Foncest Technical Assumptions

| | Electric Product Catalaids Technical Assumptions | | | | | | | | | | | | | | | Program Forecast Inputs | | | | | | oulated Fore | east Inputs | Program Forecast Outputs | | | | | | | | | | | |
|---|--|---|---|---|--|---|--|--------------------------------|-----------------------|---|---|--|-------------------|-------------------------|--------|-------------------------|--|--------------------------------|---|-----------------------------------|------------------------|------------------------------------|-----------------------------|--------------------------|-----------------------------|-------------------|------------|-----------------------------|----------------------------|----------------------------|------------------------------|-------------------------------|----------------------------|------------------------------|-------------------------------|
| Measure Description High Efficiency Pr | | | | mptions | Baselin | e Product Assu | mptions | | | nic Assumption | | | Stipulated Output | | | | | | | Economic Assumptions | | | 20 | | | | | | | 2012 | | | | 2013 | |
| Electric Measure Group | Electric Measure Description | Efficient Product Description / Rating | Efficient Product Consumption (watts) | Efficient Hours of Operation (hrs/yr) | Baseline Product Description / Rating | Baseline Product Consumption (watts) | Baseline Hours of Operation (hrs/yr) | Measure Lifetime (years) | Rebate Amount (\$) | Average Baseline Product Cost (\$) | Incremental Cost of Efficient Product (\$) | Assumed Reba Energy a % Cost Increr (\$kWh) I Cos | Perioc | st Cost sack Payback | | hWh Pound | Rebated Lifetime cost/Cust KWh Saved (\$kWh) | Customer kW Savings (kW) | Generator Peak kW Savings (kW) | Non-Energy O&M Savings (\$) | Energy O&M Savings (5) | Assumption Coincidence Factor (%) | 2012 Participants (-) | 2012 Units (-) | 2013 Participants (-) | 2013 Units (-) | NTG (%) | Installation Rate (%) | Realization Rate (%) | 2012 NET Gen kW (kW) | 2012 NET Gen kWh (kWh) | 2012 Rebate Budget (\$) | 2013 NET Gen kW (kW) | 2013 NET Gen kWh (kWh) | 2013 Rebate Budget (\$) |
| New Home Install High Efficiency ENERGY STAR AC CEE Tier 1 | New High Eff A/C | 3 Ton 14.5 SEER; 12 EER; w/o Quality Installation | 3,000 | 919 | 3T SEER 13 EEI 11.18 w/o Quality Installation | | 919 | 14.00 | \$250 | \$4,329 | \$530 s \$720 | \$ 0.114 48 | 6 22 | 6 11.7 | 202 | \$1.237 | \$0.088 | 0.22 | 0.21 | \$0.00 | \$0.00 | 90% | 1 | 1 | 1 | 1 | 80% 68% | 100% | 100% | 0 | 195 | \$250 | 0 | 192 | \$250 |
| New Home Install High Efficiency ENERGY STAR AC CEE Tier 2 | New High Eff A/C | 3 Ton 15 SEER; 12.5 EER; w/o Quality Installation | 2,880 | 766 | 3T SEER 13 w/s Quality Installatio | | 766 | 14.00 | \$350 | \$4,329 | \$403 \$894 | \$ 0.114 51 | 6 23. | .3 11.5 | 261 | \$1.343 | \$0.096 | 0.34 | 0.33 | \$0.00 | \$0.00 | 90% | 1 | 1 | 1 | 1 | 80% 68% | 100% | 100% | 0 | 283 | \$394 | 0 | 279 | \$394 |
| New Home Install High Efficiency ENERGY STAR AC CEE Tier 3 | New High Eff A/C | 3 Ton 16 SEER; 13 EER; w/o Quality Installation | 2,769 | 813 | 3T SEER 13 w/s Quality Installatio | | 813 | 14.00 | \$500 | \$4,329 | 1030.6 \$1,239 | \$ 0.114 48 | 6 24. | 9 12.9 | 366 | \$1.365 | \$0.097 | 0.45 | 0.43 | \$0.00 | \$0.00 | 90% | 2 | 2 | 2 | 2 | 80% 68% | 100% | 100% | 1 | 796 | \$1,126 | 1 | 785 | \$1,126 |
| New Home Provide Quality Installation of new AC 3T 13 SEER | New High Eff A/C with Q | 3 T Units with Quality Installation | 2,238 | 607 | 3T Units wio Quality Installatio | 3,220 | 607 | 7.00 | \$0 | \$0 | \$200 | \$ 0.114 09 | . 21 | 9 29 | 596 | \$0.000 | \$0.000 | 0.98 | 0.94 | \$0.00 | \$0.00 | 90% | ٥ | 0 | 0 | 0 | 80% 68% | 100% | 100% | ۰ | 0 | \$0 | 0 | 0 | \$0 |
| New Home Provide Quality Installation of new AC 3T 14.5 SEER | New High Eff A/C with Q | 3 T Units with Quality Installation | 2,085 | 584 | 3T Units wio Quality Installatio | 3,000 | 584 | 7.00 | \$0 | \$0 | \$200 | \$ 0.114 01 | . 3: | 3 3.3 | 534 | \$0.000 | \$0.000 | 0.91 | 0.88 | \$0.00 | \$0.00 | 90% | 1 | 1 | 1 | 1 | 80% 68% | 100% | 100% | 1 | 580 | \$0 | 1 | 573 | \$0 |
| New Home Provide Quality Installation of new AC 3T 15 SEER | New High Eff A/C with Q | 3 T Units with Quality Installation | 2,002 | 588 | 3T Units wio Quality Installatio | 2,880 | 588 | 7.00 | \$0 | \$0 | \$200 | \$ 0.114 05 | . 3. | 4 3.4 | 516 | \$0.000 | \$0.000 | 0.88 | 0.84 | \$0.00 | \$0.00 | 90% | 2 | 2 | 2 | 2 | 80% 68% | 100% | 100% | 2 | 1,122 | \$0 | 2 | 1,107 | \$0 |
| New Home Provide Quality Installation of new AC 3 T 16 SEER | New High Eff A/C with Qi | 3 T Units with Quality Installation 3 Ton 14.5 SEER; 12 | 1,925 | 573 | 3T Units wio Quality Installatio | 2,769 | 573 | 7.00 | \$0 | \$0 | \$200 | \$ 0.114 09 | 3.1 | 8 3.6 | 484 | \$0.000 | \$0.000 | 0.84 | 0.81 | \$0.00 | \$0.00 | 90% | 3 | 3 | 3 | 3 | 80% 68% | 100% | 100% | 2 | 1,577 | \$0 | 2 | 1,557 | \$0 |
| Existing Home Install High Efficiency ENERGY STAR AC CEE Tier 1 | A/C | EER; wio Quality Installation 3 Ton 15 SEER: 12.5 | 3,000 | 919 | 3T SEER 13 w/s Quality Installatio | n 5,225 | 919 | 14.00 | \$250 | \$4,329 | \$530 6 \$720 | \$ 0.114 48 | 6 22 | 6 11.7 | 202 | \$1.237 | \$0.088 | 0.22 | 0.21 | \$0.00 | \$0.00 | 90% | 7 | 7 | 7 | 7 | 80% 68% | 100% | 100% | 1 | 1,317 | \$1,689 | 1 | 1,300 | \$1,689 |
| Existing Home Install High Efficiency ENERGY STAR AC CEE Tier 2 | A/C | EER; wio Quality Installation | 2,880 | 766 | 3T SEER 13 wit Quality Installatio | n 3,220 | 766 | 14.00 | \$350 | \$4,329 | \$894 | \$ 0.114 51 | £ 23. | 3 11.5 | 261 | \$1.343 | \$0.096 | 0.34 | 0.33 | \$0.00 | \$0.00 | 90% | 33 | 33 | 33 | 33 | 68% | 100% | 100% | 10 | 8,205 | \$11,431 | 10 | 8,099 | \$11,431 |
| Existing Home Install High Efficiency ENERGY STAR AC CEE Tier 3 | Replace with High Eff A/C | EER; wio Quality Installation | 2,769 | 813 | 3T SEER 13 wit Quality Installatio | | 813 | 14.00 | \$500 | \$4,329 | \$1,239 | \$ 0.114 48 | 6 24 | 9 12.9 | 366 | \$1.365 | \$0.097 | 0.45 | 0.43 | \$0.00 | \$0.00 | 90% | 87 | 87 | 87 | 87 | 68% | 100% | 100% | 33 | 30,635 | \$43,359 | 33 | 30,241 | \$43,359 |
| Existing Home Provide Quality Installation of new AC in exist home - AC 3 T 13 SEER | Replace with High Eff AIC wiQl | 3 T Units with Quality Installation | 2,325 | 607 | 3T Units wio Quality Installatio | 3,220 | 607 | 7.00 | \$0 | \$0 | \$200 | \$ 0.114 09 | . 3: | 2 3.2 | 543 | \$0.000 | \$0.000 | 0.89 | 0.86 | \$0.00 | \$0.00 | 90% | 38 | 38 | 38 | 38 | 68% | 100% | 100% | 29 | 20,021 | \$0 | 29 | 19,764 | \$0 |
| Existing Home Provide Qual Install of new AC in exist home - AC 3 T 14.5 SEER | Replace with High Eff AIC wiQl | 3 T Units with Quality Installation | 2,166 | 584 | 3T Units wio Quality Installatio | 3,000 | 584 | 7.00 | \$0 | \$0 | \$200 | \$ 0.114 09 | . 31 | 6 3.6 | 487 | \$0.000 | \$0.000 | 0.83 | 0.80 | \$1.00 | \$0.00 | 90% | 7 | 7 | 7 | 7 | 68% | 100% | 100% | 5 | 3,077 | \$0 | 5 | 3,038 | \$0 |
| Existing Home Provide Quality Installation of new AC in exist home - AC 3 T 15 SEER | Replace with High Eff AIC wiQl | 3 T Units with Quality Installation | 2,080 | 588 | 3T Units wio Quality Installatio | 2,880 | 588 | 7.00 | \$0 | \$0 | \$200 | \$ 0.114 09 | 3.3 | 7 3.7 | 471 | \$0.000 | \$0.000 | 0.80 | 0.77 | \$2.00 | \$0.00 | 90% | 33 | 33 | 33 | 33 | 68% | 100% | 100% | 22 | 14,873 | \$0 | 22 | 14,682 | \$0 |
| Existing Home Provide Quality Installation of new AC in exist home - AC 3 T 16 SEER | Replace with High Eff A/C w/QI | 3 T Units with Quality Installation 3 Ton 14 SEER: 11.76 | 2,000 | 573 | 3T Units wio Quality Installatio 3 T SEER 10 EE | 2,769 R | 573 | 7.00 | \$0 | \$0 | \$200 | \$ 0.114 0 | 4.1 | 0 4.0 | 441 | \$0.000 | \$0.000 | 0.77 | 0.74 | \$3.00 | \$0.00 | 90% | 86 | 86 | 86 | 86 | 68% | 100% | 100% | 57 | 36,717 | \$0 | 57 | 36,246 | \$0 |
| Install High Efficiency AC With Quality Installation Trade In | Early Retrement Install High Efficiency A/C | EER; w Quality Installation 3 Ton 14.5 SEER; 12 | 2,210 | 722 | 9.2 w/o Quality Installation 3 T SEER 10 EE | 3,913 R | 722 | 7.00 | \$600 | \$3,949 | \$999 | \$ 0.114 60 | £ 7. | 1 2.8 | 1,230 | \$0.488 | \$0.070 | 1.70 | 1.64 | \$0.00 | \$0.00 | 90% | 394 | 394 | 394 | 394 | 68% | 100% | 100% | 574 | 467,448 | \$236,503 | 574 | 461,449 | \$236,503 |
| Install High Efficiency ENERGY STAR AC CE Tier 1 with Quality Installation Trade In Install High Efficiency ENERGY STAR AC CE | High Efficiency A/C | EER; w Quality Installation 3 Ton 15 SEER; 12.5 | 2,166 | 730 | 9.2 wio Quality Installation 3 T SEER 10 EE | 3,913 R | 790 | 7.00 | \$850 | \$3,949 | \$1,164 \$1,100 | \$ 0.114 74 | | | 1,275 | \$0.667 | \$0.095 | 1.75 | 1.68 | \$0.00 | \$0.00 | 90% | 68 | 68 | 68 | 68 | 68% | 100% | 100% | 101 | 83,068 | \$57,436 | 101 | 82,002 | \$57,436 |
| Tier 2 with Quality Installation Trade In | High Efficiency A/C | EER; w Quality Installation 3 Ton 16 SEER; 13 | 2,080 | 718 | 9.2 wio Quality Installation 3 T SEER 10 EE | R | 718 | 7.00 | \$950 | \$3,949 | \$1,274 | \$ 0.114 73 | | | 1,317 | \$0.721 | \$0.103 | 1.83 | 1.76 | \$0.00 | \$0.00 | 90% | 338 | 338 | 338 | 338 | 68% | 100% | 100% | 530 | 429,076 | \$320,968 | 530 | 423,569 | \$320,968 |
| Tier 3 with Quality Instaltion | High Efficiency A/C | EER; w Quality Installation Installation of 6 Ton | 2,000 | 728 | 9.2 w/o Quality Installation Installation of 6 | 3,913 | 728 | 7.00 | \$1,100 | \$3,949 | \$1,619 | \$ 0.114 68 | 6 10. | 2 32 | 1,393 | \$0.789 | \$0.113 | 1.91 | 1.84 | \$0.00 | \$0.00 | 90% | 890 | 890 | 890 | 890 | 68% | 100% | 100% | 1,457 | 1,195,464 | \$978,670 | 1,457 | 1,180,121 | \$978,670 |
| Installation of new GSHP 6 T 14.1 EER in NEW HOME (3220 Sq.Ft) for COOLING | Install GSHP Cooling | capacity with 2.5 ton load , closed loop, 14.1 EER GSHP | 1,291 | 900 | Ton 13 SEER ASHP with 2.5 to load | 2,902 | 900 | 20.00 | \$601 | \$4,582 | \$1,572 | \$ 0.114 31 | 6 11. | 7 8.0 | 1,450 | \$0.415 | \$0.021 | 1.61 | 0.72 | \$0.00 | \$0.00 | \$0.42 | 5 | 5 | 5 | 5 | 100% | 100% | 100% | 4 | 7,854 | \$3,007 | 4 | 7,753 | \$3,007 |
| Installation of new GSHP 3.4 T 14.1 EER in EXISTING HOME(1440 Sq. Pt.) for COOLING | Install GSHP Cooling | Installation of 3.4Ton capacity closed loop, 14.1 EER GSHP with 2.0 ton load | 992 | 701 | Installation of 2.16Ton 13 SEE AC with 2.0 ton load | | 701 | 20.00 | \$341 | \$4,385 | \$857 \$891 | \$ 0.114 52 | 6 63 | 2 3.0 | 932 | \$0.366 | \$0.018 | 1.33 | 0.84 | \$0.00 | \$0.00 | \$0.59 | 5 | 5 | 5 | 5 | 100% | 100% | 100% | 4 | 5,047 | \$1,708 | 4 | 4,982 | \$1,706 |
| Installation of new GSHP 6 Ton 3.3 COP in NEW HOME (3220 Sq.Ft) for HEATING | Install GSHP Heating | Installation of 6 Ton capacity, 3.3 COP closed loop, GSHP for 6 ton load | 6,317 | 859 | Installation of 6 Ton 13 SEER ASHP | 6,725 | 859 | 20.00 | \$1,203 | \$1,866 | \$8,413 \$8,704 | \$ 0.114 14 | 6 210 | 0.5 180.4 | 350 | \$3.433 | \$0.172 | 0.41 | 0.00 | \$0.00 | \$0.00 | \$0.00 | 5 | 5 | 5 | 5 | 100% | 100% | 100% | 0 | 1,898 | \$6,013 | 0 | 1,873 | \$6,013 |
| Installation of new GSHP 3.4 T 3.3 COP in EXISTING HOME (1440 Sq. Ft.) for HEATING | | Installation of 3.4 Ton capacity, 3.3 COP closed loop, GSHP for 3.4 ton load | 3,634 | 1,409 | Installation of ducted elec resistance htg | 11,908 | 1,409 | 20.00 | \$683 | \$1,866 | \$2,863 \$3,799 | \$ 0.114 24 | 6 23 | 2 1.6 | 11,657 | \$0.059 | \$0.003 | 8.27 | 0.00 | \$0.00 | \$0.00 | \$0.00 | 5 | 5 | 5 | 5 | 100% | 100% | 100% | ۰ | 63,148 | \$3,413 | 0 | 62,338 | \$3,413 |

Colonado High Efficiency Air Conditioning