Make It Easy, Make It a Deal…

Brian Tholl
Fort Collins Utilities
• Municipal utility
  • Electric, water, waste & storm water, financing and broadband
  • 55 sq. mile area: 99% underground
• 80,000 customers
  • ~ 38,000 eligible for EW-Homes
• Resource Conservation portfolio
  • 20 energy and water programs
  • 250+ incentivized measures
City and Utility Goals

• Energy, water, and carbon goals
  • Climate Action Plan
    • First adopted almost 20 years ago
    • 80% reduction by 2030, carbon neutral by 2050
  • Energy Policy
    • 2.5% annual savings from efficiency by 2020
• Regional program since 2014
• Administered by Platte River Power Authority
  • Joint Action Agency / G & T
Barriers to Customer Participation

- Complexity
- Time
- Confidence
- Money
Complexity and Time

Streamline path

**Home Performance Assessment**
- 2-3 hour evaluation of your home by a Home Performance Expert
- 30-60 minute presentation of results and project package options
- Explanation of HELP* (Home Efficiency Loan Program) financing option offered by Fort Collins Utilities
- Project process and time-line
  * Must be financially pre-approved before scheduling project.

**Questions? Please Contact:**
Efficiency Works
Neighborhoods Team
(970) 413-6020
Neighborhoods@efficiencyworks.CO
Complexity - Auditor Packages

- **Unbiased package options:** customizable
  - **Good:** Envelope impact
  - **Better:** Good + HVAC or windows
  - **Best:** Good + Better, and/or solar PV
- **Monthly cash flow emphasis**
- **Standardized pricing**
# Efficiency Works Neighborhoods Installation Standards & Pricing

These installation standards are based on Efficiency Works - Homes (Final Installation Standards V3 Effective 7/15/15). That means that you will need to meet the Homes Final Installation Standards PLUS any additional requirements in the EW-Neighborhoods Installation Standards. While the EW-Homes Standards often allow multiple pathways for compliance - this program will typically have a single pathway approach only.

<table>
<thead>
<tr>
<th>ENERGY EFFICIENCY MEASURE</th>
<th>INSTALLATION STANDARDS</th>
<th>REQUIRED TESTS</th>
<th>NOTES</th>
<th>STANDARDIZED PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FullVacuuming of the Attic</td>
<td>This means that you shall vacuum the entire attic floor to reveal all of the areas that need to be sealed.</td>
<td>Photo-Documentation Required</td>
<td>In the spirit of sustainability vacuumed insulation should be repurposed as much as possible. This should only be done if the insulation is relatively clean and not full of organic pollutants.</td>
<td>$0.75/SF</td>
</tr>
<tr>
<td>Attic Prep and Air Seal</td>
<td>See EW-Homes Installation Standards V3:&lt;br&gt;ADD REQUIREMENT TO SEAL EXTERIOR TOP PLATES. ADD ATTIC HATCH MUST BE OPERABLE WITH DURABLE INSULATION DAM</td>
<td>Combustion Safety Test required record results on Appendix F&lt;br&gt;Blower door test required prior to air sealing and after insulating in order to measure house tightness improvement. Photo-Documentation Required</td>
<td>When the ACH50 is 8 or greater we expect a 50% reduction in infiltration. When ACH50 is less than 4 identified bypasses must be sealed - insulation removal method prior to air sealing at the contractors discretion.</td>
<td>$0.40/SF</td>
</tr>
<tr>
<td>Air Sealing and Insulating External Top Plates</td>
<td>The exterior top plate shall be sealed (when accessible) by creating an insulation dam with fiberglass batts, spaced just past the top plate. Closed-cell spray foam is then applied to not only coat the entire top plate but to also fill the space between the top plate and rafter or roof deck - 3-5 inches of foam.</td>
<td>Combustion Safety Test required record results on Appendix F&lt;br&gt;Blower door test required prior to air sealing and after insulating in order to measure house tightness improvement. Photo-Documentation Required</td>
<td>This is expected to be accomplished on most homes. Scissor trusses will be possible exception.</td>
<td>$5.00/LF</td>
</tr>
<tr>
<td>Air Sealing Non-IC Rated Can Lights</td>
<td>See EW-Homes Installation Standards V3.</td>
<td>Combustion Safety Test required record results on Appendix F&lt;br&gt;Blower door test required prior to air sealing and after insulating in order to measure house tightness improvement. Photo-Documentation Required</td>
<td>This is a real opportunity to replace Non-IC rated recessed light cans with modern air tight ICR cans.</td>
<td>$24.00/Each</td>
</tr>
</tbody>
</table>
QA is expensive: used photo-documentation of all work before and after

Verification of important areas in 100% of program homes, at low cost

Contractor performance is significantly better: now have their own internal QA
• First 2 years low utilization: not simple or attractive
  • Complex application, contractors not promoting, market rates
• Revised qualifications and rates – 2015
  • 640 FICO, 6 months good bill payment
  • 2.5% interest rate, up to 20 year term
• New for 2018 – Rebranded EPIC loans
  • Revolving loan fund established
  • Includes various capital sources for low rates
After Program Changes, Loan Use Skyrockets

Fort Collins Cumulative Loan Value

$0, $200,000, $400,000, $600,000, $800,000, $1,000,000, $1,200,000, $1,400,000, $1,600,000, $1,800,000, $2,000,000

04/10/13, 06/10/13, 10/10/13, 12/10/13, 02/10/14, 04/10/14, 08/10/14, 10/10/14, 12/10/14, 02/10/15, 04/10/15, 08/10/15, 10/10/15, 12/10/15, 02/10/16, 04/10/16, 06/10/16, 08/10/16, 10/10/16, 12/10/16, 02/10/17
Neighborhood targeting

- Propensity to act & save
- Scored neighborhoods
  - Median household income & education
  - Past participation data
  - Year built
**Engagement Approach**

**Messaging:** comfort, health, and savings

**Tactics with multiple contacts**
- Letter / brochure
- Follow-up postcard after two weeks
- Yard signs with brochure holders
- Neighborhood open house
- Social Media

**Neighborhood approach**
- Localized, focused marketing
- Leveraging word of mouth
Program Reboot Results

- Reaching more customers
  - 2x as many customers enrolled
  - 77% enrolled once contacted
  - 44% conversion rate to a package

- Greater savings, same cost
  - 50% greater kWh savings
  - 70% greater Therm savings
  - 60% greater GHG savings

- 64% of projects used on-bill financing
EPIC
City of Fort Collins
Energy Performance Improvement Certificate

HOME PROFILE
LOCATION
721 Cherry St.
Fort Collins, CO
YEAR BUILT
1904
BUILDING SIZE
965 sqft
NUMBER OF BEDROOMS
2

ASSESSMENT
ASSESSMENT DATE
12/22/2016
PROJECT DATE
1/1/2017
SCORE EXPIRATION DATE
1/1/2025
ASSESSOR
Kim DeWae
PHONE
970-416-4125
EMAIL
kdeva@fco.gov

Score at time of completion:
3
Score with improvements:
7
Estimated energy cost savings:
$882 per year
Estimated carbon reduction with improvements:
57%

High Performing Features
Improvements listed below were verified through an Efficiency Assessment provided by the City of Fort Collins Utilities. The objective of the Energy Performance Improvement Certificate (EPIC) is to standardize the communication of high performance features recognized by Real Estate Professionals when assigning value to a residential property.

Actions

<table>
<thead>
<tr>
<th>Item</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Envelope:</td>
<td></td>
</tr>
<tr>
<td>Increased ceiling insulation to 2018 code</td>
<td>1/10/2018</td>
</tr>
<tr>
<td>Reduced duct sealing leakage to a minimum of 10% of total airflows</td>
<td>1/10/2018</td>
</tr>
<tr>
<td>Increased wall insulation to above 2018 code</td>
<td>1/10/2018</td>
</tr>
<tr>
<td>Heating, Ventilation, and Air Conditioning (HVAC)</td>
<td>1/10/2018</td>
</tr>
<tr>
<td>Upgraded to ENERGY STAR water heater</td>
<td>1/10/2018</td>
</tr>
</tbody>
</table>

Products

<table>
<thead>
<tr>
<th>Item</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installed Energy Star Clothes</td>
<td>1/10/2018</td>
</tr>
<tr>
<td>Installed Energy Star Dishes</td>
<td>1/10/2018</td>
</tr>
<tr>
<td>Smart, programmable thermostats</td>
<td>Pre-existing</td>
</tr>
<tr>
<td>Energy Star Water Heater</td>
<td>Pre-existing</td>
</tr>
</tbody>
</table>

*All energy efficiency features have been confirmed as present, but have not been tested for performance.

When you are ready to sell your high-performance home… highlight the benefits of High Performance Features!

- Make an energy-efficiency upgrade to your home!
- Maintain documentation from service providers that proves the energy efficiency of your home, including your EPIC certificate and Home Efficiency Assessment.
- Find a local Real Estate Professional with a green designation who can help market your home’s high performance features. Check out efficiencyworks.org/resources/find-a-service-provider
- Find a local Appraiser who is qualified to complete the Appraisal Institute’s Residential Green and Energy Efficient Addendum. Check out appraisalinstitute.org/education/education-resources/green-building-resources

Additional Energy Scores and Certifications

<table>
<thead>
<tr>
<th>HERS</th>
<th>PEARL</th>
<th>LEED</th>
<th>ENERGY STAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 out of 150</td>
<td>Gold</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

To learn more visit efficiencyworks.org/homes

Flip over to learn more about this home’s High Performance Features.
>40% housing stock are rentals
• Targeting landlords for participation
• Landlord using OBF for upgrades
  • At least 1 service needs to be w/landlord

• Program tweaks needed
Thank you! Enjoy Santa Fe!

Brian Tholl  
Energy Services Supervisor  
Fort Collins Utilities  

btholl@fcgov.com  
Direct: 970-416-4326  
Cell: 303-579-6659