



**BOSCH**

September 8, 2014

California Energy Commission  
Dockets Office, MS-4  
Re: Docket No. 14-BSTD-01  
1516 Ninth Street  
Sacramento, CA 95814-5512

Re: 2016 Building Standards Update; 14-BSTD-01 Comments for July 21,  
2014 Staff Workshop

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California Energy Commission

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**TN 73753**

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To Whom It May Concern,

On behalf of Bosch Thermotechnology, I respectfully submit the following comments concerning the proposed updates to California's Building Energy Efficiency Standards (Title 24), presented during the pre-rulemaking workshops during the summer of 2014.

Bosch Thermotechnology manufactures Bosch tankless, point-of-use and heat pump electric water heaters, solar thermal systems, Bosch and Buderus floor-standing and wall-hung boilers, Bosch and FHP geothermal systems, as well as controls and accessories for every product line.

We commend the California Energy Commission (CEC) for its efforts to promote and increase energy efficiency in buildings in general. As others have pointed out, the Title 24 Building Energy Standards assure that all new buildings and renovations meet minimum levels of efficiency, provide cost-effective solutions for consumers, reduce energy demand and cut greenhouse gas emissions. Bosch strongly supports these causes.

#### Residential Instantaneous Water Heaters (IWH)

Bosch agrees that IWHs are typically more energy efficient than storage water heaters, and believes with increased usage of IWHs, California could realize significant energy savings.

In addition, it has been our experience as a manufacturer that IWHs are cost effective and perform well across different climate zones and geographical regions.



Moreover, the cost of IWHs, as compared to other water heating products, is not significant. And as the CASE Report (July 2014) demonstrates, this minor cost differential is made up for by the IWH's longer lifespan and lower utility costs.

Concerning the CASE Team's assumptions regarding a single family home's daily hot water demand, Bosch agrees with the Davis Energy Group's assumption that 56.5 gallons per day is a more accurate depiction of actual hot water use in an average single family home in California, versus the Title 24 Residential Alternative Calculation Method Reference Manual, which assumes the same sized home uses 38.4 gallons per day.

And finally, Bosch would like to provide clarity to the CEC concerning the topic of derating for tankless products. Third party field efficiency studies (i.e. Minnesota Center for Energy Efficiency) have concluded significant savings—up to 37% of water heating energy per household. This savings was realized by replacing a typical natural draft storage water heater with a tankless water heater.

According to the Minnesota Center for Energy Efficiency, tankless water heaters saved energy and provided homeowners with acceptable hot water service at a reduced monthly cost, all without increasing total hot water consumption.

Thank you for the opportunity to submit comments on these important topics. Please feel free to contact us if you have any follow up questions or concerns. We look forward to reviewing the revised version of the report in fall 2014.

Yours sincerely,

Goncalo Costa  
Manager of Product Management  
Bosch Thermotechnology Corporation