

DOCKETED

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Re: Docket number 17-BSTD-01, 2019 Standards

To: California Energy Commission Title 24 team

Re: Docket number 17-BSTD-01, 2019 Standards

Thank you for the opportunity to comment on the 2019 Title 24 Standards. I have just two recommendations for consideration.

1. Draft Codes Section 110.2.c Thermostatic Controls reads:

"...a clock mechanism that allows the building occupant to program the temperature setpoints for at least four periods within 24 hours."

To accommodate the new default time-of-use (YOU) electricity rates starting in January 2019 at the California Investor Owned Utilities, this should be changed to: "œ...at least 6 periods within 24 hours.â€

Implementing technology standards that do not allow response to the peak TOU rates is a major oversight for grid management and a disservice to California ratepayers. This could be especially important for low-income customers, since many or most high-end thermostats already have more than 4 periods in the schedule, while lower end thermostats universally do not.

Research shows that customers with thermostats scheduled to avoid the TOU peak have 3 times the peak savings of those who donâ€™t.

Following are a few use cases to show in detail why this is important.

USE CASE 1: Old tiered rates, existing standard 4 periods

Letâ€™s say Mr. Jones has an old thermostat with 4 periods and the old Tiered rate. He works during the day. His 4 period thermostat is great.

MORNING: 6 am (comfort)

DAY: 8 am (economy)

EVENING 6 pm (comfort)

NIGHT 10 pm (economy)

USE CASE 2: New TOU rates, existing standard 4 periods - this is where most Californians will be in 6-18 months

Letâ€™s say he works during the day, has an old thermostat with 4 periods, and the new TOU rate with 4-10 pm peak (based on CAISO predicted loads in 2019). His 4 period thermostat is now insufficient.

MORNING: 6 am (comfort)

DAY: 8 am (economy)
PRECOOL: 12 pm (precool)
PEAK TOU: 4 pm (off)
EVENING 7 pm " code does not require this 5th period "
and most thermostats do not have it
NIGHT 10 pm " code does not require this 6th period
and most thermostats do not have it

USE CASE 3: New TOU rates, revised standard 6 periods

Here he works during the day, has a new thermostat with 6 periods, and the new TOU rate with 4-10 pm peak. Now he can easily program to precool and avoid the peak rate. Low bills, happy customer. Peak avoidance, happy utilities and CAISO.

MORNING: 6 am (comfort)
DAY: 8 am (economy)
PRECOOL: 12 pm (precool)
PEAK TOU: 4 pm (off)
EVENING 7 pm " (comfort)
NIGHT 10 pm " (economy)

2. I also suggest introducing new grid-friendly default settings to replace the old Energy Star default settings, which no longer meet the needs of customers and the grid.

Sincerely,

Karen Herter, PhD
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