Maziar Shirakh High Performance Buildings Office California Energy Commission Sacramento, California 95814



June 8, 2015

Subject: Docket Number Re: 15-DSTD-01- 2016 15-day Draft Building Energy Efficiency Standards

Dear Maziar Shirakh:

I wish to submit the following comments on the 2016 15-day Draft Building Energy Efficiency Standards posted on May 26, 2015.

Compliance is one of the biggest obstacles in meeting energy savings and greenhouse gas emission reductions for the state. The proposal will incentivize compliance by simplifying the requirements for ducts in attic space, lighting and water heating residential:

1. Building Design for Attics:

Current standards allow for most of the heating and ventilation and air conditioning or HVAC ducting to be placed in the uninsulated attic space. This design cuts back on the potential energy savings in a home due to the extreme temperature fluctuations in the attic space.

The proposed standards will improve efficiency by allowing for the choice between the higher performance attics, where the attic is insulated much like any other room in the home, and placing ducts in conditioned space, meaning any space in the home that is properly insulated--usually below the attic and above the basement. Providing builders and contractors choice provides flexibility and increases compliance. Greater compliance means greater savings and will bring us one step closer to reaching our zero net energy goals.

2.Lighting:

Current standards identify certain types of lighting as high efficacy lighting and require that a specific amount of lighting be high efficacy lighting.

The proposed changes to the standards will require that all lighting in newly constructed residential buildings be high efficacy lighting. This simplifies compliance by eliminating the need to calculate how to meet the percentage requirement for high efficacy lighting in the current standards and puts an end to the use of low efficacy lighting in the home.

The proposed standards should align CRI requirements in Title 24 that is proposed in the Title 20 standards for lighting. Increasing the CRI value 84 improves efficacy with little impact to cost. In

The changes to residential lighting standards are estimated to have the largest projected energy savings of all the residential building efficiency standard changes, which is estimated as having the potential of reducing the home's annual lighting energy use by an average greater than 50%.

3.Water Heating:

The proposed standards for water heating provides the option of installing gas instantaneous water heater or a gas storage water heater with either a compact hot water distribution system or Home Energy Rates System (HERS) verified piping insulation on all hot water piping in the home as a part of the prescriptive path. This is important for ensuring compliance and and achieving greater efficiency.

The proposed standards could be more beneficial to the state if these installations were a part of the mandatory requirements for new residential construction. As a requirement, these installations would result in less water down the drain while flow heats up and less energy used to heat the water in the plumbing infrastructure of the home. In a state experiencing an unprecedented drought, this is significant.

Additionally it is particularly important to the state that we continue to transition from natural gas on all fronts, including in the home (demand-side). Reductions in the demand for natural gas reduces the need for extraction and infrastructure investment; it results in the reduction of greenhouse gas emissions and improves air quality. The proposed standards should include electric or solar powered water heater options in the prescriptive path as well. Technology is available on the market that is cost-effective and will result in reductions in demand for natural gas, greenhouse gas emissions and improve air quality. Additionally, more options for installation provide more pathways to meet the ultimate goal of ZNE.

Since the building efficiency program's inception, the state has enjoyed substantial energy and monetary savings and a significant reduction in greenhouse gas emissions. Addressing consumer satisfaction and providing choice for energy savings in the home is sure to incentivize compliance with residential building standards and lead to observable energy savings and therefore even greater greenhouse gas emission reductions.

Thank you for the opportunity to provide comments.

Sincerely,

Ruhad C. Defolie

Rick DeGolia Mayor, Town of Atherton 84 Clay Drive Atherton, CA 94027