



AB 2460 (Irwin) California Solar Initiative Thermal Program: Extension and Low-income Residential Housing

SUMMARY

The California Solar Initiative (CSI) Thermal program provides rebates to customers to install solar water and air heating systems on their homes and businesses, reducing our state's natural gas use and greenhouse gas emissions. AB2460 extends CSI Thermal program funding for five years to 2022 and targets significant resources for solar thermal on low-income housing and buildings in disadvantaged communities, and for industrial applications like food processing.

BACKGROUND

Solar thermal technologies capture heat energy from the sun and use it to heat water and air for homes, businesses and industrial uses. A solar water heating system works in concert with existing water heaters, essentially pre-heating the water for use, and creating a seamless experience for the consumer. In addition, they reduce natural gas or electricity use, help consumers save money on utility bills, reduce greenhouse gas emissions, and support California manufacturing and installation jobs.

The potential for solar thermal technologies to reduce California's greenhouse gas emissions is great. California homes and businesses use 2.5 billion therms of natural gas annually to heat water, according to the California Air Resources Board, which is comparable to roughly 3% of total statewide greenhouse gas emissions and roughly equal to the total storage capacity of natural gas in the state. The California Energy Commission estimates that 42% of residential natural gas usage is for water heating. Solar thermal can reduce a significant portion of this natural gas use—up to 50 to 80% for an average residential solar water heating system. A recent analysis by the National

Renewable Energy Lab found that solar water heating systems are the best available technology for reducing greenhouse gas emissions from heating water. The potential is large for industries, commercial buildings and multi-family housing as well. Indeed, when analyzing cost-effective energy saving measures, the EPA-convened California Home Energy Retrofit Coordinating Committee stated "the single largest and most consistent opportunity in multifamily housing is reducing the energy consumed to heat domestic water."¹

In 2007, AB1470 (Huffman) created the CSI Thermal rebate program. However, rebates were not available until 2010, and once natural gas prices plummeted, the CPUC was reticent to make the necessary adjustments to the program. Effective rebate levels were finally put in place in May 2015. Since then, program activity has increased, with some of the greatest growth within the affordable housing sector. To date, the CSI Thermal program has saved 4.5 million annual therms since 2010, the equivalent of nearly 40,000 residential installations, and reduced over 24,000 metric tons of annual CO₂ emissions—the equivalent of taking over 5,000 cars off the road.

These are real savings, but just a fraction of what the program can accomplish if the state continues its support. Now that the program is finally working as originally intended, the state should extend it for a long enough period of time for the industry to invest in growth. In so doing, the state will be supporting manufacturing and installation jobs, and helping lower energy bills, especially for low-income households.

¹ "Improving California's Multifamily Buildings: Opportunities and Recommendations for Green Retrofit & Rehab Programs," California Home Energy Retrofit Coordinating Committee, 2011, p 20.



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NEED FOR THE BILL

Solar thermal is a proven technology to significantly reduce natural gas use for heating water and air in homes, businesses, and industrial uses. Especially in the context of the Aliso Canyon natural gas leak, solar thermal is about helping move the state off of its heavy reliance on natural gas, meeting our climate change goals while also helping protect residents. As part of our state's programs that target the reduction of our overall use of natural gas, the recently revamped CSI-Thermal program should be continued to build off its growing success.

Importantly, low-income residents should be a central focus of the state's growing solar water heating market. Low-income residents spend proportionately more of their income on energy, meaning the rebates will go further to help those households. Demand for solar thermal in low-income multifamily housing buildings is high, accounting for nearly half of the applications in 2015. In fact, funding for low-income customers was recently exhausted in December and was replenished out of funds dedicated to market rate housing, but will likely be exhausted again—there is an urgency for renewing resources for low-income residential installations. The CSI Thermal Program Administrators recently stated “low-income projects are crucial to maximizing the CSI-Thermal Program’s effectiveness.”²

AB2460 will extend CSI Thermal program funding for five years to 2022, and target 50% of the authorized funding for solar thermal on low-income housing and buildings in disadvantaged

communities. The bill will also ensure that the maximum rebate cap works for industrial customers, including targeting 10% of resources to this sector, enabling solar thermal systems for the largest users of natural gas. The bill will also improve the effectiveness of the incentives by directing the CPUC to review the incentive levels every two years to adjust for natural gas price fluctuations.

SUPPORT

California Solar Energy Industries Association (CALSEIA)

(Sponsor)

ACR Solar International Corp.

All Valley Solar, Inc.

Ameco Solar, Inc.

Aztec Solar, Inc.

Brightline Defense Project

California Solar Thermal, Inc.

Center for Sustainable Energy

Coalition for Clean Air

Environment California

Environmental Defense Fund

Environmental Solar Design

FAFCO, Inc.

Greenlining Institute

Heliodyne, Inc.

International Association of Plumbing and Mechanical Officials (IAPMO)

Mercy Housing

Promise Energy

Sierra Club California

Solar Forward

SolarCraft

Sol-Tek Industries, Inc.

SunChiller

SunEarth, Inc.

Sun Light & Power

South Bay Los Angeles 350 Climate Action Group

Suntrek

SunUp Solar Systems, Inc.

SunVapor

UMA Solar

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² The CSI-Thermal Program Administrators are Pacific Gas and Electric Company (PG&E), Center for Sustainable Energy (CSE), and Southern California Gas Company (SoCalGas). Advice Letter sent to CPUC on Feb 26, 2016.