

# Southern California Edison



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## Implementation Plan

**Residential Direct Install Program**

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## 1. Program Information

### a. Program Identification

Program Name	Residential Direct Install Program
Program ID#	SCE-13-SW-001G

### b. Program Implementer

Program Implementor	Yes	No
SCE Only		
SCE – Statewide Lead		
Other PA – Statewide Lead		
Third Party	x	
Other		

### c. SCE Business Plan Sector

SCE Business Plan Sector	Yes
Residential	x
Commercial	
Industrial	
Agricultural	
Public	
Codes & Standards	
Workforce Education & Training	
Finance	
Other	

### d. Program Type

Program Type	Yes	No
Resource	x	
Non-Resource		x

### e. Intervention Strategies

Primary Intervention Strategy	Yes	No
Upstream		x
Midstream		x
Downstream		x
Direct Install	x	

**f. Projected Program Budget**

Latest available program budget data is on CEDARS. (<https://cedars.sound-data.com/filings/list/>)

**g. Savings Impact**

Latest available program savings data is on CEDARS. (<https://cedars.sound-data.com/filings/list/>)

**h. Program Effectiveness**

Latest available program effectiveness data is on CEDARS. (<https://cedars.sound-data.com/filings/list/>)

## 2. Implementation Plan Narrative

### a. Program Description

*Describe the program, its rationale, and objectives.*

The Residential Direct Install (Res DI) Program provides the direct installation of comprehensive energy efficiency measures to residential customers at no to low-cost. The program is designed to enhance the energy efficiency knowledge and program participation of the residential market segment in an effort to drive them to undertake deeper energy efficiency activities and retrofits.

The program collaborates with gas utilities and water agencies to promote both energy efficiency and water conservation. This approach provides customers with a comprehensive set of measures including water conservation measures such as toilets, low-flow shower heads and faucet aerators, in addition to energy efficient products.

SCE targets specific geographic regions which provides the following benefits:

- Reduces energy use in the areas affected by the Aliso Canyon State of Emergency.
- Reduces energy use in the SONGS affected area, also known as the Preferred Resources Pilot (“PRP”) region.
- Supports the CPUC’s order for water companies to comply with the state Water Resources Control Board’s adopted measures, which are in response to Governor Brown’s April 1, 2015, Executive Order mandating a 25 percent reduction in water use statewide for all urban water users compared with 2013 usage.
- Supports D.15-09-023, which provides a partnership framework between energy investor owned utilities and the water sector to promote water energy nexus programs.
- Potential to advance energy management products in alignment with AB793 legislation.

### b. Program Delivery and Customer Services<sup>1</sup>

*Describe how the energy efficiency (EE) program will deliver savings (upstream, downstream, direct install, etc.), how it will reach customers, and the services and it will provide.*

The program delivers savings through the direct installation of cost-effective energy efficiency measures that provide electric, gas, and water savings. The services required to accomplish these are robust marketing, installation, invoicing, and customer service processes. Marketing is primarily accomplished through direct outreach supported by marketing pieces, utility website information, and word of mouth. Interested customers are scheduled directly from the field or over the phone with an installer within 1 to 5 business days. Installers are equipped with electronic tools that record the installation data and capture a customer signature electronically. Installation data is reported monthly and uploaded into SCE’s CRM system for invoicing and reporting. Participants receive customer

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<sup>1</sup> IP Guidance from D.15-10-028: "Describe how the energy efficiency (EE) program will deliver savings (upstream, downstream, direct install, etc.), how it will reach customers, and the services and [sic] it will provide."

support materials and a refrigerator magnet with the contractor's contact information for additional support, if needed, and/or referrals.

### **c. Program Design and Best Practices**

*Describe how the program overcomes the market barriers in its market sector and/or end use. Describe why the program approach constitutes "best practices" or reflects "lessons learned." Provide references where available.*

In 2013-2014, the Commission approved the implementation of the MIDI Pilot as a sub-program to EUC. The MIDI pilot was designed to coordinate with SCE and SoCalGas' Energy Savings Assistance (ESA) Program and offer a sub-set of ESA measures to income qualified customers. The pilot program experienced very low program enrollment for a variety of reasons which included constrained measure offering, inconsistent concentrations of income eligible customers and/or willingness of customers to provide income documentation. The MIDI pilot provided numerous insights during its implementation, as a result the program was modified a number of times to improve the customer experience and program enrollment. The Residential Direct Install Program incorporates these lessons learned resulting in a scalable, cost effective program that supports several local and state initiatives.

The program's design is simple and effective because the contractor has all the licenses and certifications necessary to leverage all feasible SCE/SoCalGas residential offerings in one visit. Outreach is the core method to engage utility customers in the program. The marketing materials and SCE website add credence to the cause and supplement enrollments through web generated leads and inbound calls. The outreach representatives are cross-trained and certified to offer the SCE ESA program measures and provide the SCE/SoCalGas ESA program enrollment. The contractor installs all feasible SCE/SoCalGas Res DI measures and when applicable all SCE/SoCalGas ESA measures.

### **d. Evaluation, Measurement, and Verification (EM&V):**

"Evaluation is the conduct of any of a wide range of assessment studies and other activities aimed at determining the effects of a program, understanding or documenting program performance, program or program-related markets and market operations, program induced changes in energy efficiency markets, levels of demand or energy savings, or program cost-effectiveness (Li et al. 2012)<sup>2</sup>." According to the *Protocol*<sup>3</sup>, "M&V can be used in process and market effects evaluations as well, when such data are useful for understanding issues such as measure quality and suitability for particular applications, installation practices and quality, baseline equipment efficiency and operation practices, and other issues identified by the process and/or market effects evaluation plan."

**Data Collection:** This includes collection of necessary and accurate data before the implementation, during and post installation periods. These efforts are based on several different data sources including program documentation, on-site data collection, quantity and type of energy-efficiency measures that

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<sup>2</sup> "Evaluation, Measurement, and Verification (EM&V) of Residential Behavior-Based Energy Efficiency Programs: Issues and Recommendations." SEEACTION report. 2012.

<sup>3</sup> "California Energy Efficiency Evaluation Protocols: Technical, Methodological, and Reporting Requirements for Evaluation Professionals". April 2006. Prepared for the CPUC by the TecMarkets Works Team.

installed and operational (i.e., installation verification), on-site surveys, interviews with customers and stakeholders depending on the type and the size of the measures being installed, and other related information.

**Process Evaluation:** This evaluation method describes and assesses program materials and activities<sup>4</sup>. Process evaluation are valuable especially when there is a new program or measure installed, to track the changes during the implementation or installation of a measure(s), in the case of limited program participation, and to understand the cost-effectiveness of the program or measures being implemented. Additionally, according to the EPRI Guidebook (1992), process evaluation “provide a means of improving customer satisfaction and identifying market threats and opportunities” among other benefits. The following paragraph are taken from the California Evaluation Framework (2004) M&V plan, and describes the overall range of activities regarding process evaluation<sup>5</sup>:

- “a. Reviews and tests of records, materials, tools, etc.,
- b. Interviews and discussions with program management and staff, implementing contractors, subcontractors, and field staff,
- c. Interviews and discussions with policy makers, key stakeholders, and market actors,
- d. Interviews, discussions, surveys and/or focus groups with participants and nonparticipants,
- e. Collection and analysis of relevant data available from third-party sources (e.g. equipment vendors),
- f. Field observations, measurements, and examinations, and
- g. Other activities as needed to address researchable issues.”

**Measure Installation Verification:** According to the California Energy Efficiency Evaluation Protocols (2006) “the objectives of measure installation verification are to confirm that the measures were actually installed, the installation meets reasonable quality standards, and the measures are operating correctly and have the potential to generate the predicted savings.” In addition, the *Protocol* also recommends, “monitoring shall be sufficient to capture all operational modes and seasons applicable to measure performance.”

#### **e. Program Performance Metrics**<sup>6</sup>

*Describe the program performance metrics.*

Metric	Current Value	Target Value	Timing	Measurement Method
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<sup>4</sup> “Program managers may want the process evaluation to supplement the program’s quality control or quality assurance components, to confirm the installation practice and/or to conduct program reviews and develop recommendations for improvements (“California Energy Efficiency Protocols” 2006).

<sup>5</sup> For more details on Process Evaluation Roadmap, please see “The California Evaluation Framework” (2004).

<sup>6</sup> IP Guidance from D.15-10-028: “It is in the implementation plans that we want to see at least one metric for each program/strategy/sub-sector/intervention strategy; more than one where appropriate.... Implementation plans will contain metrics, as already discussed. PAs are free to start with a clean slate in developing metrics and associated reporting requirements, but for all programs will continue to provide monthly cost reports, and for resource programs will provide monthly savings data as well.”

First year gas, electric, and demand savings	Gross and Net	Gross and Net	Annual and lifecycle	Ex-ante (pre-evaluation)
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#### **f. Quantitative Program Targets**

*Provide estimated quantitative information on the number of projects, companies, non-incentive customer services and/or incentives that the program aims to deliver and/or complete annually. Provide references where available.*

The targeted number of projects in 2019 is 20,000 single-family homes treated.

#### **g. Pilots**

*Please describe any pilot projects that are part of this program and explain what makes them innovative. The inclusion of this description should not replace the Ideation Process requirements currently agreed upon by the California Public Utilities Commission (CPUC or "Commission") staff and Investor Owned Utilities (IOUs). The Ideation Process is still undergoing refinements and will be further discussed as part of Phase III of this proceeding.*

Since 2016, the Res DI program has been providing a true water energy nexus solution by partnering with not only SoCalGas but also local water agencies. In 2016, Irvine Ranch Water District (IRWD), in partnership with SCE and SoCalGas, contributed grant dollars in an effort to install 0.8 GPF high efficiency toilets throughout their service territory in conjunction with the installation of Res DI measures. The partnership proved to be successful, and as a result, IRWD recently launched the “Get Smart Program” which now offers Rachio weather based irrigation controllers along with Res DI’s NEST thermostat, giving single-family residents control of their HVAC and irrigation systems from their mobile devices. These devices also use tried and true algorithms to maximize energy and water consumption without sacrificing comfort or a healthy landscape.

#### **h. Program Logic Model**

*Model should visually explain the underlying theory supporting the sub-program intervention approach, referring as needed to the relevant literature (for example: past evaluations, best practices documents, journal articles, books, etc.)*

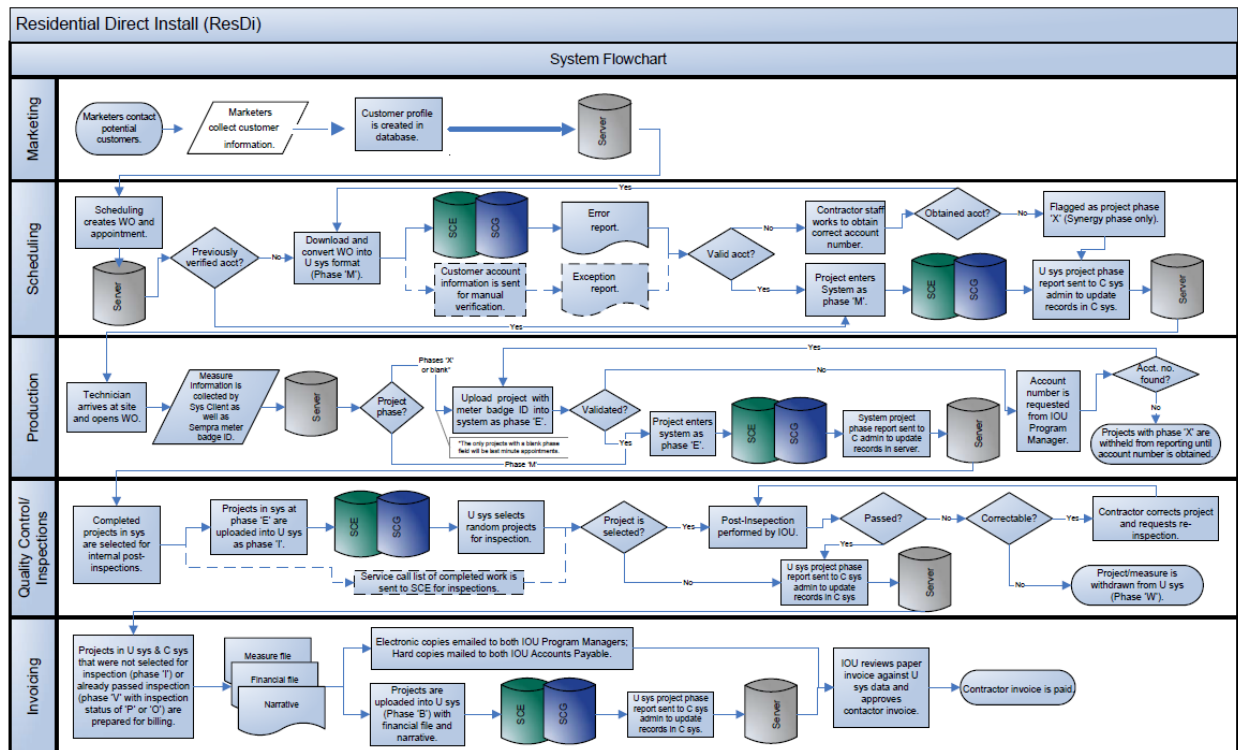
Program Logic Model is pending – working with EM&V to develop.



## i. Process Flow Chart

Provide a sub-program process flow chart that describes the administrative and procedural components of the sub-program. For example, the flow chart might describe:

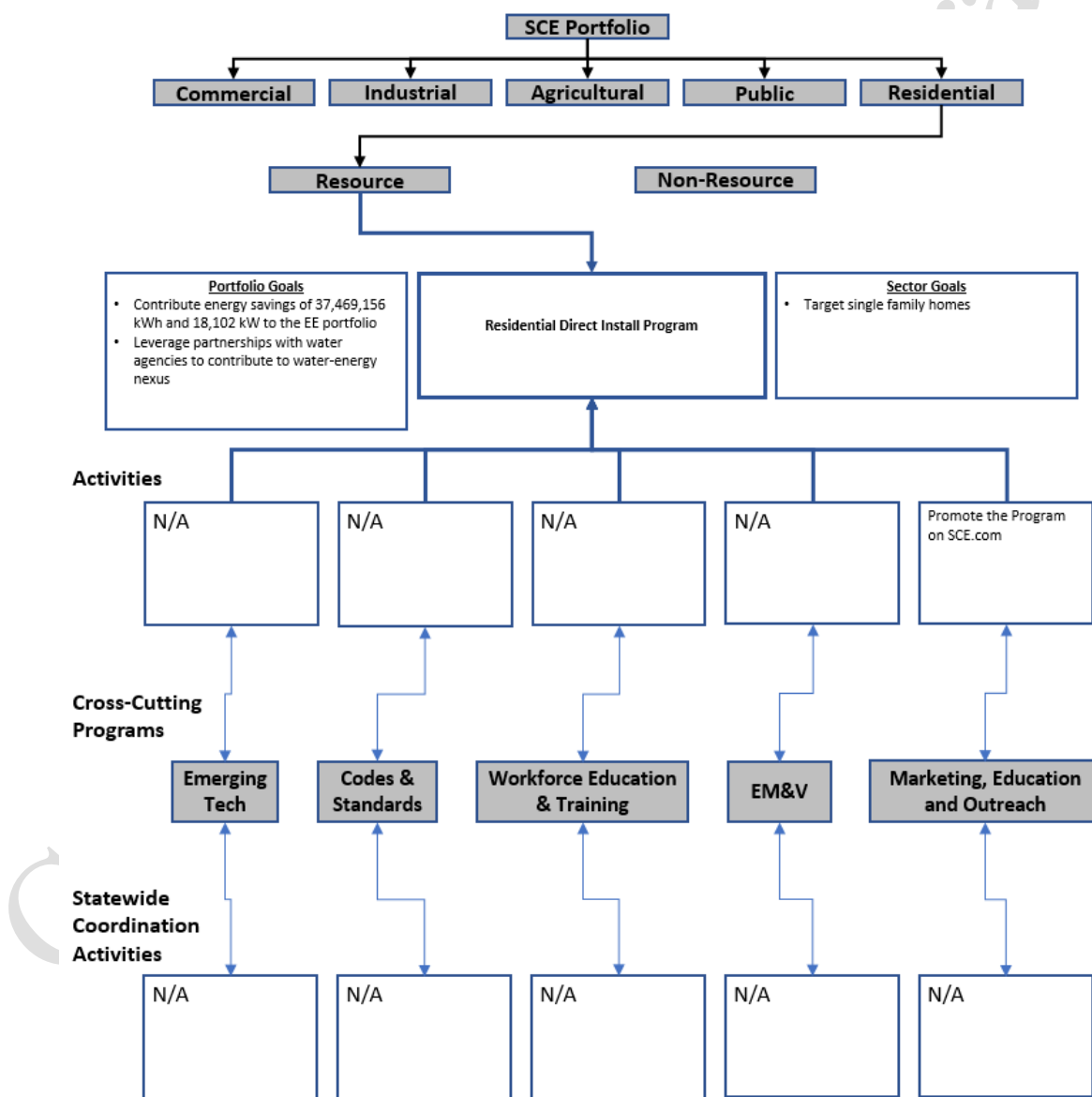
- A customer's submittal of an application
- The screening of the application
- The approval and/or disapproval of an application
- Verification of purchase or installation
- The processing of incentive payments, and
- Any quality control activities.



**j. Diagram of Program**

Please provide a one page diagram of the program including subprograms. This should visually illustrate the program/sub-program linkages to areas such as:

- Statewide and individual IOU marketing and outreach
- Workforce, Education and Training (WE&T) programs
- Emerging Technologies (ET) and Codes and Standards (C&S)
- Coordinated approaches across IOUs, and
- Integrated efforts across Demand Side Management (DSM) programs.



**k. Additional information**

*Include additional information as required by Commission decision or ruling. As applicable, indicate the decision or ruling, with page numbers.*

**l. For Market Transformation Programs Only<sup>7</sup>**

**i. Quantitative Baseline and Market Transformation Information**

*Provide quantitative information describing the current EE program baseline information (and/or other relevant baseline information) for the market segment and major sub-segments, as available.*

N/A

**ii. Market Transformation Strategy**

*Provide a market characterization and assessment of the relationships and/or dynamics among market actors, including identification of the key barriers and opportunities to advance DSM technologies and strategies. Describe the proposed intervention(s) and its/their intended results, and specify which barriers the intervention is intended to address.*

N/A

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<sup>7</sup> Ex) Codes & Standards program, Emerging Technologies program, Workforce Education & Training program, etc.

### 3. Appendix: Supporting Information and Documents

#### a. Program Manuals and Program Rules

*All programs must have manuals for implementers and customers to clarify the eligibility requirements and rules of the program. At minimum, manuals should include:*

#	Information Required	Short Description	Location Name/URL link
1	<b>Eligible Measures or measure eligibility</b>	A list of eligible measures, or measure eligibility requirements	<a href="#">URL Link</a>
2	<b>Customer Eligibility Requirements</b>	Requirements for program participation (for example, annual energy use or peak kW demand)	Not available at this time
3	<b>Contractor Eligibility Requirements</b>	List of any contractor (and/or developer, manufacturer, retailer or other "participant") eligibility requirements. (For example: specific IOU-required trainings, specific contractor accreditations, and/or specific technician certifications.)	Not available at this time
4	<b>Participating Contractors, Manufacturers, Retailers, Distributors</b>	Information as to whether: <ul style="list-style-type: none"> <li>Program or sub-program delivery channel is downstream, midstream, or upstream, and</li> <li>Program is an incentive and/or buy-down type program.</li> </ul>	Not available at this time
5	<b>Additional Services</b>	Descriptions of any additional sub-program delivery, measure installation, marketing & outreach, training, and/or other services provided, if not yet described above.	Not available at this time
6	<b>Audits</b>	Information as to whether: <ul style="list-style-type: none"> <li>Pre- and post-audits are required</li> <li>Funding or incentive levels have been set for audits, and</li> <li>The eligibility requirements for audit incentives.</li> </ul>	Not available at this time
7	<b>Sub-Program Quality Assurance Provisions</b>	List of quality assurance and quality control requirements, including accreditations and/or certifications or other credentials of individuals or organizations performing this work.	Not available at this time
8	Other (not required)		
8a			
8b			
8c			

**b. Incentive Tables, Workpapers, Software Tools**

*Provide a summary table of measures and incentive levels, along with links to the associated workpapers.*

#	Measure	Incentive Level	
1	Refrigerant Charge Adjustment Maintenance	\$180-\$200	
2	Condenser Coil Cleaning Maintenance	\$10-\$20	
3	Air Flow Adjustment Maintenance	\$10-\$20	
4	Air Conditioner – Efficient Fan Control	\$70-\$90	
5	Window Evap Cooler	\$800-\$1,000	
6	Residential Smart (Communicating) Thermostat	\$75-\$100	
7	Central AC Brushless Fan Motor replacing Permanent Split Capacitor (PSC) Motor	\$80-\$100	
8	Duct Seal High to Low Maintenance	\$40-\$60	
9	Duct Seal Med to Low Maintenance	\$40-\$60	

#	Document Name	Short Description	URL link or location name
1	SCE17HC028	Brushless Fan Motor for Residential Central AC	<a href="http://www.deeresources.net/workpapers">http://www.deeresources.net/workpapers</a>
2	SCE17HC054	Residential Smart Communicating Thermostat	<a href="http://www.deeresources.net/workpapers">http://www.deeresources.net/workpapers</a>
3	SCE13HC052	Efficient Fan Controller for Residential Air Conditioners	<a href="http://www.deeresources.net/workpapers">http://www.deeresources.net/workpapers</a>
4	SCE17HC026	Window Evaporative Coolers	<a href="http://www.deeresources.net/workpapers">http://www.deeresources.net/workpapers</a>
5	SCE17HC029	Residential HVAC Quality Maintenance	<a href="http://www.deeresources.net/workpapers">http://www.deeresources.net/workpapers</a>