SoCalGas AB 793 Implementation

Coordinating Committee Presentation
AB 793 Overview

» The IOUs have been directed to develop a program no later than January 1, 2017 that provide incentives for customers to acquire energy management technologies. For the following targeted segments:
  - Residential
  - Small and Medium Commercial

» In addition, the IOUs must also develop a plan by September 30, 2016 that would educate these customers about the incentive programs developed.

AB 793 Reference Directives:

717. (a) The commission shall require an electrical or gas corporation to do all of the following:
(1) Develop a program no later than January 1, 2017, within the electrical or gas corporation’s demand-side management programs authorized by the commission, to provide incentives to a residential or small or medium business customer to acquire energy management technology for use in the customer’s home or place of business. The electrical or gas corporation may allow third parties or local governments to apply for incentives on behalf of customers. The electrical or gas corporation shall work with third parties, local governments, and other interested parties in developing the program. The electrical or gas corporation shall establish incentive amounts based on savings estimation and baseline policies adopted by the commission.

717. (a) The commission shall require an electrical or gas corporation to do:
(2) Develop a plan by September 30, 2016, to educate residential customers and small and medium business customers about the incentive program developed pursuant to paragraph (1). The commission may require that the plan be integrated into, or coordinated with, any education campaign required by the commission.
SoCalGas recognizes that SB 350 and AB 793 has amplified the need for new and innovative energy efficiency efforts across California. Senate Bill 350 clearly outlines a plan for the state to aggressively incorporate dramatic reductions in greenhouse gases and transition to resources less dependent on carbon emitting resources.

SoCalGas believes that energy efficiency in its varied range of applications has the ability to meet tasks outlined by these essential state legislative measures. At the same time we see new demands and requirements from customers for more efficient systems and environmentally friendly solutions.

SoCalGas recognizes a paradigm shift is required in the approach to EE programs in order to reach the volume of energy savings contemplated and to meet customer needs. Fulfilling the requirements and meeting customers needs will require innovative approaches, and possibly alterations to existing programs and measures to incorporate more advance technology.
SoCalGas Key Strategies for Increasing the Participation and Deployment of Current EMT Offerings
## Existing AB 793 Offerings

- SoCalGas partnered with SoCal Edison to initiate an AB 793 preliminary offering that would offer incentives for Smart Thermostats.
- In addition, Smart Thermostat Measure amended to the PLA program.

<table>
<thead>
<tr>
<th>Program Name</th>
<th>SCE “Save Power Days” Demand Response</th>
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</thead>
<tbody>
<tr>
<td><strong>Program Description</strong></td>
<td>Downstream incentive program that provides a deemed rebate amount for customers who install a qualifying smart thermostat.</td>
</tr>
</tbody>
</table>
| **Qualifying Products Under SCE “Save Power Days” DR Program** | Nest Learning Thermostat  
WeatherBug  
Energy Hub |
| **Incentive process:** | Co-fund with SCE. SCG provides a portion of the rebate. |
| **Marketing Channels** | Marketing materials are co-branded with SCE, Nest, WeatherBug and Energy Hub. Both utilities co-develop content. Primary marketing done by SCE to SCE customers.  
Additional marketing channels include:  
SCG web site  
Social media: Facebook/Twitter (sponsored ads)  
Possible additional marketing support in-store from product manufacturers is considered |
| **Program Duration** | July 6, 2016 through December 31, 2017 |
New EMT Offerings to be launched by January 1, 2017

» Conducted preliminary secondary research on attitudes toward and adoption of energy management system technologies. Identified:
  - Our customers are connected
  - Our customers trust us with their information
  - Our customers are interested in Energy Management Systems

» Two new programs identified based on an in-depth process analysis:

  - Preliminary Market Research
  - Researched External Offerings/Best Practices
  - In depth evaluation of available products/services

» Proposal Benefits
  - Comprehensive Energy Management solutions
  - Encourages multi-measure
  - Encompasses deeper savings incentives

The goal is to influence our customers to incorporate new innovative Energy Efficiency technologies and to engage customers to manage their energy use.
SoCalGas Residential/Low Income Recommended Offerings
## Proposal

<table>
<thead>
<tr>
<th>Proposal</th>
<th>Whole Building Residential Energy Management Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Market</strong></td>
<td>Single Family Residential and Low Income</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>A multi-measure that requires the home owner to incorporate at the minimum three categories of smart energy management technologies that encourage both electric/gas savings as well as water savings. In addition, they will need to download a mobile/web application that will allow them to track and monitor their usage. This will assist single family residential customers to incorporate energy management technology while also improving their overall energy usage and awareness thus optimizing their energy and water usage.</td>
</tr>
<tr>
<td><strong>Partners</strong></td>
<td>Electric Utilities and Water Districts</td>
</tr>
<tr>
<td><strong>EM&amp;V Plan</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Claimed Savings</strong></td>
<td>Deemed</td>
</tr>
</tbody>
</table>
| **Incentive** | • Direct Install – Low Income  
• Deemed Rebate – Residential |
| **Qualifying Measures** | ELIGIBLE MEASURES: (1 from each category must be chosen + Monitoring app)  
*Energy Monitoring  
Mobile Application or Web Application - TBD |

### Gas

### Water
- Shower feedback (Savings Source: Work Paper 2016)

### Electric
- Smart Thermostat (Savings Source: Work Paper 2016)
- Smart Strips [Savings Source: Work Paper]
SoCalGas Commercial Recommended Offerings

**Small Commercial**
- Smart Thermostat
- Boiler Controller

**Medium Commercial**
- Energy Management System with Key Components
- Smart Thermostat
- Equipment Controllers
## Proposal: Commercial Energy Management Lodging Program (CEMLP)

<table>
<thead>
<tr>
<th>Proposal</th>
<th>Commercial Energy Management Lodging Program (CEMLP)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Market</strong></td>
<td>Hotels and Motels</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>A program that will encourage and assist small and medium commercial customers to incorporate energy management technology while also improving their overall building performance with existing measures and optimizing their energy usage.</td>
</tr>
<tr>
<td><strong>Partners</strong></td>
<td>Electric Utilities</td>
</tr>
<tr>
<td><strong>EM&amp;V Plan</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Claimed Savings</strong></td>
<td>Deemed - Small Commercial (&lt;25k) Metered-Based Approach – Medium Commercial (25k – 50k therms)</td>
</tr>
<tr>
<td><strong>Incentive</strong></td>
<td>Small Commercial</td>
</tr>
<tr>
<td></td>
<td>• Direct Install</td>
</tr>
<tr>
<td></td>
<td>Medium Commercial</td>
</tr>
<tr>
<td></td>
<td>• % Co-Pay – Energy Management System</td>
</tr>
<tr>
<td></td>
<td>• Pay for performance: Audit the building, then use the either EMT or EMS system (control set points) to capture savings and incent the customer after 1 year of post.</td>
</tr>
<tr>
<td><strong>Qualifying Measures</strong></td>
<td>1. Energy Management System (Savings Claim Source: No Work Paper but Ex-Post calculation could be utilized based on monthly normalized metered data)</td>
</tr>
<tr>
<td></td>
<td>2. Smart Thermostat (Savings Claim Source: Work Paper will exist by Jan 2017)</td>
</tr>
<tr>
<td></td>
<td>3. Boiler Controller (Savings Claim Source: Work Paper development in process will be in place Q1 2017)</td>
</tr>
</tbody>
</table>
SoCalGas Future EMT Offerings
planned for launch after January 1, 2017

Home Energy Management Platform Technology Integration (Mobile/Web)

- SCG is also looking into mobile-cloud based technology offerings that will help customers make informed decisions about energy usage powered by behind-the-meter data.
  - **Benefits:** capture additional savings, persistence in savings and engages customer to monitor/manage usage

Three Phased approach in integrating an innovative Energy Management
AB 793 JOINT IOU MARKETING PLAN
 Goals

The overarching goal of the AB 793 local ME&O plan is the following:

• Deliver an optimized, consistent and compelling campaign that focuses on increasing awareness and understanding of the Energy Management System (EMS) technology.

• To foster engagement and encouraging consideration and adoption through an integrated (owned, earned and paid) approach among key target audiences.

 Objectives

Generate Awareness
and customer understanding of EMS technology and its benefits.

Communicate
EMS benefits in a concise and compelling format.

Foster
customer engagement and pique interest.
Target Segments
- Residential
- Low Income
- Small and Medium Commercial

Timeline
- September 2016 – December 2018

Metrics
- EE Measure dependent
- Measure areas such as ease of participation, adoption, influence

Partnerships
- Vendors
- Manufactures
- Retail Networks
- Community Based Organizations
- External EE Stakeholders
SoCalGas Local ME&O Strategies

» Development of a messaging strategy to create an integrated local-level campaign to generate awareness.

» Development of a Grassroots community outreach strategy for residential and SMB business customers to continue familiarity with EMS and portfolio benefits.
  ▪ Collaboration with Community Based Organizations (CBO)

» Optimize tactical communications through an integrated owned, earned and paid media approach.
  ▪ Owned media is when you leverage a channel you create and control.
  ▪ Earned media is when customers, the press and the public share your content, speak about your brand via word of mouth, and otherwise discuss your brand.
Questions
APPENDIX
Vendor and Products

Hardware/Software

- **Automation**
  - Allure Energy |
  - Control4 |
  - Crestron |
  - DMP |
  - GE |
  - HAI |
  - Hitachi |
  - Lutron |
  - Motorola Home |
  - Savant Systems |
  - Tendril |
  - Visternet |
  - Vivint

- **Integrated Utility Solutions**
  - Aclara |
  - Alektrona |
  - C3 Energy |
  - Calico |
  - Converge |
  - Consert |
  - Digi |
  - EcoFactor |
  - Energate |
  - EnergyHub |
  - GE |
  - Greenwave Reality |
  - Hitachi |
  - Honeywell |
  - iControl |
  - Intelen |
  - LG |
  - MyEnergy |
  - Opower |
  - Powerhouse Dynamics |
  - Schneider Electric |
  - Sequentric |
  - Tendril |
  - ThinkEco |
  - Toshiba

- **Customer Software Only**
  - Allure Energy |
  - Blue Line Innovation |
  - Brulitech |
  - Research |
  - Energy Aware |
  - ISA Sensing |
  - PlanetEcosystems |
  - Powerhouse Dynamics |
  - Watt Intelligent Solutions |
  - Wattvision |
  - WattzOn |
  - WeGoWise |
  - Whirlpool |
  - Nest Labs

- **Packaged Hardware & Software Solutions**
  - Blue Line Innovations |
  - Brulitech Research |
  - Clipsal |
  - Control4 |
  - Crestron |
  - Digital Monitoring Products |
  - EcoDog |
  - Insteon |
  - Owl |
  - Panasonic |
  - Smartenit |
  - Visternet

- **Analytics**
  - Bidgely |
  - C3 Energy |
  - EcoFactor |
  - Ecologic Analytics |
  - EnergyHub |
  - Genability |
  - Onzo |
  - Nest Labs |
  - Plotwatt |
  - Tendril |
  - WattzOn

- **Additional Products & Services**
  - Briggs & Stratton |
  - Generac |
  - GE |
  - LG |
  - Panasonic |
  - Whirlpool

- **Integrated Non-Utility Solutions**
  - ADT |
  - Alarm.com |
  - AlertMe |
  - AT&T |
  - Bright House Networks |
  - Comcast |
  - Cox Communications |
  - EcoFactor |
  - GE |
  - iControl |
  - LG |
  - Motorola Home |
  - Passiv Systems |
  - Powerhouse Dynamics |
  - Rogers Communications |
  - SmartThings |
  - Swisscom |
  - myStorm |
  - Time Warner Cable |
  - Tri Cascade |
  - Toshiba |
  - Verizon |
  - Vivint

- **Chip Components**
  - ExeGin |
  - Freescale |
  - Semiconductor |
  - GainSpan |
  - Intel |
  - SI Labs |
  - Sigma Designs |
  - Texas Instruments

- **Communication Equipment**
  - Asoka |
  - Cisco |
  - Greenwave Reality |
  - Texas Instruments

- **PCTs, IHDs, DLC Devices**
  - Allure Energy |
  - Aztech Associate |
  - CEIVA Energy |
  - Digi |
  - Ecobee |
  - Eco-Eye |
  - Emerson |
  - Energate |
  - Energy Aware |
  - Energeno |
  - Green Energy Options |
  - Home Automation |
  - Honeywell |
  - ISA Sensing |
  - Invensys Controls |
  - Lutron |
  - Nest |
  - OpenPeak |
  - Owl |
  - Passiv Systems |
  - Radio Thermostat |
  - Rainforest Automation |
  - Savant Systems |
  - Smartenit |
  - The Energy Detective |
  - ThinkEco

- **Valuable Services**
  - EnergySavvy |
  - Genability |
  - PlanetEcosystems |
  - Simple Energy |
  - SnuggHome |
  - WeGoWise
# Smart Thermostat

<table>
<thead>
<tr>
<th>Qualifying Product</th>
<th>Smart Thermostat</th>
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</thead>
<tbody>
<tr>
<td>Description</td>
<td>Home automation thermostat responsible for controlling a home's heating, and sometimes air conditioning. They allow the user to control the temperature of their home throughout the day using a schedule, such as setting a lower temperature at night</td>
</tr>
</tbody>
</table>
| Qualifying Requirements | • Scheduling and control through web and mobile applications  
• Providing data on energy consumption or HVAC status  
• Automatically installing software updates/upgrades  
• Customer performance reports  
• Occupancy sensor or geo-fencing |
| Market Costs Range  | $100-$225 |
| Available Vendors/Manufacturers | Nest (generations 1-3)  
Ecobee (Smart Si and ecobee3)  
Honeywell Lyric (WINK) |
## Smart Products

<table>
<thead>
<tr>
<th>Qualifying Product(s)</th>
<th>Residential Water Heater Controller</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Add-on or integrated modules provide Wi-Fi connectivity to storage or tankless water heaters. The monitoring systems provide feedback to billing occupants on usage, set point schedules, fault alerts, leak detection, and other information. The controllers can improve efficiency by identifying poor performance and communicating high water consumption or optimizing set point schedules.</td>
</tr>
</tbody>
</table>
| **Qualifying Requirements** | • Must allow remote monitoring and control  
• Have fault detection and diagnostics, including water leakage  
• Ability to set temperature schedules |
| **Market Costs Range** | $50-$60 |
| **Available Vendors/Manufacturers** | Rinnai WiFi Module  
Rheem Econet (Works with Rheem only water heaters; work with WINK Hub) |
# Smart Appliances

| Qualifying Products | Smart Natural Gas Clothes Dryers  
Smart Natural Gas Full Range Stoves |
<table>
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</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>WiFi enabled appliance that offers usage tracking that help customers be smarter about their energy usage; wirelessly delivering the data straight to your computer, phone, or tablet. In addition, these appliances offer advanced troubleshooting guides and self-diagnosis capabilities designed to make even advanced maintenance a breeze for any user.</td>
</tr>
</tbody>
</table>
| **Qualifying Requirements** | • Usage tracking  
• Remote alerts and controls  
• Smart Maintenance feature |
| **Market Costs Range** | Full range stove: $2200-$3500  
Clothes Dryer: $1099 - $1300 |
| **Available Vendors/Manufacturers** | LG  
Samsung  
GE |
# Energy Management Systems

<table>
<thead>
<tr>
<th>Qualifying Product(s)</th>
<th>Small/Medium Business Energy Management System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Customer can schedule, control and monitor your water heating, space heating, cooling, lighting and other energy loads either on-site or remotely through the internet-enabled Web application, through wireless devices or mobile smartphone apps; Typically includes touchscreen module, smart thermostat, wireless module, and web application</td>
</tr>
</tbody>
</table>
| Qualifying Requirements | • Fast and easy installation  
• Short pay back period typically 24 months;  
• Must be scalable and customized to customer needs |
| Market Costs Range   | Small Commercial Building Size- $500 -1,500  
Medium Commercial Building size - $3,700 - $7,500 |
| Available Vendors/Manufacturers | Echobee EMS  
Siemans Echoview EMS  
Dexen Industries |
# Equipment Controllers

<table>
<thead>
<tr>
<th>Qualifying Product(s)</th>
<th>Boiler Controller</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Monitors flow and return and varies the threshold settings and firing cycle in order to achieve genuine energy saving. The return temperature is used to determine when to reduce the boiler setting and when to extend the firing cycle, without affecting comfort levels.</td>
</tr>
</tbody>
</table>
| **Qualifying Requirements** | • Wi-Fi Enabled  
• Communicates with EMS protocols |
| **Market Costs Range** | $200 - $1700 (depending on size of boiler unit and controller complexity) |
| **Available Vendors/Manufacturers** | Honeywell  
TekMar  
Concert |