Agenda

9:00  Introductions and project overview
9:10  Proposed program structure
9:40  Feedback and discussion
10:20 Next steps
Project Phases and Timeline

Phase 1
< Feb 2017
Assessment and Recommendation

Phase 2
Mar - Dec 2017
Transition Planning

Phase 3
Jan 2018 <
Transition
Residential Program Delivery Structure

- Serves homeowners and renters
- Through trade allies, direct installation, midstream incentives
- One Program Management Contractor contract

- Serves homebuyers
- Through builders, influence on building codes
- One PMC contract

- Serves retail customers
- Discounted products available in stores
- One PMC contract
Residential Delivery Structure Proposal

- One program
- One Program Management Contractor contract
- Target technologies across all market channels
- Structure changes will not impact current offerings
- Structure changes will not impact customer and trade ally experience

Existing Homes +
New Homes +
Products +

Residential program

PDC
Current Electric Savings, by Program

Existing Homes
- Showerheads: 47%
- HVAC: 20%
- Lighting: 16%
- Behavioral: 8%
- Windows: 2%
- Water Heaters: 3%
- Wx: 3%

New Homes
- EPS: 98%
- HVAC: 1%
- Showerheads: 1%

Products
- Lighting: 90%
- Appliances: 6%
- Showerheads: 4%
- Appliances: 6%

Existing Homes vs. New Homes:
- Showerheads: 47% vs. 1%
- HVAC: 20% vs. 1%
- Lighting: 16% vs. 98%
- Behavioral: 8% vs. negligible

Products:
- Lighting: 90%
- Appliances: 6%
- Showerheads: 4%
Savings Forecasts through 2021

Significant declines for lighting, showerheads

Electric, $60\%$

Gas, $10\%$

Including NEEA

Excluding NEEA

Including Market Transformation

Excluding Market Transformation
Sector Savings Forecast, Electric (excluding NEEA)

Electric Savings, 2016
- Lighting: 67%
- Showerheads: 16%
- HVAC: 6%
- Water Heaters: 1%
- EPS: 4%
- Wx: 1%
- Windows: 1%
- Thermostats: <1%
- Appliances: 4%

Electric Savings, 2021 Forecast
- Lighting: 22%
- HVAC: 28%
- Water Heaters: 16%
- Thermostats: 5%
- EPS: 8%
- Wx: 2%
- Windows: 1%
- Appliances: 3%
- Behavioral: 1%
- Showerheads: 14%
Forecast Savings by Measure, Gas (including market transformation)

Gas Savings, 2016

Gas Savings Forecast, 2021
Impact of Savings Declines on Current Program Structure

Electric Utility Cost Test BCR Forecast

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Homes</td>
<td>2.44</td>
<td>2.39</td>
<td>2.39</td>
<td>2.38</td>
<td>2.36</td>
</tr>
<tr>
<td>Products</td>
<td>3.29</td>
<td>1.72</td>
<td>1.30</td>
<td>1.14</td>
<td>1.14</td>
</tr>
<tr>
<td>New Homes</td>
<td>0.81</td>
<td>0.74</td>
<td>0.74</td>
<td>0.74</td>
<td>0.74</td>
</tr>
<tr>
<td>Total Residential</td>
<td>2.47</td>
<td>1.74</td>
<td>1.60</td>
<td>1.55</td>
<td>1.55</td>
</tr>
</tbody>
</table>

Gas Utility Cost Test BCR Forecast

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Homes</td>
<td>1.04</td>
<td>0.94</td>
<td>0.94</td>
<td>0.95</td>
<td>0.96</td>
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<tr>
<td>Products</td>
<td>1.84</td>
<td>0.96</td>
<td>0.94</td>
<td>0.93</td>
<td>0.92</td>
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<tr>
<td>New Homes</td>
<td>1.50</td>
<td>3.42</td>
<td>2.48</td>
<td>2.51</td>
<td>2.52</td>
</tr>
<tr>
<td>Total Residential</td>
<td>1.26</td>
<td>1.83</td>
<td>1.50</td>
<td>1.52</td>
<td>1.53</td>
</tr>
</tbody>
</table>
Challenges of Maintaining Program Structure

• Strategies implemented at program level
• Program management, delivery activities sustained across programs
• Market channels drive technology strategies
• New measure development challenging
Cost Reduction, Delivery Strategies Implemented to Date

• Cost reductions

• Streamlined processes

• Developed new measures across programs
Residential Delivery Structure Proposal

- One program
- One PMC contract
- Target technologies across all market channels
- Structure changes will not impact current offerings
- Structure changes will not impact customer and trade ally experience
- PDCs add flexibility
Structure Changes Will Not Impact Customers, Trade Allies

• Program structure will remain invisible to customers, trade allies

• Continue to provide incentives, resources for all residential customers

• Continue to rely on trade allies to engage customers

• Continue to support trade allies with incentives, training, business development funds
Feedback welcome by Friday, January 20

Contact Thad Roth
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thad.roth@energytrust.org
Next Steps

Assessment and Recommendation
- May 2016 board retreat
- July 2016 CAC meeting
- Oct 2016 utility meetings
- Nov 2016 board meeting
- Nov 2016 CAC meeting
- Dec 2016 board meeting
- Dec 2016 OPUC meeting
- Dec 2016 Management Team recommendation
- Jan 2017 CAC workshop
- Jan 2017 board policy committee
- Feb 2017 board meeting recommendation

Transition Planning

Transition
Backup slides
Concentration of Savings

Savings concentrated in few measures
- Lighting
- Showerheads

Savings concentrated within programs
- Products—lighting
- New Homes—EPS

Savings concentrated within energy source
- Electric relies on
  - Water heating
- HVAC
- Lighting
- Gas relies on
  - Water heating
  - HVAC
  - EPS
## Sector Savings Forecast, Electric

<table>
<thead>
<tr>
<th>Measure Category</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2021</th>
</tr>
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<tbody>
<tr>
<td>Water heating</td>
<td>5,495,575</td>
<td>6,450,493</td>
<td>6,924,199</td>
<td>7,402,202</td>
<td>7,884,015</td>
<td>16%</td>
</tr>
<tr>
<td>Showerheads</td>
<td>19,877,735</td>
<td>9,498,993</td>
<td>8,518,406</td>
<td>7,625,454</td>
<td>6,798,575</td>
<td>13%</td>
</tr>
<tr>
<td>Heating, Ventilation and Cooling</td>
<td>11,592,043</td>
<td>12,263,008</td>
<td>12,927,581</td>
<td>13,568,522</td>
<td>14,150,328</td>
<td>28%</td>
</tr>
<tr>
<td>Lighting</td>
<td>67,177,746</td>
<td>26,124,679</td>
<td>14,928,388</td>
<td>11,196,291</td>
<td>11,196,291</td>
<td>22%</td>
</tr>
<tr>
<td>New Construction or Major Renovation</td>
<td>4,099,826</td>
<td>4,000,316</td>
<td>4,000,316</td>
<td>4,000,316</td>
<td>4,000,316</td>
<td>8%</td>
</tr>
<tr>
<td>Thermostats/Controls</td>
<td>2,601,767</td>
<td>2,622,026</td>
<td>2,643,488</td>
<td>2,666,258</td>
<td>2,690,451</td>
<td>5%</td>
</tr>
<tr>
<td>Shell Measures</td>
<td>2,865,593</td>
<td>1,929,688</td>
<td>1,768,449</td>
<td>1,642,838</td>
<td>1,547,022</td>
<td>3%</td>
</tr>
<tr>
<td>Appliances</td>
<td>2,139,990</td>
<td>2,106,277</td>
<td>1,861,360</td>
<td>1,630,845</td>
<td>1,483,941</td>
<td>3%</td>
</tr>
<tr>
<td>Kits</td>
<td>711,671</td>
<td>711,671</td>
<td>711,671</td>
<td>711,671</td>
<td>711,671</td>
<td>1%</td>
</tr>
<tr>
<td>Behavioral</td>
<td>259,200</td>
<td>285,120</td>
<td>313,632</td>
<td>344,995</td>
<td>379,495</td>
<td>1%</td>
</tr>
<tr>
<td>Industrial Process</td>
<td>20,785</td>
<td>19,746</td>
<td>18,759</td>
<td>17,821</td>
<td>16,930</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>116,841,930</td>
<td>66,012,016</td>
<td>54,616,250</td>
<td>50,807,213</td>
<td>50,859,033</td>
<td>100%</td>
</tr>
<tr>
<td>Measure Category</td>
<td>2017</td>
<td>2018</td>
<td>2019</td>
<td>2020</td>
<td>2021</td>
<td>2020</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>New Construction and Market Transformation</td>
<td>1,407,371</td>
<td>1,475,337</td>
<td>1,063,909</td>
<td>1,079,722</td>
<td>1,091,117</td>
<td>50%</td>
</tr>
<tr>
<td>Heating, Ventilation and Cooling</td>
<td>248,213</td>
<td>263,035</td>
<td>200,047</td>
<td>296,098</td>
<td>314,767</td>
<td>14%</td>
</tr>
<tr>
<td>Hot Water</td>
<td>616,387</td>
<td>327,120</td>
<td>310,239</td>
<td>295,622</td>
<td>282,616</td>
<td>13%</td>
</tr>
<tr>
<td>Thermostats/Controls</td>
<td>177,776</td>
<td>182,887</td>
<td>188,255</td>
<td>193,901</td>
<td>199,849</td>
<td>9%</td>
</tr>
<tr>
<td>Building Shell</td>
<td>301,957</td>
<td>183,074</td>
<td>173,640</td>
<td>166,396</td>
<td>160,886</td>
<td>7%</td>
</tr>
<tr>
<td>Behavioral</td>
<td>62,640</td>
<td>68,904</td>
<td>75,794</td>
<td>83,374</td>
<td>91,711</td>
<td>4%</td>
</tr>
<tr>
<td>Kits</td>
<td>25,049</td>
<td>25,049</td>
<td>25,049</td>
<td>25,049</td>
<td>25,049</td>
<td>1%</td>
</tr>
<tr>
<td>Appliances</td>
<td>33,308</td>
<td>29,978</td>
<td>26,980</td>
<td>24,282</td>
<td>21,854</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>2,872,701</td>
<td>2,555,384</td>
<td>2,063,912</td>
<td>2,164,444</td>
<td>2,187,848</td>
<td>100%</td>
</tr>
</tbody>
</table>
Residential Sector Structure, Before

- Customer
  - Retailer
  - Trade ally
  - Kits
  - Builder
  - Products
  - Existing Homes
  - New Homes
Residential Sector Structure, After

- Customer
- Retailer
- Trade ally
- Kits
- Builder
- Residential program PMC + PDCs