

ESTIMATED GAS SAVINGS

ThermWise® Appliance Rebates

| SINGLE FAMILY | | |
|---|-----------------------|--|
| Measure | Annual Savings | Source |
| Natural Gas Furnace - 95% AFUE | 11.77 Dth/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE with ECM | 11.77 Dth/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | 13.85 Dth/unit | 2017 Nexant Energy Model Estimate |
| Gas Storage Water Heater | 2.86 Dth/unit | 2010 Deemed savings reduced by realization rate* |
| Tankless Gas Water Heater | 9.37 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Condensing Gas Storage Water Heater | 8.68 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Hybrid Gas Water Heater | 8.68 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Gas Boiler Tier 1 | 18.7 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Gas Boiler Tier 2 | 25.2 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Solar Assisted Gas Water Heating (domestic) | 17.5 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Solar Assisted Gas Water Heating (pool) | 68.9 Dth/unit | 2012 Peci Energy Model Estimate |
| Direct Vent Gas Fireplace | 10.8 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Smart Thermostat | 8.6 Dth/unit | 2014 Peci Energy Model Estimate |
| Boiler Reset Control | 5.4 Dth/unit | 2017 Nexant Energy Model Estimate |
| Combined Space and Hot Water | 19.0 Dth/unit | 2017 Nexant Energy Model Estimate |
| MULTIFAMILY | | |
| Measure | Annual Savings | Source |
| Natural Gas Furnace - 95% AFUE | 8.8 Dth/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE with ECM | 8.8 Dth/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | 10.4 Dth/unit | 2017 Nexant Energy Model Estimate |
| Gas Storage Water Heater | 2.15 Dth/unit | 2010 Deemed savings reduced by realization rate* |
| Tankless Gas Water Heater | 6.0 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Condensing Gas Storage Water Heater | 5.4 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |

*See Cadmus Phase II Evaluation

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| Hybrid Gas Water Heater | 5.4 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Gas Boiler Tier 1 | 12.08 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Gas Boiler Tier 2 | 16.11 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Solar Assisted Gas Water Heating (domestic) | 17.5 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Solar Assisted Gas Water Heating (pool) | 68.9 Dth/unit | 2012 PECI Energy Model Estimate |
| Direct Vent Gas Fireplace | 4.1 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Smart Thermostat | 4.0 Dth/unit | 2014 PECI Energy Model Estimate |
| Combined Space and Hot Water | 14.1 Dth/unit | 2017 Nexant Energy Model Estimate |
| ThermWise® Business Rebates | | |
| Measure | Annual Savings | Source |
| Gas Storage Water Heater | 3.03 Dth/unit | Calculation based upon difference between baseline and minimum efficiency energy factor |
| Gas Storage Water Heater (>75 kBtu) | 0.29 Dth/unit | |
| Tankless Gas Water Heater | 0.14 Dth/unit | ENERGY STAR® Residential Water Heaters Specification as of 1/5/09 and Final Criteria Analysis |
| Commercial Clothes Washer | 6.5 Dth/unit | Assume 14 pound capacity – Illinois TRM v6 |
| Low Flow Pre-Rinse Spray Valve | 10.8 Dth/unit | California Urban Water Conservation Council, Rinse & Save Program Evaluation 2005 |
| Natural Gas Furnace - 95% AFUE | 11.77 Dth/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE with ECM | 11.77 Dth/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | 13.85 Dth/unit | 2017 Nexant Energy Model Estimate |
| Gas Boiler (Hot Water) Tier 1 | 0.18 Dth/unit | ENERGY STAR® Boiler Calculator |
| Gas Boiler (Hot Water) Tier 2 ≥ 300,000 < 2,500,000 | 0.2 Dth/unit | 2017 Nexant Energy Model Estimate |
| Gas Boiler (Hot Water) ≥ 2,500,000 BTU/h | 0.2 Dth/unit | 2017 Nexant Energy Model Estimate |
| Gas Boiler (steam) | 0.18 Dth/unit | ENERGY STAR® Boiler Calculator |
| Gas Boiler(Steam) (Except Natural Draft) ≥ 300,000 Btu/h | 0.07 Dth/unit | ENERGY STAR® Boiler Calculator |
| Gas Boiler (Steam) (Natural Draft) ≥ 300,000 Btu/h | 0.12 Dth/unit | ENERGY STAR® Boiler Calculator |

*See Cadmus Phase II Evaluation

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| Direct Contact Gas Water Heater | 0.23 Dth/unit | PG&E -CPUC 2004-2005 / Single Family Rebate Program |
| Direct Fired Heater | 0.83 Dth/unit | 2018 Nexant Energy Model Estimate |
| Condensing Gas Water Heater | 10.2 Dth/unit | 2016 Nexant Energy Model Estimate |
| Hybrid Water Heater | 10.2 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Combined Space / Water Heater | 18.7 Dth/unit | 2014 Nexant Engineering Estimate |
| Unit Heater (NonCondensing) | 0.06 Dth/unit | PG&E 2004 and ACEEE 2003 Reports |
| Unit Heater (Condensing) | 0.17 Dth/unit | |
| Green Certified New Buildings | 0.0070 Dth/unit | 2018 Nexant Energy Model Estimate |
| Infrared Heating System | 0.48 Dth/system | 1) Gas Networks Savings Estimates 2) GDS Report 3) ASHRAE Research #4643 |
| Modulating Infrared Heaters (NC or Replacing Non IR) | .55 Dth/unit | 2014 Nexant Engineering Estimate |
| Modulating Infrared Heaters (Replacing Non IR) | .07 Dth/unit | 2014 Nexant Engineering Estimate |
| Condensing RTU's | .41 Dth/unit | 2014 Nexant Engineering Estimate |
| Gas Boiler Outside Air Reset Control | 74.1 Dth/unit | GDS Report 2004 CA Statewide Gas Potential Study Kema-Xenergy 2003 |
| Gas Boiler Tune-up – Tier 1 | 19.60 Dth/unit | 2018 Nexant Energy Model Estimate |
| Gas Boiler Tune-up – Tier 2 | 48.86 Dth/unit | GDS Report 2004 CA Statewide Gas Potential Study Kema-Xenergy 2003 |
| Gas Boiler Tune-up – Tier 3 | 72.0 Dth/unit | 2013 Nexant Engineering Estimate |
| Smart Thermostat | .007 Dth/sq. ft. | 2016 Nexant Energy Model Estimate |
| Gas Commercial Fryer | 40.4 Dth/unit | ENERGY STAR® Gas Fryer Calculator |
| Gas Commercial Fryer (Used) | 40.4 Dth/unit | 2018 Nexant Energy Model Estimate |
| Gas Steam Cooker | 88.30 Dth/unit | Illinois TRM V6 – savings, Case Studies: Restaurant Energy Efficiency PG&E – incremental cost |
| Gas Steam Cooker (Used) | 35.30 Dth /unit | Illinois TRM V6 – savings, Case Studies: Restaurant Energy Efficiency PG&E – incremental cost |
| Gas Convection Oven | 35.20 Dth/per vat | Illinois TRM V6 |
| Gas Convection Oven (Used) | 16.15 | Illinois TRM V6 |

*See Cadmus Phase II Evaluation

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| Gas Combination Oven | 40.3 Dth/unit | PG&E -CPUC 2006-2008 / Single Family Rebate Program |
| Gas Combination Oven (Used) | 40.3 Dth/unit | 2018 Nexant Energy Model Estimate |
| Gas Griddle | 14.9 Dth/unit | Illinois TRM V6 – savings, ACEEE “Baseline Market Conditions for Efficient Commercial and Industrial Gas Technologies” – incremental cost |
| Gas Griddle (Used) | 8.8 Dth/unit | Illinois TRM V6 – savings, ACEEE “Baseline Market Conditions for Efficient Commercial and Industrial Gas Technologies” – incremental cost |
| Wall Insulation (retrofit) | 0.004 Dth/ sq. ft. | DOE-2 modeling against ASHRAE 90.1-2004 Baseline |
| Roof Insulation (retrofit) | 0.0023 Dth/ sq. ft. | 2017 Nexant Energy Model Estimate |
| Charbroiler | 75 Dth/unit | 2015 Nexant Energy Model Estimate |
| Charbroiler (Used) | 75 Dth/unit | 2018 Nexant Energy Model Estimate |
| Conveyor Oven | 88.40 Dth/unit | 2015 Nexant Energy Model Estimate |
| Conveyor Oven (Used) | 88.40 Dth/unit | 2018 Nexant Energy Model Estimate |
| Gas Dryer Moisture Sensor | 11.20 Dth/unit | 2015 Nexant Energy Model Estimate |
| Modulating Gas Dryer | 32 Dth/unit | 2015 Nexant Energy Model Estimate |
| Solar Water Heater – Pool (business) | 68.90 Dth/unit | 2015 Nexant Energy Model Estimate |
| Demand Control Ventilation Tier 2 | .0068 Dth/CFM | 2017 Nexant Energy Model Estimate |
| Demand Control Ventilation Tier 1 | 27.2 Dth/unit | 2017 Nexant Energy Model Estimate |
| Custom Measures | 1,000 Dth/project | 2014 Nexant Engineering Estimate |
| Pipe Insulation (Hot Water) | .84 Dth/ sq. ft. | 2017 Nexant Energy Model Estimate |
| Pipe Insulation (Steam) | 3.13 Dth/ sq. ft. | 2017 Nexant Energy Model Estimate |
| Prescriptive ERV | 9.1 Dth/unit | 2018 Nexant Energy Model Estimate |
| ThermWise® Builder Rebates | | |
| SINGLE FAMILY | | |
| Measure | Annual Savings | Source |
| HERS Index 62 or lower | 5.2 Dth/unit | 2016 CLEAResult Energy Model Estimate |

*See Cadmus Phase II Evaluation

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|---|-----------------------|--|
| HERS Index 55 or lower | 10.4 Dth/unit | 2016 CLEAResult Energy Model Estimate |
| HERS Index 48 or lower | 15.6 Dth/unit | 2016 CLEAResult Energy Model Estimate |
| ENERGY STAR® Bonus | 2.78 Dth/unit | 2016 CLEAResult Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE | 10.13 Dth/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE with ECM | 10.13 Dth/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | 12.15 Dth/unit | 2017 Nexant Energy Model Estimate |
| Gas Storage Water Heater | 2.86 Dth/unit | 2010 Deemed savings reduced by realization rate* |
| Tankless Gas Water Heater | 8.56 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Gas Condensing Storage Water Heater | 8.68 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Hybrid Gas Water Heater | 8.68 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Gas Boiler Tier 1 | 9.06 Dth/unit | 2017 Nexant Energy Model Estimate |
| Gas Boiler Tier 2 | 16.11 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Solar Assisted Gas Water Heating (domestic) | 17.5 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Solar Assisted Gas Water Heating (pool) | 68.9 Dth/unit | 2012 PECI Engineering Estimate |
| 2X6 R-23 Walls | 5.4 Dth/unit | 2016 CLEAResult Energy Model Estimate |
| Windows R-5 | 0.029 Dth/per sq. ft. | PECI Energy Model (REM/Design v. 12.61) |
| Smart Thermostat | 4.3 Dth/unit | 2014 PECI Energy Model Estimate |
| Combined Space and Hot Water | 18.3 | 2017 Nexant Energy Model Estimate |
| MULTIFAMILY | | |
| Measure | Annual Savings | Source |
| HERS Index 62 or lower | 2.3 Dth/unit | 2016 CLEAResult Energy Model Estimate |
| HERS Index 55 or lower | 4.6 Dth/unit | 2016 CLEAResult Energy Model Estimate |
| HERS Index 48 or lower | 6.9 Dth/unit | 2016 CLEAResult Energy Model Estimate |
| ENERGY STAR® Bonus | 1.13 Dth/unit | 2016 CLEAResult Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE | 7.6 Dth/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE with ECM | 7.6 Dth/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | 9.1 Dth/unit | 2017 Nexant Energy Model Estimate |

*See Cadmus Phase II Evaluation

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| Gas Storage Water Heater | 1.39 Dth/unit | 2010 Deemed savings reduced by realization rate* |
| Tankless Gas Water Heater | 5.4 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Condensing Gas Storage Water Heater | 5.4 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Hybrid Gas Water Heater | 5.4 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Gas Boiler Tier 1 | 9.06 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Gas Boiler Tier 2 | 16.11 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Solar Assisted Gas Water Heating (domestic) | 17.5 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Solar Assisted Gas Water Heating (pool) | 68.9 Dth/unit | 2012 PECI Engineering Estimate |
| Windows R-5 | 0.021 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Smart Thermostat | 1.7 Dth/unit | 2014 PECI Energy Model Estimate |
| Combined Space and Hot Water | 12.0 Dth/unit | 2017 Nexant Energy Model Estimate |
| Energy Star High Rise | 1.13 | 2017 Nexant Energy Model Estimate |
| ThermWise® Home Energy Plan | | |
| Measure | Annual Savings | Source |
| Kitchen Sink Aerator | 1.32 Dth/unit | 2010 Nexant Engineering Calculation |
| Pipe Insulation | 1.4 Dth/system | DOE Rebuild America Reenergize Energy Efficiency Guidebook |
| Faucet Aerator | 0.44 Dth/unit | DOE Rebuild America Reenergize Energy Efficiency Guidebook |
| Low Flow Shower Head | 5.79 Dth/unit | Nexant 2006 Market Study Report |
| ThermWise® Weatherization Rebates | | |
| SINGLE FAMILY | | |
| Measure | Annual Savings | Source |
| Windows – R-5 | 0.0698 Dth/sq. ft. | Nexant 2011 Engineering Calculation |
| Wall Insulation | 0.0053 Dth/sq. ft. | 2010 Deemed savings reduced by realization rate* |
| Attic Insulation Tier 1 | 0.0053 Dth/sq. ft. | 2010 Deemed savings reduced by realization rate* |
| Attic Insulation Tier 2 | 0.0013 Dth/sq. ft. | 2010 Deemed savings reduced by realization rate* |

*See Cadmus Phase II Evaluation

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| Floor Insulation | 0.0068 Dth/ sq. ft. | 2010 Deemed savings reduced by realization rate* |
| Duct Sealing & Duct Insulation | 13.48 Dth/ System | Nexant 2011 Engineering Calculation |
| Air Sealing | 0.0048 Dth/system | Nexant 2011 Engineering Calculation |
| Pipe Insulation | 0.19 Dth/ sq.ft. | 2017 Nexant Energy Model Estimate |
| ICAST pilot | 12.5 Dth/system | 2017 Nexant Energy Model Estimate |
| MULTIFAMILY | | |
| Measure | Annual Savings | Source |
| Windows – R-5 | 0.0698 Dth/ sq. ft. | Nexant 2011 Engineering Calculation |
| Wall Insulation | 0.0053 Dth/ sq. ft. | 2010 Deemed savings reduced by realization rate* |
| Attic Insulation Tier 1 | 0.0053 Dth/ sq. ft. | 2010 Deemed savings reduced by realization rate* |
| Attic Insulation Tier 2 | 0.0013 Dth/ sq. ft. | 2010 Deemed savings reduced by realization rate* |
| Floor Insulation | 0.0068 Dth/ sq. ft. | 2010 Deemed savings reduced by realization rate* |
| Duct Sealing & Duct Insulation | 8 Dth/ system | Nexant 2011 Engineering Calculation |
| Low Income Assistance Program | | |
| Measure | Annual Savings | Source |
| Natural Gas Furnace - 95% AFUE (with & without ECM) | 11.77 Dth/unit | PECI Energy Model (REM/Design v. 12.61) |
| Natural Gas Furnace - 98% AFUE with ECM | 13.85 Dth/unit | 2015 Peci Energy Model Estimate |
| Smart Thermostat | 8.6 Dth/unit | 2018 Nexant Energy Model Estimate |
| Note: An approved non-profit or governmental organization may apply for rebates under the ThermWise® Appliance and Weatherization programs for qualifying measures listed in sections 2.10 and 2.14 of the Tariff. | | |

*See Cadmus Phase II Evaluation

| ThermWise® Energy Comparison Report | | |
|--|-----------------------|-------------------------------------|
| Measure | Annual Savings | Source |
| Energy Comparison Report | 1.62 Dth/report | 2018 Dominion Energy Model Estimate |

MEASURE LIFE

| ThermWise® Appliance Rebates | | |
|---|-----------------|-----------------------------------|
| SINGLE FAMILY | | |
| Measure | Lifetime | Source |
| Natural Gas Furnace - 95% AFUE (with & without ECM) | 20 | 2018 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | 20 | 2018 Nexant Energy Model Estimate |
| Gas Storage Water Heater | 13 | 2011 PECl estimate |
| Tankless Gas Water Heater | 20 | 2011 PECl estimate |
| Condensing Gas Storage Water Heater | 13 | 2011 PECl estimate |
| Hybrid Gas Water Heater | 15 | 2011 PECl estimate |
| Gas Boilers | 20 | 2011 PECl estimate |
| Solar Assisted Gas Water Heaters | 20 | 2011 PECl estimate |
| Direct Vent Natural Gas Fireplace | 20 | 2011 PECl estimate |
| Smart Thermostat | 15 | 2014 PECl estimate |
| Boiler Reset Control | 18 | 2017 Nexant Energy Model Estimate |
| Combined Space and Hot Water | 15 | 2017 Nexant Energy Model Estimate |
| MULTIFAMILY | | |
| Measure | Lifetime | Source |
| Natural Gas Furnace - 95% AFUE (with & without ECM) | 20 | 2018 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | 20 | 2018 Nexant Energy Model Estimate |
| Gas Storage Water Heaters | 13 | 2011 PECl estimate |

*See Cadmus Phase II Evaluation

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| Tankless Gas Water Heaters | 20 | 2011 PECE estimate |
| Condensing Gas Storage Water Heater | 13 | 2011 PECE estimate |
| Hybrid Gas Water Heater | 15 | 2011 PECE estimate |
| Gas Boilers | 20 | 2011 PECE estimate |
| Solar Assisted Gas Water Heaters | 20 | 2011 PECE estimate |
| Direct Vent Natural Gas Fireplace | 20 | 2011 PECE estimate |
| Smart Thermostat | 15 | 2014 PECE estimate |
| Combined Space and Hot Water | 15 | 2017 Nexant Energy Model Estimate |
| ThermWise® Business Rebates | | |
| Measure | Lifetime | Source |
| Gas Storage Water Heater | 15 | Calculation based upon difference between baseline and minimum efficiency energy factor |
| Tankless Gas Water Heater | 15 | ENERGY STAR Residential Water Heaters Specification as of 1/5/09 and Final Criteria Analysis |
| Commercial Clothes Washer | 10 | ENERGY STAR Commercial Clothes Washer Calculator |
| Low Flow Pre-Rinse Spray Valve | 5 | California Urban Water Conservation Council, Rinse & Save Program Evaluation 2005 |
| Natural Gas Furnace - 95% AFUE (with & without ECM) | 20 | 2018 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | 20 | 2018 Nexant Energy Model Estimate |
| Gas Boiler (hot water) | 20 | ENERGY STAR Boiler Calculator |
| Gas Boiler (hot water) ≥ 2,500,000 Btu/h | 20 | 2014 Nexant estimate |
| Gas Boiler (steam) | 15 | ENERGY STAR Boiler Calculator |
| Gas Boiler (Steam) Except Natural Draft | 15 | 2014 Nexant estimate |
| Gas Boiler (Steam) Natural Draft | 15 | 2014 Nexant estimate |
| Direct Contact Gas Water Heater | 20 | PG&E -CPUC 2004-2005 / Single Family Rebate Program |
| Direct Fired Heater | 15 | 2018 Nexant Energy Model Estimate |
| Condensing Gas Water Heater | 15 | PECE Energy Model (REM/Design v. 12.61) |
| Hybrid Gas Water Heater | 15 | PECE Energy Model (REM/Design v. 12.61) |
| Combined Space / Water Heater | 15 | 2014 Nexant estimate |

*See Cadmus Phase II Evaluation

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| Unit Heaters | 18 | PG&E 2004 and ACEEE 2003 Reports |
| Infrared Heating System | 17 | 1) Gas Networks Savings Estimates, 2) GDS Report, 3) ASHRAE Research #4643 |
| Modulating Infrared Heaters (NC or Replacing Non IR) | 17 | 2014 Nexant estimate |
| Modulating Infrared Heaters (Replacing Non IR) | 17 | 2014 Nexant estimate |
| Condensing RTU's | 15 | 2014 Nexant estimate |
| Boiler Outside Air Reset Control | 20 | 2018 Nexant, Act on Energy Commercial Technical Reference Manual No. 2010-4, 9.2.2 Gas Boiler Tune-up |
| Boiler Tune-up (tiers 1, 2, & 3) | 3 | 2018 Nexant, Act on Energy Commercial Technical Reference Manual No. 2010-4, 9.2.2 Gas Boiler Tune-up |
| Smart Thermostat | 15 | 2014 PECEI estimate |
| Gas Commercial Fryer | 8 | ENERGY STAR® Gas Fryer Calculator |
| Gas Commercial Fryer (Used) | 5 | 2018 Nexant Energy Model Estimate |
| Steam Cooker | 10 | ENERGY STAR® Steam Cooker Calculator |
| Steam Cooker (Used) | 7 | 2018 Nexant Energy Model Estimate |
| Convection Oven | 12 | PG&E -CPUC 2006-2008 / Single Family Rebate Program |
| Convection Oven (Used) | 9 | 2018 Nexant Energy Model Estimate |
| Combination Oven | 12 | PG&E -CPUC 2006-2008 / Single Family Rebate Program |
| Combination Oven (Used) | 9 | 2018 Nexant Energy Model Estimate |
| Griddle | 12 | PG&E -CPUC 2006-2008 / Single Family Rebate Program |
| Griddle (Used) | 9 | 2018 Nexant Energy Model Estimate |
| Wall Insulation (retrofit) | 35 | DOE-2 modeling against ASHRAE 90.1-2004 Baseline |
| Roof Insulation (retrofit) | 35 | DOE-2 modeling against ASHRAE 90.1-2004 Baseline |
| Charbroiler | 10 | 2015 PECEI Energy Model Estimate |
| Charbroiler (Used) | 7 | 2018 Nexant Energy Model Estimate |
| Conveyor Oven | 12 | 2015 PECEI Energy Model Estimate |
| Conveyor Oven (Used) | 9 | 2018 Nexant Energy Model Estimate |
| Gas Dryer Moisture Sensor | 10 | 2015 PECEI Energy Model Estimate |
| Modulating Gas Dryer | 10 | 2015 PECEI Energy Model Estimate |
| Solar Water Heater – Pool (business) | 20 | 2015 PECEI Energy Model Estimate |
| Demand Control Ventilation Tier 2 | 10 | 2017 Nexant Energy Model Estimate |

*See Cadmus Phase II Evaluation

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| Demand Control Ventilation Tier 1 | 10 | 2016 Nexant Energy Model Estimate |
| Pipe Insulation (Hot Water) | 10 | 2017 Nexant Energy Model Estimate |
| Pipe Insulation (Steam) | 10 | 2017 Nexant Energy Model Estimate |
| Prescriptive ERV | 15 | 2018 Nexant Energy Model Estimate |
| Green Certified New Buildings | 25 | 2018 Nexant Energy Model Estimate |
| ThermWise® Builder Rebates | | |
| SINGLE FAMILY | | |
| Measure | Lifetime | Source |
| HERS Index 62 or lower | 30 | 2016 CLEARResult Energy Model Estimate |
| HERS Index 55 or lower | 30 | 2016 CLEARResult Energy Model Estimate |
| HERS Index 48 or lower | 30 | 2016 CLEARResult Energy Model Estimate |
| ENERGY STAR® Bonus | 30 | 2016 CLEARResult Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE (with & without ECM) | 20 | 2018 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | 20 | 2018 Nexant Energy Model Estimate |
| Gas Storage Water Heater | 13 | 2011 PECEI estimate |
| Tankless Gas Water Heater | 20 | 2011 PECEI estimate |
| Condensing Gas Storage Water Heater | 13 | 2011 PECEI estimate |
| Hybrid Water Heater | 15 | 2011 PECEI estimate |
| Residential Gas Boiler | 20 | 2011 PECEI estimate |
| Solar Assisted Gas Water Heater | 20 | 2011 PECEI estimate |
| 2X6 R-23 Walls | 30 | 2011 PECEI estimate |
| Windows – R-5 | 30 | 2011 Nexant estimate |
| Smart Thermostat | 15 | 2014 PECEI estimate |
| Combined Space and Hot Water | 15 | 2017 Nexant Energy Model Estimate |
| MULTIFAMILY | | |
| Measure | Lifetime | Source |
| HERS Index 62 or lower | 30 | 2016 CLEARResult Energy Model Estimate |
| HERS Index 55 or lower | 30 | 2016 CLEARResult Energy Model Estimate |
| HERS Index 48 or lower | 30 | 2016 CLEARResult Energy Model Estimate |

*See Cadmus Phase II Evaluation

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| ENERGY STAR® Bonus | 30 | 2016 CLEAResult Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE (with & without ECM) | 20 | Measure Life – Illinois TRM V6, incremental cost – Excel Energy |
| Natural Gas Furnace - 98% AFUE with ECM | 20 | Measure Life – Illinois TRM V6, incremental cost – Nexant Estimate 2018 |
| Gas Storage Water Heater | 13 | 2011 PECE estimate |
| Tankless Gas Water Heater | 20 | 2011 PECE estimate |
| Condensing Gas Storage Water Heater | 13 | 2011 PECE estimate |
| Hybrid Gas Water Heater | 20 | 2011 PECE estimate |
| Gas Boiler | 20 | 2011 PECE estimate |
| Solar Assisted Gas Water Heaters | 20 | 2011 PECE estimate |
| Windows – R-5 | 30 | 2011 Nexant estimate |
| Smart Thermostat | 15 | 2014 PECE estimate |
| Combined Space and Hot Water | 15 | 2017 Nexant Energy Model Estimate |
| Energy Star High Rise | 30 | 2017 Nexant Energy Model Estimate |

ThermWise® Home Energy Plan

| Measure | Lifetime | Source |
|----------------------|----------|--|
| Kitchen Sink Aerator | 10 | DOE Rebuild America Reenergize Energy Efficiency Guidebook |
| Pipe Insulation | 10 | DOE Rebuild America Reenergize Energy Efficiency Guidebook |
| Faucet Aerator | 10 | DOE Rebuild America Reenergize Energy Efficiency Guidebook |
| Low Flow Shower Head | 10 | Nexant 2006 Market Study Report |

ThermWise® Weatherization Rebates

SINGLE FAMILY

| Measure | Lifetime | Source |
|--------------------------------|----------|---|
| Windows – R-5 | 30 | 2011 Nexant estimate |
| Wall Insulation | 35 | RMP Home Energy Savings Program Filing 2006 |
| Attic Insulation | 35 | RMP Home Energy Savings Program Filing 2006 |
| Floor Insulation | 35 | RMP Home Energy Savings Program Filing 2006 |
| Duct Sealing & Duct Insulation | 20 | RMP Home Energy Savings Program Filing 2006 |
| Air Sealing | 20 | Nexant 2011 Engineering Calculation |
| Pipe Insulation | 10 | 2017 Nexant Energy Model Estimate |

*See Cadmus Phase II Evaluation

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|---|-----------------|---|
| ICAST pilot | 18 | 2017 Nexant Energy Model Estimate |
| MULTIFAMILY | | |
| Measure | Lifetime | Source |
| Windows – R-5 | 30 | 2011 Nexant estimate |
| Wall Insulation | 35 | RMP Home Energy Savings Program Filing 2006 |
| Attic Insulation | 35 | RMP Home Energy Savings Program Filing 2006 |
| Floor Insulation | 35 | RMP Home Energy Savings Program Filing 2006 |
| Duct Sealing & Duct Insulation | 20 | RMP Home Energy Savings Program Filing 2006 |
| Low Income Assistance Program | | |
| Measure | Lifetime | Source |
| Natural Gas Furnace - 95% AFUE (with & without ECM) | 20 | 2018 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | 20 | 2018 Nexant Energy Model Estimate |
| Duct Sealing & Insulation | 20 | 2018 Nexant Energy Model Estimate |
| Smart Thermostat | 15 | 2018 Nexant Energy Model Estimate |
| ThermWise® Energy Comparison Report | | |
| Measure | Lifetime | Source |
| Program Measures | 1 | 2018 Dominion Energy Report estimate |

INCREMENTAL COST

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|-------------------------------------|-------------------------|---------------|
| ThermWise® Appliance Rebates | | |
| SINGLE FAMILY | | |
| Measure | Incremental Cost | Source |

*See Cadmus Phase II Evaluation

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|---|-------------------------|-----------------------------------|
| Natural Gas Furnace - 95% AFUE | \$182/unit | 2014 PECE estimate |
| Natural Gas Furnace - 95% AFUE with ECM | \$520/unit | 2018 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | \$683/unit | 2018 Nexant Energy Model Estimate |
| Gas Storage Water Heater | \$161/unit | 2014 PECE estimate |
| Tankless Gas Water Heater | \$517/unit | 2014 PECE estimate |
| Condensing Gas Storage Water Heater | \$685/unit | Illinois TRM V6 |
| Hybrid Gas Water Heater | \$878/unit | 2018 Nexant Energy Model Estimate |
| Gas Boiler Tier 1 | \$452/unit | 2014 PECE estimate |
| Gas Boiler Tier 2 | \$1,123/unit | 2014 PECE estimate |
| Solar Assisted Gas Water Heating (domestic) | \$4,500/unit | 2014 PECE estimate |
| Solar Assisted Gas Water Heating (pool) | \$2,250/unit | 2014 PECE estimate |
| Direct Vent natural gas fireplace | \$500/unit | 2014 PECE estimate |
| Smart Thermostat | \$170/unit | 2014 PECE estimate |
| Boiler Reset Control | \$500/unit | 2017 Nexant Energy Model Estimate |
| Combined Space and Hot Water | \$1,722/unit | 2017 Nexant Energy Model Estimate |
| MULTIFAMILY | | |
| Measure | Incremental Cost | Source |
| Natural Gas Furnace - 95% AFUE | \$182/unit | 2014 PECE estimate |
| Natural Gas Furnace - 95% AFUE with ECM | \$520/unit | 2018 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | \$683/unit | 2018 Nexant Energy Model Estimate |
| Gas Storage Water Heater | \$161/unit | 2014 PECE estimate |
| Tankless Gas Water Heater | \$517/unit | 2014 PECE estimate |
| Condensing Gas Storage Water Heater | \$1,082/unit | 2014 PECE estimate |
| Hybrid Gas Water Heater | \$1,413/unit | 2014 PECE estimate |
| Gas Boiler Tier 1 | \$452/unit | 2014 PECE estimate |
| Gas Boiler Tier 2 | \$1,123/unit | 2014 PECE estimate |
| Solar Assisted Gas Water Heating (domestic) | \$4,500/unit | 2014 PECE estimate |

*See Cadmus Phase II Evaluation

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| Solar Assisted Gas Water Heating (pool) | \$2,250/unit | 2014 PECl estimate |
| Direct Vent natural gas fireplace | \$500/unit | 2014 PECl estimate |
| Smart Thermostat | \$170/unit | 2014 PECl estimate |
| Combined Space and Hot Water | \$1,722/unit | 2017 Nexant Energy Model Estimate |
| ThermWise® Business Rebates | | |
| Measure | Incremental Cost | Source |
| Gas Storage Water Heater | \$400/unit | ENERGY STAR Residential Water Heaters Specification as of 1/5/09 and Final Criteria Analysis |
| Gas Storage Water Heater (>75 kBtu) | \$6.78/kBtu | PG&E -CPUC 2004-2005 / Single Family Rebate Program |
| Tankless Gas Water Heater | \$4.24/kBtu | CA Statewide Gas Potential Study (Kema-Xenergy, 2003) |
| Commercial Clothes Washer | \$136/unit | Assume 14 pound capacity – Illinois TRM V6 |
| Low Flow Pre-Rinse Spray Valve | \$32/unit | California Urban Water Conservation Council, Rinse & Save Program Evaluation, 2005 |
| Natural Gas Furnace - 95% AFUE | \$182/unit | 2013 Questar Gas furnace survey |
| Natural Gas Furnace - 95% AFUE with ECM | \$520/unit | 2018 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | \$683/unit | 2018 Nexant Energy Model Estimate |
| Boiler (steam) | \$4.22/kBTU | 2014 Nexant Engineering Estimate |
| | \$5.39/kBTU | |
| Boiler (hot water) | \$6.50/kBTU | CA Statewide Gas Potential Study (Kema-Xenergy, 2003) |
| Direct Contact Gas Water Heater | \$2.17/kBTU | PG&E -CPUC 2004-2005 / Single Family Rebate Program |
| Direct Fired Heater | \$8/kBTU | 2018 Nexant Energy Model Estimate |
| Condensing Gas Storage Water Heater | \$685/unit | Illinois TRM V6 |
| Hybrid Gas Water Heater | \$878/unit | 2018 Nexant Energy Model Estimate |
| Combined Space / Water Heater | \$1,722/unit | 2014 Nexant Engineering Estimate |
| Unit Heater (Non Condensing) | \$2.50/kBTU | Analysis of Standard Options for Unit Heaters and Duct Furnaces (PG&E 2004) |
| Unit Heater (Condensing) | \$12.00/kBTU | |
| Infrared Heating System | \$11.43/kBTU | Cost review based upon Vendor Costs (Grainger) |
| Modulating Infrared | \$25/unit | 2014 Nexant Engineering Estimate |
| | \$75/unit | |
| Condensing RTU's | \$25/unit | 2014 Nexant Engineering Estimate |

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| Boiler Outside Air Reset Control | \$835/unit | 2004-2005 California DEER Database |
| Boiler Tune-up – Tier 1 | \$169 | 2018 Nexant Energy Model Estimate |
| Boiler Tune-up – Tier 2 | \$309 | CA Statewide Gas Potential Study (Kema-Xenergy, 2003) |
| Boiler Tune-up – Tier 3 | \$607 | 2013 Nexant Engineering Estimate |
| Smart Thermostat | \$0.23/sq. ft. | 2014 Nexant Engineering Estimate |
| Gas Commercial Fryer | \$3,796/unit | ENERGY STAR® Gas Fryer Calculator |
| Gas Commercial Fryer (Used) | \$1,898 | 2018 Nexant Energy Model Estimate |
| Gas Steam Cooker | \$2,500/unit | Illinois TRM V6 – savings, Case Studies: Restaurant Energy Efficiency PG&E – incremental cost |
| Gas Steam Cooker (Used) | \$1,250 | 2018 Nexant Energy Model Estimate |
| Gas Convection Oven | \$1,572/per vat | PG&E -CPUC 2006-2008 / Single Family Rebate Program |
| Gas Convection Oven (Used) | \$786 | 2018 Nexant Energy Model Estimate |
| Gas Combination Oven | \$21,797/unit | PG&E -CPUC 2006-2008 / Single Family Rebate Program |
| Gas Combination Oven (Used) | \$10,899 | 2018 Nexant Energy Model Estimate |
| Gas Griddle | \$902/unit | Illinois TRM V6 – savings, ACEEE “Baseline Market Conditions for Efficient Commercial and Industrial Gas Technologies” – incremental cost |
| Gas Griddle (Used) | \$451 | 2018 Nexant Energy Model Estimate |
| Gas Charbroiler | \$7,500 | 2015 PECI Energy Model Estimate |
| Gas Charbroiler (Used) | \$3,250 | 2018 Nexant Energy Model Estimate |
| Gas Conveyor Oven | \$7,500 | 2015 PECI Energy Model Estimate |
| Gas Conveyor Oven (Used) | \$3,750 | 2018 Nexant Energy Model Estimate |
| Gas Dryer Moisture Sensor | \$199 | 2015 PECI Energy Model Estimate |
| Modulating Gas Dryer | \$525 | 2015 PECI Energy Model Estimate |
| Solar Water Heater – Pool (business) | \$2,250 | 2015 PECI Energy Model Estimate |
| Wall Insulation (retrofit) | \$0.64 sq. ft. | Database for Energy Efficient Resources (DEER), California Energy Commission (CEC), and California Public Utilities Commission (CPUC). 2006 |
| Roof Insulation (retrofit) | \$0.20 sq. ft. | Database for Energy Efficient Resources (DEER), California Energy Commission (CEC), and California Public Utilities Commission (CPUC). 2006 |
| Demand Control Ventilation Tier 2 | \$0.50 CFM | 2017 Nexant Energy Model Estimate |
| Demand Control Ventilation Tier 1 | \$1,500 unit | 2017 Nexant Energy Model Estimate |

*See Cadmus Phase II Evaluation

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| Custom Measures | \$8,000/project | 2012 Estimate |
| Pipe Insulation (Hot Water) | \$8.50/sq. ft. | 2017 Nexant Energy Model Estimate |
| Pipe Insulation (Steam) | 13.35/sq. ft. | 2017 Nexant Energy Model Estimate |
| Prescriptive ERV | \$300 | 2018 Nexant Energy Model Estimate |
| Green Certified New Buildings | \$6 | 2018 Nexant Energy Model Estimate |
| ThermWise® Builder Rebates | | |
| SINGLE FAMILY | | |
| Measure | Incremental Cost | Source |
| HERS Index 62 or lower | \$858/unit | 2016 CLEAResult Energy Model Estimate |
| HERS Index 55 or lower | \$1,715/unit | 2016 CLEAResult Energy Model Estimate |
| HERS Index 48 or lower | \$2,573/unit | 2016 CLEAResult Energy Model Estimate |
| ENERGY STAR® Bonus | \$429/unit | 2016 CLEAResult Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE | \$182/unit | 2014 PEI estimate |
| Natural Gas Furnace - 95% AFUE with ECM | \$520/unit | 2018 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | \$683/unit | 2018 Nexant Energy Model Estimate |
| Gas Storage Water Heater | \$161/unit | 2014 PEI estimate |
| Tankless Gas Water Heater | \$517/unit | 2014 PEI estimate |
| Condensing Gas Storage Water Heater | \$685/unit | Illinois TRM V6 |
| Hybrid Gas Water Heater | \$878/unit | 2018 Nexant Energy Model Estimate |
| Gas Boiler Tier 1 | \$452/unit | 2014 PEI estimate |
| Gas Boiler Tier 2 | \$1,123/unit | 2014 PEI estimate |
| Solar Assisted Gas Water Heating (domestic) | \$4,500/unit | 2011 PEI estimate |
| Solar Assisted Gas Water Heating (pool) | \$2,250/unit | 2012 PEI estimate |
| 2X6 R-23 Walls | \$1,000/unit | 2016 CLEAResult Energy Model Estimate |
| Windows – R-5 | \$3.50/ sq. ft. | Incremental cost – DOE – Cost-Effective Triple Pane and Low E Storm Windows |
| Smart Thermostat | \$170/unit | 2014 Nexant estimate |

*See Cadmus Phase II Evaluation

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| Combined Space and Hot Water | \$1,722/unit | 2017 Nexant Energy Model Estimate |
| MULTIFAMILY | | |
| Measure | Incremental Cost | Source |
| HERS Index 62 or lower | \$340/unit | 2016 CLEAResult Energy Model Estimate |
| HERS Index 55 or lower | \$681/unit | 2016 CLEAResult Energy Model Estimate |
| HERS Index 48 or lower | \$1,021/unit | 2016 CLEAResult Energy Model Estimate |
| ENERGY STAR® Bonus | \$170/unit | 2016 CLEAResult Energy Model Estimate |
| Natural Gas Furnace - 95% AFUE | \$182/unit | 2014 PEI Estimate |
| Natural Gas Furnace - 95% AFUE with ECM | \$520/unit | Measure Life – Illinois TRM V6, incremental cost – Excel Energy |
| Natural Gas Furnace - 98% AFUE with ECM | \$683/unit | Measure Life – Illinois TRM V6, incremental cost – Nexant Estimate 2018 |
| Gas Storage Water Heater | \$161/unit | 2014 PEI Estimate |
| Tankless Gas Water Heater | \$517/unit | 2014 PEI Estimate |
| Condensing Gas Storage Water Heater | \$1,082/unit | 2014 PEI estimate |
| Hybrid Gas Water Heater | \$878/unit | 2018 Nexant Energy Model Estimate |
| Gas Boiler Tier 1 | \$452/unit | 2014 PEI estimate |
| Gas Boiler Tier 2 | \$1,123/unit | 2014 PEI estimate |
| Solar Assisted Gas Water Heating (domestic) | \$4,500/unit | 2011 PEI estimate |
| Solar Assisted Gas Water Heating (pool) | \$2,250/unit | 2012 PEI estimate |
| Windows – R-5 | \$3.50/ sq. ft. | Incremental cost – DOE – Cost-Effective Triple Pane and Low E Storm Windows |
| Smart Thermostat | \$170/unit | 2014 PEI estimate |
| Combined Space and Hot Water | \$1,722/unit | 2017 Nexant Energy Model Estimate |
| Energy Star High Rise | \$170/unit | 2017 Nexant Energy Model Estimate |
| ThermWise® Home Energy Plan | | |
| Measure | Incremental Cost | Source |
| Kitchen Sink Aerator | \$2.65/unit | Niagara Conservation |
| Pipe Insulation | \$3.35/unit | US Department of Energy's Rebuild America |

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| | | Reenergize Energy Efficiency Guidebook |
| Faucet Aerator | \$2.75/unit | Niagara Conservation |
| Low Flow Shower Head | \$4/unit | Nexant 2006 Market Study Report |
| ThermWise® Weatherization Rebates | | |
| SINGLE FAMILY | | |
| Measure | Incremental Cost | Source |
| Windows – R-5 | \$3.52/sq.ft. | 2011 Nexant estimate |
| Wall Insulation | \$0.64/sq.ft . | RMP Home Energy Savings Program Filing 1 |
| Attic Insulation | Tier 1 - \$0.30/sq.ft . | 2017 Nexant Energy Model Estimate |
| | Tier 2 - \$0.09/sq.ft. | |
| Floor Insulation | \$0.42/sq.ft. | RMP Home Energy Savings Program Filing 1 |
| Duct Sealing & Duct Insulation | \$657/system | RMP Home Energy Savings Program Filing 1 & Lawrence Berkeley National Laboratory Home Energy Saver (Salt Lake City) |
| Air Sealing | \$0.25/sq.ft. | 2011 Nexant estimate |
| Pipe Insulation | \$2.61/unit | 2017 Nexant Energy Model Estimate |
| ICAST pilot | \$450/unit | 2018 Nexant Energy Model Estimate |
| MULTIFAMILY | | |
| Measure | Incremental Cost | Source |
| Windows – R-5 | \$3.52/sq.ft. | 2011 Nexant estimate |
| Wall Insulation | \$0.64/sq.ft. | RMP Home Energy Savings Program Filing 1 |
| Attic Insulation | Tier 1 - \$0.34/sq.ft. | 2009 Weatherization Participant Data and Insulation Vendor Estimates |
| | Tier 2 - \$0.11/sq.ft. | |
| Floor Insulation | \$0.42/sq.ft. | RMP Home Energy Savings Program Filing 1 |
| Duct Sealing & Duct Insulation | \$273/system | RMP Home Energy Savings Program Filing 1 & Lawrence Berkeley National Laboratory Home Energy Saver (Salt Lake City) |
| Low Income Assistance Program | | |
| Measure | Incremental Cost | Source |
| Natural Gas Furnace - 95% AFUE | \$182/unit | 2013 Questar Gas furnace survey |
| Natural Gas Furnace - 95% AFUE with ECM | \$400/unit | 2017 Nexant Energy Model Estimate |
| Natural Gas Furnace - 98% AFUE with ECM | \$1,105/unit | 2015 PECl Energy Model Estimate |
| Duct Sealing & Insulation | \$657/system | 2018 Nexant Energy Model Estimate |
| Smart Thermostat | \$170/unit | 2018 Nexant Energy Model Estimate |

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| ThermWise® Energy Comparison Report | | |
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| Measure | Incremental Cost | Source |
| Program Measures | \$2.54/project | 2018 Dominion Energy Report estimate |

*See Cadmus Phase II Evaluation