

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Application of Southern California Gas
Company (U904G) for Approval of Low
Income Assistance Programs and Budgets
for Program Years 2015-2017.

Application 14-11-_____
(Filed November 18, 2014)

**APPLICATION OF SOUTHERN CALIFORNIA GAS COMPANY
FOR APPROVAL OF LOW-INCOME ASSISTANCE PROGRAMS
AND BUDGETS FOR PROGRAM YEARS 2015-2017**

(ERRATA)

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November 18, 2014

**PY 2015-2017 Energy Savings Assistance Program Planning Assumptions
Southern California Gas Company**

| Measures* | Units | PY 2014 Authorized** | | | | | PY 2015 Planned | | | | | PY 2016 Planned | | | | | PY 2017 Planned | | | | |
|--|-------|----------------------|--------------|-------------|-----------------|--------------------|--------------------|--------------|-------------|-----------------|-------------------|--------------------|--------------|-------------|-----------------|-------------------|--------------------|--------------|-------------|-----------------|-------------------|
| | | Quantity Installed | kWh (Annual) | kW (Annual) | Therms (Annual) | Projected Expenses | Quantity Installed | kWh (Annual) | kW (Annual) | Therms (Annual) | Proposed Expenses | Quantity Installed | kWh (Annual) | kW (Annual) | Therms (Annual) | Proposed Expenses | Quantity Installed | kWh (Annual) | kW (Annual) | Therms (Annual) | Proposed Expenses |
| Appliances | | | | | | | | | | | | | | | | | | | | | |
| High Efficiency Clothes Washer | Each | 19,785 | | | 540,131 | 14,822,795 | 21,225 | | | 655,428 | 16,376,778 | 21,225 | | | 655,428 | 16,741,980 | 21,225 | | | 655,428 | 17,117,000 |
| Refrigerators | Each | | | | | | | | | | | | | | | | | | | | |
| Microwaves | Each | | | | | | | | | | | | | | | | | | | | |
| Domestic Hot Water | | | | | | | | | | | | | | | | | | | | | |
| Water Heater Blanket | Home | 2,484 | | | 11,595 | 137,734 | 4,675 | | 11,284 | 250,995 | 4,675 | | | 11,284 | 256,592 | 4,675 | | | 11,284 | 262,340 | |
| Low Flow Shower Head | Home | 60,264 | | | 265,500 | 2,654,501 | 102,494 | | 234,250 | 4,396,959 | 102,494 | | | 234,250 | 4,495,011 | 102,494 | | | 234,250 | 4,595,700 | |
| Water Heater Pipe Insulation | Home | 2,206 | | | 6,567 | 50,527 | 3,988 | | 7,526 | 85,314 | 3,988 | | | 7,526 | 87,217 | 3,988 | | | 7,526 | 89,171 | |
| Faucet Aerator | Home | 58,477 | | | 84,037 | 1,006,100 | 100,318 | | 749,572 | 1,564,569 | 100,318 | | | 749,572 | 1,599,459 | 100,318 | | | 749,572 | 1,635,287 | |
| Water Heater Repair/Replacement | Each | 722 | | | - | 890,195 | 1,855 | | 6,516 | 1,664,030 | 1,855 | | | 6,516 | 1,701,138 | 1,855 | | | 6,516 | 1,739,243 | |
| Thermostatic Shower Valve | Each | 74,965 | | | 1,019,524 | 3,315,234 | 117,126 | | 1,592,914 | 4,955,475 | 117,126 | | | 1,592,914 | 5,065,982 | 117,126 | | | 1,592,914 | 5,179,460 | |
| New Measure Tub Spout Enclosure | Each | | | | - | 22,329 | | | 532,894 | 1,611,019 | 89,315 | | | 2,135,197 | 6,587,780 | 89,315 | | | 2,135,197 | 6,735,346 | |
| Air Sealing/Envelope*** | | | | | | | | | | | | | | | | | | | | | |
| Caulking | Home | 51,078 | | | 184,008 | 13,527,208 | 89,464 | | 370,664 | 23,242,138 | | | | 370,664 | 23,760,437 | 89,464 | | | 370,664 | 24,292,671 | |
| Weatherstripping | Home | | | | | | | | | | | | | | | | | | | | |
| Utility Gaskets | Home | | | | | | | | | | | | | | | | | | | | |
| Attic Access Weatherstripping | Home | | | | | | | | | | | | | | | | | | | | |
| Evaporative Cooler Cover | Home | | | | | | | | | | | | | | | | | | | | |
| AC Vent Cover | Each | | | | | | | | | | | | | | | | | | | | |
| Attic Insulation | Home | 3,957 | | | 29,339 | 4,640,254 | 6,678 | | 178,758 | 7,732,091 | | | | 178,758 | 7,904,516 | 6,678 | | | 178,758 | 8,081,578 | |
| HVAC | | | | | | | | | | | | | | | | | | | | | |
| FAU Standing Pilot Light Conversion | Each | | | | 3,570 | 27,763 | 56 | | 2,310 | 17,523 | | | | 2,310 | 17,913 | 56 | | | 2,310 | 18,315 | |
| Furnace Repair/Replacement | Each | | | | - | 6,553,664 | 17,389 | | - | 14,714,085 | | | | - | 15,042,210 | 17,389 | | | - | 15,379,155 | |
| New Measure HE Furnace | Each | | | | | | 2,998 | | 100,724 | 7,451,508 | | | | 100,724 | 7,617,677 | 2,998 | | | 100,724 | 7,788,313 | |
| Room A/C Replacement | Each | | | | | | | | | | | | | | | | | | | | |
| Central A/C Replacement | Each | | | | | | | | | | | | | | | | | | | | |
| Heat Pump Replacement | Each | | | | | | | | | | | | | | | | | | | | |
| Evaporative Coolers (Replacement) | Each | | | | | | | | | | | | | | | | | | | | |
| Evaporative Coolers (Installation) | Each | | | | | | | | | | | | | | | | | | | | |
| Duct Testing and Sealing | Home | 1,563 | | | | 1,303,715 | 961 | | 14,579 | 289,505 | | | | 14,579 | 295,961 | 961 | | | 14,579 | 302,590 | |
| Maintenance | | | | | | | | | | | | | | | | | | | | | |
| Furnace Clean and Tune | Home | | | | 42,611 | 984,875 | 27,513 | | 213,084 | 1,853,937 | | | | 213,084 | 1,895,280 | 27,513 | | | 213,084 | 1,937,734 | |
| Central A/C Tune-up | Home | | | | | | | | | | | | | | | | | | | | |
| Evaporative Cooler Maintenance | Home | | | | | | | | | | | | | | | | | | | | |
| Lighting | | | | | | | | | | | | | | | | | | | | | |
| Compact Fluorescent Lights (CFLs) | Each | | | | | | | | | | | | | | | | | | | | |
| Interior Hard wired CFL fixtures | Each | | | | | | | | | | | | | | | | | | | | |
| Exterior Hard wired CFL fixtures | Each | | | | | | | | | | | | | | | | | | | | |
| Torchiere | Each | | | | | | | | | | | | | | | | | | | | |
| Occupancy Sensor | Each | | | | | | | | | | | | | | | | | | | | |
| LED Night Lights | Each | | | | | | | | | | | | | | | | | | | | |
| Miscellaneous | | | | | | | | | | | | | | | | | | | | | |
| Pool Pumps | Each | | | | | | | | | | | | | | | | | | | | |
| Pilots | | | | | | | | | | | | | | | | | | | | | |
| | Each | | | | | | | | | | | | | | | | | | | | |
| | Each | | | | | | | | | | | | | | | | | | | | |
| Customer Enrollment | | | | | | | | | | | | | | | | | | | | | |
| In-Home Education | Home | 64,176 | | | | 779,162 | 116,058 | | | 3,633,788 | 116,058 | | | | 3,714,821 | 116,058 | | | | 3,798,033 | |
| Total | | | | | 2,188,882 | 50,693,727 | | | 4,670,503 | 89,839,714 | | | | 6,272,806 | 96,783,974 | | | | | 98,951,935 | |

* Include all proposed new measures, where appropriate.

** Totals are actuals from September 2014 monthly report.

*** Envelope and Air Sealing Measures may include outlet cover plate gaskets, attic access weatherization, weatherstripping - door, caulking and minor home repairs. Minor home repairs predominantly are door jamb repair / replacement, door repair, and window putty.

**Summary of Energy Savings Assistance Program Cost Effectiveness
Southern California Gas Company**

| Ratio of Program Benefits over Program Costs (@ 7.38% Discount Rate)* | | |
|---|--|--|
| | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (Resource TRC) |
| PY 2012 | 0.68 | 0.24 |
| PY 2013 | 0.72 | 0.43 |
| PY 2014 | | |
| PY 2015 | 0.86 | 0.52 |
| PY 2016-2017 | 1.08 | 0.67 |

1. Actual Results for 2012-2013
2. Actual Results for 2014 will be reported in May 2015 Annual Report
3. Forecast Results for 2015 - 2017

* These tests were calculated using the E3 Calculator "SoCal_2013_v1 c4-Draft.xlsm"

Note: Test results were calculated using the discount rate currently in the E3 calculator = 7.38%. The non-energy benefits in the ESACET test were calculated using the LIPPT Model.

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| Ratio of Program Benefits over Program Costs (@ 7.38% Discount Rate)* | | |
|---|--|--|
| | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (Resource TRC) |
| PY 2012 | 0.68 | 0.24 |
| PY 2013 | 0.72 | 0.43 |
| PY 2014 | | |
| PY 2015 | 0.77 | 0.40 |
| PY 2016-2017 | 0.89 | 0.57 |



| Ratio of Program Benefits over Program Costs (@ 6.95% Discount Rate)** | | |
|--|--|--|
| | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (Resource TRC) |
| PY 2012 | 0.68 | 0.24 |
| PY 2013 | 0.72 | 0.43 |
| PY 2014 | | |
| PY 2015 | 0.87 | 0.53 |
| PY 2016-2017 | 1.10 | 0.69 |

1. Actual Results for 2012-2013
2. Actual Results for 2014 will be reported in May 2015 Annual Report
3. Forecast Results for 2015 - 2017

** These tests were calculated using the E3 Calculator "SoCal_2013_v1 c4-Draft.xlsm"

Note: These test results were calculated using the approved WACC as the discount rate = 6.95%. The non-energy benefits in the ESACET test were calculated using the LIPPT Model.

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| Ratio of Program Benefits over Program Costs (@ 6.95% Discount Rate)** | | |
|--|--|--|
| | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (Resource TRC) |
| PY 2012 | 0.68 | 0.24 |
| PY 2013 | 0.72 | 0.43 |
| PY 2014 | | |
| PY 2015 | 0.78 | 0.41 |
| PY 2016-2017 | 0.90 | 0.58 |

**Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Southern California Gas Company**

| Measure | Measure Group | Type of Home (SF, MH, MF) | Electric or Gas (E,G) | Climate Zone (Number) | Ratio of Benefits Over Costs (Year 2015)* | | Ratio of Benefits Over Costs (Cycle 2016-17)* | |
|------------------|---------------|------------------------------|--------------------------|--------------------------|--|---|--|---|
| | | | | | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) |
| Air sealing | Enclosure | MF | G | 4 | 2.01 | 0.36 | 2.11 | 0.38 |
| Air sealing | Enclosure | MF | G | 5 | 2.07 | 0.38 | 2.19 | 0.39 |
| Air sealing | Enclosure | MF | G | 6 | 0.07 | 0.01 | 0.07 | 0.01 |
| Air sealing | Enclosure | MF | G | 8 | 0.17 | 0.02 | 0.17 | 0.03 |
| Air sealing | Enclosure | MF | G | 9 | 0.19 | 0.03 | 0.19 | 0.03 |
| Air sealing | Enclosure | MF | G | 10 | 1.35 | 0.22 | 1.40 | 0.23 |
| Air sealing | Enclosure | MF | G | 13 | 2.35 | 0.44 | 2.50 | 0.46 |
| Air sealing | Enclosure | MF | G | 14 | 2.77 | 0.56 | 2.99 | 0.58 |
| Air sealing | Enclosure | MF | G | 15 | 0.08 | 0.01 | 0.07 | 0.01 |
| Air sealing | Enclosure | MF | G | 16 | 1.11 | 0.18 | 1.14 | 0.18 |
| Air sealing | Enclosure | MH | G | 4 | 2.07 | 0.38 | 2.18 | 0.39 |
| Air sealing | Enclosure | MH | G | 5 | 1.98 | 0.35 | 2.08 | 0.37 |
| Air sealing | Enclosure | MH | G | 6 | 2.27 | 0.42 | 2.41 | 0.44 |
| Air sealing | Enclosure | MH | G | 8 | 0.10 | 0.02 | 0.16 | 0.02 |
| Air sealing | Enclosure | MH | G | 9 | | 0.07 | 0.45 | 0.07 |
| Air sealing | Enclosure | MH | G | 10 | | 0.44 | 2.48 | 0.46 |
| Air sealing | Enclosure | MH | G | 13 | | 0.40 | 2.28 | 0.41 |
| Air sealing | Enclosure | MH | G | 14 | | 0.50 | 2.74 | 0.52 |
| Air sealing | Enclosure | MH | G | 15 | | 0.00 | 0.00 | 0.00 |
| Air sealing | Enclosure | MH | G | 16 | | 0.50 | 2.73 | 0.52 |
| Air sealing | Enclosure | SF | G | 4 | | 0.37 | 2.16 | 0.38 |
| Air sealing | Enclosure | SF | G | 5 | | 0.37 | 2.13 | 0.38 |
| Air sealing | Enclosure | SF | G | 6 | | 0.14 | 0.14 | 0.02 |
| Air sealing | Enclosure | SF | G | 8 | | 0.17 | 0.17 | 0.03 |
| Air sealing | Enclosure | SF | G | 9 | | 0.03 | 0.24 | 0.04 |
| Air sealing | Enclosure | SF | G | 10 | | 0.19 | 1.20 | 0.19 |
| Air sealing | Enclosure | SF | G | 13 | | 0.41 | 2.32 | 0.42 |
| Air sealing | Enclosure | SF | G | 14 | | 0.51 | 2.80 | 0.53 |
| Air sealing | Enclosure | SF | G | 15 | | 0.00 | 0.00 | 0.00 |
| Air sealing | Enclosure | SF | G | 16 | | 0.19 | 1.21 | 0.20 |
| Attic insulation | Enclosure | MF | G | 4 | | 0.00 | 0.00 | 0.00 |
| Attic insulation | Enclosure | MF | G | 5 | | 0.00 | 0.00 | 0.00 |
| Attic insulation | Enclosure | MF | G | 6 | | 0.36 | 0.65 | 0.38 |
| Attic insulation | Enclosure | MF | G | 8 | | 0.57 | 0.65 | 0.38 |
| Attic insulation | Enclosure | MF | G | 9 | | 0.57 | 0.65 | 0.38 |
| Attic insulation | Enclosure | MF | G | 10 | | 0.51 | 0.57 | 0.33 |
| Attic insulation | Enclosure | MF | G | 13 | | 0.47 | 0.53 | 0.30 |
| Attic insulation | Enclosure | MF | G | 14 | | 0.00 | 0.00 | 0.00 |
| Attic insulation | Enclosure | MF | G | 15 | | 0.11 | 0.12 | 0.06 |
| Attic insulation | Enclosure | MF | G | 16 | | 0.11 | 0.12 | 0.06 |
| Attic insulation | Enclosure | SF | G | 4 | | 0.25 | 0.27 | 0.14 |
| Attic insulation | Enclosure | SF | G | 5 | | 0.49 | 0.56 | 0.32 |
| Attic insulation | Enclosure | SF | G | 6 | | 0.58 | 0.66 | 0.38 |

**Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Southern California Gas Company**

| Measure | Measure Group | Type of Home (SF, MH, MF) | Electric or Gas (E,G) | Climate Zone (Number) | Ratio of Benefits Over Costs (Year 2015)* | | Ratio of Benefits Over Costs (Cycle 2016-17)* | |
|------------------------|---------------|------------------------------|--------------------------|--------------------------|--|---|--|---|
| | | | | | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) |
| Attic insulation | Enclosure | SF | G | 8 | 0.57 | 0.36 | 0.65 | 0.38 |
| Attic insulation | Enclosure | SF | G | 9 | 0.57 | 0.36 | 0.65 | 0.38 |
| Attic insulation | Enclosure | SF | G | 10 | 0.54 | 0.33 | 0.61 | 0.35 |
| Attic insulation | Enclosure | SF | G | 13 | 0.48 | 0.29 | 0.55 | 0.31 |
| Attic insulation | Enclosure | SF | G | 14 | 0.47 | 0.28 | 0.53 | 0.30 |
| Attic insulation | Enclosure | SF | G | 15 | 0.65 | 0.42 | 0.74 | 0.45 |
| Attic insulation | Enclosure | SF | G | 16 | 0.54 | 0.33 | 0.61 | 0.35 |
| Furnace clean and tune | Maintenance | MF | G | 4 | 0.71 | 0.14 | 0.75 | 0.15 |
| Furnace clean and tune | Maintenance | MF | G | 5 | 0.71 | 0.14 | 0.75 | 0.15 |
| Furnace clean and tune | Maintenance | MF | G | 6 | 0.71 | 0.14 | 0.75 | 0.15 |
| Furnace clean and tune | Maintenance | MF | G | 8 | 0.71 | 0.14 | 0.75 | 0.15 |
| Furnace clean and tune | Maintenance | MF | G | 9 | 0.71 | 0.14 | 0.75 | 0.15 |
| Furnace clean and tune | Maintenance | MF | G | 10 | 0.8 | 0.20 | 1.04 | 0.21 |
| Furnace clean and tune | Maintenance | MF | G | 13 | 0.20 | 0.20 | 1.04 | 0.21 |
| Furnace clean and tune | Maintenance | MF | G | 14 | 0.20 | 0.20 | 1.04 | 0.21 |
| Furnace clean and tune | Maintenance | MF | G | 15 | 0.10 | 0.10 | 0.52 | 0.10 |
| Furnace clean and tune | Maintenance | MF | G | 16 | 0.10 | 0.10 | 0.52 | 0.10 |
| Furnace clean and tune | Maintenance | MH | G | 4 | 0.25 | 0.25 | 1.26 | 0.26 |
| Furnace clean and tune | Maintenance | MH | G | 5 | 0.13 | 0.13 | 0.69 | 0.14 |
| Furnace clean and tune | Maintenance | MH | G | 6 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | MH | G | 8 | 0.85 | 0.85 | 3.28 | 0.89 |
| Furnace clean and tune | Maintenance | MH | G | 9 | 0.78 | 0.78 | 3.08 | 0.81 |
| Furnace clean and tune | Maintenance | MH | G | 10 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | MH | G | 13 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | MH | G | 14 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | MH | G | 15 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | MH | G | 16 | 1.73 | 1.73 | 4.99 | 1.81 |
| Furnace clean and tune | Maintenance | MH | G | 17 | 0.01 | 0.01 | 0.08 | 0.01 |
| Furnace clean and tune | Maintenance | SF | G | 5 | 0.14 | 0.14 | 0.75 | 0.15 |
| Furnace clean and tune | Maintenance | SF | G | 6 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | SF | G | 8 | 0.88 | 0.88 | 3.34 | 0.92 |
| Furnace clean and tune | Maintenance | SF | G | 9 | 0.79 | 0.79 | 3.12 | 0.83 |
| Furnace clean and tune | Maintenance | SF | G | 10 | 0.70 | 0.70 | 3.10 | 0.73 |
| Furnace clean and tune | Maintenance | SF | G | 13 | 0.37 | 0.37 | 1.75 | 0.39 |
| Furnace clean and tune | Maintenance | SF | G | 14 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | SF | G | 15 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | SF | G | 16 | 4.06 | 1.66 | 4.87 | 1.73 |
| Furnace clean and tune | Maintenance | SF | G | 17 | 2.32 | 0.62 | 2.61 | 0.64 |
| HE Furnace Split | HVAC | MF | G | 9 | 0.10 | 0.05 | 0.10 | 0.05 |
| HE Furnace Split | HVAC | MH | G | 5 | 0.30 | 0.17 | 0.32 | 0.17 |
| HE Furnace Split | HVAC | MH | G | 6 | 0.16 | 0.09 | 0.16 | 0.09 |
| HE Furnace Split | HVAC | MH | G | 8 | 0.17 | 0.09 | 0.17 | 0.09 |
| HE Furnace Split | HVAC | MH | G | 9 | 0.19 | 0.10 | 0.19 | 0.11 |
| HE Furnace Split | HVAC | MH | G | 10 | 0.23 | 0.12 | 0.23 | 0.13 |
| HE Furnace Split | HVAC | MH | G | 13 | 0.25 | 0.14 | 0.25 | 0.14 |

**Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Southern California Gas Company**

| Measure | Measure Group | Type of Home (SF, MH, MF) | Electric or Gas (E,G) | Climate Zone (Number) | Ratio of Benefits Over Costs (Year 2015)* | | Ratio of Benefits Over Costs (Cycle 2016-17)* | |
|--------------------------|---------------|------------------------------|--------------------------|--------------------------|--|---|--|---|
| | | | | | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) |
| HE Furnace Split | HVAC | MH | G | 14 | 0.32 | 0.18 | 0.32 | 0.18 |
| HE Furnace Split | HVAC | MH | G | 15 | 0.15 | 0.08 | 0.15 | 0.08 |
| HE Furnace Split | HVAC | MH | G | 16 | 0.27 | 0.15 | 0.26 | 0.15 |
| HE Furnace Split | HVAC | SF | G | 5 | 0.35 | 0.20 | 0.34 | 0.20 |
| HE Furnace Split | HVAC | SF | G | 6 | 0.20 | 0.11 | 0.20 | 0.11 |
| HE Furnace Split | HVAC | SF | G | 8 | 0.17 | 0.09 | 0.17 | 0.09 |
| HE Furnace Split | HVAC | SF | G | 9 | 0.21 | 0.11 | 0.21 | 0.12 |
| HE Furnace Split | HVAC | SF | G | 10 | 0.23 | 0.13 | 0.23 | 0.13 |
| HE Furnace Split | HVAC | SF | G | 13 | 0.27 | 0.15 | 0.27 | 0.15 |
| HE Furnace Split | HVAC | SF | G | 14 | 0.27 | 0.15 | 0.27 | 0.15 |
| HE Furnace Split | HVAC | SF | G | 15 | 0.13 | 0.07 | 0.13 | 0.07 |
| HE Furnace Split | HVAC | SF | G | 16 | 0.42 | 0.24 | 0.42 | 0.25 |
| Fail Replacement | HVAC | MF | | 8 | 0.03 | 0.03 | 0.13 | 0.03 |
| Fail Replacement | HVAC | MF | | 9 | 0.04 | 0.04 | 0.22 | 0.04 |
| Fail Replacement | HVAC | MF | | 10 | 0.05 | 0.05 | 0.23 | 0.05 |
| Fail Replacement | HVAC | MF | | 14 | 0.07 | 0.07 | 0.37 | 0.08 |
| Fail Replacement | HVAC | MH | | 7 | 0.13 | 0.13 | 0.64 | 0.14 |
| Fail Replacement | HVAC | MH | | 8 | 0.14 | 0.14 | 0.70 | 0.15 |
| Fail Replacement | HVAC | MH | | 9 | 0.08 | 0.08 | 0.38 | 0.08 |
| Fail Replacement | HVAC | MH | | 10 | 0.08 | 0.08 | 0.39 | 0.08 |
| Fail Replacement | HVAC | MH | G | 13 | 0.09 | 0.09 | 0.45 | 0.09 |
| Fail Replacement | HVAC | MH | G | 14 | 0.51 | 0.11 | 0.53 | 0.11 |
| Fail Replacement | HVAC | MH | G | 15 | 0.56 | 0.12 | 0.59 | 0.12 |
| Fail Replacement | HVAC | MH | | 16 | 0.15 | 0.15 | 0.74 | 0.16 |
| Fail Replacement | HVAC | MH | | 17 | 0.07 | 0.07 | 0.34 | 0.07 |
| Fail Replacement | HVAC | MH | | 18 | 0.13 | 0.13 | 0.62 | 0.13 |
| Fail Replacement | HVAC | SF | | 5 | 0.12 | 0.12 | 0.57 | 0.12 |
| Fail Replacement | HVAC | SF | | 6 | 0.17 | 0.17 | 0.81 | 0.18 |
| Fail Replacement | HVAC | SF | | 8 | 0.09 | 0.09 | 0.46 | 0.10 |
| Fail Replacement | HVAC | SF | | 9 | 0.08 | 0.08 | 0.40 | 0.08 |
| Fail Replacement | HVAC | SF | | 10 | 0.10 | 0.10 | 0.49 | 0.10 |
| Fail Replacement | HVAC | SF | | 13 | 0.06 | 0.06 | 0.51 | 0.07 |
| Fail Replacement | HVAC | SF | G | 14 | 0.60 | 0.13 | 0.63 | 0.13 |
| Fail Replacement | HVAC | SF | G | 15 | 0.60 | 0.13 | 0.63 | 0.13 |
| Fail Replacement | HVAC | SF | G | 16 | 0.28 | 0.06 | 0.29 | 0.06 |
| Fail Replacement | HVAC | SF | G | 17 | 0.92 | 0.21 | 0.98 | 0.22 |
| HE FAU Early Replacement | HVAC | MF | G | 8 | 0.05 | 0.03 | 0.05 | 0.03 |
| HE FAU Early Replacement | HVAC | MF | G | 9 | 0.09 | 0.04 | 0.09 | 0.04 |
| HE FAU Early Replacement | HVAC | MF | G | 10 | 0.09 | 0.05 | 0.10 | 0.05 |
| HE FAU Early Replacement | HVAC | MF | G | 14 | 0.14 | 0.07 | 0.15 | 0.08 |
| HE FAU Early Replacement | HVAC | MH | G | 4 | 0.24 | 0.13 | 0.26 | 0.14 |
| HE FAU Early Replacement | HVAC | MH | G | 5 | 0.26 | 0.14 | 0.28 | 0.15 |
| HE FAU Early Replacement | HVAC | MH | G | 6 | 0.14 | 0.08 | 0.15 | 0.08 |
| HE FAU Early Replacement | HVAC | MH | G | 8 | 0.15 | 0.08 | 0.16 | 0.08 |

**Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Southern California Gas Company**

| Measure | Measure Group | Type of Home (SF, MH, MF) | Electric or Gas (E,G) | Climate Zone (Number) | Ratio of Benefits Over Costs (Year 2015)* | | Ratio of Benefits Over Costs (Cycle 2016-17)* | |
|--------------------------|---------------|------------------------------|--------------------------|--------------------------|--|---|--|---|
| | | | | | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) |
| HE FAU Early Replacement | HVAC | MH | G | 9 | 0.17 | 0.09 | 0.18 | 0.09 |
| HE FAU Early Replacement | HVAC | MH | G | 10 | 0.20 | 0.11 | 0.22 | 0.11 |
| HE FAU Early Replacement | HVAC | MH | G | 13 | 0.22 | 0.12 | 0.24 | 0.12 |
| HE FAU Early Replacement | HVAC | MH | G | 14 | 0.28 | 0.15 | 0.30 | 0.16 |
| HE FAU Early Replacement | HVAC | MH | G | 15 | 0.13 | 0.07 | 0.14 | 0.07 |
| HE FAU Early Replacement | HVAC | MH | G | 16 | 0.24 | 0.13 | 0.25 | 0.13 |
| HE FAU Early Replacement | HVAC | SF | G | 4 | 0.21 | 0.12 | 0.23 | 0.12 |
| HE FAU Early Replacement | HVAC | SF | G | 5 | 0.31 | 0.17 | 0.33 | 0.18 |
| HE FAU Early Replacement | HVAC | SF | G | 6 | 0.18 | 0.09 | 0.19 | 0.10 |
| HE FAU Early Replacement | HVAC | SF | G | 8 | 0.15 | 0.08 | 0.16 | 0.08 |
| HE FAU Early Replacement | HVAC | SF | G | 9 | 0.1 | 0.10 | 0.20 | 0.10 |
| HE FAU Early Replacement | HVAC | SF | G | 10 | 0.11 | 0.11 | 0.22 | 0.11 |
| HE FAU Early Replacement | HVAC | SF | G | 13 | 0.13 | 0.13 | 0.26 | 0.13 |
| HE FAU Early Replacement | HVAC | SF | G | 14 | 0.13 | 0.13 | 0.26 | 0.13 |
| HE FAU Early Replacement | HVAC | SF | G | 15 | 0.06 | 0.06 | 0.12 | 0.06 |
| HE FAU Early Replacement | HVAC | SF | G | 16 | 0.21 | 0.21 | 0.40 | 0.22 |
| Upgrade FAU HE Furnace | HVAC | MF | G | 4 | 0.03 | 0.03 | 0.13 | 0.03 |
| Upgrade FAU HE Furnace | HVAC | MF | G | 5 | 0.04 | 0.04 | 0.22 | 0.04 |
| Upgrade FAU HE Furnace | HVAC | MF | G | 6 | 0.05 | 0.05 | 0.23 | 0.05 |
| Upgrade FAU HE Furnace | HVAC | MF | G | 8 | 0.07 | 0.07 | 0.37 | 0.08 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 9 | 0.61 | 0.13 | 0.64 | 0.14 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 10 | 0.66 | 0.14 | 0.70 | 0.15 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 13 | 0.08 | 0.08 | 0.38 | 0.08 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 14 | 0.08 | 0.08 | 0.39 | 0.08 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 15 | 0.09 | 0.09 | 0.45 | 0.09 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 16 | 0.11 | 0.11 | 0.53 | 0.11 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 13 | 0.12 | 0.12 | 0.59 | 0.12 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 14 | 0.15 | 0.15 | 0.74 | 0.16 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 15 | 0.07 | 0.07 | 0.34 | 0.07 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 16 | 0.13 | 0.13 | 0.62 | 0.13 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 4 | 0.5 | 0.12 | 0.57 | 0.12 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 5 | 0.77 | 0.17 | 0.81 | 0.18 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 6 | 0.44 | 0.09 | 0.46 | 0.10 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 8 | 0.38 | 0.08 | 0.40 | 0.08 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 9 | 0.47 | 0.10 | 0.49 | 0.10 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 10 | 0.52 | 0.11 | 0.54 | 0.11 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 13 | 0.60 | 0.13 | 0.63 | 0.13 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 14 | 0.60 | 0.13 | 0.63 | 0.13 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 15 | 0.28 | 0.06 | 0.29 | 0.06 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 16 | 0.92 | 0.21 | 0.98 | 0.22 |

* These tests were calculated using the E3 Calculator "SoCal_2013_v1 c4-Draft.xlsm"

Note: These test results were calculated using the discount rate currently in the E3 calculator = 7.38%. The non-energy benefits in the ESACET test were calculated using the LIPPT Model.

**Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Southern California Gas Company**

ERRATA

| Measure | Measure Group | Type of Home (SF, MH, MF) | Electric or Gas (E,G) | Climate Zone (Number) | Ratio of Benefits Over Costs (Year 2015)* | | Ratio of Benefits Over Costs (Cycle 2016-17)* | |
|------------------|---------------|------------------------------|--------------------------|--------------------------|--|---|--|---|
| | | | | | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) |
| Air sealing | Enclosure | MF | G | 4 | 2.49 | 0.36 | 2.66 | 0.38 |
| Air sealing | Enclosure | MF | G | 5 | 2.56 | 0.38 | 2.75 | 0.39 |
| Air sealing | Enclosure | MF | G | 6 | 0.09 | 0.01 | 0.09 | 0.01 |
| Air sealing | Enclosure | MF | G | 8 | 0.23 | 0.02 | 0.23 | 0.03 |
| Air sealing | Enclosure | MF | G | 9 | 0.25 | 0.03 | 0.25 | 0.03 |
| Air sealing | Enclosure | MF | G | 10 | 1.71 | 0.22 | 1.78 | 0.23 |
| Air sealing | Enclosure | MF | G | 13 | 2.88 | 0.44 | 3.13 | 0.46 |
| Air sealing | Enclosure | MF | G | 14 | 3.34 | 0.56 | 3.70 | 0.58 |
| Air sealing | Enclosure | MF | G | 15 | 0.10 | 0.01 | 0.10 | 0.01 |
| Air sealing | Enclosure | MF | G | 16 | 1.42 | 0.18 | 1.46 | 0.18 |
| Air sealing | Enclosure | MH | G | 4 | 2.55 | 0.38 | 2.74 | 0.39 |
| Air sealing | Enclosure | MH | G | 5 | 2.45 | 0.35 | 2.62 | 0.37 |
| Air sealing | Enclosure | MH | G | 6 | 2.79 | 0.42 | 3.02 | 0.44 |
| Air sealing | Enclosure | MH | G | 8 | 0.21 | 0.02 | 0.21 | 0.02 |
| Air sealing | Enclosure | MH | G | 9 | 0.59 | 0.07 | 0.59 | 0.07 |
| Air sealing | Enclosure | MH | G | 10 | 2.85 | 0.44 | 3.10 | 0.46 |
| Air sealing | Enclosure | MH | G | 13 | 2.65 | 0.40 | 2.86 | 0.41 |
| Air sealing | Enclosure | MH | G | 14 | 3.11 | 0.50 | 3.41 | 0.52 |
| Air sealing | Enclosure | MH | G | 15 | 0.00 | 0.00 | 0.00 | 0.00 |
| Air sealing | Enclosure | MH | G | 16 | 3.10 | 0.50 | 3.40 | 0.52 |
| Air sealing | Enclosure | SF | G | 4 | 2.53 | 0.37 | 2.72 | 0.38 |
| Air sealing | Enclosure | SF | G | 5 | 2.51 | 0.37 | 2.69 | 0.38 |
| Air sealing | Enclosure | SF | G | 6 | 0.18 | 0.02 | 0.18 | 0.02 |
| Air sealing | Enclosure | SF | G | 8 | 0.22 | 0.02 | 0.22 | 0.03 |
| Air sealing | Enclosure | SF | G | 9 | 0.31 | 0.03 | 0.31 | 0.04 |
| Air sealing | Enclosure | SF | G | 10 | 1.49 | 0.19 | 1.53 | 0.19 |
| Air sealing | Enclosure | SF | G | 13 | 2.70 | 0.41 | 2.91 | 0.42 |
| Air sealing | Enclosure | SF | G | 14 | 3.17 | 0.51 | 3.49 | 0.53 |
| Air sealing | Enclosure | SF | G | 15 | 0.00 | 0.00 | 0.00 | 0.00 |
| Air sealing | Enclosure | SF | G | 16 | 1.50 | 0.19 | 1.55 | 0.20 |
| Attic insulation | Enclosure | MF | G | 4 | 0.00 | 0.00 | 0.00 | 0.00 |
| Attic insulation | Enclosure | MF | G | 5 | 0.00 | 0.00 | 0.00 | 0.00 |
| Attic insulation | Enclosure | MF | G | 6 | 0.52 | 0.36 | 0.52 | 0.38 |
| Attic insulation | Enclosure | MF | G | 8 | 0.52 | 0.36 | 0.52 | 0.38 |
| Attic insulation | Enclosure | MF | G | 9 | 0.52 | 0.36 | 0.53 | 0.38 |
| Attic insulation | Enclosure | MF | G | 10 | 0.47 | 0.31 | 0.46 | 0.33 |
| Attic insulation | Enclosure | MF | G | 13 | 0.44 | 0.28 | 0.43 | 0.30 |
| Attic insulation | Enclosure | MF | G | 14 | 0.00 | 0.00 | 0.00 | 0.00 |
| Attic insulation | Enclosure | MF | G | 15 | 0.11 | 0.06 | 0.10 | 0.06 |
| Attic insulation | Enclosure | MF | G | 16 | 0.11 | 0.06 | 0.10 | 0.06 |
| Attic insulation | Enclosure | SF | G | 4 | 0.24 | 0.14 | 0.23 | 0.14 |
| Attic insulation | Enclosure | SF | G | 5 | 0.46 | 0.30 | 0.45 | 0.32 |
| Attic insulation | Enclosure | SF | G | 6 | 0.53 | 0.36 | 0.53 | 0.38 |
| Attic insulation | Enclosure | SF | G | 8 | 0.52 | 0.36 | 0.52 | 0.38 |
| Attic insulation | Enclosure | SF | G | 9 | 0.52 | 0.36 | 0.52 | 0.38 |

**Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Southern California Gas Company**

ERRATA

| Measure | Measure Group | Type of Home (SF, MH, MF) | Electric or Gas (E,G) | Climate Zone (Number) | Ratio of Benefits Over Costs (Year 2015)* | | Ratio of Benefits Over Costs (Cycle 2016-17)* | |
|------------------------|---------------|------------------------------|--------------------------|--------------------------|--|---|--|---|
| | | | | | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) |
| Attic insulation | Enclosure | SF | G | 10 | 0.49 | 0.33 | 0.49 | 0.35 |
| Attic insulation | Enclosure | SF | G | 13 | 0.45 | 0.29 | 0.44 | 0.31 |
| Attic insulation | Enclosure | SF | G | 14 | 0.43 | 0.28 | 0.43 | 0.30 |
| Attic insulation | Enclosure | SF | G | 15 | 0.59 | 0.42 | 0.60 | 0.45 |
| Attic insulation | Enclosure | SF | G | 16 | 0.49 | 0.33 | 0.49 | 0.35 |
| Furnace clean and tune | Maintenance | MF | G | 4 | 0.45 | 0.15 | 0.44 | 0.15 |
| Furnace clean and tune | Maintenance | MF | G | 5 | 0.45 | 0.15 | 0.44 | 0.15 |
| Furnace clean and tune | Maintenance | MF | G | 6 | 0.45 | 0.15 | 0.44 | 0.15 |
| Furnace clean and tune | Maintenance | MF | G | 8 | 0.45 | 0.15 | 0.44 | 0.15 |
| Furnace clean and tune | Maintenance | MF | G | 9 | 0.45 | 0.15 | 0.44 | 0.15 |
| Furnace clean and tune | Maintenance | MF | G | 10 | 0.60 | 0.21 | 0.60 | 0.22 |
| Furnace clean and tune | Maintenance | MF | G | 13 | 0.60 | 0.21 | 0.60 | 0.22 |
| Furnace clean and tune | Maintenance | MF | G | 14 | 0.60 | 0.21 | 0.60 | 0.22 |
| Furnace clean and tune | Maintenance | MF | G | 15 | 0.31 | 0.10 | 0.30 | 0.10 |
| Furnace clean and tune | Maintenance | MF | G | 16 | 0.31 | 0.10 | 0.30 | 0.10 |
| Furnace clean and tune | Maintenance | MH | G | 4 | 0.72 | 0.26 | 0.72 | 0.27 |
| Furnace clean and tune | Maintenance | MH | G | 5 | 0.41 | 0.14 | 0.40 | 0.14 |
| Furnace clean and tune | Maintenance | MH | G | 6 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | MH | G | 8 | 1.61 | 0.89 | 1.78 | 0.92 |
| Furnace clean and tune | Maintenance | MH | G | 9 | 1.53 | 0.81 | 1.68 | 0.84 |
| Furnace clean and tune | Maintenance | MH | G | 10 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | MH | G | 13 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | MH | G | 14 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | MH | G | 15 | 2.19 | 1.81 | 2.59 | 1.87 |
| Furnace clean and tune | Maintenance | MH | G | 16 | 0.05 | 0.01 | 0.05 | 0.01 |
| Furnace clean and tune | Maintenance | SF | G | 4 | 0.45 | 0.15 | 0.44 | 0.15 |
| Furnace clean and tune | Maintenance | SF | G | 5 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | SF | G | 6 | 1.63 | 0.92 | 1.81 | 0.95 |
| Furnace clean and tune | Maintenance | SF | G | 8 | 1.55 | 0.83 | 1.70 | 0.86 |
| Furnace clean and tune | Maintenance | SF | G | 9 | 1.55 | 0.73 | 1.68 | 0.76 |
| Furnace clean and tune | Maintenance | SF | G | 10 | 0.96 | 0.39 | 0.99 | 0.40 |
| Furnace clean and tune | Maintenance | SF | G | 13 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | SF | G | 14 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furnace clean and tune | Maintenance | SF | G | 15 | 2.15 | 1.73 | 2.54 | 1.79 |
| Furnace clean and tune | Maintenance | SF | G | 16 | 1.34 | 0.64 | 1.44 | 0.66 |
| HE Furnace Split | HVAC | MF | G | 9 | 0.09 | 0.05 | 0.08 | 0.05 |
| HE Furnace Split | HVAC | MH | G | 5 | 0.28 | 0.17 | 0.27 | 0.17 |
| HE Furnace Split | HVAC | MH | G | 6 | 0.16 | 0.09 | 0.13 | 0.09 |
| HE Furnace Split | HVAC | MH | G | 8 | 0.16 | 0.09 | 0.13 | 0.09 |
| HE Furnace Split | HVAC | MH | G | 9 | 0.19 | 0.10 | 0.15 | 0.11 |
| HE Furnace Split | HVAC | MH | G | 10 | 0.22 | 0.12 | 0.18 | 0.13 |
| HE Furnace Split | HVAC | MH | G | 13 | 0.24 | 0.14 | 0.20 | 0.14 |
| HE Furnace Split | HVAC | MH | G | 14 | 0.30 | 0.18 | 0.25 | 0.18 |
| HE Furnace Split | HVAC | MH | G | 15 | 0.14 | 0.08 | 0.12 | 0.08 |
| HE Furnace Split | HVAC | MH | G | 16 | 0.25 | 0.15 | 0.21 | 0.15 |
| HE Furnace Split | HVAC | SF | G | 5 | 0.33 | 0.20 | 0.28 | 0.20 |

**Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Southern California Gas Company**

ERRATA

| Measure | Measure Group | Type of Home (SF, MH, MF) | Electric or Gas (E,G) | Climate Zone (Number) | Ratio of Benefits Over Costs (Year 2015)* | | Ratio of Benefits Over Costs (Cycle 2016-17)* | |
|--------------------------|---------------|------------------------------|--------------------------|--------------------------|--|---|--|---|
| | | | | | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) |
| HE Furnace Split | HVAC | SF | G | 6 | 0.19 | 0.11 | 0.16 | 0.11 |
| HE Furnace Split | HVAC | SF | G | 8 | 0.17 | 0.09 | 0.14 | 0.09 |
| HE Furnace Split | HVAC | SF | G | 9 | 0.20 | 0.11 | 0.17 | 0.12 |
| HE Furnace Split | HVAC | SF | G | 10 | 0.22 | 0.13 | 0.19 | 0.13 |
| HE Furnace Split | HVAC | SF | G | 13 | 0.26 | 0.15 | 0.21 | 0.15 |
| HE Furnace Split | HVAC | SF | G | 14 | 0.26 | 0.15 | 0.21 | 0.15 |
| HE Furnace Split | HVAC | SF | G | 15 | 0.12 | 0.07 | 0.10 | 0.07 |
| HE Furnace Split | HVAC | SF | G | 16 | 0.38 | 0.24 | 0.33 | 0.25 |
| Fail Replacement | HVAC | MF | G | 8 | 0.08 | 0.03 | 0.08 | 0.03 |
| Fail Replacement | HVAC | MF | G | 9 | 0.13 | 0.04 | 0.13 | 0.04 |
| Fail Replacement | HVAC | MF | G | 10 | 0.14 | 0.05 | 0.13 | 0.05 |
| Fail Replacement | HVAC | MF | G | 14 | 0.22 | 0.07 | 0.21 | 0.08 |
| Fail Replacement | HVAC | MH | G | 4 | 0.37 | 0.13 | 0.36 | 0.14 |
| Fail Replacement | HVAC | MH | G | 5 | 0.40 | 0.14 | 0.39 | 0.15 |
| Fail Replacement | HVAC | MH | G | 6 | 0.22 | 0.08 | 0.21 | 0.08 |
| Fail Replacement | HVAC | MH | G | 8 | 0.23 | 0.08 | 0.22 | 0.08 |
| Fail Replacement | HVAC | MH | G | 9 | 0.26 | 0.09 | 0.25 | 0.09 |
| Fail Replacement | HVAC | MH | G | 10 | 0.31 | 0.11 | 0.30 | 0.11 |
| Fail Replacement | HVAC | MH | G | 13 | 0.34 | 0.12 | 0.33 | 0.12 |
| Fail Replacement | HVAC | MH | G | 14 | 0.43 | 0.15 | 0.42 | 0.16 |
| Fail Replacement | HVAC | MH | G | 15 | 0.20 | 0.07 | 0.19 | 0.07 |
| Fail Replacement | HVAC | MH | G | 16 | 0.36 | 0.13 | 0.35 | 0.13 |
| Fail Replacement | HVAC | SF | G | 4 | 0.33 | 0.12 | 0.32 | 0.12 |
| Fail Replacement | HVAC | SF | G | 5 | 0.46 | 0.17 | 0.46 | 0.18 |
| Fail Replacement | HVAC | SF | G | 6 | 0.27 | 0.09 | 0.26 | 0.10 |
| Fail Replacement | HVAC | SF | G | 8 | 0.23 | 0.08 | 0.23 | 0.08 |
| Fail Replacement | HVAC | SF | G | 9 | 0.28 | 0.10 | 0.28 | 0.10 |
| Fail Replacement | HVAC | SF | G | 10 | 0.32 | 0.11 | 0.31 | 0.11 |
| Fail Replacement | HVAC | SF | G | 13 | 0.36 | 0.13 | 0.35 | 0.13 |
| Fail Replacement | HVAC | SF | G | 14 | 0.36 | 0.13 | 0.35 | 0.13 |
| Fail Replacement | HVAC | SF | G | 15 | 0.17 | 0.06 | 0.17 | 0.06 |
| Fail Replacement | HVAC | SF | G | 16 | 0.55 | 0.21 | 0.55 | 0.22 |
| HE FAU Early Replacement | HVAC | MF | G | 8 | 0.05 | 0.03 | 0.05 | 0.03 |
| HE FAU Early Replacement | HVAC | MF | G | 9 | 0.08 | 0.04 | 0.08 | 0.04 |
| HE FAU Early Replacement | HVAC | MF | G | 10 | 0.09 | 0.05 | 0.08 | 0.05 |
| HE FAU Early Replacement | HVAC | MF | G | 14 | 0.14 | 0.07 | 0.12 | 0.08 |
| HE FAU Early Replacement | HVAC | MH | G | 4 | 0.23 | 0.13 | 0.22 | 0.14 |
| HE FAU Early Replacement | HVAC | MH | G | 5 | 0.25 | 0.14 | 0.23 | 0.15 |
| HE FAU Early Replacement | HVAC | MH | G | 6 | 0.14 | 0.08 | 0.13 | 0.08 |
| HE FAU Early Replacement | HVAC | MH | G | 8 | 0.14 | 0.08 | 0.13 | 0.08 |
| HE FAU Early Replacement | HVAC | MH | G | 9 | 0.16 | 0.09 | 0.15 | 0.09 |
| HE FAU Early Replacement | HVAC | MH | G | 10 | 0.19 | 0.11 | 0.18 | 0.11 |
| HE FAU Early Replacement | HVAC | MH | G | 13 | 0.21 | 0.12 | 0.20 | 0.12 |
| HE FAU Early Replacement | HVAC | MH | G | 14 | 0.27 | 0.15 | 0.25 | 0.16 |
| HE FAU Early Replacement | HVAC | MH | G | 15 | 0.13 | 0.07 | 0.12 | 0.07 |
| HE FAU Early Replacement | HVAC | MH | G | 16 | 0.22 | 0.13 | 0.21 | 0.13 |

**Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Southern California Gas Company**

ERRATA

| Measure | Measure Group | Type of Home (SF, MH, MF) | Electric or Gas (E,G) | Climate Zone (Number) | Ratio of Benefits Over Costs (Year 2015)* | | Ratio of Benefits Over Costs (Cycle 2016-17)* | |
|--------------------------|---------------|------------------------------|--------------------------|--------------------------|--|---|--|---|
| | | | | | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) |
| HE FAU Early Replacement | HVAC | SF | G | 4 | 0.21 | 0.12 | 0.19 | 0.12 |
| HE FAU Early Replacement | HVAC | SF | G | 5 | 0.29 | 0.17 | 0.27 | 0.18 |
| HE FAU Early Replacement | HVAC | SF | G | 6 | 0.17 | 0.09 | 0.16 | 0.10 |
| HE FAU Early Replacement | HVAC | SF | G | 8 | 0.15 | 0.08 | 0.13 | 0.08 |
| HE FAU Early Replacement | HVAC | SF | G | 9 | 0.18 | 0.10 | 0.16 | 0.10 |
| HE FAU Early Replacement | HVAC | SF | G | 10 | 0.20 | 0.11 | 0.18 | 0.11 |
| HE FAU Early Replacement | HVAC | SF | G | 13 | 0.23 | 0.13 | 0.21 | 0.13 |
| HE FAU Early Replacement | HVAC | SF | G | 14 | 0.23 | 0.13 | 0.21 | 0.13 |
| HE FAU Early Replacement | HVAC | SF | G | 15 | 0.11 | 0.06 | 0.10 | 0.06 |
| HE FAU Early Replacement | HVAC | SF | G | 16 | 0.34 | 0.21 | 0.33 | 0.22 |
| Upgrade FAU HE Furnace | HVAC | MF | G | 8 | 0.08 | 0.03 | 0.08 | 0.03 |
| Upgrade FAU HE Furnace | HVAC | MF | G | 9 | 0.13 | 0.04 | 0.13 | 0.04 |
| Upgrade FAU HE Furnace | HVAC | MF | G | 10 | 0.14 | 0.05 | 0.13 | 0.05 |
| Upgrade FAU HE Furnace | HVAC | MF | G | 14 | 0.22 | 0.07 | 0.21 | 0.08 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 4 | 0.37 | 0.13 | 0.36 | 0.14 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 5 | 0.40 | 0.14 | 0.39 | 0.15 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 6 | 0.22 | 0.08 | 0.21 | 0.08 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 8 | 0.23 | 0.08 | 0.22 | 0.08 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 9 | 0.26 | 0.09 | 0.25 | 0.09 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 10 | 0.31 | 0.11 | 0.30 | 0.11 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 13 | 0.34 | 0.12 | 0.33 | 0.12 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 14 | 0.43 | 0.15 | 0.42 | 0.16 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 15 | 0.20 | 0.07 | 0.19 | 0.07 |
| Upgrade FAU HE Furnace | HVAC | MH | G | 16 | 0.36 | 0.13 | 0.35 | 0.13 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 4 | 0.33 | 0.12 | 0.32 | 0.12 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 5 | 0.46 | 0.17 | 0.46 | 0.18 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 6 | 0.27 | 0.09 | 0.26 | 0.10 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 8 | 0.23 | 0.08 | 0.23 | 0.08 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 9 | 0.28 | 0.10 | 0.28 | 0.10 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 10 | 0.32 | 0.11 | 0.31 | 0.11 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 13 | 0.36 | 0.13 | 0.35 | 0.13 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 14 | 0.36 | 0.13 | 0.35 | 0.13 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 15 | 0.17 | 0.06 | 0.17 | 0.06 |
| Upgrade FAU HE Furnace | HVAC | SF | G | 16 | 0.55 | 0.21 | 0.55 | 0.22 |

* These tests were calculated using the E3 Calculator "SoCal_2013_v1 c4-Draft.xlsm"

Note: These test results were calculated using the discount rate currently in the E3 calculator = 7.38%. The non-energy benefits in the ESACET test were calculated using the LIPPT Model.

**Energy Savings Assistance Program Cost-Effectiveness - Non Weather Sensitive Measures
Southern California Gas Company**

| Measure | Measure Group | Type of Home (SF,MH,MF) | Electric or Gas (E,G) | Ratio of Benefits Over Costs (2015)* | | Ratio of Benefits Over Costs (Cycle 2016-2017)* | |
|--------------------------------|--------------------|----------------------------|--------------------------|--|---|--|---|
| | | | | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) |
| Duct sealing and testing | HVAC | MF | G | 0.00 | 0.00 | 0.00 | 0.00 |
| Duct sealing and testing | HVAC | MH | G | 0.45 | 0.25 | 0.31 | 0.17 |
| Duct sealing and testing | HVAC | SF | G | 0.97 | 0.71 | 0.73 | 0.47 |
| FAU standing pilot light conve | HVAC | MF | G | 1.33 | 1.42 | 1.63 | 1.49 |
| FAU standing pilot light conve | HVAC | MH | G | 1.33 | 1.42 | 1.63 | 1.49 |
| FAU standing pilot light conve | HVAC | SF | G | 1.33 | 1.42 | 1.63 | 1.49 |
| HE Clothes washer | Appliances | MF | G | 0.57 | 0.37 | 0.64 | 0.38 |
| HE Clothes washer | Appliances | MH | G | 0.57 | 0.37 | 0.64 | 0.38 |
| HE Clothes washer | Appliances | SF | G | 0.57 | 0.37 | 0.64 | 0.38 |
| Heating system | HVAC | MF | G | 0.00 | 0.00 | 0.00 | 0.00 |
| Heating system | HVAC | MH | G | 0.00 | 0.00 | 0.00 | 0.00 |
| Heating system | HVAC | SF | G | 0.00 | 0.00 | 0.00 | 0.00 |
| Low Flow Shower Head | Domestic Hot Water | MF | G | 0.19 | 0.19 | 0.37 | 0.19 |
| Low Flow Shower Head | Domestic Hot Water | MH | G | 0.23 | 0.23 | 0.46 | 0.24 |
| Low Flow Shower Head | Domestic Hot Water | SF | G | 0.34 | 0.34 | 0.62 | 0.35 |
| Thermostatic Shower Valve | Domestic Hot Water | all | G | 2.74 | 2.74 | 2.37 | 2.84 |
| Water Heater Blanket | Domestic Hot Water | MF | G | 0.14 | 0.14 | 0.28 | 0.14 |
| Water Heater Blanket | Domestic Hot Water | MH | G | 0.21 | 0.21 | 0.41 | 0.21 |
| Water Heater Blanket | Domestic Hot Water | SF | G | 0.30 | 0.30 | 0.57 | 0.31 |
| Water Heater Pipe Insulation | Domestic Hot Water | MF | G | 0.41 | 0.41 | 0.73 | 0.43 |
| Water Heater Pipe Insulation | Domestic Hot Water | MH | G | 0.61 | 0.61 | 0.99 | 0.63 |
| Water Heater Pipe Insulation | Domestic Hot Water | SF | G | 1.11 | 0.90 | 1.30 | 0.93 |
| Water heater repair and repla | Domestic Hot Water | MF | G | 0.00 | 0.00 | 0.00 | 0.00 |
| Water heater repair and repla | Domestic Hot Water | MH | G | 0.07 | 0.04 | 0.08 | 0.04 |
| Water heater repair and repla | Domestic Hot Water | SF | G | 0.07 | 0.04 | 0.08 | 0.04 |
| Faucet Aerator | Domestic Hot Water | MF | G | 1.24 | 1.09 | 1.49 | 1.13 |
| Faucet Aerator | Domestic Hot Water | MH | G | 1.48 | 1.55 | 1.82 | 1.61 |
| Faucet Aerator | Domestic Hot Water | SF | G | 1.71 | 2.17 | 2.15 | 2.25 |
| Tub Spout | Domestic Hot Water | MF | G | 2.08 | 4.14 | 2.73 | 4.29 |
| Tub Spout | Domestic Hot Water | SF | G | 1.82 | 2.60 | 2.32 | 2.69 |
| Minor Furnace Repair | HVAC | Renter | G | 0.00 | 0.00 | 0.00 | 0.00 |

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Note: These test results were calculated using the discount rate currently in the E3 calculator = 7.38%. The non-energy benefits in the ESACET test were calculated using the LIPPT Model.

**Energy Savings Assistance Program Cost-Effectiveness - Non Weather Sensitive Measures
Southern California Gas Company**

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| Measure | Measure Group | Type of Home (SF,MH,MF) | Electric or Gas (E,G) | Ratio of Benefits Over Costs (2015)* | | Ratio of Benefits Over Costs (Cycle 2016-2017)* | |
|-------------------------------------|--------------------|----------------------------|--------------------------|--|---|--|---|
| | | | | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) | Energy Savings Assistance Program Cost Effectiveness Test (ESACET) | Resource Measures Only Total Resource Cost Test (TRC) |
| Duct sealing and testing | HVAC | MF | G | 0.00 | 0.00 | 0.00 | 0.00 |
| Duct sealing and testing | HVAC | MH | G | 0.41 | 0.25 | 0.14 | 0.09 |
| Duct sealing and testing | HVAC | SF | G | 0.85 | 0.71 | 0.36 | 0.26 |
| FAU standing pilot light conversion | HVAC | MF | G | 0.81 | 0.76 | 0.88 | 0.80 |
| FAU standing pilot light conversion | HVAC | MH | G | 0.81 | 0.76 | 0.88 | 0.80 |
| FAU standing pilot light conversion | HVAC | SF | G | 0.81 | 0.76 | 0.88 | 0.80 |
| HE Clothes washer | Appliances | MF | G | 0.59 | 0.37 | 0.58 | 0.38 |
| HE Clothes washer | Appliances | MH | G | 0.59 | 0.37 | 0.58 | 0.38 |
| HE Clothes washer | Appliances | SF | G | 0.59 | 0.37 | 0.58 | 0.38 |
| Heating system | HVAC | MF | G | 0.00 | 0.00 | 0.00 | 0.00 |
| Heating system | HVAC | MH | G | 0.00 | 0.00 | 0.00 | 0.00 |
| Heating system | HVAC | SF | G | 0.00 | 0.00 | 0.00 | 0.00 |
| Low Flow Shower Head | Domestic Hot Water | MF | G | 0.50 | 0.27 | 0.46 | 0.28 |
| Low Flow Shower Head | Domestic Hot Water | MH | G | 0.59 | 0.35 | 0.56 | 0.36 |
| Low Flow Shower Head | Domestic Hot Water | SF | G | 0.77 | 0.50 | 0.74 | 0.52 |
| Thermostatic Shower Valve | Domestic Hot Water | all | G | 0.39 | 0.21 | 0.37 | 0.21 |
| Thermostatic Shower Valve | Domestic Hot Water | MF | G | 0.49 | 0.27 | 0.46 | 0.28 |
| Thermostatic Shower Valve | Domestic Hot Water | MH | G | 0.83 | 0.58 | 0.84 | 0.60 |
| Water Heater Blanket | Domestic Hot Water | SF | G | 0.13 | 0.07 | 0.12 | 0.07 |
| Water Heater Blanket | Domestic Hot Water | MH | G | 0.19 | 0.11 | 0.17 | 0.11 |
| Water Heater Blanket | Domestic Hot Water | SF | G | 0.26 | 0.15 | 0.25 | 0.16 |
| Water Heater Pipe Insulation | Domestic Hot Water | MF | G | 0.60 | 0.43 | 0.60 | 0.44 |
| Water Heater Pipe Insulation | Domestic Hot Water | MH | G | 0.78 | 0.63 | 0.80 | 0.66 |
| Water Heater Pipe Insulation | Domestic Hot Water | SF | G | 0.97 | 0.93 | 1.03 | 0.97 |
| Water heater repair and replace | Domestic Hot Water | MF | G | 0.00 | 0.00 | 0.00 | 0.00 |
| Water heater repair and replace | Domestic Hot Water | MH | G | 0.07 | 0.04 | 0.06 | 0.04 |
| Water heater repair and replace | Domestic Hot Water | SF | G | 0.07 | 0.04 | 0.06 | 0.04 |
| Faucet Aerator | Domestic Hot Water | MF | G | 1.59 | 2.32 | 1.77 | 2.40 |
| Faucet Aerator | Domestic Hot Water | MH | G | 1.74 | 3.28 | 1.99 | 3.39 |
| Faucet Aerator | Domestic Hot Water | SF | G | 1.87 | 4.60 | 2.18 | 4.76 |
| Tub Spout | Domestic Hot Water | MF | G | 1.83 | 4.14 | 2.13 | 4.29 |
| Tub Spout | Domestic Hot Water | SF | G | 1.65 | 2.60 | 1.85 | 2.69 |
| Tub Spout ** | Domestic Hot Water | MH | G | N/A | N/A | N/A | N/A |
| Minor Furnace Repair | HVAC | Renter | G | 0.00 | 0.00 | 0.00 | 0.00 |

* These tests were calculated using the E3 Calculator "SoCal_2013_v1 c4-Draft.xlsm"

** Tub Spout measure for mobilehomes (MH) cost-effectiveness estimate not available (n/a) at time of Application. Updated to show MF and SF # of installations.

Note: These test results were calculated using the discount rate currently in the E3 calculator = 7.38%. The non-energy benefits in the ESACET test were calculated using the LIPPT Model.