

## **Background Information for Data Center Sustainability and Best Practices Workshop**

**Bill Background:** In December 2006, Rep. Anna Eshoo (D-CA) and former Rep. Mike Rogers' (R-MI) [bill, An Act to Study and Promote the Use of Energy Efficient Computer Servers in the United States](#) was enacted into law (Public Law 109-431). This law required the Environmental Protection Agency (EPA) to publish a report assessing trends in energy use and energy costs of data centers and servers in the U.S. and outline existing and emerging opportunities for improved energy efficiency.

**2007 Conference:** In February 2007, approximately 130 stakeholders from EPA, Lawrence Berkeley National Laboratory (LBNL), and other organizations involved in the report drafting held a workshop to discuss what should be included in the report in Santa Clara, CA. The workshop was divided into four working groups:

- **Working Group 1: IT Equipment:** This working group discussed study tasks and information needs related to IT equipment (i.e., server components, servers, networking equipment, and storage devices).
- **Working Group 2: Power and Cooling Infrastructure:** This working group discussed study tasks and information needs related to data center power (i.e., backup power, grid supply, and distributed generation) and cooling infrastructure.
- **Working Group 3: Integrated Design, Operation, and Management Issues:** This working group discussed study tasks and information needs related to integrated data center design, operation, and management issues (i.e., those spanning both IT equipment and power and cooling infrastructure).
- **Working Group 4: Incentives and Voluntary Programs:** This working group discussed study tasks and information needs related to incentives (i.e., federal versus non-federal) and voluntary programs (i.e., utility incentive programs).

**2007 Report:** In August 2007, EPA and LBNL published the initial [report](#), which looked at energy usage in data centers through 2011, incentives and voluntary programs to promote energy efficiency, and provided policy recommendations and recommendations for further analysis.

**2016 Report:** In June 2016, the Department of Energy (DOE) and LBNL published a [follow-up report](#) from the 2007 report, which looked at data center consumption back to 2000 and projected out to 2020.

**Forthcoming Report:** The [Energy Act of 2020](#) [Section 1003. Energy efficient data centers] passed as part of the Fiscal Year 2021 Omnibus bill, [tasks](#) DOE, EPA, and OMB with publishing a third follow-up report that considers newer technologies (e.g., artificial intelligence) not covered in the previous reports. The new study must be completed within four years of the bill's passage (by December 2024).