

3 Uses of Administrative Data in the EIA

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By Monica King

Shawna Waugh works in the Office of Survey Development and Statistical Integration at the Energy Information Administration (EIA). She recently joined the ADRF Network working group on Data Quality Standards. We spoke with Shawna about her work at the EIA and a few ways they are finding value with both administrative and commercial data sources.

What was the impact of [Hurricane Irma](#) in 2017 on the East Coast's energy infrastructure? What impact did [Hurricane Harvey](#) have on gasoline and diesel trends in Texas and around the country? These are both examples of important questions that the U.S. Energy Information Administration (EIA) can answer with its data. Government agencies at the federal, state, and local level as well as academic researchers frequently turn to the EIA for valuable data on the supply, demand, and price in energy markets.

Ms. Waugh, an experienced survey methodologist, is now focused on cataloguing the uses of administrative data for energy programs in natural gas, petroleum marketing, and petroleum supply. She discusses how administrative data are used to supplement survey based research at the EIA. Unlike many surveys commonly used in the social sciences, all but one EIA survey product is an establishment survey, meaning that EIA surveys are usually sent out to energy suppliers, marketers, and other businesses rather than residential households.

Within Waugh's work, administrative data are used in three primary ways:

1. **To develop a sampling frame.** Because the United States' federal statistical agencies are decentralized, EIA is unable to tap into a common database to develop a survey sampling frame. "One of the disadvantages of that is that we do not have access to some of the lists that the IRS uses. So for some energy industries, we research data sources which may be useful for developing a sampling frame," she said. As a result, they have turned to various commercial sources to construct frames or to supplement information on sample frames with auxiliary data not gathered on the survey.
2. **To maintain sampling frames.** Administrative data are also used to ensure that the sampling frame is up to date. Waugh says, "It is like people moving between surveys, but you can't really move a petroleum refinery. We have to make sure that companies on our list still exist and one or two new ones have opened up in the last 10 years." In addition, administrative data helps to ensure that information on the company's point of contact for completing EIA surveys is up-to-date.

3. **To collect auxiliary information.** Finally, reliable administrative data can replace or validate survey data. The former helps to reduce respondent burden and cost of survey operations while the later helps to improve data quality.

To learn more, attend the FCSM Research Conference session on New Uses of Combining Public and Private Data where researchers from the EIA are presenting their work on “Linking a Retail Gasoline Price Survey with Commercial Data.”