




- EIA's Electric Power Surveys -

Value of EIA Form 767 Data

Presentation for

Energy Information Administration's

2007 Energy Outlook, Modeling, and Data Conference

U.S. Environmental Protection Agency

Office of Air and Radiation

March 28, 2007

CLEAN AIR MARKET PROGRAMS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

EIA-767

EIA-767 collects annual data from electric power facilities:

- Plant identification
  - company name, plant name, plant status, plant type
- Plant configuration
  - boiler, associated generators, stacks, flue information
- Plant information
  - fly ash, bottom ash, thermal output quantity and fuel use
- Boiler information
  - boiler I.D., boiler standards, design parameters, emission controls
- Generator information
  - maximum capacity, monthly generation
- Stack and flue information
  - rate, temperature, and velocity at different loads
- Flue gas particulate collector information
  - status, type, removal efficiency
- Cooling system information
  - annual operations, design parameters
- FGD unit information
  - hours in service, percent removal, type of sorbent

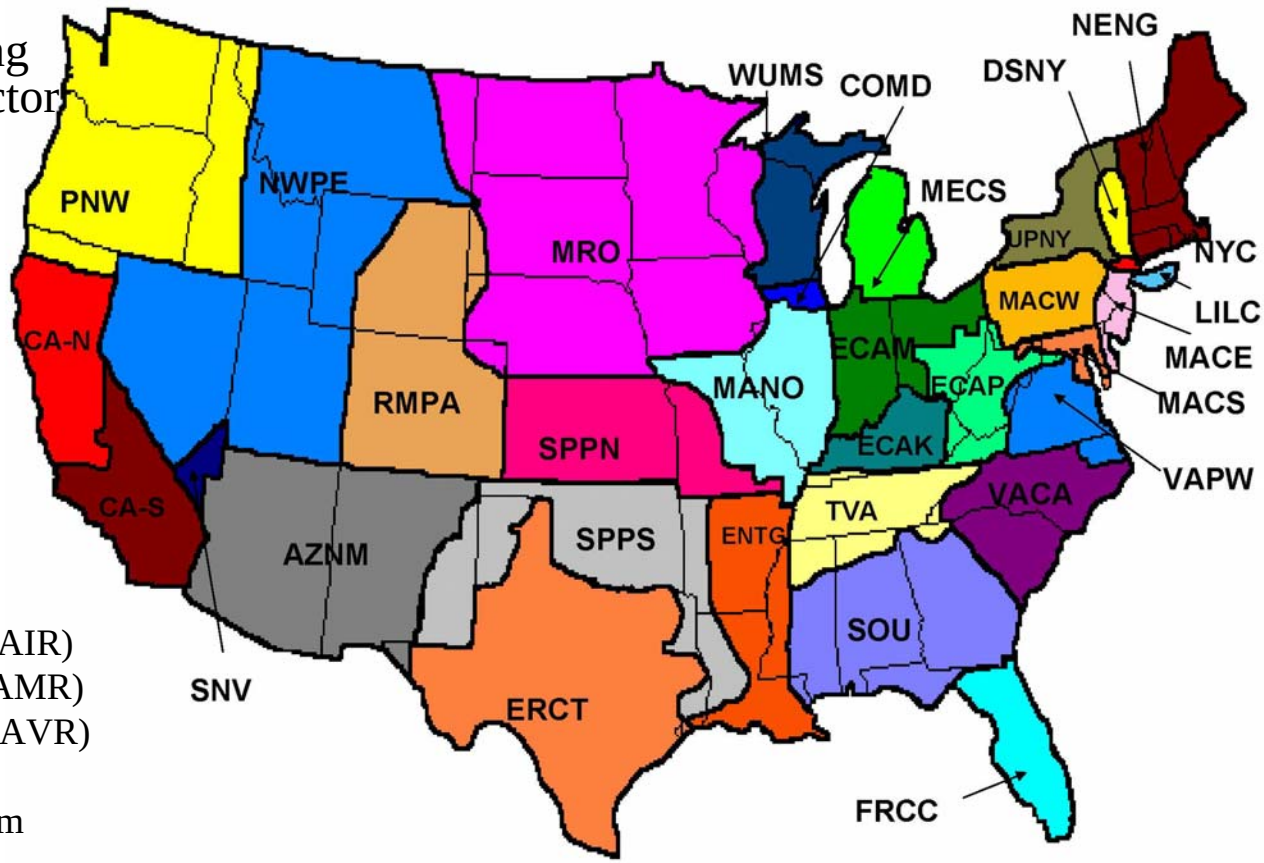
EIA-767

- EIA-767 provides EIA with boiler-specific steam-electric plant data that is critical to the formation of multiple EPA analytical tools and programs, such as:
  - **Integrated Planning Model (IPM)**
  - **(eGRID) Emissions & Generation Resource Integrated Database**
  - **CAIR NO_x Allowance Allocations**
- The above tools are used to develop environmental policies that have billions of dollars in public health and economic benefits




What Is the Integrated Planning Model (IPM)?

- IPM is a long-term capacity expansion and production costing model for analyzing the U.S. electric power sector
- EPA uses IPM to analyze emissions policies affecting the power sector
- IPM outputs are used in EPA's air quality models
- IPM was used on:
  - Clean Air Interstate Rule (CAIR)
  - Clean Air Mercury Rule (CAMR)
  - Clear Skies Initiative
  - NO_x Budget Trading Program (NBP)

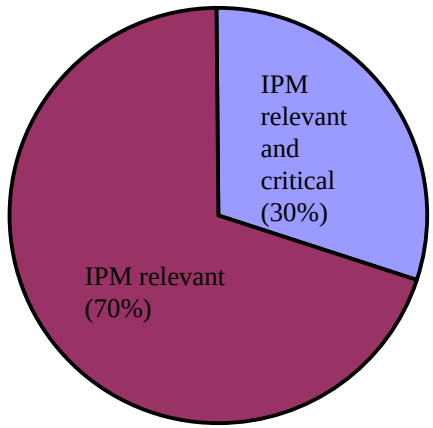


Model Regions in Recent Update of IPM

EIA-767 Is Critical to IPM

- Form EIA-767 contains 163 data fields:
  - IPM relies on data from all 163 fields
  - IPM considers 49 of the 163 fields to be critical data

EIA-767 Data Relevance to IPM



EPA Is One of Many Users of IPM

EPA has used IPM to:

- **Support rules**
  - **CAIR — Title IV SO_2**
  - **CAMR — NOx SIP Call**
  - **CAVR — Revised NAAQS**
  - **Cooling Water Standards**
- **Evaluate effects of 1990 Clean Air Act Amendments**
- **Analyze environmental impacts of restructuring**
- **Provide key inputs to EPA's air quality models**

Other IPM users include:

- **Government agencies**
  - **FERC**
  - **WRAP**
  - **RGGI**
  - **OTC**
  - **OTAG**
- **Industry groups**
  - **EPRI**
  - **EEI**
  - **SoCal**
  - **PacifCorp**
  - **TVA**
  - **AEP**
  - **Florida Power**
  - **Cinergy**
  - **National Coal Association**
- **Other organizations**
  - **Center for Clean Air Policy**
  - **Clean Air Task Force**
  - **Clean Energy Group**

What Is eGRID?

- eGRID is EPA's nationally recognized, comprehensive tool that uniquely links emissions, generation, and fuel use at all electric power plants in the U.S. on an annual basis
  - Generation (MWh)
  - Emissions (NO_x SO_2 CO_2 Hg)
  - Fuel Use (MMBtu)
  - Boiler data, generator data, integrated plant level data
  - Plant data aggregated to different levels:
    - state, electric generating company, parent company, power control area, eGRID subregion, NERC Region, U.S.
- eGRID has a broad user base
  - eGRID EPA's most popular clean energy webpage
  - Supports decisions of users and tools they produce
    - Labeling/environmental disclosure
    - RPS & RECS attributes
    - EPA's Power Profiler tool
    - Policy and research use: analysis (e.g. RGGI) & direct input to other tools (e.g. RMI tool, NREL's HOMER)

eGRID

eGRID Uses and Clients

- eGRID used for other EPA tools/programs
  - Power Profiler – CPPD website for general public relating electricity use and emissions
  - Climate Leaders – CO_2 emission factors for electricity use
  - Portfolio manager (pending) – Relates CO_2 emissions to building energy use
  - Personal GHG Calculator (pending) – Relates CO_2 emissions with electricity use

- Used by Federal Government
  - NETL, ORNL, ANL, NREL
    - ORNL - CHP Calculator
    - NETL - NATCARB website
    - NREL – HOMER

- Used by RECS Tracking Systems
  - Emission and fuel use attributes for RECs Tracking Systems:
    - PJM's Generation Attribute Tracking System (GATS)
    - ISO-NE's Generation Information System (GIS)

eGRID

eGRID Uses and Clients

- **Heavily used by states**
  - Many electricity labeling (environmental disclosure programs) rely on eGRID
  - Many states rely on data for policy decisions/impacts (e.g. output based standards)
  - Many states publish state-specific eGRID data on the web
  - Greenhouse Gas Inventory & Registry efforts (e.g. California Climate Action Registry)

- **Used by Non Governmental Organizations in tools and for analyses**
  - NESCAUM analysis, Powerscorecard.org, OTC's Emission Workbook, GHG Protocol Initiative, RMI Community Energy Finder, Powerscorecard.org, Leonardo Academy "Cleaner and Greener Environmental Program", NRDC's Benchmarking Air Emissions, Emission solutions carbon footprint calculator

- **Used by universities**
  - Texas A&M, Stanford, NCU, Penn State, Eastern Connecticut University's lesson on Energy Education, Michigan Tech's lesson on Energy Resources, etc.
  - Cited in many academic papers and theses

eGRID

CAIR NO_x Allowance Allocations

- EIA-767 data along with EIA-860 data is used to identify potential CAIR units and to determine a unit's share of the state-budgeted NO_x allowances
  - 1,445,000 annual NO_x allowances are based on EIA data for phase I
  - $1.8 billion/yr of NO_x allowances are based on EIA data for phase I
  - 850 of 2,665 potential CAIR units were identified with EIA data

Other Groups/Organizations Using EIA-767 Data

- **States use the data for a host of reasons including:**
  - Emission Inventories (which are critical to air quality modeling efforts and efforts to understand what sources contribute to air quality problems)
  - Rule development (including trading rules, renewable portfolio standards and high energy demand day strategies)

- **Many organizations use the data for power sector modeling including:**
  - CRA International
  - Massachusetts Institute of Technology (MIT)
  - Resources for the Future (RFF)
  - Other members of the Stanford Modeling Forum

Conclusion

- EIA-767 collects vital data for federal and state environmental and energy regulatory agencies to use in their efforts to protect human health and the environment.

- EPA requests EIA to continue collection of this data on behalf of the public that we serve.