



State Clean Energy-Environment Technical Forum
Gathering and Using State-level Energy Data
May 22, 2008
Call Summary



Participants: 57 participants from 26 states and national organizations

Materials: The participant list, agenda, and all presentation materials from this call are available at http://keystone.org/Public_Policy/2007_8DOCS_CLEANENERGY/2007_8DOCS.html. Please refer to these documents for additional background information and detail on presentations.

Key Issues Discussed

- What state-level data does EIA collect that would help build a comprehensive energy profile?
- What data is needed for informed decision-making?
- How do states get data above and beyond what EIA has to offer?

Presentation Summaries and Discussion

A. Welcome/Introduction – Julia Miller, US EPA; Catherine Morris, The Keystone Center

B. Overview of EIA state-level data collection, Barbara Fichman, Energy Profiles Program Manager, Energy Information Administration (see website above for presentation)

- EIA state-level energy data, including infrastructure maps, can be found on the EIA website at: <http://tonto.eia.doe.gov/state/>
- Data are collected from an extensive and diverse range of sources.
- Maps provide a detailed state-by-state energy overview and tables link to original sources.
- EIA's first and most important goal is accuracy—data is time consuming and expensive to gather.
- Biggest challenge is to serve all kinds of audiences: policy makers, college students and everyone in between.
- Ms. Fichman highlighted some of the new state-level information provided this year, including time series of energy production.
- State rankings of certain energy data are planned for later this year.
- Common uses of state energy data include emergency planning and analysis of policy options.
- A number of things that would still be useful but are not currently available:
 - Detailed end-use data for each consuming sector in every State
 - Residential and commercial building characteristics, such as type of furnace
 - Appliance usage, including space heating, cooling, and lighting

Q&A

A participant noted that the EIA 767 Report (fuel emission and type data) has been suspended. Is that going to be available again?

- Yes, those data will be available. The environmental information formerly collected on the Form EIA-767 is now collected on the new Form EIA-923 (operational information) and the Form EIA-860 (static information).
- EIA is in the process of collecting annual 2007 data now. It will be released at the individual plant level by the end of this year. However, as we did not collect the data for 2006, there will be a hole in the data for that year.
- Detailed information, including a good schematic illustrating the consolidation of survey forms, is shown on the EIA web site:
<http://www.eia.doe.gov/cneaf/electricity/2008forms/consolidate.html>

What quality control measures are used by the EIA and what is done to assure quality data is reported?

- EIA reviews incoming survey data and asks “Are they in a believable range?” For example, currently, about 90 percent of electric power data is submitted over the Internet. Data entered by respondents have to pass all of our built-in edits. That is, the current data are compared to their previously submitted data, and other internal calculations are done to test the data. If any of those results fall outside of preset ranges, the respondents literally cannot submit their data. They must fix the incorrect information and then submit it. After that, we have quality assurance reports that further evaluate the data at the plant, state, and national levels. Data that still appear to be questionable are followed up with telephone calls and e-mails to the respondents. Finally, the report and data are reviewed by several levels of EIA experts for quality control.
- End-use consumption data are subjected to extensive statistical validation.
- EIA is interested in speeding this process up; it’s partly a resource question to develop a faster response rate. We have found that Internet data collection has greatly increased the timeliness, as well as the accuracy, of the data.

C. Ohio, Greg Payne, Energy Office, OH Department of Development (see website above for presentation)

- After a Governor’s energy strategy session for state agencies, the Energy Office was asked to draft a situation analysis that presented energy/use consumption patterns, forecasts, and implications for the State of Ohio.
 - State energy resources, trends and current and proposed policies at the federal and state level were taken into consideration.
 - Relied heavily on existing data sources: EIA, Ohio PUC, EPA, DNR, NREL.
 - Included local sources & examples to translate national data to state-level.
 - Shows where Ohio stands in comparison to the rest of the nation.

- Missing data such as industrial energy use, energy efficiency potential, and demand response potential will be gathered by contractors selected through an RFP process.
- Other topics covered in the report:
 - Energy usage costs and consumption
 - Emissions issues
 - Renewable energy resources and costs
 - Energy efficiency measures
 - Material and construction costs.
 - Workforce and supply chain issues
 - Legislation and policy
- Next steps involve stakeholder engagement and broader dissemination of the report. Ohio plans targeted updates to the report.
- Significant lessons-learned are highlighted including the importance of feedback from stakeholders, the difficulty of dealing with uncertainties such as oil prices and carbon regulations, and the need for continued updates to the state energy forecasts.

Q&A:

How much does it cost to capture that data? Was the collection of that data outsourced?

- The process just started in January. The cost so far has been under \$100,000. The RFP for an energy potential study was under that amount as well.
- Data collected in-house and from other states.

D. New Jersey, Dr. Bharat Patel, Director, Office of Planning, NJ Board of Public Utilities (see website above for presentation)

- New Jersey has been developing its own energy data center, which it used to have before budget constraints and deregulation caused the state's efforts to lapse.
 - This entails developing a comprehensive online resource as well
- Data acquired from Energy Information Administration, PJM Interconnection (the regional independent transmission organization covering 13 states from NJ to Illinois), New Jersey Gas and Electric Utilities, New Jersey Clean Energy Program, US Federal Highway Administration, FERC, U.S. Census Bureau, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, Rutgers Agricultural Experiment Station, , National Association of Realtors and NJ Departments of Environmental Protection, Community Affairs, and Transportation.
 - Need to make sure EIA data is consistent with state utility data and that all sources are included.
 - Also collecting data from near-by states
- Behind-the-meter energy use and generation (e.g. distributed renewable generation) represents a significant gap in the data and will be important in determining compliance

with state Renewable Portfolio Standard.

- Several models were used to forecast the Business-As-Usual and Alternative Action Plan.
- Dr. Patel explained how the data has been used to develop a comprehensive plan to meet GHG and energy reduction targets.
 - These plans outline program design, cost, what sectors impacted, administrative costs, timeline of action, and sources of funding.
 - For each strategy, there needs to be an attendant funding strategy.
- Appendices to Dr. Patel's presentation showed in detail the sources of data for each aspect of the NJ Data Center Data Dictionary.

Q&A

What are the building energy efficiency goals?

- The goal is to reduce the 2020 projected energy consumption by 20%. For electricity, the goal is to reduce the consumption by 20,000 GWh and a peak load reduction of 5,700 MW. For natural gas and oil, the goal is to reduce the heating (space and process) requirements by 119 TBtus.
- 75-80% of savings come from existing buildings, the balance from advanced building codes and appliance standards.

How do you create a funding strategy that accounts for moving pieces that are constantly changing?

- It is important to have funding for projects for specific time periods, so that it is always clear where money is being targeted.

D. Texas, Jeff Haberl, Energy Systems Laboratory, Texas A&M (see above website for presentation)

- Texas A&M is under contract with the State of Texas to analyze the air quality and GHG impacts of various state programs. The objective was to document verifiable credits for state EE/RE projects
- Mr. Haberl provided a thumb nail sketch of ESL's work with wind farm data in Texas
 - Wind capacity in Texas has grown from 3,026 MW (March 2007) to a projected capacity of 3,125 MW by 2010
 - Biggest challenge has been to get ahead of the legislative mandate on wind generation
 - Calculating NOx Reductions from Wind Farms posed certain challenges
- ESL also calculated NOx emissions reductions from new residential and commercial construction using EPA's e-Grid and AP-42 data.
- ESL also calculated cumulative NOx emissions across all state EE/RE programs

Q&A (all panelists)

Are data available on the state by state achievement of renewable standard?

- EIA collects data that would allow a data user to determine each State's progress toward achieving the renewable standard. We collect data on electricity generation by fuel type,

including renewable energy, and, therefore, we know what percent of total electricity was generated by renewable fuels. However, EIA does not do the comparison that would show if a given State has reached the standard. Electricity generation data by State and fuel type are available in EIA's *State Electricity Profiles*:

http://www.eia.doe.gov/cneaf/electricity/st_profiles/e_profiles_sum.html

How do we give feedback to EIA?

- On any EIA webpage there's a banner at the bottom where comments can be sent to the national data center.

How is agricultural energy information included in consumption data?

- Agricultural consumption of energy is included in the industrial sector in EIA's State Energy Data System: http://www.eia.doe.gov/emeu/states/_seds.html

What does PJM stand for?

- 13 states from NJ to Illinois that are part of the PJM Regional Transmission Organization.

Is EIA planning to collect behind-the-meter data?

- No, EIA currently has no plans to collect those data.

For RPS, the IOUs need to report the amount of green power. Is EIA going to provide a data stream of the amount of green power from power producers?

- EIA's historical electricity generation data clearly show how much green power has been generated. We release aggregate data showing generation by wood, waste, wind, solar, and geothermal in the *Electric Power Monthly* at: http://www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html and the *Electric Power Annual* at http://www.eia.doe.gov/cneaf/electricity/epa/epa_sum.html. Data at the individual plant level are also available at: http://www.eia.doe.gov/cneaf/electricity/page/eia906_920.html

NEXT TECHNICAL FORUM CALL: June 19, from 2:00 p.m. to 3:30 p.m. ET
TOPIC: State Energy Forecasting.