



Low-Income EE Update

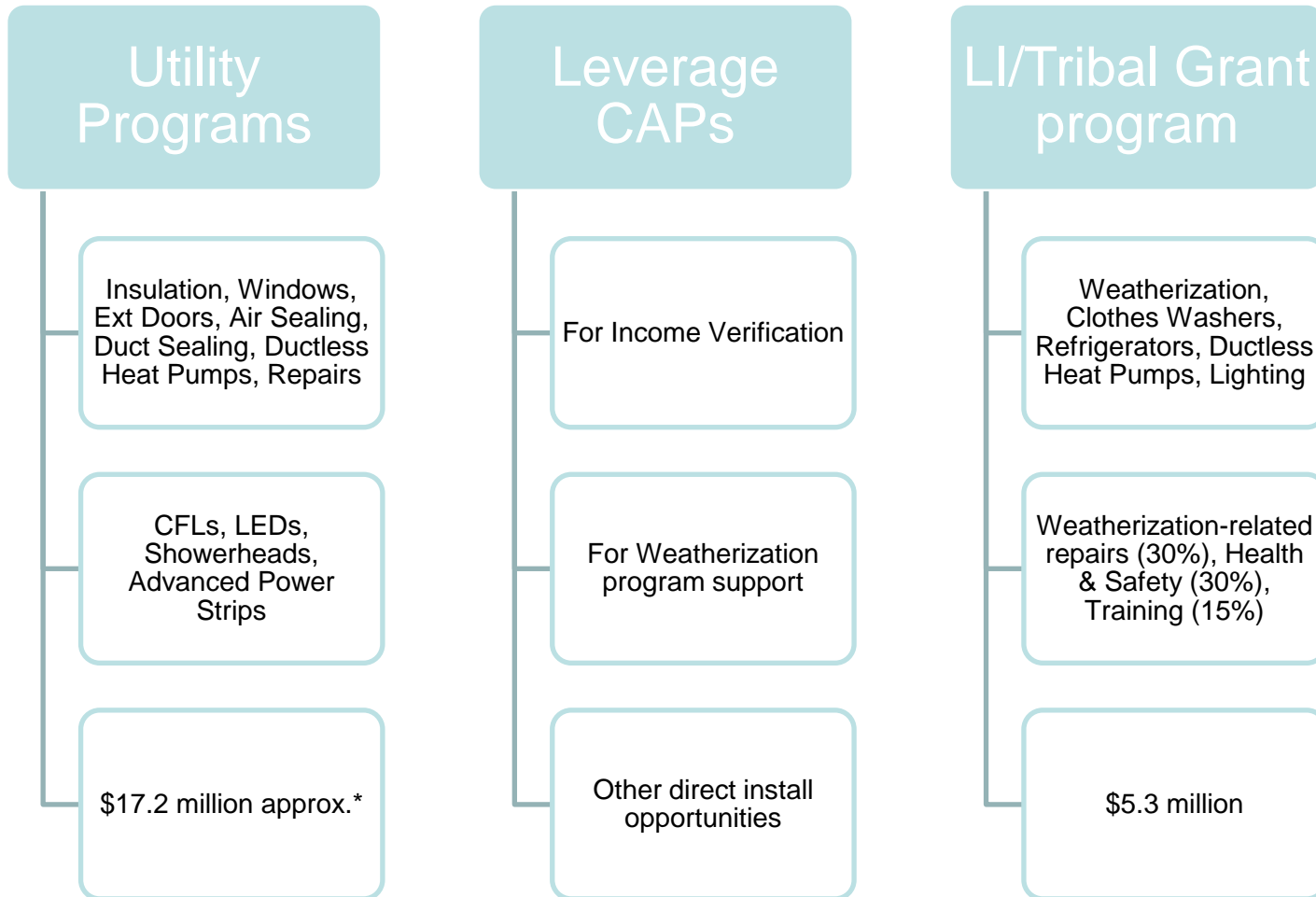
Sarah F. Moore – Residential Sector Lead

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Current utility and grant programs



*estimate based on 25% of 2014 Residential budget spend



2014 Low Income reported utility program activity*

| | Single Family | Manufactured Homes | Multifamily | All Residential |
|---------------------|---------------|--------------------|-------------|-----------------|
| Air Sealing | 28% | 89% | <i>n/a</i> | 39% |
| Attic Insulation | 20% | 86% | 30% | 23% |
| Ductless Heat Pumps | 2% | 2% | <i>n/a</i> | 2% |
| Floor Insulation | 18% | 74% | 33% | 26% |
| Insulated Door | 2% | 0% | <i>n/a</i> | 1% |
| Wall Insulation | 26% | <i>n/a</i> | 33% | 26% |
| Windows | 10% | 16% | 16% | 11% |

*Does not include grant program activity



Low Income reporting gaps

- BPA utility data under-reporting Low Income
 - Projects reported under Standard Income measures:
 - Lighting, showerheads via direct install
 - Duct sealing
 - Ductless Heat Pumps prior to 2014
 - Utility self-funded measures
 - Unreported measures
 - CAP activity not captured
 - Other efforts we don't see



Meaningful benchmarking

- Tracking percentage of total region is too variable
 - Economic factors are dynamic
 - Status of housing stock is dynamic
 - We don't have good historical data
- We can do better benchmarking annually
 - Utility program Low Income reported measures
 - CAP program activity
 - Grant program activity
 - Demographic analysis and trends by state (Census, RBSA)



Programmatic Strategies – Identify Barriers

- CAP assessment (in progress)
- Utility assessment (coming soon)
- Continue Low Income Workgroup (LIEE workgroup)
- Utility Roundtables
- Outreach to focus support
 - New measure ideas (exterior doors)
 - Program support for SRR utilities



Moderate Income Comparison

| Energy-efficiency upgrade | Energy Trust (ETO) Savings Within Reach program requirements | Maximum ETO incentive | BPA payment for corresponding measure* |
|---|--|-----------------------|--|
| Attic insulation | Existing must be R-12 or less, insulate to R-38. | \$0.50 per sq. ft. | R-7 or less: \$0.65 per sq. ft. |
| | | | R-7 to R-11: \$0.25 per sq. ft. |
| Wall insulation | Existing must be R-4 or less, insulate to R-11, or fill cavity. | \$0.50 per sq. ft. | \$0.65 per sq. ft. |
| Floor insulation | Existing must be R-0, insulate to R-30, or fill cavity. | \$0.40 per sq. ft. | \$0.30 per sq. ft. |
| Heat pump upgrade with a minimum efficiency HSPF 9.0 | Upgrade from an existing heat pump or replacing non-electric heat (example: propane, wood or oil). | \$550 | \$500 |
| Heat pump upgrade with a minimum efficiency HSPF 9.5 | Upgrade from an existing heat pump or replacing non-electric heat (example: propane, wood or oil). | \$800 | \$500 |
| Heat pump upgrade with a minimum efficiency HSPF 9.0 | Upgrade from electric furnace, baseboard, wall heater or ceiling heat. | \$750 | \$1,400 |
| Heat pump upgrade with a minimum efficiency HSPF 9.5 | Upgrade from electric furnace, baseboard, wall heater or ceiling heat. | \$1,000 | \$1,400 |
| Ductless heat pump | Must replace electric resistance heat or electric furnace as primary heat source. | \$1,000 | \$800 replacing zonal heat |
| | | | \$1200 replacing electric furnace |

* Note: The payment listed is for the BPA measure most closely correlated to the Energy Trust measure. BPA maintains many other measures with a variety of insulation starting and ending R-values, allowing more homes to qualify for programs.



BPA Measures Not Offered by ETO

| Energy-efficiency upgrade | Energy Trust Savings Within Reach program requirements | Maximum ETO incentive | BPA payment |
|----------------------------------|---|------------------------------|--------------------|
| Insulated Exterior Door | N/A | N/A | \$40.00 |
| Whole House Air Sealing | N/A | N/A | \$0.20 per CFM50 |
| Prescriptive Air Sealing | N/A | N/A | \$0.08 per sq. ft. |
| PTCS Duct Sealing | N/A | N/A | \$250 |
| Prescriptive Duct Sealing | N/A | N/A | \$250 |



Oct 2015 IM - Changes

- Removed ducting requirement for Tier 2 Heat Pump Water Heaters(HPWH)
- New BPA HPWH Qualified Product list
- Re-organized HVAC section to prepare for HVAC expansion
- Single Family definition expanded to include Townhouses



Oct 2015 IM – new measures

- T-8 Linear Fluorescent Fixtures – Retail
- LED Fixtures – Retail
- Energy Star Clothes Dryers (electric)
- HPWH for Manufactured Homes
- SF Wx measures by HVAC type – optional
- Class 22 windows for multifamily (also low income)



New measures in the pipeline

**In process, not guaranteed by April 2016*

- Efficient Storm Windows
- HPWH – Tier 3 (default settings)
- High Efficiency Clothes Dryers – Tiers 2-6
- Thermostatic Shower valves
- DHP for New Construction