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Mr. Chair, Members of the Committee, my name is Derek Smith. I am CEO of Clean Energy Works, based in Portland, Oregon. Thank you for the opportunity to speak with you this afternoon; and thank you, Senator Merkley, for your leadership on clean energy and economic development.

Clean Energy Works is a non-profit, public-private partnership. Our mission is to create jobs and reduce energy waste through the facilitation of home energy retrofits. We coordinate and deploy public, private and utility dollars to scale up the residential energy efficiency sector.

We were founded four years ago as a City of Portland pilot project seeded with Recovery Act dollars. I am here to report that this smart Federal investment is proving that residential energy efficiency can create quality jobs and unlock private capital to grow a vibrant marketplace.

To date, our statistics include:

- 12,000 sign-ups
- 3700 homes upgraded in rural, suburban and urban communities
- 30% average energy savings per home
- More than \$1.5 million put back into the pocketbooks of Americans instead of being spent on energy waste

As for jobs, we know through our work that, for every 10 homes upgraded, one job gets created. To date, we've enabled:

- 1300 workers receiving paychecks
- 400 new-hires in the hard-hit construction industry
- \$21/hour average wages across multiple trades, from weatherization to plumbing to electrical to HVAC
- 56% of work hours performed by women and people of color
- 36 veterans working on projects

- \$65 million in economic development
- And counting...

Before we began our work, this market was 200 homes per year and workers were paid piece-rate wages averaging around \$9/hour. We are now lifting people out of poverty and into career pathway professions.

How do we generate these numbers? It all comes down to making it easy for citizens to upgrade their homes for energy efficiency. The way it works for a homeowner is:

1. They sign up at our website
2. We arrange for an assessment of their home and pair them with a vetted contractor
3. A scope of work is drafted and agreed upon by the contractor and homeowner
4. We arrange financing from a local lender
5. We provide quality control and customer service throughout the project

Currently, more than 100 small to medium sized contracting firms are growing their businesses in the program. And multiple private lenders are providing unsubsidized financing. These lenders include several credit unions, a regional bank and a community development financial institution. Loan products include secured, unsecured, home equity and “on-bill,” meaning customers can pay back their loans on their utility bills. So private investment is happening, initially spurred on by public investment.

As you know, retrofitting inefficient homes puts energy savings back into the wallets of American families and communities. A coordinated effort to retrofit America’s housing stock would create hundreds of thousands of US jobs in some of the hardest hit industries, including construction and manufacturing. These are primarily small business jobs that cannot be outsourced, using materials that are on average 90% made in the USA¹. In Oregon alone, we estimate there are 600,000 homes in need of weatherization, an \$8 billion opportunity that could create 60,000 jobs.

Plus, energy efficiency is unique in that it creates its own cash flow - less money spent on energy means more money to purchase groceries and save for college. Simply put, saving energy pays for itself.

So I’d like to conclude by highlighting a few policy issues for your consideration.

National Policy Challenge – Utility Coordination

Utility dollars are regulated at a state level and are exclusively focused on energy savings, blind to economic opportunity, driven by lowest cost, and so they inadvertently foster cheap wages and minimal career advancement. Even though there may not be direct Federal jurisdiction, I point this out as a

¹ Home Performance Resource Center: [Manufacturing Shares of Common Energy Remodeling Products](#)

national policy issue because, when you send public dollars into the energy efficiency sector – a proven smart investment that creates jobs and unlocks private capital – public utility commission oversight formulas consider this leverage an unwelcome challenge. The result is the potential pullback of utility investment. It is our experience that continued growth in energy efficiency can be optimized when public, private and ratepayer dollars are effectively coordinated.

National Policy Opportunities – Real Estate Valuation

The Sensible Accounting to Value Energy (SAVE) Act, S. 1106, was introduced by Senators Bennet (D-Colo.) and Isakson (R-Ga.) in June of last year. This legislation would improve the accuracy of mortgage underwriting used by federal mortgage agencies by including energy efficiency as a factor in determining the value and affordability of a home.

The SAVE Act is a prudent addition to federal underwriting guidelines as it incorporates the second largest cost of home ownership – energy costs, which exceed both taxes and insurance as a monthly expense. It is not a mandatory addition to such policies, but only comes into play if the consumer is buying a new energy efficient home or seeking to improve the efficiency of an older home. In fact, consumers in older homes have been significantly allocated a larger part of their remodeling expenditures to energy efficiency according to the Harvard Joint Center².

The inclusion of net energy savings in the debt-to-income calculation is not a liberalization, but a long overdue prudent addition to correct a "blindspot" in underwriting. A car loan or credit card debt is included in the debt burden, but not the energy cost, which may be higher. Although the SAVE Act does not call for a mandatory inclusion, it allows for the recognition of cost-effective savings from rated properties to be included. For example, if the monthly additional mortgage cost to obtain a new or improved home is \$50 a month, but the monthly savings are \$95, the residual \$45 only can be recognized as a net energy savings. I would argue that it is not a coincidence that the Veterans Administration, the only federally insured entity that includes a proxy for energy costs, had the best mortgage performance over the recent housing crisis cycle. Although anecdotal, many housing counselors have reported that, in performing troubled homeowner counseling, energy costs were a large and relatively fixed component of monthly expenses that were harder to adjust relative to other expenses such as cutting down discretionary spending or selling a second car.

The appraisal feature of the bill has been supported by the Appraisal Institute and the Congressionally-chartered Appraisal Foundation as consistent with generally recognized valuation methods and techniques.

It is also important to note how mortgages for such homes actually have actually performed over time. The University of North Carolina studied the performance of energy efficient homes versus a matched

²http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/harvard_jchs_remodeling_report_2013.pdf

sample for the period from 2001 to 2012³. It found that the energy efficient homes foreclosed on average 32% less than their similar neighbors. Furthermore, they stayed in their homes on average 25% greater period of time possibly indicating greater satisfaction due to comfort and lower operating costs.

Over 50 national organizations have signed on as supporters of the SAVE Act. What is of interest is the diversity of the group, including leading organizations representing business (NAM and the Chamber), housing (NAHB, NAR and LBA), industry (Dow, Johns-Manville and BASF), as well as energy efficiency-focused NGOs (ACEEE, NRDC and ASE) and Efficiency First, a home performance business trade association of which Clean Energy Works is proud to be a member. They all recognize the changes happening in the housing industry and agree on the benefits of prudent underwriting support as well as savings to consumers and strengthening of the economy and job formation in our communities.

National Policy Opportunities – Financing

While I have noted here today how valuable home energy efficiency may be, despite its value, it is severely under-utilized. There remain significant market barriers that prevent this vital resource – energy efficiency – from being tapped more effectively. Homeowners are being asked to make these investments not only because we want them to save money on their utility bills, but because this reduces costs across the energy system as a whole, and also to achieve broader goals such as energy independence, pollution reduction, job creation. However, we are not properly valuing these very real public and resource benefits energy efficiency provides. Instead, we are asking homeowners to pay for the full cost of these improvements, often upfront and out of pocket.

One of the key shifts to begin accounting for the multiple benefits of energy efficiency is to move towards accounting for energy efficiency as a resource, the demand reduction equivalent of supply-side energy production. Reducing demand on the grid through energy efficiency is akin to building power plants, only cheaper, 100 percent domestic and completely clean.

We know how to finance power plants. Due to the structure, protections and oversight in place, power plants supply a stable and predictable amount of energy to an established and reliable market. Utilities can raise capital to make investments in projects to increasing the nation's energy supply, however, we lack the same mature capital sources and markets for energy efficiency, even though it is widely understood to be the most cost effective resource for meeting our energy needs.

We need to begin to treat residential energy savings as distributed demand-side power plants that will ultimately, at least in part, be paid for based on their ability to deliver an energy saving resource to the grid. To accomplish this, we must more rigorously measure and account for the performance of energy efficiency improvements.

³ http://www.imt.org/uploads/resources/files/IMT_UNC_HomeEEMortgageRisksfinal.pdf

Historically, energy efficiency incentives have largely been targeted at specific technologies and individual improvements. Transitioning these incentives to a performance-based paradigm that links incentives to actual savings allows for technology and business model neutrality. Rather than attempting to maintain an up-to-date list of equipment specification or picking winning technologies or special interests, offering incentives based on savings at the meter can free up the tax code from keeping pace with an ever-changing industry. Most importantly, it creates a system that is flexible and rewards innovation.

Senators Cardin, Feinstein, and Schatz introduced S. 2189, the Energy Efficiency Tax Incentives Act last month. This legislation includes the first performance based energy efficiency tax incentive –25E in the tax code. This tax incentive would provide between \$2000-\$5000 to homeowners based on their energy savings. And, public dollars would be targeted toward public goods, energy savings. This approach would let the market determine the technology put in the home. Tax dollars would be investing in those mini power plant savings and the multi-public benefits those savings provide.

Thank you very much for your support and consideration.

Derek Smith

A handwritten signature in black ink, appearing to read "Derek Smith", written in a cursive style.

CEO