

**DOCKETED**

<b>Docket Number:</b>	17-EBP-01
<b>Project Title:</b>	Improving Energy Compliance of Central Air-Conditioning and Heat Pump Systems
<b>TN #:</b>	224436
<b>Document Title:</b>	Paul ThomasSDG&E and SEMPRA Aug 3 Workshop slides
<b>Description:</b>	N/A
<b>Filer:</b>	Judy Roberson
<b>Organization:</b>	SDG&E and SEMPRA
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	8/7/2018 10:14:55 AM
<b>Docketed Date:</b>	8/7/2018

## HVAC Energy Efficiency

Program Background



## CA Energy Efficiency Strategic Plan



More than a decade ago the CPUC outlined the following “Big Bold Energy Efficiency Strategy” in it’s Long Term Energy Efficiency Strategic Plan:

*“Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California’s climate”*



CA | Energy Efficiency Strategic Plan

## HVAC Energy Efficiency Strategy



Expanding upon that, in Section 6.1, the following vision is stated:

*‘The residential and small commercial heating, ventilation, and air conditioning (HVAC) industry will be transformed to ensure that technology, equipment, installation, and maintenance are of the highest quality to promote energy efficiency and peak load reduction in California’s climate.’*

## HVAC Strategic Goals



Thus, the following goals were developed:

### 6.3 GOALS

Goal	Goal Results
1. Consistent and effective compliance, enforcement, and verification of HVAC-related building and appliance standards.	➔ HVAC-related permits are obtained for 50% of installations by 2015 and 90+% by 2020.
2. Quality installation and maintenance becomes the industry and market norm.	➔ By 2020 100% of systems are installed to quality standards and optimally maintained throughout their useful life.
3. Whole building design and construction practices fully integrate building performance objectives to reduce cooling and heating loads.	➔ Integrated design and construction practices are standard practice by 2020.
4. New climate-appropriate HVAC technologies (equipment and controls, including system diagnostics) are developed with accelerated market penetration.	➔ At least 15% of equipment shipments are optimized for California’s climate by 2015 and 70% by 2020.

## *HVAC Portfolio Elements*



Overarching HVAC Portfolio Strategic Elements:

- Upstream/Midstream
  - Get efficient equipment into our market
- Quality Installation (QI)
  - Make sure it's installed correctly
- Quality Maintenance (QM)
  - Maintain it to ensure continued efficient performance
- Workforce, Education and Training (WE&T)
  - Directly supports/enables QI/QM

## *Key Impacts*



- **Legislative:** AB758, AB32, SB1414, AB802, AB793, SB350
- **EM&V:** Impact Evaluations – HVAC 1-6
- **Stakeholder Feedback:** WHPA, participating contractors, etc.
- **WE&T:** Continued development of strategy(s)
- **Emerging Technologies**
- **Codes and Standards**