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Docket Number:	25-BSTD-03
Project Title:	2028 Energy Code Pre-Rulemaking.
TN #:	271515
Document Title:	Merrian Borgeson, NRDC Comments - NRDC Comments on June 23 Workshop and CASE Reports
Description:	N/A
Filer:	System
Organization:	Merrian Borgeson, NRDC
Submitter Role:	Public
Submission Date:	7/17/2026 11:15:43 AM
Docketed Date:	7/17/2026

Comment Received From: Merrian Borgeson, NRDC
Submitted On: 7/17/2026
Docket Number: 25-BSTD-03

NRDC Comments on June 23 Workshop and CASE Reports

Additional submitted attachment is included below.



July 17, 2026

California Energy Commission
Re: Docket No. 25-BSTD-03
715 P Street
Sacramento, CA 95814
docket@energy.ca.gov

Dear Commissioners, CEC Staff, & IOU CASE Team:

The Natural Resources Defense Council (NRDC) submits the following comments on behalf of its members and activists in California who support affordable and equitable decarbonization and clean air policies to help mitigate the climate crisis and advance a sustainable economy. These comments are in response to the Final CASE Reports published in the docket in June 2026 and the information presented during the California Energy Commission's (CEC) June 23rd workshop on solar PV, battery energy storage systems, existing building performance, and alterations for the 2028 Title 24 Building Energy Standards (the "energy code").

The 2028 energy code represents an important opportunity for California to continue to advance the nonresidential energy code to improve energy efficiency, advance building decarbonization, and achieve emissions reductions throughout the state. Establishing a strong 2028 energy code not only will lead to these statewide benefits, but also sends a message on the importance of building codes as a tool for making practical, cost-effective, and reliable advancements in energy efficiency and emissions reductions.

NRDC appreciates the IOU CASE Team's efforts in developing the CASE reports and the CEC team's efforts in developing the additional requirements proposed in the June 23rd workshop. NRDC offers the following specific comments on the measures proposed.

Measures Proposed by the CEC in June 23 Workshop

Expansion of Rooftop Unit Measures – NRDC strongly supports the expansion of the existing requirements for replacement rooftop units (RTUs) that require either a heat pump RTU or gas equivalent to units in retail and restaurants sized between 5.4 and 20 tons. This measure is very impactful given that 54% of commercial floor area is served by RTUs, 79% of RTU installations

are replacements, 78% of those still use gas units, and 40% of the single-zone RTU market in California falls into this tonnage range.[1] Requiring these units to be efficient heat pump or equivalent gas RTUs will lead to significant energy and emissions savings throughout the state, while saving the state a net \$70 million from the first year of installations, as projected by the CEC. In NRDC's perspective, this is the single most important measure of this code cycle.

While we strongly support the CEC's efforts on this measure, we recommend that the CEC work to strengthen the impact of the proposal, by applying the requirements to more climate zones where the CEC's analysis shows heat pump RTUs to be cost-effective. Currently many climate zones are excluded due to lack of an alternative gas pathway. We recommend that the CEC consider whether any of the following options would allow for the development of a gas pathway to support the inclusion of additional climate zones:

- Referencing NEEA's Advanced Performance RTU specification which requires low leakage dampers and enclosure insulation. Based on NEEA's modeling, enclosure insulation alone can save approximately 3% on a gas RTU in San Diego.
- Requiring increased cooling efficiency for gas RTUs. Based on NEEA modeling, this could save an additional 2.5% on a gas RTU in San Diego.
- Making the gas pathway a dual fuel pathway that utilizes the efficiency of a heat pump to allow for the installation of a gas RTU.

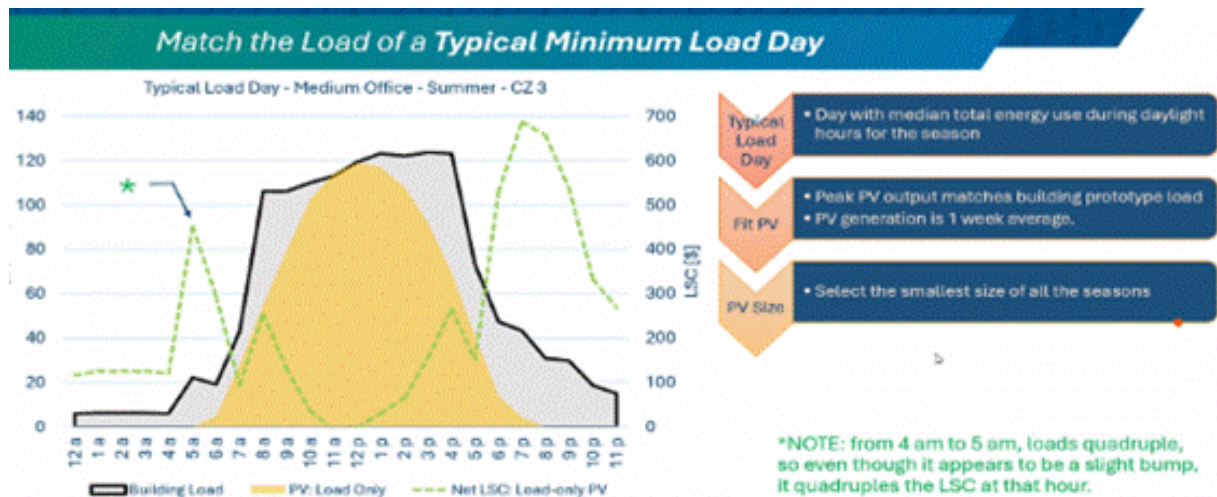
We welcome further discussion on these and other potential opportunities to expand this measure to additional climate zones to strengthen the scope and impact of this measure.

We also note that the CEC is using the electric resistance cooling efficiency requirement as the heat pump cooling efficiency, which is overcounting cooling savings from heat pumps. The appropriate efficiency standard to use for heat pumps is for all other heating section types: an EER of 12.0 and IEER of 13.0.

Overall, NRDC strongly supports this measure and encourages the CEC to expand its impact to more climate zones.

Nonresidential Solar (PV) and Battery Energy Storage Systems (BESS) Requirements –

NRDC is concerned with the PV and BESS requirements as proposed in the June 23rd workshop. Based on the workshop, our understanding is that the intent is to align the required PV and BESS system size with the typical load day for each season, sized for whichever season produces the smallest load, as described in the figure below:



While we are generally supportive of requirements that align the PV and BESS requirements more closely with building loads (as compared to the 2025 requirement which are based on an export target), we are very concerned that as proposed this results in a reduction in PV and BESS system sizes for most building types compared to the 2025 code. Specifically, as shown for the cells highlighted in green below, the proposal would reduce the required PV system size required for a majority of building types and climate zones, reducing energy savings by as much as 111% compared to the requirements of the 2025 code.[2] We are concerned that on the whole these reductions in PV and BESS system sizes would increase energy use, decrease resiliency, and increase emissions compared to what is required by the 2025 code across the state.

Climate Zone	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exhibits & Events	1.49	1.23	1.10	1.39	1.25	1.08	1.38	1.19	1.02	1.76	1.36	1.16	1.48	1.27	1.18	1.07
Library	1.77	1.98	1.91	1.97	1.79	1.93	2.16	2.75	2.35	1.92	1.87	2.21	2.18	2.08	2.25	1.96
Religious Worship	0.72	1.01	0.68	0.78	0.73	0.60	0.82	0.95	0.66	1.10	0.91	0.83	0.62	0.71	1.04	0.62
Sports & Recreation	1.23	1.20	1.10	1.44	0.99	1.67	1.39	1.05	1.73	1.42	1.22	1.15	1.52	0.94	1.21	1.41
Large Office	2.96	2.73	2.66	2.74	2.65	2.99	2.67	2.77	2.65	3.09	2.85	2.76	3.31	2.80	2.96	2.33
Medium Office	3.15	2.76	2.87	3.05	2.85	2.74	3.02	3.60	3.29	3.32	3.01	3.11	3.17	2.87	3.93	3.36
Small Office	4.00	3.22	3.38	3.86	3.56	3.38	3.37	3.70	3.36	3.95	3.57	3.61	3.96	3.47	4.05	4.34
Restaurant	4.60	4.74	5.06	5.55	4.24	4.78	5.68	5.48	5.70	5.72	5.23	4.94	5.11	5.62	6.32	5.70
Large Retail	1.79	1.93	2.05	1.94	1.73	2.06	1.91	2.17	2.07	2.24	2.47	2.03	2.40	2.21	2.70	2.11
Medium Retail	2.28	2.09	2.04	1.93	2.08	2.15	2.07	2.42	2.65	2.35	2.55	3.06	2.33	2.30	2.90	2.11
Strip Mall	3.95	3.58	3.35	3.81	3.75	3.90	3.36	3.70	3.99	4.67	3.79	3.72	3.76	4.29	4.02	4.12
High School	0.72	0.50	0.46	0.79	0.52	0.83	0.60	1.02	1.01	1.20	1.43	0.67	1.45	1.72	2.63	0.54
K - 8 School	0.12	0.46	0.50	0.58	0.50	0.42	0.51	1.02	1.17	1.13	1.38	0.57	1.50	1.74	2.33	0.18
Large School	1.59	1.42	1.36	1.40	1.35	1.59	1.27	1.52	1.33	1.62	1.61	1.60	1.39	1.41	2.02	1.15
Warehouse	1.00	0.85	0.79	0.95	0.90	0.82	0.74	1.02	0.89	0.99	0.91	0.96	1.03	0.92	1.04	0.94
Proposed (2028)	≤ 10%	≤ 30%	≤ 50%	≤ 70%	≤ 90%	>100%<	≥ 110%	≥ 130%	≥ 150%	≥ 170%	≥ 190%	≥ 210%				
Current (2025)																

If the CEC elects to continue with this approach of aligning PV and BESS requirements more closely with loads, we recommend modifying its approach to keep energy savings neutral or positive in comparison to 2025 and to limit building types and climate zones that have drastic changes in requirement. One potential way to do this would be to align with the season the produces the highest typical load day, rather than the smallest.

Measures Proposed by the Final CASE Reports

In general, NRDC supports the energy code changes proposed in the IOU submitted CASE Reports on the docket (with two exceptions as noted below) and urges the CEC to adopt these measures as proposed. In particular, NRDC strongly supports the following measures and offers more detailed comments for consideration:

Swimming Pool and Spa Heating – NRDC strongly supports the proposed expansion of pool heating system requirements to existing indoor and outdoor pools undergoing renovations or improvements (rather than just newly constructed pools) due to its significant gas and emissions reductions. Expanding this measure to existing pools significantly increases its impact and ensures efficient pool and spa heating at all nonresidential pools when they are upgraded. The CASE team has taken in significant stakeholder feedback on this measure and has developed a well-balanced proposal that would allow for six different compliance options including on-site renewable energy, energy recovery, heat pump pool heaters, gas heaters that meet certain efficiency requirements, or another system designated by the CEC Executive Director. These options provide several efficient and feasible pathways for compliance. We strongly urge the CEC to adopt this measure as proposed in the final CASE Report.

Energy Recovery for Traction Elevators – NRDC strongly supports the proposed requirement to require regenerative drives for traction elevators that meet certain size thresholds. As stated in the case report, elevator use can account for 5 to 15 percent of electricity use in new buildings. Regenerative drives are able to reduce direct energy consumption by 25 to 45 percent while also reducing cooling loads. Elevators remain one of the largest untapped energy efficiency opportunities in commercial buildings and we urge the CEC to move forward with the requirements as proposed in the CASE Report.

Process Boilers – NRDC supports the proposed requirement of stake economizers for process steam boilers with capacities of 10 MMBTU/h or greater for both new and replacement boilers. This measure would recover a portion of the heat wasted by these boilers and achieve significant natural gas and emissions reductions statewide.

Healthcare Exceptions – NRDC supports limiting the healthcare facility exceptions for shutoff and reset controls so that certain health care facilities would be required to provide controls for safe airflow turndown to when spaces are unoccupied.

There are two CASE reports where NRDC recommends additional changes before adoption:

Modulating Dedicated Outside Air Systems (DOAS) – While NRDC generally supports the CASE Team’s efforts to improve DOAS efficiency, NRDC has concerns with this measure as indicated by the many stakeholder comments on the docket on this issue. Specifically, NRDC is

concerned that as proposed the measures will increase the costs of a highly efficient HVAC system type that is critical for decarbonization, making it a less viable pathway for new systems. While we understand that some changes to this measure have been made in the most recent CASE report, we recommend that the CEC and CASE Team convene a meeting with engaged stakeholders from the engineering community to ensure that this measure doesn't inhibit the installation of highly efficient DOAS systems through increased costs.

Nonresidential Heat Pump Water Heater (HPWH) Ventilation Clean Up – NRDC generally supports the intent of this language and in particular the removal of ducting configurations that include only an intake or exhaust duct to the outdoors but not both. However, NRDC is concerned with the removal of the louvered wall/door ventilation options, which represent one of the low-cost ventilation methods and are effective at providing ventilation air. We are concerned that removing these ventilation methods will impede the installation of HPWHs in nonresidential buildings. We recommend continuing to allow louvered wall/door ventilation configurations, which have been shown to supply sufficient airflow for HPWHs.

We appreciate the opportunity to submit these comments.

Sincerely,

Merrian Borgeson
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Natural Resources Defense Council (NRDC)

Meg Waltner
Associate Director
Energy 350, on behalf of NRDC

[1] As presented during the CEC's June 23rd workshop.

[2] As shown on slide 25 for religious worship facilities in climate zone 8.