

Data Centers: A Wealth of Information and Savings Opportunities



Program Overview

The AEP Ohio Data Center Program helps data center owners and operators gain access to energy-saving opportunities by incentivizing data center energy efficiency through financial incentives that flow straight to the bottom line.

AEP Ohio recognizes the challenges and opportunities in these energy-intensive environments, and is dedicated to helping you reduce IT-related operating costs. AEP Ohio's Data Center Program team can provide assistance to help you identify and implement energy-saving projects that reduce your energy costs without sacrificing uptime. By investing in IT, cooling and power projects, you can optimize your data center's energy use and permanently reduce your electricity consumption.

Customer Eligibility

Any AEP Ohio non-residential customer with data center, server room or other IT space is eligible. Submission of a pre-application prior to equipment installation is highly recommended. Project final applications must be submitted within 180 days of project completion from a previous calendar year or within the same calendar year of its completion.

Colocation Eligibility

Colocation incentives are available if your facility relocates its data center, server room or server closet to a colocation facility with more efficient operations. A colocation facility is a data center that rents space to businesses to host their servers and other computing needs. AEP Ohio can help advise if colocation is a good solution for your facility.



How to Participate

1. Free Facility Survey and Application Assistance

The Data Center Program team is a free resource available to help survey your facility and assess energy savings. Whether your project is an upgrade to an existing facility or planning future capacity, the team will help evaluate energy-saving opportunities and keep you on track in the pre-application process.

2. Post-Installation Savings Verification

The final application should be submitted within 180 days of the project completion. Upon receipt of the final application, the Data Center Program team will provide a post-install savings verification free of charge. Your performance-based incentive will be based on actual energy saved in your data center.

3. Payment

Once your energy savings are verified, AEP Ohio will review your final application and release incentives (typically within 10-12 weeks).

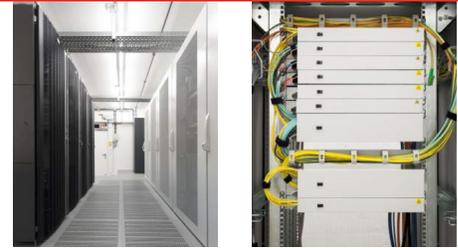
Project Eligibility

The Data Center Program offers incentives to a wide variety of energy efficiency measures and customers. Examples of the types of measures the program incentivizes include but are not limited to:

- Replacement or Optimization of Chillers, Cooling Towers, Compressors, Condensers or Pumps
- Motor Horsepower Reduction
- Evaporative Coolers
- Air-side/Water-side Economizers
- VFDs for Pumps or Supply Fan Motors
- Electronically-Commutated Motors (ECM) for Fans
- Wired or Wireless Sensors
- Control System Integration
- Airflow Management Measures
- In-Rack or In-Row Cooling Equipment
- Uninterruptible Power Supply (UPS)
- Power Distribution Unit (PDU)
- Generator Block Heater Heat Pump

Infrastructure improvements on the mechanical and electrical systems are an important part of the program; however, the program does acknowledge the importance of an efficient IT environment and also incentivizes measures to improve the performance of the IT equipment, including but not limited to:

- Server Virtualization
- Server Refresh
- Mainframe/Storage Consolidation
- Storage Refresh
- Efficient IT Growth
- Data Center Relocation



Data Center Savings Case Studies:	Annual Cost Savings	Energy Efficiency Incentive
An Ohio corporation relocated its data center operations to a colocation facility. The corporation relocated 24 kW worth of IT load, which reduced energy consumption of its existing facility by over 465,000 kWh per year and a net overall energy saving by over 200,000 kWh per year.	\$37,000	\$14,000
A hospital upgraded its CRAC units with VFDs, while simultaneously increasing set-point temperatures in the IT space. This cooling project reduced the hospital's energy consumption by 250,000 kWh per year.	\$18,000	\$17,500
A private university relocated its existing IT equipment to a newly built data center space on campus. The new facility utilized high-efficiency UPS modules and advanced cooling techniques including economization ('free cooling') and elevated temperatures. The result was savings of over 450,000 kWh over a standard design.	\$28,000	\$31,500
A research institute implemented an extensive upgrade to its data center controls, virtualized hundreds of servers and worked with the AEP Ohio Data Center team to plan a high-density compute cluster with servers far more efficient than its standard configuration. The result was over 3,700,000 kWh in energy savings per year.	\$270,000	\$260,000
An industrial company implemented a desktop virtualization project by moving to local workstation clients with central servers. This IT project reduced the company's energy consumption by 350,000 kWh per year.	\$25,000	\$21,000
A financial services firm expanded with variable speed CRAH units, implemented air flow management strategies to allow the increase of its data center set point temperature and upgraded its IT mainframe equipment. These IT and cooling projects reduced the firm's energy consumption by 5.2 million kWh per year.	\$300,000	\$365,000
A small business elected to relocate three server racks from its server room to a nearby colocation data center. The difference in efficiency between the server room and the large data center resulted in an energy savings of 140,000 kWh and freed its staff to focus on their core work.	\$12,600	\$11,000

For more information, call **855-290-3876** or email **AEPOhioDataCenters@willdan.com**

AEP Ohio provides free assistance in savings identification and application submission. Visit **AEPOhio.com/Solutions** for other energy efficiency programs and tips offered from AEP Ohio. Rev 06/18



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