

## Appendix H: rebate matrix

### ***This matrix summarizes information regarding Efficiency Works Homes rebates***

Some improvements may also qualify for other rebates. Consult with the project's Home Efficiency Advisor (HEA) to see what other rebates may be available.

#### **Eligibility requirements**

- Rebates are available for improvements to existing (greater than one year old) single-family detached homes and attached townhomes with individual heating systems. Multi-family homes or homes less than one year old are not included.
- Rebates can be used for improvements to owner-occupied and rental properties receiving electric service from Estes Park Power & Communications, Fort Collins Utilities, Longmont Power & Communications, or Loveland Water and Power.
- An Efficiency Works Home Energy Audit is required as a prerequisite before efficiency improvement measures are installed (except for emergency replacement of windows, HVAC or DWH equipment, which may be installed prior to the performance of an Efficiency Works Home Energy Audit. The audit must still take place prior to the issuance of rebates. (Exception: Starting 2017 HVAC rebates will no longer be required have an audit)
- Improvements must be installed by contractors included on the applicable *Efficiency Works Participating Contractor List* (<https://efficiencyworks.org/resources/find-a-service-provider/>). As these lists will be periodically updated, be sure the version you're using is current. Homeowner installations do not qualify for rebates.
- Improvements must be installed in accordance with the details of the *Efficiency Works for Homes Installation Standards*. This is the contractor's responsibility. Key aspects of the *Installation Standards* are shown below as "Requirements."
- Following any retrofit, which may impact the building shell tightness, a blower door test out is required (as indicated in the "Post-installation Tests column").
- Where any building envelope improvement measures (attic insulation, frame wall insulation, window replacement, etc.) are undertaken, the corresponding building component(s) must be durably air sealed. In addition, for buildings with an air leakage rate greater than 3.0 ACH50 as determined at the time of the Efficiency Works Home Energy Audit, the **envelope air leakage rate must be reduced. This is applicable to all homes where building envelope improvements are made** – not just for homes where air-sealing rebates are sought.
- Any time the combustion safety test results in spillage at natural conditions, the problem must be corrected before a rebate will be approved.

#### ***Special conditions that exist as follows***

- *Estes Park rebates are only applicable for homes with electric heat.*

#### **Questions**

Contact Scott Suddreth at 970-290-9723

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Efficiency Works Homes Program Rebates			
Efficiency Measure	Requirements and Options	Rebate Amounts for Gas-heated Homes <sup>1</sup>	Rebate Amounts for Electric-heated Homes
<b>Air Sealing</b>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> All houses with an ACH50 of greater than 3.0 are eligible</li> <li>• <b>Combustion safety test required</b></li> </ul>	Rebate amount varies with % reduction in house shell leakage: <ul style="list-style-type: none"> <li>• Tier 1, <math>\geq 25\%</math> - \$220</li> <li>• Tier 2, <math>\geq 33\%</math> - \$330</li> <li>• Tier 3, <math>\geq 50\%</math> - \$440</li> </ul>	Rebate amount varies with % reduction in house shell leakage: <ul style="list-style-type: none"> <li>• Tier 1, <math>\geq 25\%</math> - \$330</li> <li>• Tier 2, <math>\geq 33\%</math> - \$440</li> <li>• Tier 3, <math>\geq 50\%</math> - \$550</li> </ul>

<sup>1</sup> Note special condition for Estes Park in the Eligibility Requirements section  
 Efficiency Works Homes 2020 Service Provider Participant Guide

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<p><b>Conditioned Crawl Space Insulation</b></p>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> uninsulated or poorly installed insulation</li> <li>• <b>Rim joist insulation and air sealing, foundation wall insulation, and moisture/soil gas barrier must meet <i>EW-H Installation Standards</i> to qualify for a rebate.</b></li> <li>• <b>Evidence of moisture requires extension of moisture/soil gas barrier up the foundation wall to the sill plate as well as provision for means of sub-barrier moisture removal.</b></li> <li>• <b>Rim joist:</b> foam board or spray foam insulation to current IECC R-value requirements, air seal</li> <li>• <b>Foundation wall – options (insulation levels must meet current IECC R-value requirements):</b> <ul style="list-style-type: none"> <li>- Insulate on <b>interior</b> with un-faced batts or perforated vinyl faced fiberglass blanket, closed cell foam board or spray foam with ignition barrier (except where exempt per ICC-ES).</li> <li>- Insulate on <b>exterior</b> with foam board down to top of footing. Protect above grade</li> </ul> </li> <li>• <b>Combustion safety test required</b></li> </ul>	<p style="text-align: center;"><b>Rim joist</b></p> <ul style="list-style-type: none"> <li>• Spray foam - \$0.55/sq.ft., max \$550</li> <li>• Foam board - \$0.55/sq.ft., max \$330</li> </ul> <p style="text-align: center;"><b>Foundation wall</b></p> <ul style="list-style-type: none"> <li>• Fiberglass (interior) - \$0.33/sq.ft., max \$275</li> <li>• Spray foam (interior) - \$0.55/sq.ft., max \$330</li> <li>• Foam board (interior or exterior) - \$0.55/sq.ft., max \$330</li> </ul>	<p style="text-align: center;"><b>Rim joist</b></p> <ul style="list-style-type: none"> <li>• Spray foam - \$0.83/sq.ft., max \$825</li> <li>• Foam board - \$0.83/sq.ft., max \$495</li> </ul> <p style="text-align: center;"><b>Foundation wall</b></p> <ul style="list-style-type: none"> <li>• Fiberglass (interior) - \$0.49/sq.ft., max \$412</li> <li>• Spray foam (interior) - \$0.83/sq.ft., max \$495</li> <li>• Foam board (interior or exterior) - \$0.83/sq.ft., max \$495</li> </ul>
Efficiency Measure	Requirements and Options	Rebate Amounts for Gas-heated Homes	Rebate Amounts for Electric-heated Homes
<p><b>Cold Crawl Space Insulation</b></p>	<ul style="list-style-type: none"> <li>• <b>Water Pipes must be above full depth floor insulation</b></li> <li>• Mechanical ducts insulated, R-8</li> <li>• Air seal floor, fill joist cavity with insulation to RESNET Grade 1, and cover bottom with <u>vapor permeable</u> air barrier.</li> <li>• Insulate and air-seal rim joists to R-value prescribed by the IECC</li> <li>• <b>Combustion safety test required</b></li> </ul>	<p style="text-align: center;">\$0.33/sq.ft., max \$275</p>	<p style="text-align: center;">\$0.49/sq.ft., max \$412.50</p>

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<p><b>Basement Wall Insulation</b></p>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> Basement walls are uninsulated.</li> <li>• <b>Existing moisture problems must be mitigated and any foundation cracks sealed</b></li> <li>• <b>Rim joist:</b> closed cell foam board or spray foam to meet current IECC R-value requirements; air seal foundation plate</li> <li>• <b>Foundation wall insulation:</b> <ul style="list-style-type: none"> <li>- On <b>interior, options:</b> <ul style="list-style-type: none"> <li>• 1" XPS or EPS foam board against foundation wall + unfaced R-13 fiberglass batts in finished frame wall</li> <li>• Continuous spray foam or foam board to IECC R-value requirements with thermal barrier.</li> </ul> </li> <li>- On <b>exterior:</b> <ul style="list-style-type: none"> <li>• Closed cell foam board to meet current IECC R-value requirements, 48" below-grade or T.O. footer (whichever is greater); protect foam above-grade</li> </ul> </li> </ul> </li> <li>• <b>Combustion safety test required</b></li> </ul>	<p style="text-align: center;"><b>Rim joist</b></p> <ul style="list-style-type: none"> <li>• Spray foam - \$0.55/sq.ft., max \$550</li> <li>• Foam board - \$0.55/sq.ft., max \$330</li> </ul> <p style="text-align: center;"><b>Foundation wall</b></p> <ul style="list-style-type: none"> <li>• Fiberglass batt + foam board (interior) - \$0.88/sq.ft., max \$605</li> <li>• Spray foam or foam board (interior) - \$0.55/ sq.ft., max \$330</li> <li>• Foam board (exterior) - \$0.55/sq.ft., max \$330</li> </ul>	<p style="text-align: center;"><b>Rim joist</b></p> <ul style="list-style-type: none"> <li>• Spray foam - \$0.83/sq.ft., max \$825</li> <li>• Foam board - \$0.83/sq.ft., max \$495</li> </ul> <p style="text-align: center;"><b>Foundation wall</b></p> <ul style="list-style-type: none"> <li>• Fiberglass batt + foam board (interior) - \$1.10/sq.ft., max \$990</li> <li>• Spray foam or foam (interior) - \$0.83/sq.ft., max \$495</li> <li>• Foam board (exterior) - \$0.83/sq.ft., max \$495</li> </ul>
<p><b>Cantilever Floor Insulation</b></p>	<ul style="list-style-type: none"> <li>• <b>No restriction on existing condition</b></li> <li>• Air seal exterior and interior</li> <li>• Any water pipes must be located in top ½ of floor joist cavity or drywall must be removed and netting installed below water pipes before insulating</li> <li>• <b>Combustion safety test required</b></li> </ul>	<p style="text-align: center;">\$0.55/ sq.ft., max of \$220</p>	<p style="text-align: center;">\$.83/ sq.ft., max of \$330</p>

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Efficiency Measure	Requirements and Options	Rebate Amounts for Gas-heated Homes	Rebate Amounts for Electric-heated Homes
<p><b>Floor Over Garage Insulation</b></p>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> Insulation does not fill floor cavity</li> <li>• Any water pipes must be located in top ½ of floor joist cavity or drywall must be removed and netting installed below water pipes before insulating</li> <li>• Floor joist cavities used as return air ducts must be sealed from floor cavity being insulated</li> <li>• Any drywall removed from ceiling must be restored to current code compliance</li> <li>• <b>Combustion safety test required</b></li> </ul>	<p>\$0.55/ sq.ft., max of \$220</p>	<p>\$.83/ sq.ft., max of \$330</p>
<p><b>Exterior Frame Wall Insulation</b></p>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> R-9 or less</li> <li>• Must air seal all wall assembly openings (windows, doors &amp; electrical boxes) prior to dense packing walls</li> <li>• Completely fill all stud cavities</li> <li>• Cloth sheathed electrical wiring must be evaluated by a licensed electrician prior to insulating</li> <li>• Knob and tube wiring must be abandoned or replaced prior to insulating</li> <li>• <b>Combustion safety test required</b></li> </ul>	<p>\$0.55/sq.ft. (net wall area), max of \$550</p>	<p>\$.83/sq.ft. (net wall area), max of \$825</p>
<p><b>Masonry Exterior Wall Insulation</b></p>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> uninsulated</li> <li>• Insulate masonry walls, on either the interior or exterior, to meet current IECC R-value requirements</li> <li>• <b>Combustion safety test required</b></li> </ul>	<p>\$0.55/sq.ft. (net wall area), max of \$550</p>	<p>\$.83/sq.ft. (net wall area), max of \$825</p>

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Efficiency Measure	Requirements and Options	Rebate Amounts for Gas-heated Homes	Rebate Amounts for Electric-heated Homes
<p><b>Attic Insulation (Flat Ceiling)</b></p>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> Insulation &lt; R-30</li> <li>• Final insulation must <math>\geq</math>R-49</li> <li>• Baffles at all exterior top plate soffit vent locations &amp; insulation stops to minimize wind washing</li> <li>• Must air seal ceiling thermal by-passes</li> <li>• Must install missing air barriers or insulation on knee walls and skylights.</li> <li>• Must repair duct problems in attic before insulating</li> <li>• All exhaust fan ducts must terminate on the exterior of the building</li> <li>• <b>Combustion safety test required</b></li> </ul>	<p>\$0.33/sq.ft. of flat attic area, max \$550</p>	<p>\$0.55/sq.ft. of flat attic area, max \$825</p>
<p><b>Attic Knee Wall Insulation</b></p>	<ul style="list-style-type: none"> <li>• <b>Insulation must be installed to RESNET Grade I</b></li> <li>• <b>Final insulation level to meet current IECC R-value requirements</b> <ul style="list-style-type: none"> <li>- <b>If already insulated</b>, add R-11 spray foam, foam board or vinyl faced fiberglass blanket over existing insulation. Spray foam &amp; foam board requires ignition barrier (except where exempt per ICC-ES).</li> <li>- <b>If uninsulated</b>, first fill cavity, then add R-11 spray foam, foam board or vinyl faced fiberglass blanket to the cold side of the framing. Spray foam &amp; foam board requires ignition barrier (except where exempt per ICC-ES).</li> </ul> </li> <li>• <b>Combustion safety test required</b></li> </ul>	<p><b>Already Insulated</b> \$0.33/sq.ft. of knee wall area, max \$550</p> <p><b>Uninsulated</b> \$0.55/sq.ft. of knee wall area, max \$550</p>	<p><b>Already Insulated</b> \$0.55/sq.ft. of knee wall area, max \$825</p> <p><b>Uninsulated</b> \$0.83/sq.ft. of knee wall area, max \$825</p>

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Efficiency Measure	Requirements and Options	Rebate Amounts for Gas-heated Homes	Rebate Amounts for Electric-heated Homes
<p><b>Cathedral Ceiling Insulation</b></p>	<ul style="list-style-type: none"> <li>• <b>No minimum existing insulation</b></li> <li>• <b>No interior Class I vapor retarders</b></li> <li>• <b>Cathedral ceiling insulation requirements:</b> <ul style="list-style-type: none"> <li>- Install continuous, external R-20 insulation above the structural roof sheathing (and covered with IRC approved roofing material)</li> <li>- Completely fill rafter cavity below structural roof sheathing with dense-packed short fiber fiberglass</li> <li>- Air seal ceiling and can lights as appropriate</li> </ul> </li> <li>• <b>Combustion safety test required</b></li> </ul>	<p>\$0.55/sq.ft. max of \$550</p>	<p>\$.83/sq.ft. max of \$825</p>
<p><b>Conditioned Attics (Unvented Attics with Spray Foam on the Underside of the Roof Deck)</b></p>	<ul style="list-style-type: none"> <li>• <b>All existing insulation must be removed from the attic floor (vacuum out all blown insulation)</b> <ul style="list-style-type: none"> <li>- Minimum R-30 on underside of roof deck</li> <li>- An ignition barrier is required to cover all exposed foam</li> <li>- All attic ventilation (soffit, gable, roof vents) must be removed or sealed.</li> </ul> </li> </ul>	<p>\$0.55/sq.ft. max \$550</p>	<p>\$0.83/sq.ft. max \$825</p>

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<p><b>Window and/or Sliding Glass Door Replacement</b></p>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> Windows and sliding glass doors must be single pane, clear glass or metal framed</li> <li>• Exterior walls and existing window frames left in place must be insulated and air sealed</li> <li>• Windows and sliding glass doors must be ENERGY STAR® qualified for our northern climate, with a low maintenance exterior</li> <li>• U-Factor of <math>\leq 0.30</math> w/ any SHGC U-Factor of 0.31 w/ SHGC of <math>\geq 0.35</math> U-Factor of 0.32 w/SHGC of <math>\geq 0.40</math></li> <li>• <b>Combustion safety test required</b></li> </ul>	<p>\$2.50/sq.ft., max \$750</p>	<p>\$3.75/sq.ft., max \$1,000</p>
<p><b>Replacement Air Handler Blower Motor</b></p>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> Motor is PSC</li> <li>• New motor must be DC</li> <li>• TESP must not exceed 0.8 iwc</li> </ul>	<p>\$150</p>	<p>\$150</p>



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Efficiency Measure	Requirements and Options	Rebate Amounts for Gas-heated Homes	Rebate Amounts for Electric-heated Homes
<b>Replacement Gas Furnace<sup>2</sup></b>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> Furnace with AFUE &lt;90% may upgrade to Tier 1 or Tier 2</li> <li>• <b>Existing:</b> Furnace efficiency AFUE <math>\geq</math>90% must either increase efficiency to Tier 2 or if already at Tier 2 efficiency must move from PSC to ECM blower.</li> <li>• Furnaces must be sized by ACCA approved Manual J software &amp; commissioned</li> <li>• Must be sealed combustion with intake &amp; exhaust to outside</li> <li>• Tier 2 furnace must have multi-stage gas valve &amp; ECM motor.</li> <li>• TESP must not exceed 0.8 iwc</li> <li>• <b>Combustion safety test required</b></li> </ul>	<p>2 Tiers of rebates based on furnace efficiency:</p> <p>92% min AFUE - \$300</p> <p>95% min AFUE - \$500</p> <p>\$500 max per customer</p>	N/A
<b>Replacement Gas Boiler<sup>3</sup></b>	<ul style="list-style-type: none"> <li>• Existing hydronic system must be evaluated by boiler specialist</li> <li>• Replacement boiler must be sealed combustion with intake &amp; exhaust to outside</li> <li>• <b>Replacement boiler must be at least 10% more efficient than existing boiler</b></li> <li>• <b>For replacement boilers &gt;85% AFUE, return water temps must be low enough to allow condensing</b></li> <li>• <b>All existing circulator pumps must be replaced with DC, ECM pumps</b></li> <li>• <b>Combustion safety test required</b></li> </ul>	\$300	N/A

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Efficiency Measure	Requirements and Options	Rebate Amounts for Gas-heated Homes	Rebate Amounts for Electric-heated Homes
<b>Replacement Air Conditioners</b>	<ul style="list-style-type: none"> <li>• AC system sized using ACCA Manual J compliant method</li> <li>• Systems &gt; 115% of design cooling load must use Manual S</li> <li>• <b>Must be AHRI matched.</b></li> <li>• Tier 4 must have 2 stage AC and furnace with an ECM motor</li> <li>• Existing AC must be SEER 10 or &lt;, <b>OR</b> replacement AC system is at least 1 ton smaller</li> <li>• System must be commissioned with Appendix E</li> </ul>	<p>4 Tiers of efficiency rebates:</p> <p>SEER 14.5, EER 12 - \$150</p> <p>SEER 15, EER 12.5 - \$250</p> <p>SEER 16, EER 12.5 - \$350</p> <p>SEER 17, EER 12.5 - \$500</p> <p>\$500 max per customer</p>	<p>4 Tiers of efficiency rebates:</p> <p>SEER 14.5, EER 12 - \$150</p> <p>SEER 15, EER 12.5 - \$250</p> <p>SEER 16, EER 12.5 - \$350</p> <p>SEER 17, EER 12.5 - \$500</p> <p>\$500 max per customer</p>
<b>Ductless Mini-Splits</b>	<ul style="list-style-type: none"> <li>• Must be cold-climate multi-stage heat pump.</li> <li>• No commissioning required</li> <li>• No Manual J required</li> </ul>	<p>SEER ≥ 16, HSPF ≥ 9.5</p> <p>\$250 per head</p> <p>\$500 max per customer</p>	<p>SEER ≥ 16, HSPF ≥ 9.5</p> <p>\$250 per head</p> <p>\$750 max per customer</p>

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Efficiency Measure	Requirements and Options	Rebate Amounts for Gas-heated Homes	Rebate Amounts for Electric-heated Homes
<b>Heat Pumps; Existing HP, or Electric Furnace</b>	<ul style="list-style-type: none"> <li>• Feasibility of improvement must be evaluated by EW-H participating HVAC contractor specializing in Heat Pumps</li> <li>• Must be cold-climate air-source multi-stage heat pump, mini-split heat pump or ground source heat pump</li> <li>• System must be sized using ACCA Manual J compliant method</li> <li>• System must be commissioned with Appendix E</li> </ul>	SEER 14.5 & HSPF 9.0 - \$500	SEER 14.5 & HSPF 9.0 - \$500
<b>Advanced Evaporative Cooler</b>	<ul style="list-style-type: none"> <li>• New evaporative cooler or replacing existing AC with evaporative cooler</li> <li>• <b>Must have: inorganic media, thermostat control, automated daily water dump, insulated cover for winter</b></li> </ul>	\$500	\$500
<b>Replacement Gas Water Heater</b>	<ul style="list-style-type: none"> <li>• Replacing natural draft vented water heater or electric water heater</li> <li>• Intake (where applicable) and exhaust must be piped to exterior</li> <li>• <b>Combustion safety test required</b></li> </ul>	3 Tiers of efficiency rebates:  Power Vent EF $\geq$ 0.62 - \$100  Direct vent EF $\geq$ 0.67 - \$200  Sealed Combustion EF $\geq$ 0.82 - \$400	N/A
<b>Heat Pump Water Heater</b>	<ul style="list-style-type: none"> <li>• Replacing natural draft vented water heater or electric water heater</li> </ul>	2 Tiers of efficiency rebates:  UEF $\geq$ 2.0 (E-star) \$300  UEF $\geq$ 3.0 \$500  Max \$1000	2 Tiers of efficiency rebates:  UEF $\geq$ 2.0 (E-star) \$300  UEF $\geq$ 3.0 \$500  Max \$1000

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<b>Whole House Fan</b>	<ul style="list-style-type: none"><li>• New or replacing old whole house fan</li><li>• Fans must have motorized, insulated doors or dampers, which shut and seal after every use</li></ul>	\$275 Per household	\$275 Per household
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<b>Mechanical Ventilation</b>	<ul style="list-style-type: none"> <li>• <b>Existing:</b> Per ASHRAE 62.2-2010 calculation, home requires mechanical ventilation</li> <li>• Install Ventilation per ASHRAE 62.2-2010 mechanical ventilation requirements</li> <li>• <b>Combustion safety test required</b></li> </ul>	20% of cost up to \$400	20% of cost up to \$400
<b>Garage to House Air Sealing</b>	<ul style="list-style-type: none"> <li>• Existing: Air leakage pathways exist between the attached garage and the main house</li> <li>• Seal all areas called out in the report as well as the prescriptive list (see measures from <i>EW-H Installation Standards</i>)</li> <li>• <b>Combustion safety test required</b></li> </ul>	\$110	\$110