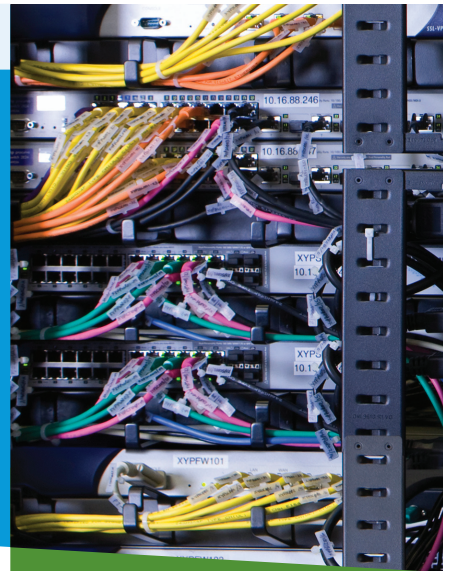


DATA CENTER

SAVE ENERGY & MONEY

while ensuring the integrity of your data center.



Opportunity and Benefits

Reliability, performance, and security within your facility are top priorities, but you can also save energy and money while ensuring the integrity of your data center. Energy efficiency can help you decrease your energy consumption (kWh/sq ft) and improve your Power Usage Effectiveness (PUE). Many existing data centers can reduce their energy use by 25% - 40% without compromising the integrity of the data housed within their facilities. Efficiency gains can also have a dramatic impact on a company's carbon footprint.

IT real estate is at a premium, and physical expansion may not be feasible or economic. For many data centers, available floor space and cooling capacity are rapidly being exhausted by the proliferation of new servers. In other instances, servers have been consolidated but the data center has not been optimized. In either case, there are potential energy savings opportunities. The Mass Save program offers technical assistance to reduce energy usage in both new and existing facilities ranging from simple server rooms to the largest Tier 4 enterprise data centers.

Incentives and Financing

Financial incentives and financing can help make your energy efficiency projects a reality so that you can start saving energy and money. Our energy specialists can help you navigate through this process.

Training

Maximize the impact of your investment dollars through the Mass Save program by offering your staff training to learn about the latest equipment and best practices available for energy efficiency. Your staff can then apply the lessons learned to the everyday operation of your data center for optimal productivity and efficiency.

ABOUT MASS SAVE

Mass Save® is an initiative sponsored by Massachusetts' gas and electric utilities and energy efficiency service provider, including Berkshire Gas, Cape Light Compact, Columbia Gas of Massachusetts, National Grid, New England Gas Company, NSTAR, Unitil, and Western Massachusetts Electric Company.

The Sponsors of Mass Save work closely with the Massachusetts Department of Energy Resources to provide a wide range of services, incentives, trainings, and information promoting energy efficiency that help residents and businesses manage energy use and related costs.

Start saving now!

Get started on improving your data center performance today. Visit us online at MassSave.com Some restrictions may apply.



Here is a list of some energy efficiency measures you can implement at your data center:

1 Improve Airflow Distribution and Management:

- Better hot aisle/cold aisle containment
- VFD motors on fans
- Optimized HVAC controls
- In-row cooling

2 Install Advanced Power Distribution and Servers:

- UPS
- PDUs with transformers
- Servers
- Server consolidation

3 Deploy Efficient HVAC Equipment:

- Variable frequency drive fans
- Greater utilization of free cooling
- Humidification equipment and control
- Chillers

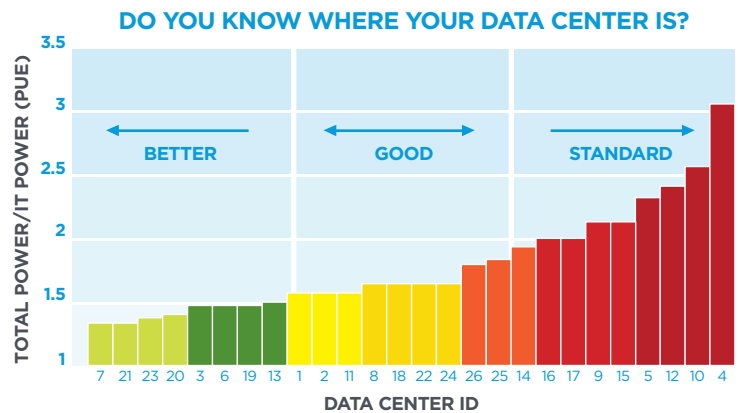
4 Utilize Efficient Lighting Controls:

- Efficient lamps, ballasts and fixtures
- Occupancy based lighting controls

WHAT IS PUE AND HOW WILL IT HELP ME?

Power Usage Effectiveness (PUE) is an energy use metric that compares the total energy used by your data center to the energy used for the data center's core functions of data storage and transmission. The best possible PUE value that can be achieved is 1.0 which occurs when all the energy used by your data center is consumed to manage the stored data only.

Each energy efficiency measure implemented at your data center can lower and improve your center's PUE score and yield greater energy and dollar savings.



Source: LBNL, <http://hightech.lbl.gov/benchmarking-guides/data-a1.html>

Brought to you by:

