

# IMPROVING DATA CENTER EFFICIENCY

## Green data centers give true savings—\$3.8 billion dollar opportunity.

Data centers are one of the largest and fastest-growing consumers of electricity around the world. If just half of the recommended energy efficiency best practices were adopted, it could slash energy consumption by 40%, reduce greenhouse gas emissions—and save \$3.8B every year.

# 50



power plants

By 2020, the estimated energy needed to power data centers will equal the output of 50 500-megawatt power plants.<sup>1</sup>

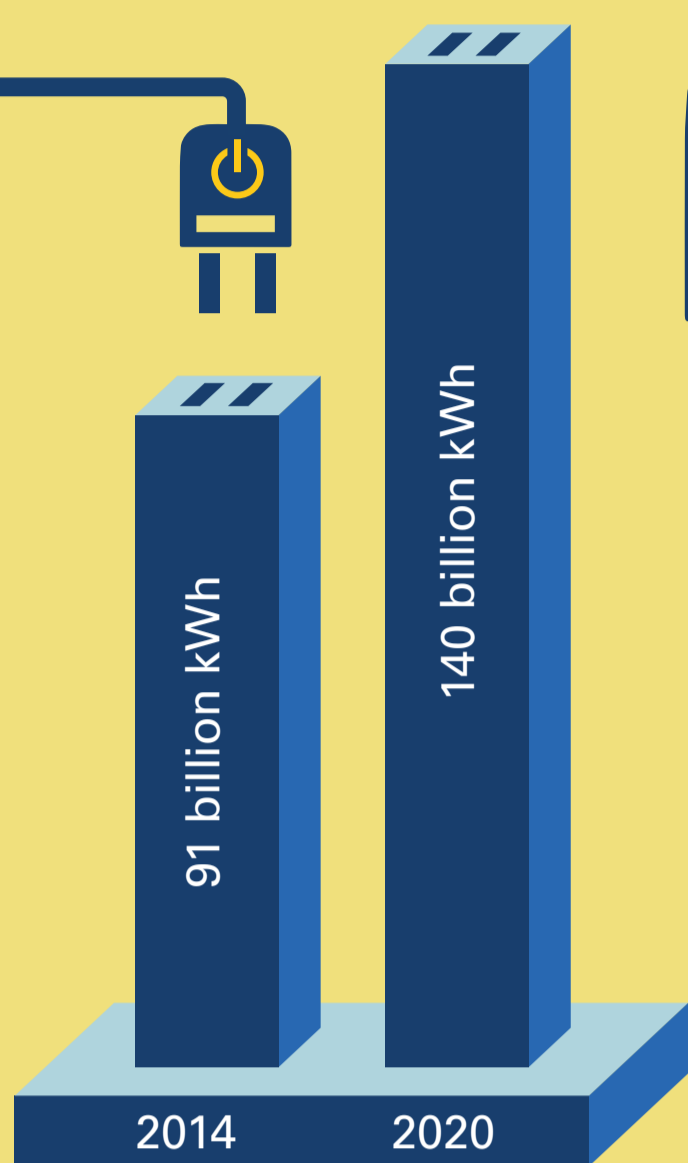
### Power consumption

In 2014, U.S. data centers consumed **91 billion kWh** of power.<sup>2</sup> By 2020, this is expected to increase to **140 billion kWh**.<sup>1</sup>

# 117

million tons

Powering these data centers will generate more than 117 million metric tons of greenhouse gas emissions.<sup>3</sup>



## Unlocking incentives for more efficient data centers

Utility providers, as well as federal and state governments, offer a wide range of incentives to encourage energy efficient data center projects, from new construction to redesigns improving power utilization effectiveness (PUE).

### ENERGY STAR



The ENERGY STAR program certifies energy efficient products that help drive a reduction in power consumption. Today ENERGY STAR is working to assess and recognize top-performing data centers that have achieved superior energy efficiency performance. Data centers can seek the ENERGY STAR stamp of approval by actively working to improve PUE.

Learn more about the ENERGY STAR program.

### LEED program



The Leadership in Energy & Environmental Design (LEED) is a building certification program that provides guidance for achieving energy efficiency in building projects. LEED categories have been specifically designed to support the certification of data centers by encouraging the use of higher efficiency IT equipment for new construction and existing operations.

Learn more about LEED certification.

### Prescriptive incentives



There are countless incentive programs available through energy providers around the world that promote and encourage energy efficiency. These prescriptive programs allow data centers to receive a monetary return for activities that meet highly specific parameters (e.g. purchasing designated equipment for a specific use). The programs are typically well defined and easy to use.

Talk to your utility provider.

### Custom incentives



These programs allow businesses to develop an action plan specific to their unique circumstances and then present a project proposal to the utility. This might include installing ENERGY STAR equipment, changing IT equipment to lower PUE or changing operations to improve efficiency and reduce waste.

Talk to your utility provider.

### Local incentives



Some data center operators may be able to take advantage of energy incentives related to things like alternative fuels and advanced vehicles. While not specifically targeted to data centers, the U.S. Department of Energy has a state-by-state breakdown of laws and incentives currently in place.

Visit the DOE listings.



## How to get started

Talk to your utility provider about how energy efficiency programs can help you capture your share of these incentives. And find out how Eaton partners with data center operators from design through build and support to drive efficiency and safeguard applications at [Eaton.com/datacenter](http://Eaton.com/datacenter).

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