Energy Use in Data Centers

When you think of energy use in data centers, you might think of the electricity powering the servers and other equipment. An equally significant aspect of data center energy use comes from the HVAC system, which keeps all the heat-producing equipment cool enough to operate continuously. In a typical data center, there is usually opportunity to improve the energy efficiency of this process by optimizing airflow, room temperature, and humidity.

What is DC Plus?

DC Plus is a third-party program offered by Pacific Gas and Electric Company (PG&E) that provides financial incentives to commercial customers who implement energy-saving improvements in their data centers. We work with you to identify specific, cost-effective improvements, which might include: Adding partitions, strip curtains, blanking panels and/or chimney cabinets; Repositioning/plugging holes in floor tiles; Optimizing cooling and humidity setpoints; and Repairing HVAC economizers.

We understand the unique challenges of running a data center. It requires balancing the need to provide constant, high-level IT service while managing energy use as it relates to your building's total operating costs. With DC Plus, you can make the airflow and temperature control in your data center more energy efficient, saving money on operating costs and earning rewarding financial incentives.

Consider these facts:

▸ Airflow management using an air-side economizer can reduce data center cooling costs by over 60%[1]

▸ Implementation of airflow and temperature management strategies can result in fan energy savings of 70-90% and energy savings at the chiller of 15-20%[2]

▸ In an airflow demonstration conducted by Lawrence Berkeley National Laboratory, airflow management strategies were estimated to result in a 5.4% decrease in total data center energy use[3]

▸ In the same study, higher return air temperatures increased the capacity of computer room air handling units by 30-49%[3]

Eligibility

Your data center must be in the PG&E service area and up to 30,000 sq ft or 500 kW IT load DC Plus is ideally suited for data centers:

- Inside commercial, institutional, or industrial buildings/campuses
- Experiencing temperature or performance issues
- Using a higher than average amount of energy
- Without significant facilities or IT changes underway (or planned soon)

The DC Plus team can determine your eligibility with a simple phone call or site visit.

DC Plus Incentives

DC Plus offers financial incentives based on the estimated energy savings of your project, capped at 50% of your project cost:

- $0.08 - $0.15 per kWh
- $150 per kW

We calculate energy savings after implementation and verification of your project. There are additional incentives available for other specific equipment, like variable frequency drives for HVAC fans, network desktop computer power management, and other improvements approved by the DC Plus team.

Participation Process

1. **No-Cost Data Center Assessment** – We visit your data center and conduct a free, non-invasive assessment, in order to understand and document the current conditions of airflow and temperature distribution inside the data center.

2. **Assessment Report** – We provide a report that includes what we learned from the assessment and a specific list of energy-saving best practices not covered by DC Plus.

3. **Implementation Planning** – We meet with you to review recommendations and devise a specific plan of action to implement improvements that suit your specific data center and business needs.

4. **Implementation** – We will support you throughout the process, answering questions, facilitating project progress, and checking in regularly to make sure everything stays on track.

5. **Verification, Training, and Final Project Report** – When implementation is complete, you'll receive a follow-up verification service package, which includes on-site verification of project work and a review of all project documentation. You'll also receive a Final Project Report, covering the final energy savings, cost savings, and incentive amounts.

The Path to Efficiency Starts Here

+ Learn more at **DCPlus.org**. If you're ready to get started, contact us directly at **844-DCE-Plus** (844-323-7587) or **DCPlus@clearesult.com**.

dcplus.org