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"Solving the Climate Crisis: Cleaner, Stronger Buildings"

Questions for the Record

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The Honorable Kathy Castor

1. **In your testimony, you mentioned that low-income households and communities of color often have higher energy burdens than average families, frequently caused by poor maintenance of older, less efficient buildings. What are the main challenges preventing energy efficiency investments in these communities? How can the Federal government help address these challenges?**

Of the more than **25 million households that earn $25,000** or less, roughly two-thirds are renters (including 1.2 million families in public housing) and one-third are owners. Over 30% of the U.S. population and over 25% of U.S. households live in multifamily buildings. Yet when we talk about possible energy efficiency improvements in the residential sector, these households are rarely considered with resources and program capacity devoted to middle- and upper-income single-family homes.

However, there is an enormous opportunity in making energy efficiency accessible to low income families. A Federal investment of $5 billion a year over 10 years could achieve 25 percent to 40 percent energy savings in up to **25 million residential units**, cut up to 50 million tons of CO2 emissions and create hundreds of thousands of green jobs annually when fully implemented.

These households still face multiple barriers to accessing efficiency services, which can be grouped into four (4) primary categories; Economic, Social, Health and Safety, and Policy barriers.

I. Economic barriers include:
   - High upfront costs, creditworthiness requirements. the largest barrier to retrofitting multifamily arises from the absence of capital for the upfront cost of an energy retrofit. Federal policy arbitrarily separates energy improvements from capital improvements in both public and assisted housing, missing an opportunity to integrate energy use into capital reinvestment planning and analysis HUD buildings undergo for refinancing.
   - Split incentives: Renters face a unique barrier by fact that they don't own the dwelling or unit they reside in. In typical, unsubsidized multifamily housing with individual meters, resident interest in lower utility costs is often thwarted by owner disinterest in making energy efficiency investments that can't be directly recouped

through savings. Split incentives exacerbate the upfront capital problem by placing the burden on the tenant, or relying on the owner who receives little of the savings benefit for making the energy investments.

- Small and medium sized owners need special assistance: Many retrofit programs that target rental housing aren't suitable to small and medium sized owners who don't own a great deal or large scale of properties. These owners tend to be individual or private owners with very limited capital to meet upfront cost.

II. Social barriers:

- Communication and trust: Implementing a successful energy efficiency program in rental housing requires a great deal of information sharing between tenants, building owners and program administrators. Lack of trust between tenants and building owners or managers can reduce the likelihood of participation.
- Scheduling difficulties: completing an energy efficiency retrofit can cause a disruption to the lives of the tenants even a disruption of their occupancy in the unit until repairs are completed. Trust is required so they know they will be allowed to stay and return, to their home without a subsequent increase in cost to them, straining already stretched household budgets.
- Language and literacy barriers: Increasingly language and literacy issues are becoming factors making the deployment of services difficult, in addition to immigration status which may keep some households from applying for any formal services or supports.

III. Health and safety barriers:

- Age of housing and deferred maintenance: 64% of all U.S. housing was built before 1980, and many of the homes relied upon by low income households for housing have not received regular maintenance or repair. The combination of age and deferred maintenance of the housing stock increases the cost of providing basic energy efficiency retrofits when those cost are expected to be recouped through savings. This is especially true if a home or building is in need of roof repair. A compromised roof would nullify many of the benefits of the energy retrofit, and when the cost are measured against the potential savings of a project, a leaky roof makes the home or apartment ineligible for energy efficiency financing.
- Local climate and building materials: Deferred maintenance combined with local climatic and building material quality can add additional burdens to affordable housing. Many low-income homes in humid climates face issues such as mold that create health hazards that would be exacerbated by energy retrofits that "lock-in" mold causing material in a highly sealed building envelope. Similarly, older homes built with asbestos, lead paint and pipes can also create health hazards that would increase unless addressed in conjunction with an energy retrofit. However, most efficiency programs offer very little support if any for incorporating these areas into the retrofit portfolio. Nationwide, up to 15 percent of homes may be unable to access weatherization services due to these and other health and safety issues.

IV. Policy barriers:

- HUD Capital restrictions: Federal policy arbitrarily separates energy improvements from capital improvements in both public and assisted housing, missing an opportunity to integrate energy use into capital reinvestment planning and analysis HUD buildings undergo for refinancing.

- Energy benchmarking: is a critical requirement for understanding energy usage and knowing where potential savings can be gained. However, without a national benchmarking strategy, service providers are reliant on local governments to implement benchmarking ordinances that vary in quality and scope of data collected.
- Cost/Benefit testing: Utilities are increasingly relied upon to provide financing for energy efficiency services as a customer benefit to rate payers for utility services. Low income families pay into the utility rate system often at a higher rate per square foot than their higher income counterparts. However, they rarely receive an adequate share of utility rate-payer financed efficiency investments in return. This is often due to cost/benefit testing requirements, regulated at the state level, requiring utility programs to meet a cost/benefit threshold set by the regulator. Due to the deferred maintenance of many affordable housing units and other cost issues, low income housing often has difficulty meeting that threshold making those properties effectively ineligible for services.
- Fragmentation: At the federal level, energy efficiency dollars and programs are administered by HUD, DOE, HHS, Treasury who must then coordinate with a myriad of state and local housing and energy financing agencies. These disparate public agencies are charged with governing affordable housing operations and capital improvements on the one hand, and energy efficiency, tax, and utility policy on the other. Fragmentation, influences program delivery for example by requiring "door-to-door" income verification of DOE weatherization assistance program eligibility. This cumbersome step, can often discourage program services to be applied to multifamily properties were many low-income families live. Fragmentation also exacerbates shortages and bottlenecks in workforce training and employment.

The primary federal programs to increase energy efficiency in homes for very low-income people are a patchwork of small, poorly funded and in some cases, poorly designed initiatives. Within each, however, are elements that could be improved and expanded with potential for greater impact.

The primary programs that fund or administer energy efficiency at the federal level are the DOE Weatherization Assistance Program; EPA Energy Star Programs, HUD Energy Performance Contracting, and LIHEAP Emergency Energy Assistance program which states can apply a portion of its allotted annual LIHEAP budget (up to 15%) to address high energy burdens through increased efficiency.

The Federal government can improve energy efficiency services by:

- Increasing funding levels of Federal energy efficiency programs to meet certain efficiency benchmarks and goals over time.
- Create more coordination among various Federal programs, in particular in the areas of program eligibility, benchmarking and savings verification.
- Create a national standard for utility cost/benefit testing that properly values societal and non-energy benefits of energy retrofits for low income households.
- Mandate the inclusion of energy improvements as an aspect of capital refinancing plans under HUD
- Create national benchmarking database and require rental units to make available energy usage data that can be utilized by potential tenants to determine housing options. This would create an incentive for building owners to investment in improving energy efficiency.

2. **In addition to reducing carbon emissions, what are some of the public health benefits of energy-efficiency upgrades of multifamily housing?**

Achieving the health benefits of energy efficiency updates requires attention to the various social determinants of health and how housing quality drives many of those outcomes. There is an overall decline in life expectancies in the 21st century despite the increased spending on medical care and it is likely that the inability of the nation to address physical and social determinants of health have contributed to this problem. Efficiency provides a unique opportunity to improve those outcomes for individual families and for the population at large.

Social determinants of health (SDOH) are defined by World Health Organization (WHO) and by Healthy People 2020 as the conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.

Social and economic factors, such as affordability, restrict housing and neighborhood options for low-income households often giving them few options but to reside near or in proximity to hazardous sites as these locations are often the housing of last resort. In addition, energy insecurity that leads to utility shutoffs leaving families (particularly the elderly and young) vulnerable to weather conditions while forces tradeoffs in meeting basic needs such as housing, food and health care.

Energy efficiency can also reduce exposure to indoor and outdoor pollutants and particulate matter that lead to respiratory illnesses, absences from school or work and longer term health conditions that accumulate over time.

Better Indoor Air Quality: leads to reduced concentration of poly-cyclical aromatic hydrocarbons (PAH), hydrocarbons, aldehydes, carbon monoxide (CO), sulfur dioxide (SO2), nitrogen oxides (NOx), and particulate matter (PM) in the home

Weatherization and Efficiency Can: Lower Incidence of CVD related Emergency Room visits, Reverse adverse respiratory symptoms such as COPD, Eliminate CO poisoning hospitalization and death, Reduce coronary heart disease deaths

3. **In your testimony, you describe some of the unique challenges faced by residents of rural areas. Many of these communities depend on non-profit electric cooperatives for their power. How can Congress make sure that rural communities are able to access energy-efficiency upgrades?**

Rural communities face unique challenges for maintaining and upgrading homes and residential buildings. Particularly those areas serviced by smaller utility coops who may not be able to finance efficiency programs internally.

Federal policies that can help rural communities include expanding the USDA Rural Energy Savings Program. This program “provides rural electric cooperatives and other rural utilities with zero-percent loans to launch or expand energy efficiency financing programs for their members. Beneficial electrification and renewable energy projects are also eligible.”

In addition to ensuring financing for existing federal programs, the Federal government can support efforts that increase partnerships with local community based and regional organizations that support enhanced efficiency programs. These organizations can reduced cost of program implementation through outreach, program marketing, workforce training and needs assessments at the community level.

Couple financial resources with technical assistance to make efficiency improvements. Help customers conduct energy audits, identify energy efficiency measures, and work with qualified contractors to conduct selected improvements.

Particular emphasis in rural communities needs to be to scale up resources devoted to retrofitting or replacing manufactured homes, as these housing types are overly represented in rural communities.

Require and support better program evaluation of small electric coop programs and services to optimize resources and results. Many rural co-ops have worked with partners to evaluate their programs. For example, EEtility's EM&V of the PAYS on-bill tariff programs offered by Ouachita Electric and Roanoke Electric provides data on the effectiveness of these programs. Similarly, Delta Montrose Electric Association (DMEA), Midwest Energy, and the city of Springfield, Missouri, all hired evaluators to review their programs. Additionally, in 2016, Cooperative Energy, a G&T co-op in Mississippi, collaborated with Advanced Energy (AE) to develop a two-year Residential Retrofit Pilot Study examining the impact of three types of retrofit measures.

4. **In your testimony, you outlined several policies that could reduce emissions in the building sector. In your opinion, which policies would be most impactful and should be prioritized?**

To avert the worst impacts of climate change, our policy must ensure both the reduction of emissions that cause climate change and also support people's capacity to adapt and thrive in a post carbon world. In order to act on climate change while also addressing the threat of rising inequality, we must accelerate action on all fronts and in particular create a more supportive policy environment for affordable housing and accelerate residential energy efficiency. We need Congressional action to lead our nation in its response to climate change and to realize the enormous benefits of these investments. Through decisive action, Congressional leaders can address the dual crisis of affordable housing and climate change, while producing hundreds of thousands of clean jobs and alleviating the negative health impacts of indoor and outdoor air pollution.

Addressing these core policy areas will enable affordable housing and low-income families to be engaged as partners in actions that contribute to meaningful emissions reductions by reducing household energy use and demand.

The Federal government should endorse and establish a national Energy Efficiency Resource Standard that would create a wider incentive for reducing energy use in buildings and homes.

Key policies congress should support toward these outcomes that will influence the affordable housing sector most are;

Preserving Affordable Housing

- Expand the National Housing Trust Fund from $367m now to $3.5 billion/year. Affordable housing is in short supply across the country, and this is one of the newer sources of funding to improve it. Ensure that energy use assessments and benchmarking are incorporated into refinance requirements. The support can be used to reduce energy use and increase resiliency of housing, depending on state allocation plan requirements. But the need vastly outstrips the funding currently available.
- Support and utilize S. 1703 the Affordable Housing Credit Improvement Act (AHCIA) and S.1288 the Clean Energy for America Act to enable Low Income Housing Tax Credit (LIHTC) properties to take advantage of tax incentives available for energy efficiency investments. The LIHTC is the largest and most successful tool for creating and preserving affordable housing. The Clean Energy for America Act amends the Internal Revenue Code of 1986 to provide tax

incentives for increased efficiency investments in retrofitting existing and new residential and commercial buildings.

- Support H.R. 4307, the Build More Housing Near Transit Act. The legislation would require major transit projects using Federal Transit Administration (FTA) New Starts capital investment grant funding to incorporate an evaluation of housing development near transit station areas as a part of the application process.

Lowering Household Energy Cost

- Support reauthorization of S.983, the Weatherization Enhancement and Local Energy Efficiency Investment and Accountability Act. This bill reauthorizes the DOE WAP, creates a new innovation fund for special projects.
- Support S.185 the Investing in State Energy Act. This bill would require that the Department of Energy (DOE) distribute funding appropriated for WAP and SEP by Congress to implementing agencies within 60 days.
- Support the Green New Deal for Public Housing Act. The bill would create seven new grant programs that public housing agencies (PHAs), tribes or tribally designated housing entities, and Native Hawaiian housing entities can apply for under a single application. Some grants focus on workforce development while others address building and unit upgrades such has energy-efficient windows, improved insulation, pipe replacement to improve water quality, and new appliances. Grant programs would also facilitate community energy generation in public housing to make public housing energy self-sufficient and empower residents to vote to determine how to utilize any profits.

Improving Indoor Air Quality and Health

- Support H.R.3590, the Environmental Justice and Civil Rights Restoration and Enforcement Act. This bill reinforces that Federal agencies are to comply and be held accountable to the Title VI Civil Rights Act and that disparities and outcomes shown to have disparate impact must be address through Environmental Justice actions. This bill gives communities the legal tools to hold Federal agencies including the Environmental Protection Agency (EPA) accountable to unequal burdens.
- Support H.R.3923, the Environmental Justice Act. Requires Federal agencies to address environmental justice, to require consideration of cumulative impacts in certain permitting decisions, and for other purposes.

Creation Jobs with Career Opportunities for Workers

- Support H.R.4061, the Blue Collar and Green Collar Jobs Development Act. Directs the Secretary of Energy to establish and carry out a comprehensive, nationwide, energy-related industries jobs program.
- Support H.R.4148, the Green Jobs and Opportunity Act. Requires the Secretary of Labor, in consultation with the Secretary of Energy and Secretary of Education, to submit a report on current and future trends and shortages in the clean energy technology industry to achieve a clean energy economy, and to provide grants to establish and enhance training programs for any occupation or field of work for which a shortage is identified.

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II. In addition to reducing carbon emissions, what are some of the public health benefits of energy-efficiency upgrades of multifamily housing?

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III. In your testimony, you describe some of the unique challenges faced by residents of rural areas. Many of these communities depend on non-profit electric cooperatives for their power. How can Congress make sure that rural communities are able to access energy-efficiency upgrades?

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