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DCC Comments to California Energy Commission - Docket No 25-BSTD-03

Additional submitted attachment is included below.

November 5, 2026

California Energy Commission
Docket Unit, MS-4
Docket No. 25-BSTD-03
715 P Street
Sacramento, CA 95814
Submitted electronically to: docket@energy.ca.gov

RE: Docket Number: 25-BSTD-03 (2028 Energy Code Pre-Rulemaking)

Dear California Energy Commission:

The Data Center Coalition (DCC) appreciates the opportunity to comment on the draft data center provisions for the 2028 Building Energy Efficiency Standards (Energy Code). DCC is the national membership association for the data center industry, and our membership is comprised of leading data center owners and operators, as well as companies that lease large amounts of data center capacity.[1] Data centers provide the digital infrastructure that keeps us connected in our daily lives and supports many sectors of the 21st century innovation economy, including financial services, advanced manufacturing, cybersecurity, healthcare, artificial intelligence, and other key industries.

Data centers aggregate our collective computing demands efficiently and securely. Previously, these types of computing resources were dispersed across businesses, which were far less efficient and secure. By centralizing computing resources, data centers have been able to leverage innovations in design, equipment, and technology to maximize energy efficiency. While electricity consumption at data centers rose just six percent from 2010 to 2018, computing output jumped 550 percent, marking significant gains in efficiency and productivity.[2]

Moreover, data centers are highly incentivized to continue operating as efficiently as possible. According to the U.S. Chamber of Commerce, energy is the largest operating item for data centers, comprising 40-80 percent of total annual expenditures.[3] Apart from meeting sustainability commitments, data center companies strive to maximize energy efficiency to keep costs low for customers and for supporting their own operations.

It is important to recognize that data centers are not simply large consumers of electricity; they also facilitate efficiency gains and energy savings for homes, businesses, industrial consumers, and utilities across the economy. Many technologies and strategies deployed across California —including smart thermostats, smart meters, managed electric vehicle ("EV") charging, smart lighting, and grid enhancing technologies—require the digital infrastructure provided by data centers.

DCC supports an efficiency standard for data centers that delivers real, verifiable energy savings. Our concerns are how the draft reaches that goal. It prescribes specific equipment and designs rather than using a performance metric. Our comments address three issues: the

[1] Public testimony and written comments submitted by DCC do not necessarily reflect the views of each individual DCC member. A list of current DCC members is accessible at https://www.datacentercoalition.org/members.
[2] Lawrence Berkeley National Laboratory, "Recalibrating global data center energy-use estimates," Science Magazine, https://datacenters.lbl.gov/sites/default/files/Masanet_et_al_Science_2020.full.pdf.
[3] U.S. Chamber of Commerce Technology Engagement Center. *Data Centers: Driving Economic Growth in the Digital Economy*. U.S. Chamber of Commerce, https://www.uschamber.com/assets/documents/ctec_datacenterrpt_lowres.pdf.

overall structure of the requirements, the mandatory heat recovery provision in Section 910.1.4, and the uninterruptible power supply (UPS) efficiency floor in Section 910.2.4.

Performance-based compliance pathways maintain flexibility for evolving designs and solutions while still achieving efficiency goals

DCC suggests replacing the draft's prescriptive design requirements with a performance-based approach. Specifically, the Commission should ensure that the existing performance (energy budget) compliance path accurately models data center cooling and power distribution systems and should allow all Section 910 measures to be traded off within that path.

DCC encourages any proposed guidelines or best practices to account for the relationship between energy and water use, and to maintain flexibility as this allows data centers to deploy effective, efficient, and innovative cooling solutions. DCC also encourages guidelines to avoid favoring or prohibiting any specific type of technology, as the development of design and cooling solutions is greatly influenced by local conditions, and continues to evolve as the data center industry and the broader ecosystem of solution providers seek increasingly efficient, effective, and sustainable options. A list of required designs fixes today's technology into a code that will govern facilities for years. It can also have a counterproductive consequence of disincentivizing the development and deployment of more efficient, less resource intensive technologies. A performance pathway avoids those problems.

DCC also encourages the Commission to ground any new data center requirements in measured performance data. Reporting under 2026 Assembly Bill 1577[4] will provide the Commission with California-specific data center energy information, and that data should inform any efficiency requirements before specific designs are mandated.

Standards should consider the energy-water nexus

There is no one-size-fits-all solution for cooling, and the best approach often depends on local factors such as water stress analysis, humidity, climate, temperature, and the availability of water and energy, including recycled, nonpotable, or reclaimed sources. And there is often a trade-off between energy usage and water usage. Cooling choices that lower energy use often raise water use. Evaporative and adiabatic cooling can reduce energy use substantially but consume water. Dry and closed-loop systems conserve water but typically use more energy, especially in hot inland climate zones. A standard tuned only to energy would push operators toward water-intensive cooling in a state where water supply is constrained. DCC recommends that any performance pathway account for climate zone and water use, for example by recognizing low-water cooling designs that carry an energy penalty, so that the Energy Code does not inadvertently drive operators toward water-intensive cooling.

Heat recovery from data centers is largely an untested scenario in the U.S., and requirements could pose challenging compliance burdens with minimal benefits

DCC strongly recommends removing the heat recovery requirement from the list of mandatory measures. It is one of only two provisions in the draft that a project cannot utilize an alternative compliance path, which makes it the most burdensome element of the proposal.

Whether heat recovery is energy efficient and cost effective depends on the site. Data center waste heat is useful only when there is a nearby off taker with steady heating demand, such as a district energy system, an industrial process, or an adjacent building. California has limited

[4] California State Assembly. (2026). AB-1577 Data centers: reporting (2025–2026 Reg. Sess.). California Legislative Information, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202520260AB1577.

district heating infrastructure, and many data center sites have no off taker. In mild climate zones, a facility's own heating load is small. Raising waste heat to a useful temperature typically requires heat pumps, which could also add electric load. A mandatory requirement cannot account for these site conditions.

The UPS efficiency floor should be aligned with real operating load
DCC suggests that the Commission base the UPS efficiency requirement on the load at which UPS equipment actually operates, or to move it to the tradeable performance path. The draft sets a minimum efficiency of 0.970 for UPS units rated above 10 kW, measured as an average across load points. UPS efficiency generally declines at partial load. A metric averaged across rated load points does not reflect how this equipment performs in service, and it may not identify the units that perform best under real operating conditions.

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The data center industry takes its resource use seriously, and the industry is investing in the development and deployment of designs and solutions that maximize efficiency. A performance-based framework, informed by measured data that reflects the energy and water trade-off, would achieve that goal while leaving room for designs that improve over time. DCC appreciates the Commission's consideration of these comments and welcomes continued engagement with staff as the 2028 Energy Code moves toward formal rulemaking.

Respectfully submitted,

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