ENSOLTIS
Green Hybrid Roofing

October 31, 2014

California Energy Commission
Dockets Office, MS-4
1516 Ninth Street
Sacramento CA 95814-5512
Attn: Mazi Shirakh

RE: Docket No. 14-BSTD-01
2016 California Title 24 Update Process—High Performance Attics and Insulated Roofing Tile
Emailed to: [docket@energy.ca.gov]

To Whom it May Concern,

Ensoltis Green Hybrid Roofing, Inc. is a California manufacturer of a patented insulating roofing tile system, a product which we feel can play a large role in achieving the State's objective of improving the thermal performance of attics in residential buildings. We are encouraged that the Commission has chosen to address the substantial inefficiencies of attic and duct systems as part of the 2016 update to Title 24 Standards, and we appreciate the opportunity to contribute to the update process.

Our product reduces summer attic temperatures and radiant heat gains by creating a thermal barrier at the outermost layer of the building envelope. In contrast to above-or-below-roof-deck insulation systems that attempt to block heat already absorbed by roofing materials, the low density and high specific heat capacity of our product means that much of the sun's energy is never absorbed. This not only reduces cooling system demands of the home where it is installed, but also mitigates the urban heat island effect caused by paved surfaces and rooftops made of dense materials that readily absorb heat. And unlike many highly reflective "cool roof" products, the appearance of our product is virtually identical to traditional roofing products, which increases the market viability of this solution.

Making the transition from the traditional concrete and clay roofing tile used in the majority of California's new construction to Green Hybrid Roofing tile requires little or no additional training or changes to subcontractor scheduling. In fact, the light weight and resistance to breakage makes installation quicker and easier than tile, and the insulating properties of Green Hybrid Roofing may eliminate the need to use additional roof deck insulation, speeding up the overall construction timeline and reducing builder costs.

By achieving the attic temperature reductions without creating the need for an additional system or layer of insulation, Green Hybrid Roofing has the potential to help achieve the

State's energy objectives without creating an undue cost, training, and time burden on California builders. By controlling builder cost, housing can be made more affordable to California consumers, and since all of our products are manufactured in our southern Central Valley facility, expanding the use of Green Hybrid Roofing can help bring jobs to an area of California still struggling to recover from the effects of the Great Recession.

Although our system was not evaluated alongside the various other options for High Performance Attics explored by the Codes and Standards Enhancement (CASE) team, we ask that the Commission consider including it as a compliance option within the 2016 Standards. For the reasons expressed above, we consider Green Hybrid Roofing a viable alternative to roof deck insulation systems, and one that is less disruptive of current building practices than any of the other proposed solutions.

However, in order to make insulated roofing tiles a viable option for Title 24 compliance under the current code, and to allow for evaluation of the system as an option for inclusion in the 2016 Standards, it is important that the energy impacts can be modeled in CBECC-res. At this time, CBECC does not provide a roofing material option with the properties of our product. We look forward to working with CEC staff to overcome this limitation of the compliance software, thereby offering a market-ready, cost-effective means for builders to create High Performance Attics in California homes.

Sincerely,

Lawrence Penner
Vice President of Product Certification
Green Hybrid Roofing, Inc.