



# AppalachianVoices

Protecting the Central and Southern Appalachian Mountain Region

## FACT SHEET: The Need For and Potential Benefits of On-Bill Energy Efficiency Finance Programs in the High Country of North Carolina

### Descriptive socio-economic and housing data

- The median household income in Alleghany, Ashe, Caldwell and Watauga counties is more than \$10,000 (25%) less than the North Carolina average, and \$18,000 less than the national average
- The average poverty rate in these four counties is 20%, which is 2.5 percentage points higher than the North Carolina poverty rate and nearly five percentage points higher than the national average. Overall, more than 33,000 High Country residents live below the poverty line
- Half of all occupied housing units in the four-county High Country region are more than thirty years old
  - Approximately 75% of all housing units in the region are single-family units, and nearly 60% of those units (more than 27,000 total units) are more than thirty years old

### Key results of the High Country Home Energy Makeover contest

- Total completed applications: 38
- Average energy cost burden (annual): 8% of gross family income (2013-2014) (\*\*national average was 2.7% in 2012)
- Range of energy cost burden: 3% to 28% of gross income
- One quarter of all applicants spent 15% or more of gross family income on energy bills
- On average, applicants spent 30% more on electricity alone than the average Blue Ridge Electric customer
- Preliminary analysis shows an electricity-only savings of 12-30% from retrofits received by the three contest winners

### Potential impacts of a Blue Ridge EMC on-bill finance program

If BRE were to set a goal of providing OBF investments of up to \$8,000 per home to only 5% of its residential members by 2025, members with an average annual consumption of 20,000 kilowatt-hours (kWh), and an average savings per home of 25%, the following results could reasonably be achieved:

- 325 retrofits provided per year, or 3,250 OBF investments by 2025
- An investment of \$2.5 million per year, for a 10-year investment of \$25 million
- An annual average of 5,000 kWh saved per home, valued at approximately \$513 per year
- Ninety gigawatt-hours (GWh) saved over ten years (16 GWh saved in year 10)
- \$9.2 million in gross savings for members over ten years (\$1.7 million savings in year 10)
- \$2.3 million in cumulative net savings for members (after accounting for loan repayment) after year 10 (\$420,000 in year 10)

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## Impacts of existing on-bill finance programs

### How\$mart Kansas

Total home energy retrofits (as of Sept 2014): 989  
Total funds invested: approx. \$6 million  
Average annual kilowatt-hours saved: 2,100 kWh (additional savings of 270 therms gas)  
Average percent **electricity** use reduction: more than 20%  
Average annual gross savings (before repayment): N/A  
Average annual net savings (after repayment): \$120

### How\$mart Kentucky

Total home energy retrofits (as of April 2015): 187  
Total funds invested: approx. \$1.5 million  
Average annual kilowatt-hours saved: 5,180 kWh  
Average percent **electricity** use reduction: 21%  
Average annual gross savings (before repayment): \$590  
Average annual net savings (after repayment): \$151

### South Carolina's Help My House program

Total home energy retrofits (as of June 2013): 187  
Total funds invested: approx. \$1 million  
Average annual kilowatt-hours saved: 10,809 kWh  
Average percent energy use reduction: 34%  
Average annual gross savings (before repayment): \$1,157  
Average annual net savings (after repayment): \$288

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