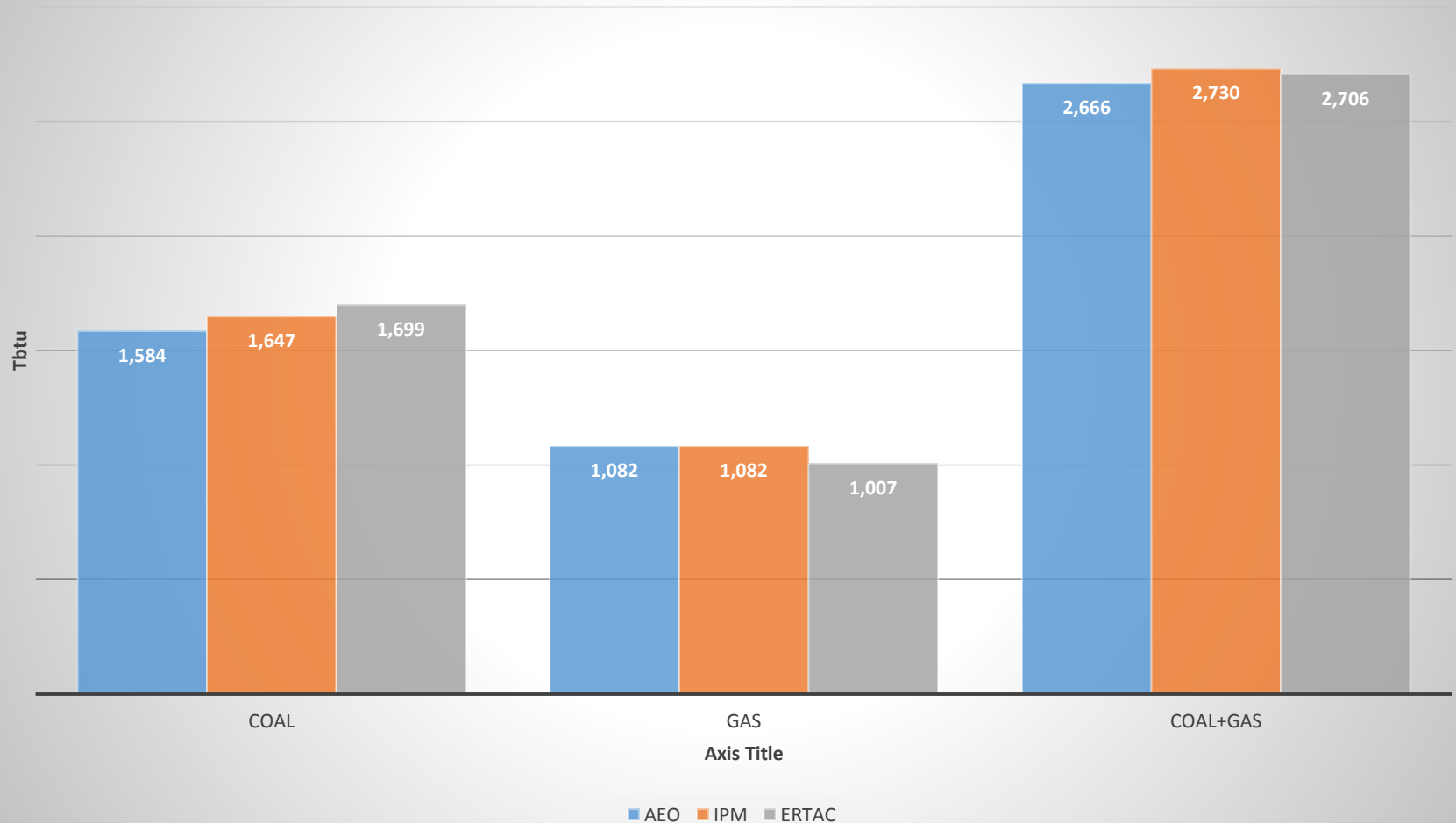


- ERTAC unit level generation in a future year will be a function of base year generation and growth within a fuel category (e.g., coal, three types of natural gas, and oil)
  - This generation will be predominantly driven by regional growth in the forecasts and base year unit operations.
  - Unit operational growth is also adjusted for what is known or expected to differ from the base year – and this can be significant in individual cases -- but growth in unit operation will not generally be modified by overall changes in the dispatch environment.
- IPM unit level generation for a forecast year will be the result of a economic/engineering, planning and dispatch decision, driven and constrained by multiple factors. The result may be quite different from the current generation dispatch. Key differences can include:
  - Unplanned retirements, additions and controls and related impact on the dispatch
  - Changes in the fuel mix arising from changes in supply resources and fuel prices.
  - Changes in inter-regional transmission flows
  - The dispatch will capture many of the operational constraints such as reserve requirements and transmission limitations, but is not designed to capture detailed unit level conditions that may limit individual unit operations

# Similar National Mix



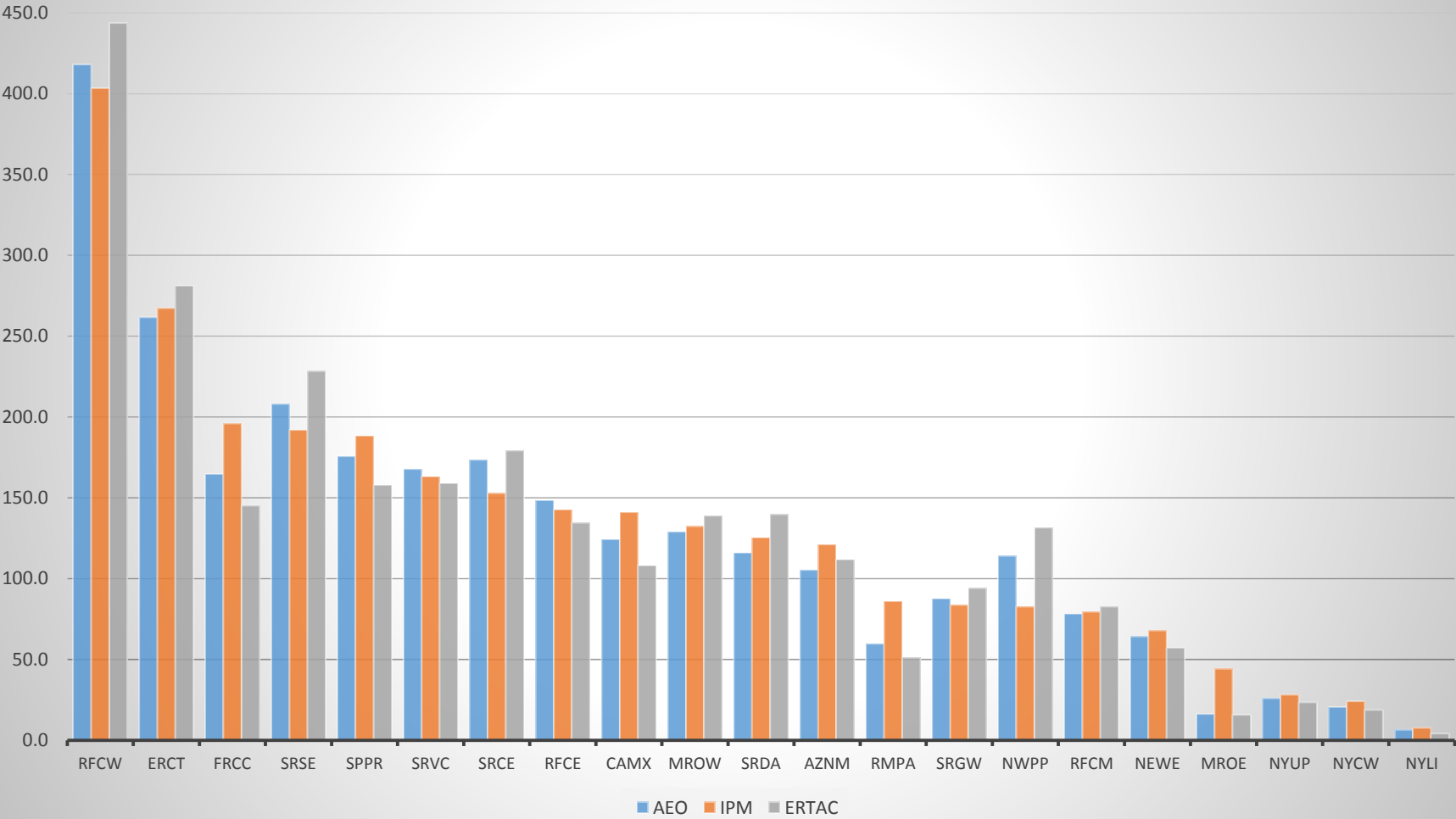
Generation 2018 (Thousand Gwh)



# Regional Coal+Gas



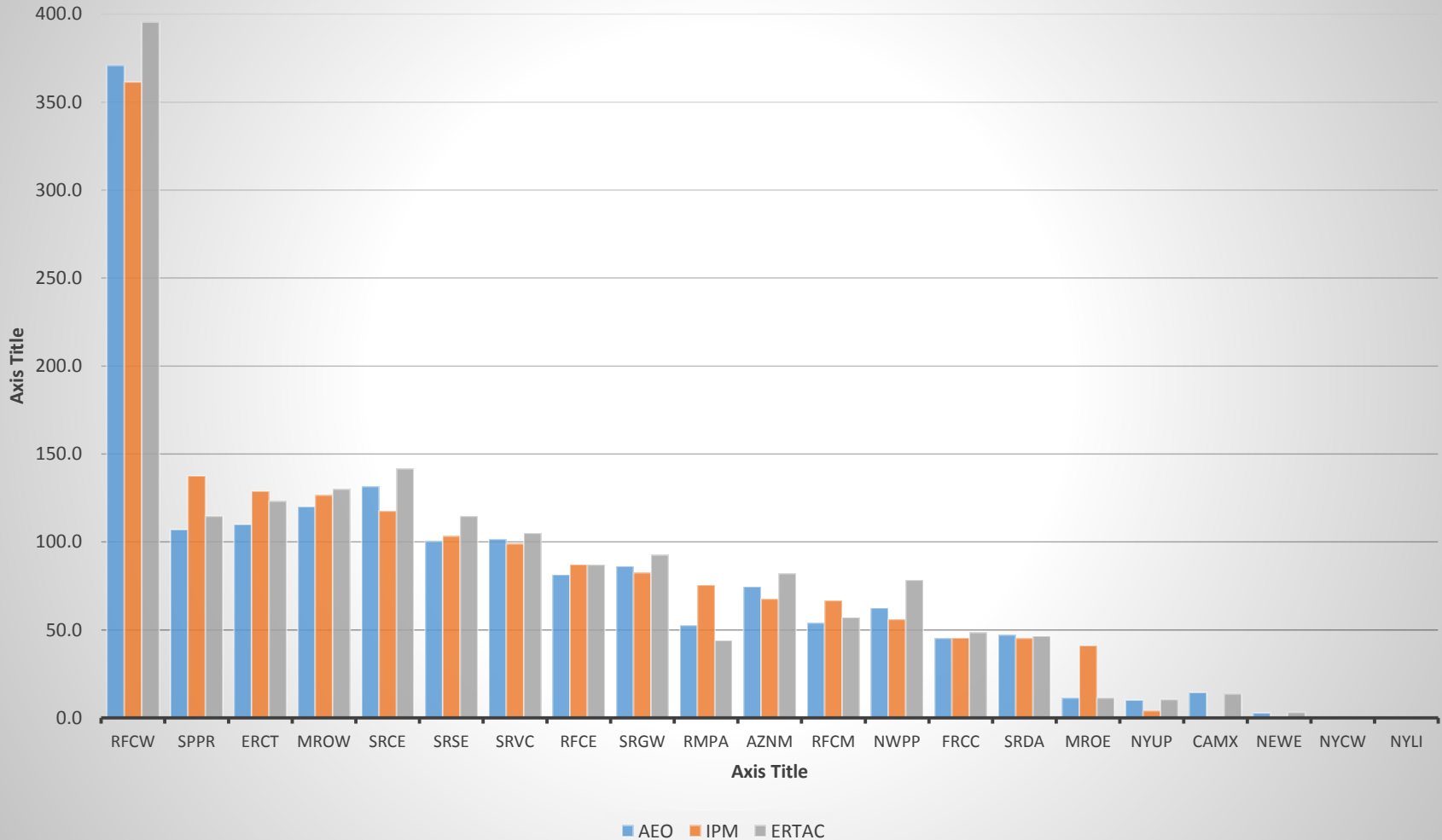
**Regional Coal + Gas Generation (Thousand Gwh)**  
 [Sorted by IPM Generation]



# Regional Coal



**Regional Coal Generation (Thousand Gwh)**  
[Sorted by IPM Generation]



# Regional Natural Gas



## Regional Natural Gas Generation (Thousand Gwh)

[Sorted by IPM Generation]

