



Big Data in the Energy Industry

Utilities, oil and gas companies, energy project developers, transmission and distribution companies, and energy service providers are using Big Data to modernize and manage their operations. Big Data is facilitating the proliferation of distributed generation and energy storage, while improving demand-side management. It is also being used by energy companies to detect, mitigate and prevent losses and inefficiencies. But along with its benefits, Big Data also raises concerns for the energy industry regarding privacy, security, safety and reliability, disclosure requirements, and more.

PRACTICE AT A GLANCE

- We advise on clearing new infrastructure and innovative technologies at the intersection of Big Data, energy, government regulation and IP.
- We have significant experience designing and assessing compliance programs that account for Big Data and related issues.
- Our team includes former senior officials from the FBI, FERC, US Department of Energy, Homeland Security, EPA, Department of the Interior, Department of Defense and CFTC. Our attorneys have security clearances that enable them to access classified/sensitive information and restricted areas.

INDUSTRY-SPECIFIC ISSUES

- Regulations are evolving concerning the use of Big Data to facilitate the development, integration and operation of wind, solar and other distributed generation, as well as energy storage.
- As energy companies adopt new technologies to monetize Big Data, patent holders will seek to leverage their IP rights against these companies.
- Collecting Big Data from smart meters, e-vehicles and appliances raises significant privacy and consumer protection concerns.
- Big Data is being used to address energy system inefficiencies and vulnerabilities.
- Electric grids and other utilities continue to be attractive targets for cybersecurity attacks.

\$2 Trillion

The amount of energy cost savings by 2030 from the data gleaned from smart grids.

\$38 Billion

The estimated value of the energy management systems market in 2018.

20%

The percentage of utilities that have a Big Data strategy and are currently implementing it.

EXPERIENCE

- Assisted major energy utilities in responding to law enforcement and other government requests related to cybersecurity incidents, and helped the utilities develop proactive strategies to prevent and address future incidents.
- Advised a number of clients on the treatment of Critical Energy Infrastructure Information and other information under the Freedom of Information Act (FOIA).
- Assisted several clients in complying with reporting, record-keeping and reliability requirements, and evolving regulations with respect to data in the energy industry.
- Advised one of the United States' largest investor-owned utilities in developing and implementing a best-in-class compliance system.
- Defended a financial services company employing Big Data analytics against electric market manipulation charges asserted by FERC.
- Represented a utility-scale energy storage company on regulatory issues regarding “grid-based energy storage” arising at FERC and the Regional Electric Transmission Organizations.
- Supplied consumer disclosures, contractual language, financial privacy advice and marketing-law guidance to a manufacturer of in-home energy-management devices that collect, analyze and share Big Data.
- Advised a financial services company on disclosure requirements arising from affiliates' participation in wholesale and retail energy markets, including compliance with proposed FERC rules requiring submittal of “Connected Entity” data.
- Counseled competitive electric suppliers, community solar developers and other entities on customer protection requirements applicable to the supply of electricity or natural gas.
- Advised an offshore wind project developer on potential disclosure obligations arising under the Federal Power Act and the Public Utilities Holding Company Act of 2005, and potential protections available under confidentiality provisions of those laws and exemptions under FOIA.
- Counseled a manufacturer of home automation equipment and smart appliances about federal and state restrictions on collection, use and sharing of Big Data obtained in connection with such equipment and associated mobile applications.
- Provided regulatory advice to an electronic exchange in connection with its participation in regional wholesale electric markets.
- Served as strategic counsel to a leading wholesale electricity supplier regarding proposed transmission projects in several states.

FUTURE TRENDS INCLUDE:

- Strong focus on protecting the energy grid from cybersecurity threats
- Using data to establish more reliable maintenance and asset management strategies for key pieces of equipment
- Increased interconnectedness of energy-utilizing devices, particularly home systems and next-generation appliances, creating corporate vulnerability to oversight from regulators and Congress
- Progressively more integration of Big Data into companies' daily operations
- Information from smart meters and other sources providing key insights into customer behavior
- Utilities using Big Data to more rapidly identify the location and causes of outages, improving their ability to respond and cutting disruption time



Analysts predict that global utility company expenditure on data analytics will grow over time.

For more information visit us at wilmerhale.com/big-data | contact us at big.data@wilmerhale.com