

# THE A/C BILL IS ANYTHING BUT COOL

Heat is a server killer. To battle high temps, IT pros often rely on CRAC and HVAC units. And sure, A/C keeps the room cool—but it comes at a steep financial cost.

## The cold truth about electricity costs

**\$29B**  
Air conditioning costs about \$29 billion annually.<sup>1</sup>



**10.28 cents**  
The average cost per kilowatt hour in the U.S.<sup>2</sup>

**6% of electricity**  
A/C accounts for 6% of all electricity consumed.<sup>2</sup>

**Up to 5%**  
Needless cooling of data centers raises energy costs up to 5% per degree.

**29% increase**  
Electricity demand will grow 29% through 2040.<sup>4</sup>



## Costs are never constant

Electricity prices change seasonally, monthly, daily and even minute-by-minute. While we can never precisely know why prices rise and fall, these factors combine to influence the cost of electricity:<sup>5</sup>



**Facilities**

Power plants have distinct construction, maintenance and operating costs. Plants generally use electricity generators with relatively high fuel costs during periods of increased demand.



**Fuel**

Fuel costs vary depending on per-unit cost, such as dollars spent per ton of coal or thousand cubic feet for natural gas.



**Transmission & distribution system**

Varied delivery systems have maintenance costs including general maintenance, and repairs from accidents and extreme weather.



**Weather conditions**

Extreme temperatures can increase the demand for electricity, especially for cooling, and demand drives prices up.



**Regulations**

In some states, public service and utility commissions fully regulate prices, while other states have a combination of unregulated prices (for generators) and regulated prices (for transmission and distribution).

## Costs fluctuate by use and state

Average U.S. costs by sector, per kWh<sup>6</sup>

**12.55¢**  
Residential

**10.37¢**  
Commercial

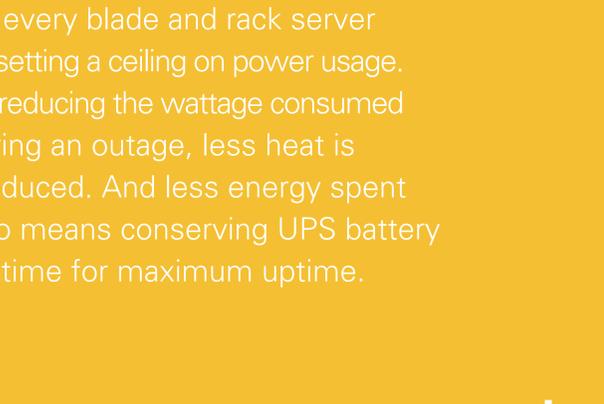
**6.75¢**  
Industrial

**9.48¢**  
Transportation



### Top 10 most expensive states<sup>7</sup>

Electricity cost (cents per kilowatt hour)

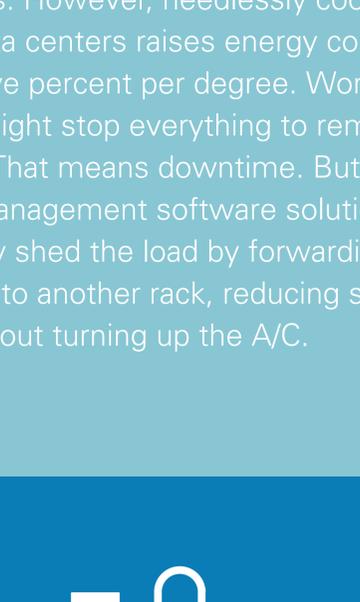


## How to get the electric bill to chill

No matter where you are or the time of year, server cooling is constant. Fight the electric bill battle with **power management software** and get unprecedented control over heat. Together with your existing automation platform, the software can help you monitor rack environmental conditions and reduce your dependence on costly A/C.

## Power capping

Set power consumption limits for every blade and rack server by setting a ceiling on power usage. By reducing the wattage consumed during an outage, less heat is produced. And less energy spent also means conserving UPS battery runtime for maximum uptime.



A power outage occurs.

- 1
- 2
- 3



The software recognizes the outage.

- 1
- 2
- 3



Power consumption is capped, reducing heat output and extending uptime without virtual machine shut down.

- 1
- 2
- 3

## Shed the load

IT pros turn up CRAC units when a rack overheats. However, needlessly cooling entire data centers raises energy costs by four to five percent per degree. Worse still, IT pros might stop everything to remove servers. That means downtime. But a power management software solution lets you easily shed the load by forwarding the compute to another rack, reducing server heat without turning up the A/C.



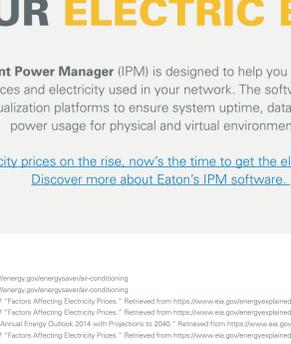
The software sends a notification: a server is running hot

- 1
- 2
- 3



The IT pro pinpoints the hot server.

- 1
- 2
- 3



The compute is moved to another virtual server, reducing heat without adding A/C.

- 1
- 2
- 3

# READY TO REDUCE YOUR ELECTRIC BILL?

Eaton's **Intelligent Power Manager (IPM)** is designed to help you remotely monitor and manage the devices and electricity used in your network. The software easily integrates with major virtualization platforms to ensure system uptime, data integrity and smart power usage for physical and virtual environments.

[With electricity prices on the rise, now's the time to get the electric bill to chill. Discover more about Eaton's IPM software.](#)

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