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2012-2014 CARE-ESA Program Proposed Decision





ESA: Budget and Goals

Goal: PD Should be modified to clarify that the homes-treated goal is 3-year rather than annual.

The PD's ESAProgram budget for PG&E should be corrected to \$471,032,000 (rather than \$459,467,324) to correctly apply the 5% reduction to PG&E's filed budget.

- Consistent with:
 - The number of homes treated goal
 - The increased number of refrigerator installations expected
- Revised budget filed in PG&E Reply Testimony, Dec. 9, 2011.



ESA Budget

| PG&E ESAP Program Budgets 2012-2014 | | | | |
|--|---------------|---------------|---------------|---------------|
| Filed | 2012 | 2013 | 2014 | Cycle Total |
| PG&E Application - 5/15/2011 | \$137,904,000 | \$167,525,000 | \$173,422,000 | \$478,851,000 |
| PG&E Reply Testimony - 12/9/2011 * | \$157,023,000 | \$162,622,000 | \$168,347,000 | \$487,992,000 |
| PD 5% Adjustment - 5/4/2012 | \$132,321,707 | \$160,743,662 | \$166,401,955 | \$459,467,324 |
| PG&E Corrects PD in Comments 5/24/2012 | \$150,158,500 | \$156,994,000 | \$162,453,000 | \$471,032,000 |
| Proposed Number of Homes to be Treated | | | | |
| PG&E Application - 5/15/2011 | 110,000 | 132,500 | 132,500 | 375,000 |
| PG&E Reply Testimony - 12/9/2011 | 125,000 | 125,000 | 125,000 | 375,000 |
| PD 5% Adjustment - 5/4/2012 | 119,940 | 119,940 | 119,940 | 359,820 |
| PG&E PD Comments- 5/24/2012 | 119,940 | 119,940 | 119,940 | 359,820 |
| * PG&E revised its ESAP Program Budget (Reply Testimony filed Dec. 9, 2011) to: | | | | |
| 1) PG&E revised homes treated to equalize annual goals (increasing homes treated in 2012 from 110,000 to 125,000 and decreasing each of 2013-2014 homes treated from 132,500 to 125,000; the 3-year total remains the same). | | | | |
| 2) PG&E increased 2012-2014 budgets to accommodate higher number of pre-1999 refrigerators forecasted in the new market potential data received from KEMA in Dec 2011. | | | | |



ESA: Landlord-Owned Property

Water Heaters and Furnaces

The ESA Program should not provide Water Heaters and Furnaces in tenant-occupied buildings

- PG&E believes this prohibition is fair to all customers as providing these measures would significantly reduce the number of homes treated.
- The Energy Efficiency proceeding provides rebates for Water Heaters and Furnaces.
- Replacing broken or hazardous equipment is providing ratepayer funding to landlords who would have to repair or replace this equipment anyway.
- The CPU has consistently not provided furnaces and water heaters under ESA except when the equipment fails NGAT.



Impacts of Increased Income Verification

- PG&E supports increased income verification using statistical modeling to target those least likely to be eligible
- The 90% penetration goal needs to be relaxed as increased income verification will result in more customers falling off the program
- Doubling PG&E's PEV rate to 20% would reduce the penetration rate to 84% by the end of 2014 (based on 2012 eligibility estimates)

| Enrollment & Verification Estimates - Comparison by Approach | | | |
|--|--------------------|-------------------|--------------|
| Approach | Application Filing | Proposed Decision | 20% PEV Rate |
| Annual Verification Requests | 120,000 | 800,000 | 310,000 |
| Percent of Total Enrolled | 8% | 52% | 20% |
| Admin Costs - Verification | \$625K | \$4M | \$1.6M |
| 2012-2014 Net Enrollment Change | 47,000 | -459,000 | -134,000 |
| 2014 Year-End Enrollment | 1,581,000 | 1,075,000 | 1,400,000 |
| 2014 Year-End Penetration Rate | 95% | 65% | 84% |



CARE

High Usage Customers

- PG&E supports opportunity for all >400% of Baseline customers to participate in ESA.
- ESA eligibility requirements must be modified to allow these customers to be treated by ESA.

Streamlining Categorical Program Eligibility

- PG&E agrees that workshops with all parties would be a good forum to review categorical program alignment with CARE eligibility requirements:
 - Household versus individual (e.g., Lifetime) eligibility needs to be reconciled
- PG&E supports income verifying any customer that falls into the top 20% most likely ineligible group, even if they initially qualified categorically.

Attachment H.1

Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Pacific Gas and Electric Company

| Measure | Measure Group | Type of Home (SF, MH, MF) | Electric or Gas (E, G) | Climate Zone (Number) | Ratio of Benefits Over Costs* | | | Approved |
|---------------------------------------|---------------|------------------------------|------------------------------|--------------------------|-------------------------------|------------------------------|-----------------------------|----------|
| | | | | | Utility Cost Test | Modified Participant Test | Total Resource Cost Test | |
| | | | | | | | | |
| New AC TIME DELAY MH/CZ13 | HVAC | MH | E | 13 | 2.03 | 6.43 | 1.73 | X |
| New AC TIME DELAY MH/CZ14 | HVAC | MH | E | 14 | 2.02 | 6.43 | 1.73 | X |
| New AC TIME DELAY MH/CZ11 | HVAC | MH | E | 11 | 1.95 | 5.34 | 1.68 | X |
| New AC TIME DELAY MH/CZ12 | HVAC | MH | E | 12 | 1.87 | 4.35 | 1.62 | X |
| New AC TIME DELAY MH/CZ4 | HVAC | MH | E | 4 | 1.65 | 3.09 | 1.42 | X |
| New AC Tune-up- Central w/CZ14 w/SF | HVAC | SF | E | 14 | 1.64 | 3.08 | 1.40 | X |
| New AC Tune-up- Central w/CZ14 w/MH | HVAC | MH | E | 14 | 1.82 | 3.00 | 1.39 | X |
| New AC TIME DELAY MH/CZ22 | HVAC | MH | E | 2 | 1.55 | 2.66 | 1.34 | X |
| New AC TIME DELAY SF/CZ13 | HVAC | SF | E | 13 | 1.54 | 2.56 | 1.32 | X |
| New AC TIME DELAY SF/CZ14 | HVAC | SF | E | 14 | 1.53 | 2.56 | 1.31 | X |
| New AC TIME DELAY SF/CZ11 | HVAC | SF | E | 11 | 1.45 | 2.14 | 1.25 | X |
| A/C Tune-up- Central w/CZ14 w/MF | HVAC | MF | E | 14 | 1.37 | 2.01 | 1.18 | X |
| A/C Tune-up- Central w/CZ13 w/SF | HVAC | SF | E | 13 | 1.36 | 1.96 | 1.17 | X |
| A/C Tune-up- Central w/CZ11 w/SF | HVAC | SF | E | 11 | 1.30 | 1.71 | 1.12 | X |
| New AC TIME DELAY MH/CZ5 | HVAC | MH | E | 5 | 1.20 | 1.66 | 1.02 | X |
| New AC TIME DELAY MH/CZ6 | HVAC | MH | E | 6 | 1.20 | 1.66 | 1.02 | X |
| New AC Tune-up- Central w/CZ13 w/MH | HVAC | MH | E | 13 | 1.25 | 1.63 | 1.07 | X |
| New AC TIME DELAY MF/CZ11 | HVAC | MF | E | 11 | 1.23 | 1.59 | 1.06 | X |
| New AC TIME DELAY MF/CZ13 | HVAC | MF | E | 13 | 1.24 | 1.59 | 1.06 | X |
| New AC TIME DELAY MH/CZ3 | HVAC | MH | E | 3 | 1.19 | 1.44 | 1.03 | X |
| A/C Tune-up- Central w/CZ11 w/MH | HVAC | MH | E | 11 | 1.18 | 1.42 | 1.02 | X |
| A/C Tune-up- Central w/CZ13 w/MF | HVAC | MF | E | 13 | 1.14 | 1.38 | 0.98 | X |
| New AC TIME DELAY SF/CZ12 | HVAC | SF | E | 12 | 1.18 | 1.36 | 1.03 | X |
| New AC TIME DELAY MF/CZ11 | HVAC | MF | E | 11 | 1.13 | 1.30 | 0.98 | X |
| A/C Tune-up- Central w/CZ12 w/SF | HVAC | SF | E | 12 | 1.11 | 1.22 | 0.96 | X |
| A/C Tune-up- Central w/CZ11 w/MF | HVAC | MF | E | 11 | 1.05 | 1.16 | 0.91 | X |
| Evap Coolers R&R SF/CZ13 | HVAC | SF | E | 13 | 1.03 | 1.15 | 0.88 | X |
| Evap Coolers R&R SF/CZ14 | HVAC | SF | E | 14 | 1.02 | 1.15 | 0.88 | X |
| Evap Coolers R&R SF/CZ16 | HVAC | SF | E | 16 | 1.03 | 1.14 | 0.88 | X |
| Air Sealing / Envelope MH/CZ13/G-wAC | HVAC | MH | EG | 13 | 0.93 | 1.08 | 0.46 | X |
| Air Sealing / Envelope MH/CZ14/G-wAC | HVAC | MH | EG | 14 | 0.52 | 1.08 | 0.45 | X |
| A/C Tune-up- Central w/CZ12 w/MH | HVAC | MH | E | 12 | 1.03 | 1.07 | 0.89 | X |
| New AC TIME DELAY SF/CZ16 | HVAC | SF | E | 16 | 1.00 | 1.07 | 0.86 | X |
| Evap Coolers R&R MH/CZ14 | HVAC | MH | E | 14 | 0.97 | 1.06 | 0.83 | X |
| Evap Coolers R&R MH/CZ13 | HVAC | MH | E | 13 | 0.98 | 1.06 | 0.83 | X |
| Air Sealing / Envelope SF/CZ13/G-wAC | ENCLOSURE | SF | EG | 13 | 0.52 | 1.04 | 0.44 | X |
| Air Sealing / Envelope SF/CZ14/G-wAC | ENCLOSURE | SF | EG | 14 | 0.52 | 1.04 | 0.44 | X |
| Air Sealing / Envelope MH/CZ16/G-wAC | ENCLOSURE | MH | EG | 16 | 0.49 | 0.98 | 0.41 | X |
| Air Sealing / Envelope SF/CZ16/G-wAC | ENCLOSURE | SF | EG | 16 | 0.48 | 0.96 | 0.41 | X |
| Air Sealing / Envelope MH/CZ11/G-wAC | ENCLOSURE | MH | EG | 11 | 0.48 | 0.94 | 0.40 | X |
| Air Sealing / Envelope SF/CZ11/G-wAC | ENCLOSURE | SF | EG | 11 | 0.45 | 0.94 | 0.38 | X |
| New AC TIME DELAY MF/CZ12 | HVAC | MF | E | 12 | 0.61 | 0.87 | 0.79 | X |
| Air Sealing / Envelope MH/CZ12/G-wAC | ENCLOSURE | MH | EG | 12 | 0.44 | 0.84 | 0.38 | X |
| A/C Tune-up- Central w/CZ16 w/SF | HVAC | SF | E | 16 | 0.84 | 0.83 | 0.72 | X |
| Evap Coolers R&R MH/CZ11 | HVAC | MH | E | 11 | 0.85 | 0.81 | 0.73 | X |
| New AC TIME DELAY SF/CZ4 | HVAC | SF | E | 4 | 0.83 | 0.81 | 0.71 | X |
| Evap Coolers R&R SF/CZ11 | HVAC | SF | E | 11 | 0.84 | 0.81 | 0.73 | X |
| Evap Coolers R&R SF/CZ12 | HVAC | SF | E | 12 | 0.84 | 0.78 | 0.73 | X |
| Air Sealing / Envelope SF/CZ12/G-wAC | ENCLOSURE | SF | EG | 12 | 0.41 | 0.77 | 0.35 | X |
| Air Sealing / Envelope MF/CZ14/G-wAC | ENCLOSURE | MF | EG | 14 | 0.40 | 0.75 | 0.35 | X |
| Air Sealing / Envelope MF/CZ13/G-wAC | ENCLOSURE | MF | EG | 13 | 0.40 | 0.75 | 0.35 | X |
| Evap Coolers R&R MH/CZ12 | HVAC | MH | E | 12 | 0.82 | 0.75 | 0.71 | X |
| Air Sealing / Envelope MH/CZ13/E-wAC | ENCLOSURE | MH | E | 13 | 0.40 | 0.74 | 0.34 | X |
| Air Sealing / Envelope MH/CZ14/E-wAC | ENCLOSURE | MH | E | 14 | 0.40 | 0.74 | 0.34 | X |
| Air Sealing / Envelope SF/CZ13/E-wAC | ENCLOSURE | SF | E | 13 | 0.40 | 0.73 | 0.34 | X |
| Air Sealing / Envelope SF/CZ14/E-wAC | ENCLOSURE | SF | E | 14 | 0.39 | 0.73 | 0.34 | X |
| Air Sealing / Envelope MF/CZ14/E-wAC | ENCLOSURE | MF | E | 14 | 0.39 | 0.73 | 0.34 | X |
| Air Sealing / Envelope MF/CZ13/E-wAC | ENCLOSURE | MF | E | 13 | 0.40 | 0.73 | 0.34 | X |
| A/C Tune-up- Central w/CZ16 w/MH | HVAC | MH | E | 16 | 0.76 | 0.72 | 0.65 | X |
| New AC TIME DELAY MF/CZ16 | HVAC | MF | E | 16 | 0.77 | 0.72 | 0.66 | X |
| Air Sealing / Envelope MH/CZ11/G-wAC | ENCLOSURE | MH | EG | 11 | 0.34 | 0.72 | 0.29 | X |
| Air Sealing / Envelope MH/CZ11/G-noAC | ENCLOSURE | MH | G | 1 | 0.35 | 0.72 | 0.29 | X |
| A/C Tune-up- Central w/CZ12 w/MF | HVAC | MF | E | 12 | 0.75 | 0.66 | 0.65 | X |
| Air Sealing / Envelope SF/CZ11/G-wAC | ENCLOSURE | SF | EG | 11 | 0.32 | 0.65 | 0.27 | X |
| Air Sealing / Envelope SF/CZ11/G-noAC | ENCLOSURE | SF | G | 1 | 0.32 | 0.65 | 0.27 | X |
| A/C Tune-up- Central w/CZ4 w/SF | HVAC | SF | E | 4 | 0.70 | 0.65 | 0.60 | X |
| Air Sealing / Envelope MF/CZ16/G-wAC | ENCLOSURE | MF | EG | 16 | 0.35 | 0.64 | 0.30 | X |
| A/C Tune-up- Central w/CZ6 w/MH | HVAC | MH | E | 6 | 0.63 | 0.62 | 0.53 | X |
| Air Sealing / Envelope MH/CZ2/G-wAC | ENCLOSURE | MH | EG | 2 | 0.32 | 0.62 | 0.27 | X |
| New AC TIME DELAY MF/CZ4 | HVAC | MF | E | 4 | 0.67 | 0.61 | 0.58 | X |
| Air Sealing / Envelope MF/CZ16/E-wAC | ENCLOSURE | MF | E | 16 | 0.34 | 0.61 | 0.29 | X |
| Air Sealing / Envelope SF/CZ16/E-wAC | ENCLOSURE | SF | E | 16 | 0.33 | 0.58 | 0.28 | X |
| Air Sealing / Envelope SF/CZ2/G-wAC | ENCLOSURE | SF | EG | 2 | 0.30 | 0.57 | 0.25 | X |
| Air Sealing / Envelope MH/CZ16/E-wAC | ENCLOSURE | MH | E | 16 | 0.32 | 0.57 | 0.28 | X |
| Air Sealing / Envelope MH/CZ6/G-wAC | ENCLOSURE | MH | EG | 6 | 0.28 | 0.57 | 0.23 | X |
| Air Sealing / Envelope MH/CZ6/G-wAC | ENCLOSURE | MH | EG | 6 | 0.28 | 0.57 | 0.23 | X |
| A/C Tune-up- Central w/CZ6 w/SF | HVAC | SF | E | 6 | 0.59 | 0.57 | 0.49 | X |
| New AC TIME DELAY SF/CZ4 | HVAC | SF | E | 4 | 0.65 | 0.56 | 0.56 | X |
| Air Sealing / Envelope MH/CZ4/G-wAC | ENCLOSURE | MH | EG | 4 | 0.28 | 0.54 | 0.24 | X |
| Air Sealing / Envelope MH/CZ3/G-wAC | ENCLOSURE | MH | EG | 3 | 0.27 | 0.53 | 0.23 | X |
| A/C Tune-up- Central w/CZ4 w/MH | HVAC | MH | E | 4 | 0.61 | 0.53 | 0.52 | X |
| Air Sealing / Envelope SF/CZ6/G-wAC | ENCLOSURE | SF | EG | 6 | 0.27 | 0.53 | 0.22 | X |
| Air Sealing / Envelope SF/CZ6/G-wAC | ENCLOSURE | SF | EG | 6 | 0.27 | 0.53 | 0.22 | X |
| New AC TIME DELAY MH/CZ1 | HVAC | MH | E | 1 | 0.89 | 0.53 | 0.51 | X |
| Air Sealing / Envelope MF/CZ11/G-wAC | ENCLOSURE | MF | EG | 11 | 0.30 | 0.52 | 0.26 | X |
| Air Sealing / Envelope MH/CZ11/E-wAC | ENCLOSURE | MH | E | 11 | 0.30 | 0.51 | 0.26 | X |
| Air Sealing / Envelope SF/CZ4/G-wAC | ENCLOSURE | SF | EG | 4 | 0.27 | 0.50 | 0.22 | X |
| Air Sealing / Envelope MF/CZ11/E-wAC | ENCLOSURE | MF | E | 11 | 0.29 | 0.49 | 0.25 | X |
| A/C Tune-up- Central w/CZ16 w/MF | HVAC | MF | E | 16 | 0.57 | 0.49 | 0.49 | X |
| Air Sealing / Envelope MH/CZ3/G-noAC | HVAC | MH | G | 3 | 0.25 | 0.48 | 0.20 | X |
| Air Sealing / Envelope SF/CZ11/E-wAC | ENCLOSURE | SF | E | 11 | 0.29 | 0.48 | 0.25 | X |
| Air Sealing / Envelope SF/CZ3/G-wAC | ENCLOSURE | SF | EG | 3 | 0.25 | 0.47 | 0.21 | X |
| A/C Tune-up- Central w/CZ6 w/MF | HVAC | MF | E | 6 | 0.51 | 0.47 | 0.43 | X |
| Air Sealing / Envelope MF/CZ12/G-wAC | ENCLOSURE | MF | EG | 12 | 0.29 | 0.46 | 0.25 | X |
| Air Sealing / Envelope MH/CZ2/G-noAC | ENCLOSURE | MH | G | 2 | 0.24 | 0.46 | 0.20 | X |
| Air Sealing / Envelope MH/CZ12/E-wAC | ENCLOSURE | MH | E | 12 | 0.29 | 0.46 | 0.25 | X |
| Attic insulation SF/CZ14/G-wAC | ENCLOSURE | SF | EG | 14 | 0.50 | 0.44 | 0.43 | X |
| Attic insulation SF/CZ13/G-wAC | ENCLOSURE | SF | EG | 13 | 0.51 | 0.44 | 0.43 | X |
| Air Sealing / Envelope MF/CZ12/E-wAC | ENCLOSURE | MF | E | 12 | 0.27 | 0.44 | 0.24 | X |
| A/C Tune-up- Central w/CZ2 w/MH | HVAC | MH | E | 2 | 0.53 | 0.43 | 0.45 | X |
| Air Sealing / Envelope SF/CZ12/E-wAC | ENCLOSURE | SF | E | 12 | 0.27 | 0.43 | 0.23 | X |
| Air Sealing / Envelope MH/CZ11/G-noAC | ENCLOSURE | MH | G | 11 | 0.22 | 0.43 | 0.18 | X |
| A/C Tune-up- Central w/CZ2 w/SF | HVAC | SF | E | 2 | 0.51 | 0.42 | 0.44 | X |
| Air Sealing / Envelope MH/CZ16/G-noAC | ENCLOSURE | MH | G | 16 | 0.21 | 0.41 | 0.18 | X |
| Air Sealing / Envelope SF/CZ2/G-noAC | ENCLOSURE | SF | G | 2 | 0.21 | 0.41 | 0.18 | X |
| Attic insulation SF/CZ16/G-wAC | ENCLOSURE | SF | EG | 16 | 0.47 | 0.41 | 0.40 | X |
| Air Sealing / Envelope MH/CZ5/G-noAC | ENCLOSURE | MH | G | 5 | 0.20 | 0.41 | 0.17 | X |
| Air Sealing / Envelope MH/CZ6/G-noAC | ENCLOSURE | MH | G | 6 | 0.20 | 0.41 | 0.17 | X |

Attachment H.1

Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Pacific Gas and Electric Company

| Measure | Measure Group | Type of Home | Electric or Gas | Climate Zone | Ratio of Benefits Over Costs* | | | |
|---------------------------------------|---------------|--------------|-----------------|--------------|-------------------------------|---------------------------|--------------------------|---|
| | | | | | Utility Cost Test | Modified Participant Test | Total Resource Cost Test | |
| Air Sealing / Envelope SF/CZ11/G-noAC | ENCLOSURE | SF | G | 11 | 0.21 | 0.40 | 0.17 | X |
| Air Sealing / Envelope SF/CZ3/G-noAC | ENCLOSURE | SF | G | 3 | 0.20 | 0.38 | 0.16 | X |
| Air Sealing / Envelope MH/CZ12/G-noAC | ENCLOSURE | MH | G | 12 | 0.20 | 0.38 | 0.16 | X |
| Air Sealing / Envelope SF/CZ16/G-noAC | ENCLOSURE | SF | G | 16 | 0.20 | 0.38 | 0.16 | X |
| Attic Insulation SF/CZ11/G-wAC | ENCLOSURE | SF | EG | 11 | 0.45 | 0.38 | 0.38 | X |
| Air Sealing / Envelope MH/CZ4/G-noAC | ENCLOSURE | MH | G | 4 | 0.20 | 0.38 | 0.16 | X |
| Air Sealing / Envelope SF/CZ8/G-noAC | ENCLOSURE | SF | G | 8 | 0.19 | 0.37 | 0.15 | X |
| Air Sealing / Envelope SF/CZ6/G-noAC | ENCLOSURE | SF | G | 6 | 0.19 | 0.37 | 0.15 | X |
| New AC TIME DELAY MF/CZ22 | HVAC | MF | E | 2 | 0.46 | 0.36 | 0.40 | X |
| Attic Insulation MF/CZ14/G-wAC | ENCLOSURE | MF | EG | 14 | 0.43 | 0.36 | 0.37 | X |
| Attic Insulation MF/CZ13/G-wAC | ENCLOSURE | MF | EG | 13 | 0.44 | 0.36 | 0.37 | X |
| A/C Tune-up- Central w/C24 w/MF | HVAC | MF | E | 4 | 0.44 | 0.36 | 0.38 | X |
| Air Sealing / Envelope SF/CZ12/G-noAC | ENCLOSURE | SF | G | 12 | 0.16 | 0.34 | 0.15 | X |
| Air Sealing / Envelope MH/CZ14/G-noAC | ENCLOSURE | MH | G | 14 | 0.17 | 0.34 | 0.15 | X |
| Air Sealing / Envelope MH/CZ13/G-noAC | ENCLOSURE | MH | G | 13 | 0.18 | 0.34 | 0.15 | X |
| Air Sealing / Envelope SF/CZ4/G-noAC | ENCLOSURE | SF | G | 4 | 0.18 | 0.34 | 0.15 | X |
| Attic Insulation SF/CZ13/E-wAC | ENCLOSURE | SF | E | 13 | 0.39 | 0.31 | 0.33 | X |
| Attic Insulation SF/CZ14/E-wAC | ENCLOSURE | SF | E | 14 | 0.38 | 0.31 | 0.33 | X |
| Attic Insulation SF/CZ12/G-wAC | ENCLOSURE | SF | EG | 12 | 0.39 | 0.31 | 0.33 | X |
| Air Sealing / Envelope SF/CZ13/G-noAC | ENCLOSURE | SF | G | 13 | 0.18 | 0.31 | 0.14 | X |
| Air Sealing / Envelope SF/CZ14/G-noAC | ENCLOSURE | SF | G | 14 | 0.16 | 0.31 | 0.14 | X |
| Attic Insulation MF/CZ13/E-wAC | ENCLOSURE | MF | E | 13 | 0.39 | 0.31 | 0.33 | X |
| Attic Insulation MF/CZ14/E-wAC | ENCLOSURE | MF | E | 14 | 0.39 | 0.31 | 0.33 | X |
| A/C Tune-up- Central w/C22 w/MF | HVAC | MF | E | 2 | 0.39 | 0.30 | 0.33 | X |
| Attic Insulation SF/CZ1/G-wAC | ENCLOSURE | SF | EG | 1 | 0.30 | 0.27 | 0.25 | X |
| Attic Insulation SF/CZ1/G-noAC | ENCLOSURE | SF | G | 1 | 0.31 | 0.26 | 0.26 | X |
| Attic Insulation SF/CZ18/E-wAC | ENCLOSURE | SF | E | 18 | 0.32 | 0.25 | 0.28 | X |
| Attic Insulation MF/CZ12/G-wAC | ENCLOSURE | MF | EG | 12 | 0.33 | 0.25 | 0.28 | X |
| Attic Insulation MF/CZ11/G-wAC | ENCLOSURE | MF | EG | 11 | 0.32 | 0.25 | 0.27 | X |
| Attic Insulation SF/CZ2/G-wAC | ENCLOSURE | SF | EG | 2 | 0.29 | 0.24 | 0.24 | X |
| Air Sealing / Envelope MF/CZ8/G-wAC | ENCLOSURE | MF | EG | 8 | 0.12 | 0.22 | 0.10 | X |
| Air Sealing / Envelope MF/CZ6/G-wAC | ENCLOSURE | MF | EG | 6 | 0.12 | 0.22 | 0.10 | X |
| Air Sealing / Envelope MF/CZ4/G-wAC | ENCLOSURE | MF | EG | 4 | 0.13 | 0.22 | 0.11 | X |
| Attic Insulation SF/CZ11/E-wAC | ENCLOSURE | SF | E | 11 | 0.29 | 0.21 | 0.25 | X |
| Attic Insulation SF/CZ4/G-noAC | ENCLOSURE | SF | G | 4 | 0.24 | 0.21 | 0.20 | X |
| Attic Insulation SF/CZ5/G-noAC | ENCLOSURE | SF | G | 5 | 0.24 | 0.21 | 0.20 | X |
| Attic Insulation SF/CZ6/G-noAC | ENCLOSURE | SF | G | 6 | 0.24 | 0.21 | 0.20 | X |
| New AC TIME DELAY SF/CZ3 | HVAC | SF | E | 3 | 0.28 | 0.20 | 0.24 | X |
| Attic Insulation SF/CZ3/G-wAC | ENCLOSURE | SF | EG | 3 | 0.24 | 0.20 | 0.21 | X |
| Evap Coolers R&R SF/CZ2 | HVAC | SF | E | 2 | 0.27 | 0.20 | 0.23 | X |
| Evap Coolers R&R SF/CZ3 | HVAC | SF | E | 3 | 0.27 | 0.20 | 0.23 | X |
| Evap Coolers R&R SF/CZ4 | HVAC | SF | E | 4 | 0.26 | 0.20 | 0.22 | X |
| Evap Coolers R&R SF/CZ1 | HVAC | SF | E | 1 | 0.25 | 0.20 | 0.22 | X |
| Attic Insulation MF/CZ12/E-wAC | ENCLOSURE | MF | E | 12 | 0.27 | 0.19 | 0.24 | X |
| Attic Insulation MF/CZ11/E-wAC | ENCLOSURE | MF | E | 11 | 0.26 | 0.19 | 0.23 | X |
| Air Sealing / Envelope MF/CZ4/E-wAC | ENCLOSURE | MF | E | 4 | 0.12 | 0.19 | 0.10 | X |
| Air Sealing / Envelope MF/CZ5/E-wAC | ENCLOSURE | MF | E | 5 | 0.11 | 0.19 | 0.09 | X |
| Air Sealing / Envelope MF/CZ6/E-wAC | ENCLOSURE | MF | E | 6 | 0.11 | 0.19 | 0.09 | X |
| Air Sealing / Envelope MF/CZ2/G-wAC | ENCLOSURE | MF | EG | 2 | 0.12 | 0.19 | 0.10 | X |
| Evap Coolers R&R MH/CZ2 | HVAC | MH | E | 2 | 0.26 | 0.19 | 0.22 | X |
| Evap Coolers R&R MH/CZ3 | HVAC | MH | E | 3 | 0.26 | 0.19 | 0.22 | X |
| Evap Coolers R&R MH/CZ4 | HVAC | MH | E | 4 | 0.25 | 0.19 | 0.21 | X |
| Evap Coolers R&R MH/CZ16 | HVAC | MH | E | 16 | 0.25 | 0.19 | 0.22 | X |
| Attic Insulation SF/CZ12/E-wAC | ENCLOSURE | SF | E | 12 | 0.25 | 0.17 | 0.22 | X |
| Attic Insulation SF/CZ2/G-noAC | ENCLOSURE | SF | G | 2 | 0.21 | 0.17 | 0.17 | X |
| Air Sealing / Envelope SF/CZ4/E-wAC | ENCLOSURE | SF | E | 4 | 0.10 | 0.17 | 0.09 | X |
| Air Sealing / Envelope SF/CZ8/E-wAC | ENCLOSURE | SF | E | 8 | 0.09 | 0.17 | 0.08 | X |
| Air Sealing / Envelope SF/CZ6/E-wAC | ENCLOSURE | SF | E | 6 | 0.09 | 0.17 | 0.08 | X |
| Attic Insulation SF/CZ11/G-noAC | ENCLOSURE | SF | G | 11 | 0.20 | 0.16 | 0.17 | X |
| Air Sealing / Envelope MH/CZ5/E-wAC | ENCLOSURE | MH | E | 5 | 0.09 | 0.16 | 0.08 | X |
| Air Sealing / Envelope MH/CZ6/E-wAC | ENCLOSURE | MH | E | 6 | 0.09 | 0.16 | 0.08 | X |
| Air Sealing / Envelope MH/CZ4/E-wAC | ENCLOSURE | MH | E | 4 | 0.10 | 0.16 | 0.09 | X |
| Attic Insulation SF/CZ18/G-noAC | ENCLOSURE | SF | G | 18 | 0.19 | 0.16 | 0.16 | X |
| Air Sealing / Envelope SF/CZ2/E-wAC | ENCLOSURE | SF | E | 2 | 0.10 | 0.16 | 0.09 | X |
| Air Sealing / Envelope MH/CZ2/E-wAC | ENCLOSURE | MH | E | 2 | 0.10 | 0.16 | 0.09 | X |
| Air Sealing / Envelope MF/CZ2/E-wAC | ENCLOSURE | MF | E | 2 | 0.10 | 0.16 | 0.09 | X |
| Attic Insulation SF/CZ3/G-noAC | ENCLOSURE | SF | G | 3 | 0.19 | 0.15 | 0.15 | X |
| Attic Insulation MF/CZ4/G-wAC | ENCLOSURE | MF | EG | 4 | 0.19 | 0.14 | 0.16 | X |
| Attic Insulation MF/CZ5/G-wAC | ENCLOSURE | MF | EG | 5 | 0.17 | 0.14 | 0.15 | X |
| Attic Insulation SF/CZ12/G-noAC | ENCLOSURE | SF | G | 12 | 0.17 | 0.14 | 0.14 | X |
| Attic Insulation SF/CZ4/G-noAC | ENCLOSURE | SF | G | 4 | 0.17 | 0.14 | 0.14 | X |
| Attic Insulation SF/CZ5/G-noAC | ENCLOSURE | SF | G | 5 | 0.16 | 0.14 | 0.14 | X |
| Attic Insulation SF/CZ14/G-noAC | ENCLOSURE | SF | G | 14 | 0.16 | 0.13 | 0.13 | X |
| Attic Insulation SF/CZ13/G-noAC | ENCLOSURE | SF | G | 13 | 0.16 | 0.13 | 0.13 | X |
| Attic Insulation MF/CZ2/G-wAC | ENCLOSURE | MF | EG | 2 | 0.17 | 0.13 | 0.14 | X |
| Attic Insulation MF/CZ3/G-wAC | ENCLOSURE | MF | EG | 3 | 0.16 | 0.12 | 0.14 | X |
| Air Sealing / Envelope MF/CZ3/G-wAC | ENCLOSURE | MF | EG | 3 | 0.07 | 0.12 | 0.06 | X |
| Air Sealing / Envelope SF/CZ3/E-wAC | ENCLOSURE | SF | E | 3 | 0.06 | 0.09 | 0.05 | X |
| Air Sealing / Envelope MF/CZ5/E-wAC | ENCLOSURE | MF | E | 5 | 0.06 | 0.09 | 0.05 | X |
| Attic Insulation MF/CZ3/G-noAC | ENCLOSURE | MF | G | 3 | 0.08 | 0.07 | 0.07 | X |
| Attic Insulation MF/CZ12/G-noAC | ENCLOSURE | MF | G | 12 | 0.07 | 0.05 | 0.06 | X |
| Attic Insulation MF/CZ11/G-noAC | ENCLOSURE | MF | G | 11 | 0.07 | 0.05 | 0.06 | X |
| Air Sealing / Envelope MH/CZ3/E-wAC | ENCLOSURE | MH | E | 3 | 0.03 | 0.05 | 0.03 | X |
| Air Sealing / Envelope MF/CZ1/G-wAC | ENCLOSURE | MF | EG | 1 | 0.03 | 0.05 | 0.02 | X |
| Attic Insulation MF/CZ5/G-noAC | ENCLOSURE | MF | G | 5 | 0.06 | 0.05 | 0.05 | X |
| Attic Insulation MF/CZ4/G-noAC | ENCLOSURE | MF | G | 4 | 0.06 | 0.05 | 0.05 | X |
| Attic Insulation MF/CZ13/G-noAC | ENCLOSURE | MF | G | 13 | 0.06 | 0.05 | 0.05 | X |
| Air Sealing / Envelope MF/CZ1/G-noAC | ENCLOSURE | MF | G | 1 | 0.03 | 0.05 | 0.02 | X |
| Air Sealing / Envelope MF/CZ16/G-noAC | ENCLOSURE | MF | G | 16 | 0.02 | 0.03 | 0.01 | X |
| Air Sealing / Envelope MF/CZ2/G-noAC | ENCLOSURE | MF | G | 2 | 0.02 | 0.03 | 0.01 | X |
| Air Sealing / Envelope MF/CZ11/G-noAC | ENCLOSURE | MF | G | 11 | 0.02 | 0.03 | 0.01 | X |
| Air Sealing / Envelope MF/CZ3/G-noAC | ENCLOSURE | MF | G | 3 | 0.02 | 0.03 | 0.01 | X |
| Air Sealing / Envelope MF/CZ5/G-noAC | ENCLOSURE | MF | G | 5 | 0.01 | 0.03 | 0.01 | X |
| Air Sealing / Envelope MF/CZ6/G-noAC | ENCLOSURE | MF | G | 6 | 0.01 | 0.03 | 0.01 | X |
| Air Sealing / Envelope MF/CZ12/G-noAC | ENCLOSURE | MF | G | 12 | 0.01 | 0.03 | 0.01 | X |
| Air Sealing / Envelope MF/CZ4/G-noAC | ENCLOSURE | MF | G | 4 | 0.01 | 0.02 | 0.01 | X |
| Air Sealing / Envelope MF/CZ14/G-noAC | ENCLOSURE | MF | G | 14 | 0.01 | 0.02 | 0.01 | X |
| Air Sealing / Envelope MF/CZ13/G-noAC | ENCLOSURE | MF | G | 13 | 0.01 | 0.02 | 0.01 | X |
| Air Sealing / Envelope MF/CZ1/E-wAC | ENCLOSURE | MF | E | 1 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MH/CZ1/E-wAC | ENCLOSURE | MH | E | 1 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SF/CZ1/E-wAC | ENCLOSURE | SF | E | 1 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MF/CZ1/E-noAC | ENCLOSURE | MF | E | 11 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MF/CZ11/E-noAC | ENCLOSURE | MF | E | 11 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MF/CZ12/E-noAC | ENCLOSURE | MF | E | 12 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MF/CZ13/E-noAC | ENCLOSURE | MF | E | 13 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MF/CZ14/E-noAC | ENCLOSURE | MF | E | 14 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MF/CZ16/E-noAC | ENCLOSURE | MF | E | 16 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MF/CZ2/E-noAC | ENCLOSURE | MF | E | 2 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MF/CZ3/E-noAC | ENCLOSURE | MF | E | 3 | 0.00 | 0.00 | 0.00 | X |

Attachment H.1

Energy Savings Assistance Program Cost-Effectiveness - Weather Sensitive Measures
Pacific Gas and Electric Company

| Measure | Measure Group | Type of Home | Electric or Gas | Climate Zone | Ratio of Benefits Over Costs* | | | |
|--------------------------------------|---------------|--------------|-----------------|--------------|-------------------------------|---------------------------|--------------------------|---|
| | | | | | Utility Cost Test | Modified Participant Test | Total Resource Cost Test | |
| Air Sealing / Envelope MFCZ4/E-noAC | ENCLOSURE | MF | E | 4 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MFCZ5/E-noAC | ENCLOSURE | MF | E | 5 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MFCZ6/E-noAC | ENCLOSURE | MF | E | 6 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ1/E-noAC | ENCLOSURE | MH | E | 1 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ11/E-noAC | ENCLOSURE | MH | E | 11 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ12/E-noAC | ENCLOSURE | MH | E | 12 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ13/E-noAC | ENCLOSURE | MH | E | 13 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ14/E-noAC | ENCLOSURE | MH | E | 14 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ16/E-noAC | ENCLOSURE | MH | E | 16 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ22/E-noAC | ENCLOSURE | MH | E | 2 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ3/E-noAC | ENCLOSURE | MH | E | 3 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ4/E-noAC | ENCLOSURE | MH | E | 4 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ5/E-noAC | ENCLOSURE | MH | E | 5 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope MHCZ6/E-noAC | ENCLOSURE | MH | E | 6 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ1/E-noAC | ENCLOSURE | SF | E | 1 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ11/E-noAC | ENCLOSURE | SF | E | 11 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ12/E-noAC | ENCLOSURE | SF | E | 12 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ13/E-noAC | ENCLOSURE | SF | E | 13 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ14/E-noAC | ENCLOSURE | SF | E | 14 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ16/E-noAC | ENCLOSURE | SF | E | 16 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ2/E-noAC | ENCLOSURE | SF | E | 2 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ3/E-noAC | ENCLOSURE | SF | E | 3 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ4/E-noAC | ENCLOSURE | SF | E | 4 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ5/E-noAC | ENCLOSURE | SF | E | 5 | 0.00 | 0.00 | 0.00 | X |
| Air Sealing / Envelope SFCZ6/E-noAC | ENCLOSURE | SF | E | 6 | 0.00 | 0.00 | 0.00 | X |
| Furnace Repair | MAINTENANCE | MF | E | System | 0.00 | 0.00 | 0.00 | X |
| Furnace Replacement | MAINTENANCE | MF | E | System | 0.00 | 0.00 | 0.00 | X |

* Based on 2012 program year.

Attachment H.2

Energy Savings Assistance Program Cost-Effectiveness - Non Weather Sensitive Measures
Pacific Gas and Electric Company

| Measure* | Measure Group | Ratio of Benefits Over Costs* | | | | | |
|---|--------------------|-------------------------------|---------------------------|-------------------|---------------------------|--------------------------|----------|
| | | Type of Home (SF, MH, MF) | Electric or Gas (E, G) | Utility Cost Test | Modified Participant Test | Total Resource Cost Test | Approved |
| Water Heater Pipe Insulation SF/CZ-All/Gas | Domestic Hot Water | SH | G | 2.41 | 35.79 | 1.95 | X |
| Water Heater Pipe Insulation MH/CZ-All/Gas | Domestic Hot Water | MH | E | 2.02 | 12.83 | 1.83 | X |
| Faucet Aerator SF/CZ-All/Elec | Domestic Hot Water | MH | G | 1.63 | 6.83 | 1.32 | X |
| Water Heater Blanket MH/CZ-All/Elec | Domestic Hot Water | SH | E | 1.47 | 5.42 | 1.19 | X |
| Faucet Aerator MH/CZ-All/Elec | Domestic Hot Water | MF | G | 1.47 | 5.38 | 1.19 | X |
| Water Heater Pipe Insulation MF/CZ-All/Gas | Domestic Hot Water | SH | G | 1.45 | 5.10 | 1.15 | X |
| Faucet Aerator SF/CZ-All/Gas | Domestic Hot Water | MH | G | 1.23 | 3.68 | 1.00 | X |
| Faucet Aerator MH/CZ-All/Gas | Domestic Hot Water | SH | E | 1.19 | 3.44 | 0.96 | X |
| Faucet Aerator MF/CZ-All/Gas | Domestic Hot Water | MH | E | 1.19 | 3.44 | 0.96 | X |
| New Low Flow Shower Head SF/CZ-All/Elec | Domestic Hot Water | SH | E | 1.07 | 2.97 | 0.97 | X |
| New Microwave-replacing gas oven MF/CZ-All | Appliances | MH | E | 1.13 | 2.77 | 0.85 | X |
| New Microwave-replacing gas oven SF/CZ-All | Appliances | MF | E | 1.10 | 2.77 | 0.85 | X |
| New Microwave-replacing gas oven MH/CZ-All | Appliances | MH | E | 1.10 | 2.77 | 0.85 | X |
| Water Heater Blanket SF/CZ-All/Elec | Domestic Hot Water | SH | E | 0.98 | 2.59 | 0.80 | X |
| New Low Flow Shower Head MH/CZ-All/Elec | Domestic Hot Water | SH | G | 0.97 | 2.54 | 0.76 | X |
| Forcierre - 55 W (D03-842 RES00AVT or 55) w/CZ w/SF | Lighting | MH | G | 1.27 | 2.04 | 1.03 | X |
| New Microwave-replacing electric oven SF/CZ-All | Appliances | MH | G | 1.25 | 1.95 | 1.03 | X |
| New Microwave-replacing electric oven MH/CZ-All | Appliances | SH | G | 1.25 | 1.95 | 1.03 | X |
| New Microwave-replacing electric oven MF/CZ-All | Appliances | MF | E | 1.25 | 1.95 | 1.03 | X |
| New Low Flow Shower Head MH/CZ-All/Gas | Domestic Hot Water | MH | E | 0.80 | 1.85 | 0.65 | X |
| Water Heater Pipe Insulation MH/CZ-All/Elec | Domestic Hot Water | SH | E | 0.75 | 1.74 | 0.61 | X |
| CFL - MF/CZ-All | Lighting | MF | G | 1.15 | 1.72 | 0.94 | X |
| CFL - MH/CZ-All | Lighting | MH | G | 1.05 | 1.46 | 0.86 | X |
| CFL - SF/CZ-All | Lighting | SH | E | 1.04 | 1.43 | 0.85 | X |
| New Low Flow Shower Head SF/CZ-All/Gas | Domestic Hot Water | MH | E | 0.85 | 1.39 | 0.53 | X |
| Water Heater Pipe Insulation SF/CZ-All/Elec | Domestic Hot Water | MF | G | 0.64 | 1.12 | 0.43 | X |
| Water Heater Blanket MH/CZ-All/Gas | Domestic Hot Water | MF | E | 0.64 | 1.09 | 0.44 | X |
| Refrigerator SF/CZ-All | Appliances | SH | E | 0.83 | 1.08 | 0.57 | X |
| Refrigerator MH/CZ-All | Appliances | MH | E | 0.82 | 1.03 | 0.57 | X |
| LIHEAP - Appliance SF/CZ-All | Appliances | SH | E | 0.77 | 0.94 | 0.63 | X |
| LIHEAP - Appliance MH/CZ-All | Appliances | MH | E | 0.77 | 0.93 | 0.62 | X |
| Exterior Hard wired CFL fixtures MF/CZ-All | Lighting | MF | E | 0.69 | 0.86 | 0.56 | X |
| Water Heater Blanket SF/CZ-All/Gas | Domestic Hot Water | MF | E | 0.43 | 0.82 | 0.34 | X |
| Refrigerator MF/CZ-All | Appliances | SH | G | 0.68 | 0.82 | 0.56 | X |
| Exterior Hard wired CFL fixtures SF/CZ-All | Lighting | SH | E | 0.67 | 0.81 | 0.54 | X |
| Exterior Hard wired CFL fixtures MH/CZ-All | Lighting | MH | E | 0.65 | 0.78 | 0.52 | X |
| Interior Hard wired CFL fixtures MF/CZ-All | Lighting | MF | E | 0.66 | 0.75 | 0.54 | X |
| LIHEAP - Appliance MF/CZ-All | Appliances | ALL | E | 0.64 | 0.74 | 0.52 | X |
| Interior Hard wired CFL fixtures SF/CZ-All | Lighting | MH | E | 0.63 | 0.71 | 0.51 | X |
| Interior Hard wired CFL fixtures MH/CZ-All | Lighting | SH | E | 0.61 | 0.68 | 0.50 | X |
| Occupancy Sensor All/CZ-All | Lighting | MF | G | 0.51 | 0.53 | 0.41 | X |
| Water Heater Blanket MF/CZ-All/Gas | Domestic Hot Water | MF | G | 0.17 | 0.29 | 0.13 | X |
| New Low Flow Shower Head MF/CZ-All/Gas | Domestic Hot Water | MF | E | 0.14 | 0.23 | 0.11 | X |
| Faucet Aerator MF/CZ-All/Elec | Domestic Hot Water | MF | E | 0.00 | 0.00 | 0.00 | X |
| New Low Flow Shower Head MF/CZ-All/Elec | Domestic Hot Water | MF | E | 0.00 | 0.00 | 0.00 | X |
| Water Heater Blanket MF/CZ-All/Elec | Domestic Hot Water | MF | E | 0.00 | 0.00 | 0.00 | X |
| Water Heater Pipe Insulation MF/CZ-All/Elec | Domestic Hot Water | ALL | E | 0.00 | 0.00 | 0.00 | X |
| Water Heater R&R | Domestic Hot Water | ALL | E | 0.00 | 0.00 | 0.00 | X |
| *** Water heater R&R added back in owner occupied homes, consistent with D0811031 | | | | | | | |

*Based on 2012 program year.