

# Solar Water Heating in California



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## SWH and the CPUC

- Significant barriers exist to growth to growth in the SWH market
- CPUC is seeking to address these barriers and identify pathways to support SWH. There are currently three programs within which SWH is, or may be considered:
  - California Solar Initiative
    - CCSE Pilot Program and potential as part of non-PV technologies
  - Energy Efficiency Programs
    - SWH is included within the each of the three IOUs EE portfolios, but rebates cannot be offered unless SWH is demonstrated to be cost-effective
  - AB 1470
    - In fall 2007, California Legislature gave CPUC regulatory authority to create a \$250 million statewide incentive program for SWH



## SWH and California Solar Initiative

- CCSE SWH Pilot Program
  - Currently incentives are being offered through the Solar Water Heating Pilot Program being administered by CCSE
  - Pilot Program is being closely monitored by CPUC and is expected to provide important data that will bridge the information gap that is currently a significant limiting factor
- Non-PV Program
  - CSI has a non-PV electricity displacing component which currently does not include SWH as an eligible technology (see D.06-01-024 which states that SWH must be considered only within the Pilot), but the CPUC will assess the results of the Pilot Program and re-consider whether SWH should be eligible (D.06-01-024)
- Any future incentives for SWH within the CSI Program will be limited to systems that displace electric water heaters



## SWH and Ca. Energy Efficiency Programs

- SWH was an approved EE measure in the IOUs 2006-2008 EE portfolios,
  - To be eligible for Ca. Utility EE programs, SWH must also be cost-effective on a stand alone basis
  - With no clear data that demonstrates whether SWH is cost effective, the Ca. Utilities have not included SWH in any EE programs
- SWH being considered for inclusion 2009-2011 EE Programs
  - Cost effectiveness concerns linger
  - Evaluation results of CCSE Pilot Program may be used for future EE planning
- SWH being considered as part of Zero Net Energy Homes strategic planning

## AB 1470 -- Overview

- AB 1470 -- Solar Water Heating and Efficiency Act of 2007
  - Passed into law in fall 2007
  - Gives CPUC jurisdiction to create a stand-alone incentive program for gas-displacing solar water heating technologies
    - May include water heating, space heating, or other methods for capturing energy from the sun to reduce natural gas consumption
  - Goal to support the installation of 200,000 SWH systems by 2017
  - Funding not to exceed \$250 million over the course of 10 years
  - CPUC must first assess the results of the SWH Pilot Program, and determine whether an incentive program for SWH is cost effective and in the ratepayers interest



## AB 1470 -- Program Goals and Design Requirements

- SWH must offset gas-fired water heating systems (goal of 200,000 installs by 2017)
- Program offered to ratepayers of gas corporations
- Program designed to coordinate with the Energy Commission's NSHP to achieve goals of ZNE homes
- Includes 10% set aside for the installation of solar water heating systems for specified low income residential housing
- Incentive structure be designed to decline over time

## AB 1470 -- Eligibility Requirements

- AB 1470 includes specific system and equipment eligibility requirements:
  - Residential systems must achieve SRCC OG-300 certification and multi-family or commercial certification must achieve SRCC OG-100 certification
  - All eligible equipment must be new and unused and have not been previously placed in service
  - SWH collectors have a warranty of 10 years
  - SWH system hosts be connected to gas utility distribution system in Ca.
  - SWH of 30 kWth must have metering or measuring devices that monitor energy generated or displaced, while smaller systems may be required (based upon Commission program design and implementation) to have meters
  - SWH system incentives be bundled with appropriate energy efficiency improvements
    - Any energy efficiency requirements will be developed by the Commission in consultation with the Energy Commission and stakeholders



## AB 1470 -- Next Steps

- First step that CPUC must take is to evaluate the results of the SWH Pilot and hold public hearings to assess the cost-effectiveness and public benefit of SWH
  - CPUC awaiting the interim Pilot evaluation report to begin an internal assessment of what next steps need to be taken to begin to consider AB 1470
  - CPUC has included AB 1470 within its 08-03-008 rulemaking, which means that all matters relating to AB 1470, so interested parties should request party status to stay abreast of progress