Testimony of

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COMMITTEE ON ENERGY AND NATURAL RESOURCES

Hearing to Examine Rural Energy Challenges and Opportunities

April 19, 2018

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Chairman Murkowski, Ranking Member Cantwell and Members of the Committee, thank you for the opportunity to testify regarding the role weatherization and energy conservation programs play in the energy challenges and opportunities in rural and remote areas of the United States. My name is Andrew Lyons and I have lived the vast majority of my life in rural communities throughout Oregon and Washington. I grew up in a community of less than 50 people, and for the past 9 years I have had the amazing opportunity to manage low income weatherization and energy assistance programs for HopeSource, a community action council that serves several rural counties in Eastern Washington.

During my time in this field, I've noticed that the emphasis and regulation for energy issues is often on how energy is created and distributed as opposed to how energy is consumed. Nearly 22% of the energy in the United States is used in the home. Recent changes in building codes have allowed for the building of more energy efficient homes, but much of our existing housing stock is not energy efficient. More than 40% of homes in the US were built before 1970, when home energy efficiency was barely a concept.[1] This is exacerbated in rural communities where the housing stock tends to be older and more dilapidated. Rural homes are more likely to be in substandard condition. In fact, nearly 6% of rural homes are either moderately or severely substandard, with leaking roofs, rodent problems and inadequate heating or plumbing systems.[2] Inefficient housing stock in rural communities is further compounded by higher rates of, and more systemic, poverty.[3] Rural citizens, on average, also pay higher energy rates. Combined, these factors make home weatherization and energy assistance programs highly relevant when discussing energy opportunities and challenges in rural America.

The specific points I would like to address:

- Multifaceted impact of low income weatherization programs
- The critical role federal funding plays in the low income weatherization program
- The ongoing need for weatherization services

[1] HUD American Housing Survey, 2013. https://www.census.gov/programs-surveys/ahs/data.2013.html
[2] Housing Assistance Council, "Taking Stock: Rural People, Poverty, and Housing in the 21st Century,", 2012. http://www.ruralhome.org/storage/documents/ts2010/ts_full_report.pdf
[3] USDA Economic Research Service, "Rural Poverty and Well-being," 2018. https://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/

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Multifaceted Impact of Low Income Weatherization Program

Numbers Served

The low income weatherization program has had a substantial impact since its inception in 1976. Since then more than 7.4 million homes have been weatherized in the US. Over the past six years, the Washington state program has served 18,725 low income households.

Energy Conservation

The primary focus of a weatherization program is to reduce energy consumption in the home. A fully weatherized home in cold weather states can provide 30% in energy savings, according to an Oak Ridge National Lab evaluation.[4] On average, a family saves $283 in energy costs each year after weatherization, and many households report much higher savings. Individual weatherization projects that combine a new efficient heating system with additional insulation and air sealing can achieve savings upwards of 40% or more. This savings is realized on an annual basis for 10-30 years depending on the life of the energy-saving measure installed in the home. This savings is critical for low income citizens who have a much higher energy burden. Families eligible for weatherization services pay 16.3% of their income on energy costs, compared to 3.5% for everyone else.[5]

Energy consumption in a home is based on two basic components: the physical building and the behavior of people living in the building. Weatherization programs seek to address the building by making it more energy efficient through the installation of measures that are shown to have a positive savings to investment ratio, meaning the cost of the measure will be paid back in energy savings over the life of the measure. Typical energy conservation measures include air sealing, adding insulation, and replacing inefficient heating or cooling systems.

Behavior of people living in the home is addressed through conservation education programs. At HopeSource, we utilize an AmeriCorps member to teach workshops where participants can clearly see the relationship between their actions and the energy bills they pay. The AmeriCorps member also provides in-home assessments, which allows participants to receive a personalized energy analysis of their home so they will know best how to save energy.

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[4] Oak Ridge National Lab, "Weatherization Works - Summary of Findings from the Retrospective Evaluation of the U.S. Department of Energy's Weatherization Assistance Program," 2014.
https://weatherization.ornl.gov/Retrospectivepdfs/ORNL_TM-2014_338.pdf

[5] Oak Ridge National Lab, "Weatherization Assistance Program Technical Memorandum Background Data and Statistics On Low-Income Energy Use and Burdens," 2014.
https://weatherization.ornl.gov/pdfs/ORNLTM2014_133.pdf

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April 19, 2018

A recent HopeSource project that illustrates the benefits of weatherization services was captured by one of our AmeriCorps members, Savannah Kisling:

“Jenny’s home was heated with electric baseboards and a single wood stove. She struggled daily to keep the house warm enough for her and her two boys, all the while battling fear of the fire that was heating her home.

The day I visited Jenny’s home it was 15 degrees outside. The house was barely warm from the fire she had started a few hours before. Jenny no longer had the financial resources or ability to secure firewood to last her through the winter, and she was concerned that the chimney would catch fire given the age of the home and fireplace. The wood smoke also exacerbated her respiratory issues. Luckily Jenny’s home was an excellent candidate for the weatherization program that helps make homes more efficient, comfortable and safe to live in. We were able to replace her wood stove with an electric ductless heat pump that would be energy-efficient and totally fire-free. We also provided in-home energy conservation education that helped her change some ingrained habits to lower her energy bill.

For every home project we finish we give a short questionnaire to the resident to check on his/her experience. At the end of her questionnaire Jenny left a note: ‘I have renewed hope living here with my kids. I don’t feel embarrassed to have others over, and my kids can play comfortably in the living room without blankets and coats.’ This gave me insight that our program does more than just save people from chimney fires and cold toes. It can change how people live in their homes, and it gives them confidence in ways that few things can.”

By addressing both the building and the behavior, the low income weatherization program has had a dramatic impact on conserving energy in rural communities across the United States.

Healthy Homes

Weatherization has long been seen strictly as an energy efficiency program, yet its impacts go much further. Guided by building science and treating the home as a system, weatherization programs ensure that once a home is weatherized it also is a healthier and safer place to live. Rural citizens of the United States benefit from increased health and safety through means such as improved air quality and repair of electrical hazards. Citizens become more self-sufficient as their energy expenses decrease, allowing them to stay stably housed for the long term. The nation also reaps enormous benefits from this program in dollars saved on energy assistance, health care costs, homeless services and maintenance of the country’s affordable housing stock. Oak Ridge National Laboratory found that every Department of Energy dollar spent resulted in $4.50 in benefits -- $1.72 in energy savings and $2.78 in health and safety. Looking at our nation’s healthcare costs, the savings potential as a result of weatherization programs is substantial.

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A recently completed HopeSource weatherization project illustrates additional benefits of having a home weatherized:

"Debra Herrick believes in angels, but not the kind with wings. She says they walk the earth with tape measures and hammers, making her house a true home again.

Debra lives in a tidy older mobile home in Ellensburg, enjoying life with her elderly dog, Choo-Choo. But it wasn't always that way. She's been a store manager, machinist, cook and waitress, moving between the Pacific Northwest and Alaska. Debra's a survivor on many levels: a work accident left her with a crippled back, difficult relationships, financial setbacks, widowhood and heart attacks. As she said, at one point 'I lost my marbles.' She started hoarding, to the point her rooms were filled floor to ceiling with just a walkway to navigate through the house. 'I became a real hermit,' she said, socially withdrawing from the world.

That was seven years ago. She's struggled to come back from that low point with help from a mental health counselor who 'saved my life.' After she felt better, she started tackling her home, which had a leaking roof ('it was raining inside'), plumbing leaks and electrical issues. Extension cords snaked through the rooms to provide electricity to the washer and dryer. It was also costly to heat with an electric furnace and wood stove. So she reached out to HopeSource to see what the community action agency could do.

'I always wondered what HopeSource was all about,' she said. 'When I walked in the door the first day, I was treated so respectfully.'

The weatherization team evaluated her home, determining Debra would save on her energy bills in the long run by providing more insulation in the crawl space and air sealing the heating ducts. In order to protect that investment, repairs were also made to the roof and plumbing. Because she lives on a small fixed income, she qualified for the free service, which is funded with grants from the state and federal government and the Kittitas Public Utility District.

The work has changed her life, she said. She's already cleared out the main areas of the home and is reducing clutter in the bedrooms. There's energy in her attitude and optimism for her future. 'Like they say, we're the captains of our own ships, and I'm gonna sail, I'm not gonna sink.'

In a bit of an ironic twist, repairing her home has also encouraged her to get out more and re-engage with the world.

'I did something special for myself last week. I actually took myself out for dinner at a restaurant. I haven't done that for years. Just knowing that there's people out there who care, you've uplifted my life. You are true angels on earth.' "

Critical Need for Federal Funding

Federal funds still provide the backbone of weatherization programs across the nation. One of the strengths of the low income weatherization program, specifically in Washington state, has been our ability to leverage funds received from the Department of Energy and LIHEAP (Low Income Home Energy Assistance Program) with state, local and private funds. On a national level, for every $1 invested by DOE and LIHEAP, the program leverages almost $2 in other non-federal, state, utility, and private resources.[6] In the weatherization program I manage for HopeSource the number is even higher. For every $1 in federal funding we have been able to leverage an additional $2.91 from additional funding sources, including utilities, state Matchmaker funds, and local governments. We also partner with other non-profits like Habitat for Humanity to ensure our services complement one another.

If the federal weatherization program were eliminated, the projected impacts for Washington state are as follows (figures based on 2016 funding levels):

- Washington state would lose $15,464,541 in LIHEAP and DOE weatherization dollars
- This number is expected to rise beyond $20,464,541 when we add the loss of potential leveraged dollars
- Washington would lose at least 235 full-time jobs
- Washington would lose the ability to weatherize more than 2,062 homes in the coming program year. This equates to 2,062 families going without much needed work done on their homes, scraping to pay their energy bills and maintaining financial solvency.
- $977,250 in direct annual benefits would be lost for low-income families
- Federal funding cuts would result in the loss of more than 27,337 MBTUs of first-year annual energy savings
- The state's ability to preserve existing affordable housing stock through the weatherization program would be affected

Ongoing Need for Weatherization Services

Will we run out of low income homes to weatherize? It is difficult to estimate the remaining need for weatherization due to the challenges of available and compatible data sets. The Washington State Department of Commerce recently completed an assessment for the state legislature. The assessment determined that in Washington state:

[6] NASCSP, "Weatherization Assistance Program PY 2016 Funding Report," 2017. http://www.nascsp.org/data/files/weatherization/publications/nascsp%202016%20wap%20funding%20survey%20final-web%20display.pdf

- More than 686,000 households are financially eligible (at or below 200% of the Federal Poverty Level) to participate in the low income weatherization program
- It is estimated that 58% of those households (about 398,000 homes) live in homes that can potentially be weatherized
- Since 1995, 79,000 households have been weatherized through Washington state's Low-Income Weatherization Program
- This represents a penetration rate of approximately 20% of potential homes. Penetration rates vary by housing type, market segment and heating fuel.

Although overall demand may decrease over time, the assessment showed that there is an immediate and ongoing need for low income weatherization services.

Conclusion

Thank you again for the opportunity to testify regarding the relevance of energy conservation/weatherization programs ~~i~~n looking at the energy challenges and opportunities in rural America. Hopefully I have been able to demonstrate the impact and ongoing need for low income weatherization programs. Not only in how these programs assist rural citizens in need, but also the vital role they play in moving the country to greater energy independence. As a part of the Washington state weatherization network we look forward to being a resource for Committee members in the future to ensure low income weatherization and energy assistance programs continue to deliver cost-effective results that support our economy and make a difference in the lives of the most vulnerable in our rural communities.