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## *WHERE WE LIVE MATTERS: ACHIEVING ENERGY JUSTICE THROUGH AFFORDABLE HOUSING*

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*Where We Live Matters: Achieving Energy Justice through  
Affordable Housing*

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*Where we live matters. It can determine the availability of opportunities for employment and education as well as availability of mental and physical healthcare. It can also determine quality of life and life expectancy. Research shows that people of color and people of lower socioeconomic circumstances are more likely to suffer significant health and social risks associated with living in communities near polluting energy infrastructure. Further, the condition of the homes we live in matters. Low-income families traditionally live in older, less well-maintained properties that are not energy efficient, making it harder for households to protect against everchanging environmental factors. Adding insult, these same communities pay a higher-than-average percentage of their income toward energy-related products and services such as electricity, heat, and gasoline.*

*Energy is undergoing a revolution - a shift from fossil fuel driven energy toward sustainable, clean, and environmentally friendly energy. In this transition, it is important for federal and state governmental authorities to engage in ethical decision-making for a more sustainable future for all communities. This Article will explore opportunities to achieve energy justice through the federal weatherization assistance program. Focusing on affordable housing for low-income families, weatherization of these households can reduce energy costs and provide a safer, more comfortable home. Further, this Article will explore the pitfalls of the current weatherization assistance program and recommended solutions so that the program may operate effectively and efficiently, ultimately providing affordable energy-efficient homes for all households.*

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*Introduction*

Energy insecurity, defined as “the inability to adequately meet basic household needs,” has extensive implications on the health and health equity of low-income households.<sup>3</sup> Energy insecurity stems from high energy bills relative to low income and is highly prevalent in the U.S., with more than thirty-three million households deemed energy insecure as of 2020.<sup>4</sup> Further, almost twenty-five million households in the same year reduced or went without food or medicine to pay for energy.<sup>5</sup> Energy insecurity is not just an uncomfortable truth, it can be fatal - leaving the most vulnerable of our society to navigate extreme weather without power.<sup>6</sup> Furthermore, energy insecurity will continue to grow if affordable housing for low-income families is not modified and improved in such a way that U.S. citizens are better able to pay their energy bills.

Energy insecurity is not a new occurrence in the U.S., with low-income households, older adults, and people of color traditionally paying nearly 9% of their income in energy costs.<sup>7</sup> Low-income families tend to live in older homes, with the energy cost being greater due to the lack of up-to-date cooling and heating systems and improper insulation. Additionally, low-income families tend to live in communities with less vegetation and tree coverage, resulting in higher energy costs to cool and heat the home. Low-income households have been enveloped into an unfortunate cycle as energy prices continue to rise, creating a cycle of energy insecurity and an inability to afford to move out of such housing.

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award to allow me the time and space to write this piece. A special thank you to William “Alex” Love, Research Assistant, and Katy Stein, Head of Research of the University of Houston Law Library, for your invaluable help on this project.

<sup>2</sup> © 2023. University of Houston Law Center, J.D. 2023.

<sup>3</sup> Diana Hernández, *Energy Insecurity and Health: America’s Hidden Hardship*, Health Affairs (June 29, 2023), <https://www.healthaffairs.org/doi/10.1377/hpb20230518.472953/>.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> Ryan Randazzo, *APS Will End Power Shut-offs Following 2018 Fatality That May Be Related to Heat and Loss of Service*, AZ CENTRAL (June 13, 2019, 6:07 PM), <https://www.azcentral.com/story/money/business/energy/2019/06/13/arizona-public-service-co-halts-power-disconnects-following-2018-fatality/1448147001/>. (A 72-year-old Sun City woman whose power was disconnected due to unpaid energy bills succumbed to the heat of her home due to the power shut off and, devastatingly, passed away).

Affordable housing was originally created to tackle the issue of substandard and deteriorating housing, but the program has effectively pigeon-holed low-income families into remaining in indecent conditions because of the lack of energy efficiency within the homes. The U.S. Department of Housing and Urban Development (HUD) once defined affordable housing to be decent and suitable for Americans. However, a lack of energy efficiency within affordable housing has created conditions far from decent and suitable. Affordable housing, in theory, should evolve in the same way as other housing in America, transitioning to clean energy as well as electrification and energy-efficient appliances, windows, insulation, roofing, and air conditioning and heating units. However, affordable housing has been neglected in the energy transition.

This is hardly the first-time affordable housing has been neglected. In the past, affordable housing has been placed in areas with high concentrations of air pollution, resulting in low-income families suffering from asthma, lung cancer, and other respiratory issues. The Justice40 Initiative put into place by the Biden Administration sought to right the U.S.'s past wrongs against marginalized communities, allocating 40% of the overall benefits of federal investments in clean energy and energy efficiency to be dedicated to disadvantaged communities as of 2021. In response to the long history of environmental justice movements, the Justice40 Initiative is striving to be a whole-of-government effort.

Part III discusses two prominent federal agencies under the Justice40 Initiative in charge of assisting with energy efficiency for affordable housing – the U.S. Department of Housing and Urban Development (HUD) and the Federal Weatherization Assistance Program administered through the U.S. Department of Energy (DOE). HUD provides avenues for delivering energy efficiency to low-income households through Public and Indian Housing, Multifamily Programs, and Single Family Programs. These programs are all beneficial in their own unique way. However, they do not mirror their promised goals and have not produced widespread energy efficient homes as they once

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<sup>7</sup> *Energy Justice and the Energy Transition*, NAT'L CONF. OF STATE LEGISLATURES (May 3, 2022).

assured.

The Federal Weatherization Assistance Program (WAP) is another tool for providing energy efficient homes to low-income families. WAP assists homeowners with repairs to affordable housing for the elderly, the disabled, and low-income families by weatherizing properties. Weatherization targets heating/cooling systems, air sealing, and insulation. By making these improvements and repairs, WAP can increase the performance of a home and reduce the energy burden. WAP was created with the intention to alleviate the energy burden on low-income households and provide more energy efficient homes. However, WAP's program was built on a faulty foundation. Thus, WAP is constantly struggling to provide the bare minimum of what it promised due to the inefficiency of its own program.

The main issues with WAP include: (1) lack of eligibility for multi-family residences; (2) a failed outreach and energy audit procedure; (3) a failed deferral system; and (4) a lack of administrative support. A large portion of low-income households is made up of multi-family residences. By identifying the bulk of multi-family residences as ineligible for WAP, the program is stunting weatherization measures that would benefit a vast array of low-income households. Additionally, the application and screening process for the weatherization program involves considerable paperwork, with households needing to provide documents such as "utility bills, income documentation, social security cards, and proof of ownership."<sup>8</sup> After the application process is complete, inspectors may find that the work would be ineffective or that the repairs would be too costly, or other health and safety concerns arise. Thus, the residents are forced to reapply, which is where they get lost in the shuffle.<sup>9</sup>

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<sup>8</sup> Rebecca Mann & Jenny Schuetz, Commentary, *The U.S. Needs Better, More Accessible Home Weatherization Programs*, BROOKINGS INSTITUTE (Oct. 10, 2022), <https://www.brookings.edu/blog/the-avenue/2022/10/10/the-u-s-needs-better-more-accessible-home-weatherization-programs/>.

<sup>9</sup> This is particularly concerning if these homes are located near chemical plants or similar facilities. Laura Benshoff, *A Low-Income Energy-Efficiency Program Gets \$3.5B Boost, but Leaves Out Many in Need*, NPR (May 13, 2022), <https://www.npr.org/2022/05/13/1096114029/low-income-energy-efficient-weatherization-program-3-5b-needy>.

Part IV sets forth recommendations for addressing current weatherization obstacles for affordable housing, including pushing for another partnership between HUD and the DOE, allowing for multifamily residences to be eligible for weatherization and for both agencies to meet their Justice40 objectives. This Part will then explore exactly how WAP's energy audit procedure and deferral process can be improved by uniformity. Included in this improvement is both outreach opportunities and a Pre-WAP Program across all states. Many homes are not weatherized simply because homeowners are unaware of the opportunity. The homeowners that are aware of the opportunity, on the other hand, may wait for months on end to get an energy audit, just to be deferred. This Article will detail a proposed Pre-WAP Program that would provide information about the energy audit process, eligibility requirements, and specifics on types of structural/interior problems that lead to deferrals. A Pre-WAP Program would cut delays substantially, creating a more efficient weatherization program. Finally, for the homes that are deferred, this Article will detail a quicker, more efficient deferral program. Right now, waiting for an energy audit can take up to two years and being deferred can mean another two years on the waitlist. Our proposed deferral process will alleviate the repeated wait time by bumping deferred households to a higher spot on the waiting list. By doing this, eligible WAP households will be weatherized at a much higher rate in a shorter amount of time.

Affordable housing is undergoing an energy insecurity crisis for low- income households. Weatherization of low-income households is a key component in addressing this crisis and offering true affordable housing, but the Federal Weatherization Assistance Program must be drastically changed to have long- lasting effects.

### *I. Background*

Where we live matters. It can determine the availability of opportunities for employment and education as well as availability of mental and physical healthcare. It can also determine quality of life and life expectancy. Research shows that people of color and people of lower socioeconomic circumstances are more likely to suffer significant health and social risks associated with living in communities near polluting energy infrastructure. This infrastructure includes everything from refineries to highways to railway lines – all of which are disproportionately located in disadvantaged communities. Adding insult, these same communities

pay a higher-than-average percentage of their income toward energy-related products and services such as electricity, heat, and gasoline. This Part will discuss obstacles and costs for lower income individuals to take advantage of a cleaner, more technologically advanced system, and discuss how these disparities lead to energy injustices.

*a. The Burden of Our Energy Delivery System*

Lower income families, including people of color, and older adults, pay a higher percentage of their income toward energy related needs than do white, middle to upper income families.<sup>10</sup> Studies show that low-income families pay, on average, “nearly 9% of their income in energy costs— three times more than non-low-income households.”<sup>11</sup>

This is in part because lower income communities tend to suffer harsher summers and winters compared to higher income communities.<sup>12</sup> Looking at neighborhoods by race, “71% of counties showed that people of color lived in neighborhoods with higher temperatures compared with white people.”<sup>13</sup> Higher temperatures are a result of several issues, some of which include less vegetation and less tree coverage, with there being a direct relation between socioeconomic status and an exposure to nature.<sup>14</sup> A lack of vegetation and tree coverage increases temperatures substantially, resulting in up to a 7°F difference.<sup>15</sup> Thus, lower income communities pay higher energy costs to cool households.<sup>16</sup>

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<sup>10</sup> Kathiann M. Kowalski, *Racial Disparities Persist in Electric Service. Is ‘Willful Blindness’ to Blame?* ENERGY NEWS NETWORK (July 1, 2020), <https://energynews.us/2020/07/01/racial-disparities-persist-in-electric-service-is-willful-blindness-to-blame/>.

<sup>11</sup> *Energy Justice and the Energy Transition*, *supra* note 7.

<sup>12</sup> Deepa Shivaram, *Extreme Heat Is Worse For Low-Income, Nonwhite Americans, A New Study Shows*, NPR (July 14, 2021, 2:43 PM), <https://www.npr.org/2021/07/14/1015983700/extreme-heat-is-getting-worse-for-low-income-non-white-americans-a-new-study-sho>.

<sup>13</sup> *Id.*

<sup>14</sup> Robert I. McDonald, et al., *The Tree Cover and Temperature Disparity in US Urbanized Areas: Quantifying the Association With Income Across 5,723 Communities*, PLoS ONE 16(4): e0249715 (Apr. 28, 2021), <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0249715>.

<sup>15</sup> Kristen Toussaint, *Poor Neighborhoods are Hotter Than the Rich Areas Right Next to Them*, Fast Company (July 21, 2021), <https://www.fastcompany.com/90656641/poor-neighborhoods-are-hotter-than-rich-areas-right-next-to-them>.

Higher energy costs also occur because lower income families tend to live in older, less well-maintained properties that are not energy efficient, resulting in higher utility bills.<sup>17</sup> “Black, Hispanic, Native American, and older adult households, as well as families residing in low-income multifamily housing, manufactured housing, and older buildings experience disproportionately high energy burdens nationally, regionally, and in metro areas.”<sup>18</sup> Because of this, they are also more apt to receive service disconnection notices and actual disconnections for failure to pay energy bills.<sup>19</sup> Over the span of a year, between May 2020 and May 2021, 24% of all low-income residents reported struggling to pay their energy bills, with 18% of these residents receiving disconnection notices, and 8% of these residents actually becoming disconnected.<sup>20</sup> This presents a cyclical problem. As costs increase and comfort decreases, mental and physical health deficiencies rise, resulting in an inability to prosper in society.<sup>21</sup>

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<sup>16</sup> *Id.*

<sup>17</sup> Ariel Dreihobl, Lauren Ross & Roxana Ayala, *How High are Household Energy Burdens? An Assessment of National and Metropolitan Energy Burden across the United States*, American Council for an Energy Efficient Economy, <https://www.aceee.org/sites/default/files/pdfs/u2006.pdf>.

<sup>18</sup> *Id.*

<sup>19</sup> Kathiann M. Kowalski, *supra* note 10, “African Americans earning less than 150% of the poverty level were about twice as likely to have their electricity shut off as white households with comparable incomes. The impacts were lower in the Midwest than in some other regions, but Black households still had a higher rate of disconnections.”

<sup>20</sup> Shalanda H. Baker, Sanya Carley & David M. Konisky, *Energy Insecurity and the Urgent Need for Utility Disconnection Protections*, 159 *Energy Policy* 112663 (Dec. 2021), <https://par.nsf.gov/servlets/purl/10354768>.

<sup>21</sup> Jamal Lewis, Diana Hernández, & Arline T. Geronimus, *Energy Efficiency as Energy Justice: Addressing Racial Inequities Through Investments in People and Places*, 13(3) *Energy Effic.* 419 (March 2019), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7966972/pdf/nihms-1541921.pdf>.

“Persistent income inequality, wealth gaps and entrenched racial residential segregation have disenfranchised African Americans and reduced their ability to escape this pernicious cycle.” *Id.*



In addition, lower income households “face unique barriers such as high upfront costs or lack of access to new electric technologies and appliances.”<sup>22</sup> Clean energy through electrification has been identified as a means of reducing overall maintenance and energy costs; however, the high upfront costs of electrification have caused agencies to shy away from pursuing energy-efficient technology in lower-income households.<sup>23</sup> Nevertheless, a reduction in maintenance and energy costs would create an equitable transition to electrification, with electrification being a matter of implementation rather than a need for technical capacity.<sup>24</sup>

In fact, electrification is also looked at as the answer to both the housing crisis and the climate crisis.<sup>25</sup> Electrification is pertinent for affordable housing as winters are becoming more expensive as the years progress.<sup>26</sup> For example, Winter 2022/2023 was more expensive than previous years with heating bills jumping as much as 28% for those who rely on natural gas.<sup>27</sup> Electricity, on the other hand, had a 10% increase in costs.<sup>28</sup> In the current housing crisis, “being poor costs more.”<sup>29</sup>

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<sup>22</sup> Weston Berg, Emma Cooper & Marianne DiMascio, *State Energy Efficiency Scorecard: 2021 Progress Report* 35-36, American Council for an Energy-Efficient Economy (February 2022),

<https://www.aceee.org/sites/default/files/pdfs/u2201.pdf>.

<sup>23</sup> See Sarah Shemkus, *As the Wealthy Go Electric, Who Will Pay for Aging Gas Infrastructure?* Canary Media (Sept. 6, 2022),

<https://www.canarymedia.com/articles/electrification/as-the-wealthy-go-electric-who-will-pay-for-aging-gas-infrastructure>.

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> See Matt Egan, *It’s Freezing. Cranking Up the Heat is Going To Cost You*, CNN (Dec. 22, 2022), <https://www.cnn.com/2022/12/22/business/heating-expenses-winter-storm/index.html>.

<sup>27</sup> *Some U.S. Households Await Winter with Dread Because of Soaring Energy Costs*, NBC News (Oct. 20, 2022, 1:17 PM),

<https://www.nbcnews.com/business/consumer/it-will-be-a-cold-winter-as-heating-energy-costs-rise-rcna53245>.

<sup>28</sup> *Id.*

<sup>29</sup> Toussaint, *supra* note 15.

Another area of concern is that the affordable energy access gap will continue to grow as we move to a clean energy future, leaving disadvantaged families even more disadvantaged without “access to renewable energy resources, energy efficiency technologies, and the economic and health benefits of the clean energy economy,”<sup>30</sup> but still footing the bill for the transition.<sup>31</sup> Energy is undergoing a revolution - a shift from fossil fuel driven energy toward sustainable, clean, and environmentally friendly energy. However, the “economic burden of a big switch could fall more on lower income, minority communities.”<sup>32</sup> We have already started to see the burden fall onto low-income households, with recession resulting in low-income households spending three times more of their income on energy costs compared to that of non-low-income households.<sup>33</sup>

*b. From Environmental to Energy Injustice With Our Energy Delivery System*

The “affordability of and access to reliable energy is at the heart of energy justice.”<sup>34</sup> And, “significant equity implications” will occur as energy bills increase for customers who have not transitioned over to clean energy.<sup>35</sup>

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<sup>30</sup> Lanikque Howard, *LIHEAP American Rescue Plan Funding: Racial and Economic Justice is Also Equity in Energy*, HHS ADMIN. FOR CHILD. AND FAMS. (May 4, 2021), <https://www.acf.hhs.gov/blog/2021/05/liheap-american-rescue-plan-funding-racial-economic-justice-also-equity-energy>.

<sup>31</sup> Jeff Karoub, *Poor Urban, Rural Areas Could Bear Financial Burden of Move from Natural Gas to Electricity for Energy Needs*, University of Michigan News (Aug. 5, 2021), <https://news.umich.edu/poor-urban-rural-areas-could-bear-financial-burden-of-move-from-natural-gas-to-electricity-for-energy-needs/>.

<sup>32</sup> *Id.*

<sup>33</sup> *Report: Low-Income Households, Communities of Color Face High “Energy Burden” Entering Recession*, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON. (Sept. 10, 2020), <https://www.aceee.org/press-release/2020/09/report-low-income-households-communities-color-face-high-energy-burden>.

<sup>34</sup> *Energy Justice and the Energy Transition*, *supra* note 7.

<sup>35</sup> Lucas W. Davis & Catherine Hausman, *Who Will Pay for Legacy Utility Costs?*, 9(6) J. OF THE ASS'N OF ENV'T AND RES. ECONOMISTS 1047, 1049 (Nov. 2022), <https://www.journals.uchicago.edu/doi/pdf/10.1086/719793>.

For example, as customers do move from natural gas to electrification and exit the current natural gas utility energy delivery system, those remaining will encounter higher natural gas bills.<sup>36</sup> This gap will continue to grow as new homes are built with electricity generated appliances instead of with natural gas.<sup>37</sup>

Energy justice has its roots in the environmental justice movement. The environmental justice movement began after individuals sought to address the “inequity of environmental protection in their communities.”<sup>38</sup> Air pollution, for example, is a widely acknowledged environmental justice issue “whose health and economic impacts are disproportionately distributed in underserved communities.”<sup>39</sup>

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<sup>36</sup> *Id.* See Heather Payne & Jennifer D. Oliva, Warranting Health Equity, 70 *UCLA L. REV.* (forthcoming 2023), <https://dx.doi.org/10.2139/ssrn.4188216>. Professors Heather Payne and Jennifer Oliva even argue that the continued use of natural gas for cooking and heating should be considered a breach of the implied warranty of habitability due to their potential for negative health impacts, *id.* at 1051.

<sup>37</sup> *Id.* Some states are looking at fossil fuel bans, which could gain momentum across the U.S., which will increase electrification of households. See Shemkus, *supra* note 23.

<sup>38</sup> Mike Doyle, *Environmental Justice and Energy Infrastructure Projects*, POWER ENG’RS (Feb. 24, 2022) <https://www.powereng.com/library/environmental-justice-and-energy-infrastructure-projects>.

<sup>39</sup> Sienna Bishop, *Why Both the Climate Change and Air Pollution Crises Are Environmental Justice Issues*, CLARITY (June 20, 2022), <https://www.clarity.io/blog/why-both-the-climate-change-and-air-pollution-crises-are-environmental-justice-issues#:~:text=The%20impacts%20of%20both%20climate,them%20both%20environmental%20justice%20issues>.

In the past, polluting sites and facilities have been placed in or near low-income communities, which oftentimes include areas of affordable housing within these communities facing injustice and bearing the brunt of toxic pollution and, inevitably, suffering disproportionately.<sup>40</sup>

A 2018 study conducted by the EPA identified non-white, lower-income communities are disproportionately burdened by air pollution (consisting of automobile fumes, smog, soot, oil smoke, ash, and construction dust) than white, higher income communities.<sup>41</sup> People of color are more likely to live in areas with higher rates of air pollution, with the International Agency for Research on Cancer identifying this pollution to be carcinogenic, and the EPA declaring it as a contributor to lung issues, heart attacks, and premature death.<sup>42</sup>

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<sup>40</sup> The White House, *Environmental Justice*, <https://www.whitehouse.gov/environmentaljustice/>. (last visited Dec. 11, 2023).

<sup>41</sup> Natalie Colarossi, *10 Egregious Examples of Environmental Racism in the US*, INSIDER (Aug. 11, 2020, 3:35 PM), <https://www.insider.com/environmental-racism-examples-united-states-2020-8>.

<sup>42</sup> *Id.* A few notable examples of injustice include Cancer Alley in Louisiana, Uniontown, Alabama, and Asthma Alley in New York City. *Id.* Cancer Alley stretches 85 miles of land along the Mississippi River between New Orleans and Baton Rouge. *Id.* This stretch of land is lined with oil refineries and petrochemical plants and is nicknamed “Cancer Alley” because residents of the area are “50 times more likely to develop cancer than the average American.” *Id.* By placing these energy generation sites near low-income communities, people are becoming overpopulated with toxins in their water and in their air. *Id.* In 2010, over a billion tons of deadly coal ash from a spill that occurred in Kingston, Tennessee two years prior was transported to Uniontown, Alabama. *Id.* Workers who sought to clean the coal ash spill before it was transported suffered from brain cancer, lung cancer, and leukemia. *Id.* However, Uniontown, a predominantly low-income Black community, was alerted that the EPA deemed the coal ash non-hazardous, leaving the community no protection against the dangerous pollutant. *Id.* Finally, Asthma Alley, also known as The Bronx in New York City (NYC), is the most racially diverse borough in NYC, and thus “bears the burden of a disproportionate level of pollution.” *Id.* It is estimated that 20% of children in The Bronx neighborhoods suffer from asthma, a direct result of air pollution. *Id.* These examples of injustice simply skim the surface of the environmental inequity suffered throughout the decades.

Environmental justice requires the “fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies.”<sup>43</sup> The Civil Rights Movement of the 1960s began the fight for environmental justice, spurring the first alarm of inequitable public health and community conditions in low-income communities.<sup>44</sup> The first action to take place opposing environmental injustices was the Memphis Sanitation Strike of 1968.<sup>45</sup> The strike was an action taken against “unfair treatment and environmental justice concerns” in Memphis, Tennessee, specifically advocating for fair pay and better working conditions for Memphis garbage workers.<sup>46</sup> The Memphis Sanitation Strike birthed environmental justice activism, with Rev. Dr. Martin Luther King, Jr. leading the pack.<sup>47</sup> After the strike, it was another ten years before another major environmental justice event occurred, with *Bean v. Southwestern Waste Corp.* arising, along with the formation of NECAG.<sup>48</sup> *Bean* began a fight to keep Whispering Pine Sanitary Landfill in Houston, Texas from being placed within 1500 feet of a local public school. While the suit was unsuccessful, a ripple was sent through America, highlighting the message and issue of environmental justice.<sup>50</sup>

Dr. Robert Bullard, now known as the Father of Environmental justice, was drawn into the case as his wife, Linda Bullard, represented the plaintiffs in *Bean*.<sup>51</sup>

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<sup>43</sup> EPA, LEARN ABOUT ENVIRONMENTAL JUSTICE, <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice> (last visited Dec. 11, 2023).

<sup>44</sup> EPA, ENVIRONMENTAL JUSTICE TIMELINE, <https://www.epa.gov/environmentaljustice/environmental-justice-timeline> (last visited Dec. 11, 2023).

<sup>45</sup> *Id.*

<sup>46</sup> *Id.*

<sup>47</sup> *Id.*

<sup>48</sup> *Id.* NECAG stands for Northeast Community Action Group.

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> *Bean v. Sw. Waste Mgmt. Corp.*, 482 F. Supp. 673 (S.D. Tex. 1979).

Throughout the 1980s, the environmental justice movement was rampant and Dr. Bullard began to widen his studies from sociology to environmental racism.<sup>52</sup> Through his studies, Dr. Bullard has continued to address issues of sustainable development, urban land use, housing, climate justice, emergency response, and more.<sup>53</sup> Dr. Bullard identified minorities as suffering the most from industrial pollution, stating “There is no level playing field. Any time our society says that a powerful chemical company has the same right as a low-income family that’s living next door, that playing field is not level, is not fair.”<sup>54</sup> Dr. Bullard recognized environmental inequity as uncomfortable, but necessary to discuss in pursuit of change.<sup>55</sup>

Since the 1980’s, the environmental justice movement has propelled forward. Rebecca Bratspies, another well-known environmental justice activist, has also been at the forefront of the movement, discussing the connection between environmental regulation and overburdened communities.<sup>56</sup> With the help of Dr. Bullard and Rebecca Bratspies, environmental justice has been a greater point of discussion amongst legislatures as the years have progressed.

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<sup>52</sup> *Biography*, Dr. Robert Bullard: Father of Environmental Justice, (last visited Dec. 11, 2023) <http://drrobertbullard.com/biography/>.

<sup>53</sup> *Id.*

<sup>54</sup> David Pace, Minorities suffer most from industrial pollution, NBC News (Dec. 13, 2005, 1:19 PM), <https://www.nbcnews.com/id/wbna10452037>.

<sup>55</sup> Katherine Rowland, Robert Bullard on Talking Clean and Acting Dirty, *Guernica*, <https://www.guernicamag.com/talking-clean-and-acting-dirty/>. “When you start peeling the onion and uncovering layers and layers of inequity that have been subsidized by industry and government, it makes a lot of people uncomfortable. You can call it institutionalized racism or institutionalized inequality, but what we say is that any system that operates to maintain inequality is a corrupt system and must be addressed.”

<sup>56</sup> CleanLaw—Legislating Environmental Justice in New York with Prof. Rebecca Bratspies and Hannah Perls, Harvard Env’t. & Energy Law Program (Oct. 6, 2022), <https://eelp.law.harvard.edu/2022/10/cleanlaw-legislating-environmental-justice-in-new-york-with-prof-rebecca-bratspies-and-hannah-perls/>.

Throughout the last thirty years, environmental justice for minority and low-income populations has been considered with executive orders<sup>57</sup>, EPA collaborations, science symposiums, the EJ 2020 Action Agenda, and, most recently, with Justice40, an energy justice initiative.<sup>58</sup>

“Borrowing from decades of environmental justice advocacy,”<sup>59</sup> energy justice refers to “the concepts of equity, affordability, accessibility and participation in the energy system and energy transition regardless of race, nationality, income or geographic location.”<sup>60</sup> It can encompass all levels of energy generation, distribution, and consumption as well as energy access, costs of energy and equitable distribution of clean energy benefits and technology.<sup>61</sup>

Acknowledging the inequities in clean energy access and energy affordability, the Biden Administration appointed, for the first time in 2021, a Deputy Director for Energy Justice dedicated to addressing environmental justice and ensuring that 40% of the overall benefits of federal investments in clean energy and energy efficiency flows to disadvantaged communities under the 2021 Justice40

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<sup>57</sup> Executive Order 12898 was signed into effect by President Bill Clinton, addressing environmental justice in minority populations and low-income populations. The action was to focus federal attention on “the environmental and human health conditions of minority and low-income populations with the goal of achieving environmental protection for all communities.” The order directed federal agencies to develop strategies on how to “identify and address the disproportionately adverse human health and environmental effects of programs, policies and activities on minority and low-income populations.” EPA, *supra* note 44.

<sup>58</sup> EPA, *supra* note 44.

<sup>59</sup> NAT’L CONF. OF STATE LEGISLATURES, *supra* note 7 (noting that “energy justice is concerned with potential pollution, noise or health impacts from energy generation or transmission facilities.”).

<sup>60</sup> *Id.*

<sup>61</sup> Alexandra B. Klass & Gabriel Chan, *Regulating for Energy Justice*, 97 NYU L. REV. 1426, 1478 (Nov. 2022) (arguing “for public utility commissions to adopt a more active role in advancing the goals of distributional and procedural energy justice in alignment with their current public interest authority and ratemaking responsibilities.”).

Initiative. “Justice40 is a whole-of-government effort” that comes many years after the birth of the environmental justice movement.<sup>62</sup>

Its goal is for Federal agencies to work together with state and local governments and communities to “make good on President Biden’s promise to deliver at least 40 percent of the overall benefits from Federal investments in climate and clean energy to disadvantaged communities.”<sup>63</sup>

The Justice40 Initiative is intended to benefit disadvantaged communities that are “marginalized, underserved, and overburdened by pollution.”<sup>64</sup> Under the Justice40 Initiative, the Federal Government made it a goal to allot 40 percent of the overall benefit of certain federal investments to these disadvantaged communities.<sup>65</sup> Categories of investments within the Justice40 Initiative include: climate change, clean energy and energy efficiency, affordable and sustainable housing, and many others.<sup>66</sup> By making investments under the Justice40 Initiative, The Biden-Harris Administration believes lasting change will ensure “equitable distribution of the benefits” from the programs involved.<sup>67</sup>

To enact lasting change and meet the goal of the Justice40 initiative, the Biden Administration, through the Inflation Reduction Act, Bipartisan Infrastructure Law, and the American Rescue Plan, is heavily investing in Federal agencies to advance environmental justice.<sup>68</sup> By investing, the Administration believes they will be able to bring crucial resources to communities that have been overburdened for countless years by pollution and environmental hazards.<sup>69</sup>

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<sup>62</sup> Deep South Center for Environmental Justice, *Justice40: A Time for Righteous Investment*, <https://www.dscej.org/justice40>. (last visited Dec. 11, 2023).

<sup>63</sup> *Id.*

<sup>64</sup> *Id.*

<sup>65</sup> The White House, *Justice40 A Whole-of-Government Initiative*, <https://www.whitehouse.gov/environmentaljustice/justice40/> (last visited Dec. 11, 2023).

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

<sup>68</sup> *Id.*

<sup>69</sup> *Id.*



In this transition to a clean energy future, it is important for federal and state governmental authorities to engage in ethical decision-making for a more sustainable future for all communities.<sup>70</sup> Ethical decision-making permeates “the planning and execution of energy transitions.”<sup>71</sup>

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<sup>70</sup> *Environmental Justice and Energy Infrastructure Projects*, *supra* note 28. With a clear roadmap of bad site planning, concerns have bubbled as to the location of new clean energy facilities. With federal agencies, state agencies, and local communities requiring an increased attention to environmental justice, planning strategies have begun to take form. Strategies include: performing socio-demographic studies at the start of the study process to “identify nearby environmental justice communities,” “engag[ing] early with potential stakeholders and environmental justice leaders,” conducting robust site and/or route “analysis to verify and document the project location selection process and decision criteria,” and developing “a mitigation plan to address and minimize project impact on environmental justice communities.” *Id.* When identifying future locations for energy facilities, a key part is going to include working closely with communities and project planning, addressing environmental justice concerns head-on. The EPA has outlined unique siting requirements for energy projects, creating a tailored process to address needs inherent in site cleanup and reuse. *Id.* New siting requirements include analyzing multiple phases of site construction in an effort to determine the feasibility of commissioning a site that coincides with environmental equity. v/re-powering/siting-re-powering-projects- while-addressing- environmental-issues. These phases comprise pre-screening analysis/site selection, (site specific assessment) energy feasibility analysis, design and development, construction and commission, performance period, and decommissioning. *Id.* The EPA has achieved success already with the use of their site development process, successfully generating electricity on formerly contaminated lands, landfills, and mine sites. *See* EPA, RE-POWERING SUCCESS STORIES: ELECTRICITY GENERATION, <https://www.epa.gov/re-powering/re-powering-success-stories-electricity-generation> (last visited Dec. 11, 2023). With these requirements in place, location concerns for new clean energy facilities may ultimately dissipate. State examples are here: *Energy Justice and the Energy Transition*, *supra* note 7.

<sup>71</sup> Clark Miller, *Ethics of Energy Transitions*, Online Ethics Center for Engineering and Science (2014), <https://onlineethics.org/cases/energy-ethics/ethics-energy-transitions>.

Some of the more recent questions raised pertaining to the energy transition revolve around atmospheric carbon levels, specifically: how much longer will the pumping of carbon into the atmosphere be permitted, knowing the projected impacts on future generations; who is responsible for carbon-reducing actions;<sup>72</sup> and who will pay for those reductions.<sup>73</sup> The Justice40 initiative is the first time the federal government, as a whole, has attempted to achieve environmental and energy justice amongst low-income communities.

## II. Federal Energy Efficiency Programs for Affordable Housing

There are two federal programs important for meeting the Justice40 objectives that are at the forefront of energy efficiency for low-income individuals in the United States – Federal Housing and Urban Development programs administered through the U.S. Department of Housing and Urban Development, and The Federal Weatherization Assistance Program administered through the U.S. Department of Energy. As discussed in this Part, each provides obstacles and opportunities.

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<sup>72</sup> *Id.*

<sup>73</sup> In essence, ethical decision making is the act of choosing an action that does the most good and the least harm. Pub. Broad. Serv., *Five Sources of Ethical Standards* (Sept. 2008),

[https://www.pbs.org/wnet/religionandethics/files/2008/09/five\\_sources.pdf](https://www.pbs.org/wnet/religionandethics/files/2008/09/five_sources.pdf). During this energy transition, it “remains uncertain which fuel(s) will be ‘best’, both practically (in terms of technology and economics) and ethically.” Jacob Bethem et al., *Energy Decisions Within an Applied Ethics Framework: An Analysis of Five Recent Controversies*, 10(29) ENERGY, SUSTAINABILITY AND Soc’Y (Aug. 13, 2020), <https://energysustainsoc.biomedcentral.com/articles/10.1186/s13705-020-00261-6>. Jacob Bethem and his collaborators (Bethem) analyzed five recent/current controversies within the energy field: the Dakota Access Pipeline; the Navajo Generating Station; fracking; a moratorium against uranium mining; and the Xiaolangdi Dam. *Id.* Each of these cases contained an ethical question, urging governmental authorities to engage in ethical decision-making. With each case evaluated as to the ethical decision-making for a more sustainable future, Bethem created a general two step recommendation: (1) “the local perspective should be prioritized and used as the first evaluative lens,” and (2) “the practitioner or decision maker must judge the ethically relevant aspects of the decision at hand and choose the most plausible ethical principle(s) to employ.” *Id.* Using this general recommendation as a guide, authorities may be able to engage in ethical decision-making for a more sustainable future for all communities. *Id.*

a. *Federal Housing and Urban Development programs administered through the U.S. Department of Housing and Urban Development*

The U.S. Department of Housing and Urban Development (HUD) has developed programs geared toward energy efficiency, but results have been slow and many are left out of the process.<sup>74</sup> HUD was created in 1965 “to allow the federal government to tackle urban problems including substandard and deteriorating housing in a coordinated manner.”<sup>75</sup> Created as part of President Lyndon B. Johnson’s War on Poverty, HUD’s mission is to address America’s housing needs by improving and developing the Nation’s communities and enforcing fair housing laws.<sup>76</sup> HUD wanted to help in creating a “decent home and suitable living environment for all Americans.”<sup>77</sup> HUD works to achieve its goal of providing decent, suitable living to Americans through a variety of programs,<sup>78</sup> one of which being public or subsidized housing for low-income individuals and families.<sup>79</sup> Since the creation of HUD, more than 7 million families have lived in locally-managed, HUD supported public housing.<sup>80</sup>

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<sup>74</sup> Laura Benschoff, *A Low-Income Energy-Efficiency Program Gets \$3.5B Boost, But Leaves Out Many in Need*, NPR (May 13, 2022, 10:00 AM), <https://www.npr.org/2022/05/13/1096114029/low-income-energy-efficient-weatherization-program-3-5b-needy>.

<sup>75</sup> U.S. DEP’T. OF HOUS. & URB. DEV., *A BRIEF HISTORY OF HUD*, [https://archives.hud.gov/hud50/hud50.hud.gov/hud\\_history\\_timeline/index.html#:~:text=%20The%20U.S.%20Department%20of%20Housing,begun%20under%20President%20John%20F.](https://archives.hud.gov/hud50/hud50.hud.gov/hud_history_timeline/index.html#:~:text=%20The%20U.S.%20Department%20of%20Housing,begun%20under%20President%20John%20F.) (last visited Dec. 11, 2023).

<sup>76</sup> U.S. DEP’T. OF HOUS. & URB. DEV., *QUESTIONS AND ANSWERS ABOUT HUD*, <https://www.hud.gov/about/qaintro> (last visited Dec. 11, 2023).

<sup>77</sup> *Id.*

<sup>78</sup> Primary programs administered by HUD to achieve their goal of providing “suitable living environment for all Americans” includes: (1) “Mortgage and loan insurance through the Federal Housing Administration;” (2) “Community Development Block Grants (CDBG) to help communities with economic development, job opportunities and housing rehabilitation;” (3) “HOME Investment Partnership Act block grants to develop and support affordable housing for low-income residents;” (4) “Rental assistance in the form of Section 8 certificates or vouchers for low-income households;” (5) “Public or subsidized housing for low-income individuals and families;” (6) “Homeless assistance provided through local communities and faith-based and other nonprofit organizations;” and (7) “Fair housing public education and enforcement.” *See Id.*

<sup>79</sup> *Id.*

<sup>80</sup> *Id.*

Today, HUD helps provide housing for more than “4.3 million low-income families through its public housing, rental subsidy and voucher programs.”<sup>81</sup> It supplies public housing for eligible low-income families, the elderly, and persons with disabilities.<sup>82</sup>

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<sup>81</sup> *Id.*

<sup>82</sup> U.S. DEP'T. OF HOUS. & URB. DEV., PUBLIC HOUSING, [https://www.hud.gov/program\\_offices/public\\_indian\\_housing/programs/ph/programs](https://www.hud.gov/program_offices/public_indian_housing/programs/ph/programs). (last visited Dec. 11, 2023).

HUD has stated that “housing quality is the key to the public’s health.”<sup>83</sup>

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<sup>83</sup> U.S. DEP’T. OF HEALTH & HUM. SERVS. & U.S. DEP’T OF HOUS. & URB. DEV., *HEALTHY HOUSING REFERENCE MANUAL* 15 (2006), [https://www.hud.gov/sites/documents/DOC\\_12333.PDF](https://www.hud.gov/sites/documents/DOC_12333.PDF), at 15. HUD and The Center for Disease Control and Prevention (CDC) have also worked together to discover ways to eliminate substandard housing conditions that harm health by drafting a Healthy Housing Reference Manual. *Id.* The Healthy Housing Reference Manual outlines what HUD believes to be the baseline for housing to be “safe, decent, affordable, and healthy” for citizens. *Id.* The manual is broken down into key chapters, including: basic principles of healthy housing, housing regulations, disease vectors and pests, indoor air pollutants and toxic materials, housing structure, water supplies, plumbing, and energy usage *Id.* at 9-12. HUD believes that a “properly constructed and maintained home is nearly timeless in its usefulness. *Id.* at 15. HUD and CDC outline the basic principles of healthy housing by identifying fundamental physiologic needs, fundamental psychological needs, and protection against diseases. *Id.* at 39-48. HUD and CDC also identify that “healthy housing” should have protection against injury, protection against fire, and protection against toxic gases. *Id.* at 39-48. HUD and CDC have cited that housing should provide for following physiologic needs: “(1) protection against the elements; (2) a thermal environment that will avoid undue heat loss; (3) a thermal environment that will permit adequate heat loss from the body; (4) an atmosphere of reasonable chemical purity; (5) adequate daylight illumination and avoidance of undue daylight glare; (6) direct sunlight; (7) adequate artificial illumination and avoidance of glare; (8) protection from excessive noise; and (9) adequate space for exercise and for the children to play.” *Id.* at 39. HUD and CDC have cited that housing should provide for following psychological needs: “(1) adequate privacy for the individual; (2) opportunities for normal family life; (3) opportunities for normal community life; (4) facilities that make possible the performance of household tasks without undue physical and mental fatigue; (5) facilities for maintenance of cleanliness of the dwelling and of the person; (6) possibilities for aesthetic satisfaction in the home and its surroundings; and (7) concordance with prevailing social standards of the local community. *Id.* at 41. Finally, HUD and the CDC cite eight ways to protect against contaminants, including: “(1) provide a safe and sanitary water supply; (2) protect the water supply system against pollution; (3) provide toilet facilities that minimize the danger of transmitting disease; (4) protect against sewage contamination of the interior surfaces of the dwelling; (5) avoid unsanitary conditions near the dwelling; (6) exclude vermin from the dwelling, which may play a part in transmitting disease; (7) provide facilities for keeping milk and food fresh; and (8) allow sufficient space in sleeping rooms to minimize the danger of contact infection.” *Id.*

HUD administers Federal aid to local public housing agencies (PHAs) that manage the housing for low-income residents at rents they can afford.<sup>84</sup> Public housing comes in all sizes and types, ranging from scattered single-family houses to high rise apartments for elderly families.<sup>85</sup> The current Management Assessment (MASS) Occupancy Rate<sup>86</sup> available for public housing is 94.74% as of August 2, 2023.<sup>87</sup> These units are distributed amongst 2,717<sup>88</sup> PHAs across the nation.<sup>89</sup> The average household income of public housing households is \$15,703 and the average total % wage income is 28.27%.<sup>90</sup> These numbers, in aggregate, indicate that public housing in the U.S. falls into the category of ‘affordable housing’ as the housing costs no more than 30% of gross household income. However, specific states with higher costs of living, may not fall into the affordable housing category. For example, states such as New York and California have total % wage incomes of 32.44% and 36.76%, respectively.<sup>91</sup>

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<sup>84</sup> U.S. DEP'T OF HOUS. & URB. DEV., HUD'S PUBLIC HOUSING PROGRAM, [https://www.hud.gov/topics/rental\\_assistance/phprog#:~:text=The%20U.S.%20Department%20of%20Housing,developing%2C%20and%20managing%20these%20development.](https://www.hud.gov/topics/rental_assistance/phprog#:~:text=The%20U.S.%20Department%20of%20Housing,developing%2C%20and%20managing%20these%20development.) (last visited Dec. 11, 2023). It is important to note that the term ‘public housing’ and the term ‘affordable housing’ are not one and the same. Dylan Jeffries, *Low-Income Housing and Affordable Housing: What's the Difference?*, THE COLUMBIAN (Oct. 3, 2022, 6:05AM), <https://www.columbian.com/news/2022/oct/03/low-income-housing-and-affordable-housing-whats-the-difference/>. Public housing is a specific category of housing for low- income households that is “owned and managed by a local public housing agency.” *Id.* Affordable housing, as defined by HUD, is “any housing that costs an owner or renter no more than 30 percent of gross household income, including utilities.” *Id.*

<sup>85</sup> U.S. DEP'T OF HOUS. & URB. DEV., PUBLIC HOUSING DATA DASHBOARD, [https://www.hud.gov/program\\_offices/public\\_indian\\_housing/programs/ph/PH\\_Dashboard](https://www.hud.gov/program_offices/public_indian_housing/programs/ph/PH_Dashboard). (last visited Dec. 11, 2023).

<sup>86</sup> *Id.* at slide 2., MASS Occupancy Rate = Occupied Units / Available Units.

<sup>87</sup> *Id.*

<sup>88</sup> *Id.* at slide 3. This is the current number of PHAs funded as of 8/2/2023. Funded PHAs have decreased with 2,879 in 2020, 2,852 in 2021, and 2,717 in 2023 (Data not available for 2022).

<sup>89</sup> *Id.* at slide 2.

<sup>90</sup> *Id.* at slide 5.

<sup>91</sup> *Id.*

Further, as public housing attempts to reduce the cost of living, the issue of electrification is ever relevant. Paid Resident 2022 Utility Information indicates that 891,742 units of HUD-funded public housing use electricity, with an average utility rate of \$0.136.<sup>92</sup> Of those units using electricity, 756,776 units continue to use gas, with an average utility rate of \$0.478.<sup>93</sup> The difference between electricity utility rate and gas utility rate is almost four times, pointing to the previously discussed equity implications that will occur for customers who have not transitioned over to clean energy.<sup>94</sup>

HUD has several programs dedicated to supporting energy efficiency, including: Public and Indian Housing, Office of Housing - Multifamily Programs, and Office of Housing - Single Family Programs.<sup>95</sup> Programs within these HUD branches describe the specifics of energy-efficient housing opportunities.<sup>96</sup> Each will be discussed briefly in turn.<sup>97</sup>

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<sup>92</sup> *Id.* at slide 6.

<sup>93</sup> *Id.*

<sup>94</sup> *Id.*

<sup>95</sup> U.S. DEP'T OF HOUS. & URB. DEV., HUD PROGRAMS THAT SUPPORT ENERGY EFFICIENCY, [https://www.hud.gov/program\\_offices/economic\\_development/eegb/programs#s2](https://www.hud.gov/program_offices/economic_development/eegb/programs#s2) (last visited Dec. 11, 2023). The office of Community Planning and Development also provides an overview on HUD energy initiatives and how HUD programs coincide with government-wide energy policies. However, no specific opportunities are listed under this HUD branch.

<sup>96</sup> *Id.*

<sup>97</sup> In line with the federal move toward equitable energy efficiency, states are considering how to ensure equitable distribution of the benefits and avoid overburdening already underserved communities. NAT'L CONF. OF STATE LEGISLATURES, *supra* note 7. For example, New York has established a task force made up of "representatives from 'environmental justice communities' that advise the state regarding the economic and environmental impacts of the state's transition to clean energy, including clean energy development, energy efficiency programs and low-income energy assistance." *Id.* at 2. New Jersey requires the state to evaluate environmental justice impacts when issuing permits for regulated activities. "Applicants must submit an environmental justice impact statement for any new or expanded facility, which would include certain energy facilities and infrastructure." *Id.* at 2. Virginia has multiple protective provisions, but one in particular "requires the state PUC to ensure the development of new or expanding energy facilities does not have a disproportionate impact on historically economically disadvantaged communities. Additionally, the commission should consider whether the placement of renewable energy facilities provides benefits to those communities and displaced fossil fuel workers." *Id.* at 2.

### 1. *Public and Indian Housing*

Under HUD, the Office of Public and Indian Housing's (PIH) goal is to ensure "safe, decent, and affordable housing" for those eligible.<sup>98</sup> The PIH branch of HUD contains numerous programs for public housing authorities and tribes.<sup>99</sup> Public Housing Environmental and Conservation Clearinghouse Program within PIH is geared specifically toward funding for energy-efficiency.<sup>100</sup> This program provides a "one-stop shop for public housing authorities to find resources related to energy and water conservation, hazardous materials, and operations and management practices."<sup>101</sup> Within this program, rate reduction incentives (RRIs) may be given for "Public Housing Agencies (PHAs) that pursue special and significant efforts beyond what is required by statute and/or regulation to reduce their utility rate,"<sup>102</sup> which could be helpful for low-income individuals; however, there are no specific energy efficiency measures within the program that are geared toward providing energy efficient, affordable housing.

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<sup>98</sup> *About PIH*, U.S. Dept. of Housing and Urban Development, [https://www.hud.gov/program\\_offices/public\\_indian\\_housing/about](https://www.hud.gov/program_offices/public_indian_housing/about).

<sup>99</sup> U.S. DEP'T OF HOUS. & URB. DEV, *supra* note 95.

<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

<sup>102</sup> U.S. DEP'T OF HOUS. & URB. DEV., PUBLIC HOUSING ENERGY BRANCH, [https://www.hud.gov/program\\_offices/public\\_indian\\_housing/programs/ph/pheb](https://www.hud.gov/program_offices/public_indian_housing/programs/ph/pheb). (last visited Dec. 11, 2023). PHAs are eligible for RRIs "if a PHA takes action beyond normal public participation in rate-making proceedings, such as wellhead purchase of natural gas, administrative appeals, or legal action to reduce the rate it pays for utilities." *Id.* Further, "PHAs with an eligible action may retain one-half (50%) of the annual savings realized from their actions, or 100% of savings if the RRI is done in conjunction with an EPC." *Id.*



## 2. *Office of Housing – Multifamily Property Owners*

The Office of Housing – Multifamily Property Owners<sup>103</sup> contains a handful of programs encouraging funding for energy efficiency, two of which provide opportunities to recipients of HUD funds to implement energy-efficient housing.<sup>104</sup> First, the Fannie Mae-FHA Green Refinance Plus Program “allows for refinancing of existing,<sup>105</sup> affordable multifamily rental properties into new mortgages that include funds for energy- and water-saving improvements.”<sup>106</sup> The Fannie Mae- FHA Green Refinance Plus Program provides funding for the “refinance, preservation, and energy-efficient retrofits of older affordable multifamily housing properties.”<sup>107</sup> The Fannie Mae Program requirements include (i) property must be ten years old, with a “recorded use agreement of the affordability restrictions that extend for at least the term of the new loan to help preserve affordable housing,”<sup>108</sup> (ii) at least five percent of the “refinance loan proceeds must be applied to the property renovation or energy retrofit,”<sup>109</sup> and (iii) all “rehabilitation and energy

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<sup>103</sup> From September to October 2022, HUD received public input on creating a “new green and resilient retrofit program for multifamily assisted housing properties.” U.S. DEP’T OF HOUS. & URB. DEV., *HUD Seeks Public Input on Design of New Green and Resilient Retrofit Program for Multifamily Assisted Housing Properties*, HUD No. 22-185 (Sept. 26, 2022) [https://www.hud.gov/press/press\\_releases\\_media\\_advisories/HUD\\_No\\_22\\_185](https://www.hud.gov/press/press_releases_media_advisories/HUD_No_22_185;); U.S. Dep’t of Hous. & Urb. Dev., Green and Resilient Retrofit Program: Request for Information, 87 Fed. Reg. 58526 (Sept. 27, 2022) <https://www.federalregister.gov/documents/2022/09/27/2022-20855/green-and-resilient-retrofit-program-request-for-information>. HUD notes that this is the first program “to target multifamily properties nationwide with property-level resilience interventions at this scale.” *Id.*

<sup>104</sup> U.S. DEP’T OF HOUS. & URB. DEV., *supra* note 95. The HUD website promoting energy efficient programs, under the Multifamily Programs provides information about an Energy Innovation Fund. This fund seems like a great path to explore - providing a total of \$25 million in grants to be used for the purpose of energy efficiency upgrades at multifamily properties – however, they have not been taking applications for over a decade (as of October 20, 2011).

<sup>105</sup> *Id.* (Existing is defined as housing that is ten years or older.)

<sup>106</sup> U.S. DEP’T OF HOUS. & URB. DEV., *supra* note 95.

<sup>107</sup> U.S. DEP’T OF HOUS. & URB. DEV., GREEN REFINANCE PLUS PROGRAM (2011), <https://archives.hud.gov/news/2011/pr11-106-GreenRefiPlusFactSheet.pdf>.

<sup>108</sup> *Id.*

<sup>109</sup> *Id.*

improvements must enhance value and improve property operations.”<sup>110</sup> Following these requirements, the Fannie Mae Program will adopt a Green Property Needs Assessment (Green PNA).<sup>111</sup> The Green PNA serves as a standard for all Green Refinancing Plus loans and identifies a property’s deferred capital needs and “cost effective opportunities for increasing energy and water efficiency.”<sup>112</sup> These said opportunities will reduce operating and capital costs for the property owner, “reduc[ing] utility costs for tents, while improving indoor environmental quality.”<sup>113</sup> The Fannie Mae-FHA Green Refinance Plus Program is the first of two programs to require recipients of HUD funds to provide energy efficient housing. The second program would be the Green Retrofit Program for Multifamily Housing.<sup>114</sup>

The Green Retrofit Program for Multifamily Housing issues grants and loans, made available through HUD’s Office of Affordable Housing Preservation (OAHP), for eligible property owners to “make energy and green retrofit investments in the property.”<sup>115</sup> Additionally, this program aids in ensuring the “maintenance and preservation of the property, the continued operation and maintenance of energy efficiency technologies, and the timely expenditure of funds.”<sup>116</sup> To become eligible for the Green Retrofit Program, physical and financial analyses of properties will be conducted to determine the size of each grant and loan. Incentives “will be made available to participating owners and the terms of the grants or loans will include continued affordability agreements.”<sup>117</sup> Requirements and commitments must be made by recipients of HUD funds (property owners/managers) to be eligible for the program, including (i) agreeing to “extend the affordability requirements of [the] property by 15 years beyond the existing expiration,” (ii) agreeing “to the use of greened replacements

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<sup>110</sup> *Id.*

<sup>111</sup> *Id.*

<sup>112</sup> *Id.*

<sup>113</sup> *Id.*

<sup>114</sup> U.S. DEP’T OF HOUS. & URB. DEV., GREEN RETROFIT PROGRAM FOR MULTIFAMILY HOUSING, <https://archives.hud.gov/recovery/programs/green.cfm> (last visited Dec. 11, 2023).

<sup>115</sup> *Id.*

<sup>116</sup> *Id.*

<sup>117</sup> *Id.*

and greened property management,” (iii) agreeing “to introduce and implement an integrated pest management program,” (iv) becoming trained in Green Building Principles, and (v) further limits will apply to the extent to which any single owner may participate in the program.<sup>118</sup> The Green Retrofit Program, along with the Fannie Mae Program, exemplify opportunities under the Office of Housing – Multifamily Property Owners Branch which may require recipients of HUD funds to provide energy-efficient housing.

### 3. *Office of Housing – Single-Family Property Owners*

Under the Office of Housing – Single Family Property Owners branch of HUD, the Energy Efficient Mortgages Program provides an opportunity to require recipients of HUD funds to provide energy efficient housing.<sup>119</sup> The Energy Efficient Mortgages Program allows single-family homebuyers and homeowners “to finance the cost of adding energy efficient features as part of the FHA-insured mortgage.”<sup>120</sup> This program recognizes the reward of energy-efficient homes, citing cost-effective energy improvements as a source for lower utility bills, ultimately resulting in more household income available for mortgage payments.<sup>121</sup> A home energy assessor provides a list of improvements (or “energy package”) that the borrower can choose to make for the property.<sup>122</sup> To qualify for the energy package, the energy efficient improvements must be cost-effective.<sup>123</sup> The borrower must also obtain a home energy assessment, which identifies opportunities for improving the energy efficiency of the home and their cost-effectiveness.<sup>124</sup>

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<sup>118</sup> *Id.* An excel spreadsheet with the GRP application form on this website consists of the requirements and commitments listed here.

<sup>119</sup> U.S. DEP'T OF HOUS. & URB. DEV, *supra* note 95.

<sup>120</sup> *Id.*

<sup>121</sup> U.S. DEP'T OF HOUS. & URB. DEV., ENERGY EFFICIENT MORTGAGE PROGRAM, [https://www.hud.gov/program\\_offices/housing/sfh/eem/energy-r](https://www.hud.gov/program_offices/housing/sfh/eem/energy-r). (last visited Dec. 11, 2023).

<sup>122</sup> *Id.*

<sup>123</sup> *Id.* Improvements are cost-effective when the cost of making them is equal to or less than the money saved on energy from those improvements.

<sup>124</sup> *Id.*

This program allows families to save money on utility bills by enabling them to finance energy efficient improvements.<sup>125</sup>

individuals<sup>126</sup> to work together to achieve quality, safe, and healthy housing due to health, home construction, and home maintenance essentially being inseparable because of their overlapping goals.<sup>127</sup> HUD stands by their housing beliefs, claiming that physiological needs, psychological needs, and protection against contaminants are *fundamental* and *basic* to a healthy home. Unfortunately, even with the above HUD programs, HUD's stated goal to create healthy homes and meet the fundamental needs of public housing, has continued to fall below expectations and the system continues to be in disarray.<sup>128</sup> As of June 30, 2023, out of the 6,354 properties inspected within the last year, hundreds of them have resulted in failing scores.<sup>129</sup> Ironically, Washington D.C., wherein HUD is headquartered, 56.89% of HUD-funded public housing failed their inspections with a score of 60 or below.<sup>130</sup>

As such, while the Public and Indian Housing, Office of

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<sup>125</sup> *Id.*

<sup>126</sup> U.S. DEP'T OF HOUS. & URB. DEV., *supra* note 83, at 31. Highly trained individuals are cited as being contractors, builders, code inspectors, housing inspectors, environmental health officers, injury control specialists, and epidemiologists. *Id.* at 17.

<sup>127</sup> *Id.*

<sup>128</sup> U.S. DEP'T OF HOUS. & URB. DEV., PHYSICAL INSPECTION SCORES BY STATE FOR PUBLIC HOUSING, [https://www.hud.gov/program\\_offices/public\\_indian\\_housing/reac/products/prodpass/phscores](https://www.hud.gov/program_offices/public_indian_housing/reac/products/prodpass/phscores) (last visited Dec. 11, 2023). One such example of the disarray is that of Rondesha Brooks' government- subsidized apartment, to which she shares with her 12-year-old daughter who suffers from asthma, had mold spreading from the basement up through her living room walls. Suzy Khimm, Laura Strickler, Hannah Rappleye & Stephanie Gosk, *Under Ben Carson, more families live in HUD housing that fails health and safety inspections*, NBC News (Nov. 14, 2018, 3:17 PM) <https://www.nbcnews.com/politics/white-house/under-ben-carson-more-families-live-hud-housing-fails-health-n935421>. NBC reported that while she reached out to an inspector, a federal housing inspection returned a property score of 27 points out of 100, "far below the 60 points needed to pass the mandatory health and safety inspection. *Id.* The failing score should have resulted in swift action by HUD to correct not only the mold infestation, but also the exposed wiring, missing smoke detectors, and bug infestation. *Id.* However, more than nine months after the inspection, deadlines have come and gone and still no action was taken. *Id.*

<sup>129</sup> *Id.* REAC Physical Inspections Scores and Release Dates Excel spreadsheet with inspection number.

<sup>130</sup> *Id.*

Housing - Multifamily Programs, and Office of Housing - Single Family Programs all provide avenues for energy-efficient housing opportunities, HUD alone is not sufficient to meet the energy needs of families living in public housing. As will be discussed *infra*, a partnership with the U.S. Department of Energy through its Weatherization Assistance Program, however, could propel these programs forward - and help meet the Justice 40 initiatives.

*b. Federal Housing and Urban Development programs administered through the U.S. Department of Housing and Urban Development*

The federal weatherization assistance program (WAP) started in 1976.<sup>131</sup> It is “the largest energy efficiency assistance program in the country,” and administered through the U.S. Department of Energy.<sup>132</sup> WAP’s purpose is “to improve the long-term energy performance of the home”<sup>133</sup> by investing in upfront efficiency upgrades that will last through time. Statistics show that weatherizing a home can reduce energy burdens by some 25%, which can be quite significant for low-income residents, in particular.<sup>134</sup> Toward this end, the program is reported to have served over 7 million households since its inception, saving them an average \$372 a year in energy bills.<sup>135</sup> With every dollar invested, weatherized homes result in \$0.90 to \$1.40 gained in energy benefits.<sup>136</sup>

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<sup>131</sup> The Low-Income Home Energy Assistance Program (LIHEAP) began shortly after the WAP. The program “pays low-income households’ energy bills during energy hardship emergencies (typically, a utility customer’s inability to pay) and when access to energy becomes a physical necessity (e.g., the coldest days in winter or when households rely on medical equipment).” Carlos Martín et al., *Targeting Weatherization: Supporting Low-Income Renters in Multifamily Properties through the Infrastructure Investment and Jobs Act’s Funding of the Weatherization Assistance Program and Beyond*, HARV. UNIV. JOINT CENTER FOR HOUS. STUD. 10 (Jan. 31, 2023), [https://www.jchs.harvard.edu/sites/default/files/research/files/harvard\\_jchs\\_weatherization\\_martin\\_et\\_al\\_2023.pdf](https://www.jchs.harvard.edu/sites/default/files/research/files/harvard_jchs_weatherization_martin_et_al_2023.pdf).

<sup>132</sup> *Id.* at 12.

<sup>133</sup> Mann & Schuetz, *supra* note 8.

<sup>134</sup> Ariel Drehobl, Lauren Ross, & Roxana Ayala, *How High Are Household Energy Burdens?*, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON. (2006), <https://www.aceee.org/sites/default/files/pdfs/u2006.pdf>. “Weatherization can reduce low-income household energy burdens by about 25%, making it an effective strategy to reduce high energy burdens for households with high energy use while also benefiting the environment.” *Id.*

Funding for WAP comes from a \$5 billion appropriation under the 2009 American Recovery and Reinvestment Act (ARRA),<sup>137</sup> and a \$3.5 billion allocation in 2021 through the Infrastructure Investment and Jobs Act (IIJA).<sup>138</sup> With goals to help low-income homeowners “save on utility costs, reduce aggregate energy consumption, and reduce greenhouse gas emissions,”<sup>139</sup> WAP services may include the addition/replacement of insulation, replacement of heating/cooling systems, air sealing, and other similar repairs.<sup>140</sup> Through these improvements and repairs, WAP not only increases the performance of a home, but also protects residents’ health, safety, and financial well-being.<sup>141</sup>

The problem, however, is that Federal weatherization funding has only reached a sliver of the eligible population. In 2018 30% of U.S. households were reported to be eligible for weatherization.<sup>142</sup> Federal eligibility requires an annual income “below 200 percent of the federal poverty guidelines,” though some states allow for eligibility at 60% below the state’s median income.<sup>143</sup> “In theory, this broad population overlaps significantly with the population that currently receives or qualifies to receive rental assistance—typically defined in relation to area median income.”<sup>144</sup> Only 90,451 homes, however, received funding, suggesting that 0.2% of the eligible low-income households received weatherization services.<sup>145</sup>

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<sup>135</sup> *Id.*

<sup>136</sup> Mann & Schuetz, *supra* note 8.

<sup>137</sup> *Id.* The Obama administration expanded the program as part of the Recovery Act, and now President Biden is following suit with the Infrastructure Bill. The program is part of a larger initiative to reduce greenhouse gas emissions and lower energy costs for 700K low-income houses over the next five years.

<sup>138</sup> *Id.*

<sup>139</sup> *Id.*

<sup>140</sup> *Id.*

<sup>141</sup> *Id.*

<sup>142</sup> Ariel Dreobl, *Weatherization Cuts Bills and Creates Jobs but Serves Only a Tiny Share of Low-Income Homes*, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON. (July 7, 2022), <https://www.aceee.org/blog-post/2020/07/weatherization-cuts-bills-and-creates-jobs-serves-only-tiny-share-low-income>.

<sup>143</sup> Martin, et al., *supra* note 131.

<sup>144</sup> *Id.*

<sup>145</sup> Dreobl, *supra* note 142. “[O]nly about 0.2 percent of all eligible low-income households in the U.S. live in units that have received WAP assistance.” *Id.*

This failure to reach households in need appears to be due in part to a (1) lack of eligibility for multi-family residences, which leaves out a large swath of underserved households; (2) a failed energy audit procedure with lengthy applications, long wait times, and inconsistent processes; and (3) a failed deferral system resulting in even longer wait times with significant loopholes for ineligibility due to structural damage. Each will be discussed below.

1. *Multi-family Home Disparity*

WAP's delivery pattern has a disparity in rental housing, favoring that of single-family housing over other building types.<sup>146</sup> This disparity is not favorable to low-income families who rent, as 63 percent of renters in 2021 lived in multifamily properties.<sup>147</sup> When looking solely at the distribution of building types for renter occupied homes, "WAP program's historical emphasis on single-family homes overlooked the 63 percent of renters that live in multifamily properties, divided between those living in small multifamily buildings (17 percent) and large multifamily properties (46 percent)."<sup>148</sup> This distribution can vary widely across the U.S.;<sup>149</sup> however, in all but a dozen or so states located mostly in the Southern more rural populations, the majority of renters live in multi-family properties as opposed to single-family properties.<sup>150</sup>

Eligible multifamily properties, as defined by HUD, are any new or existing properties owned by a nonprofit, public, or private entity with at least 5 housing units.<sup>151</sup>

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<sup>146</sup> Martin, et al., *supra* note 131 at 5.

<sup>147</sup> *Id.*

<sup>148</sup> *Id.*

<sup>149</sup> For example, in Rhode Island 40 percent live in multifamily properties. *Id.*

<sup>150</sup> *Id.* "Only in less than a dozen states—states located mostly in the South, states with largely rural populations, as well as Puerto Rico—do more renters live in single-family homes." *Id.*

<sup>151</sup> HUD EXCHANGE, IS A DUPLEX AN ELIGIBLE MULTIFAMILY PROPERTY? (Oct. 2015), <https://www.hudexchange.info/faqs/programs/811-project-rental-assistance-pra/program-requirements/eligible-units/is-a-duplex-an-eligible-multifamily-property/>.

Small multifamily properties are those with units between five and 50, while large multifamily properties are properties with more than 50 units.<sup>152</sup> While HUD has characterized small and large multifamily properties as being WAP-eligible, multifamily housing has repeatedly been looked over by WAP services. Passing over WAP-eligible multifamily housing diminishes WAP's full potential for weatherizing low-income households.

Further, households that are eligible for WAP assistance are also “more likely to live in multifamily and manufactured housing than their wealthier, WAP- ineligible counterparts.”<sup>153</sup> This holds true for small units, ranging from 2-4 units, as well as larger multifamily housing types. As of 2021, there are twice as many WAP-eligible households (10 percent) as WAP-ineligible households (5 percent) that live in small multifamily buildings. The “importance of the [small multifamily] building type for renters—and especially for low-income ones that could receive WAP aid—is a critical parameter for serving the 38.8 million U.S. households that currently qualify.”<sup>154</sup> “Multifamily buildings are a particular concern not only because they house many low-income households but also because they include rental units. If renters pay for their utility usage but owners control the physical property, they have different motivations and different levels of information for reducing energy consumption.”<sup>155</sup> Like other rental units, multifamily housing suffers from a “split incentive” wherein owners are deterred from making investments in building improvements because they may not reap the financial reward of the investment while their renters will reap the reward of unit improvement.<sup>156</sup> This asymmetry leads owners to not invest in improvements, leading to a constant stream of unimproved, non-weatherized multifamily units.<sup>157</sup>

The disparity in multi-family building types, specifically rentals, and the lack of incentive for rental properties owners to

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<sup>152</sup> Fannie Mae, *Small Multifamily Properties Are a Key Source of Rental Housing in Many Places* (May 19, 2023), <https://multifamily.fanniemae.com/news-insights/multifamily-market-commentary/small-multifamily-properties-are-key-source-rental>.

<sup>153</sup> Martin, et al., *supra* note 131 at 6.

<sup>154</sup> *Id.*

<sup>155</sup> *Id.*

<sup>156</sup> *Id.*

<sup>157</sup> *Id.*



weatherize has created a gaping hole in the weatherization assistance program. A big part of filling this hole will include incentivization and the DOE/HUD partnership, as discussed *infra*.

## 2. *Failed Energy Audit Procedure*

WAP provides program funding to all 50 states,<sup>158</sup> so the first step in receiving WAP services is to identify the state-designated program authority and to submit an application for an energy audit with that agency.<sup>159</sup> This process can vary by state, but it always requires extensive (and often ambiguous) requests for paperwork, with households needing to submit documents proving property ownership, income and utility costs, among other things.<sup>160</sup> Once all paperwork is completed, households will be scheduled for an energy audit. Wait times for an inspector to conduct a home energy audit can exceed more than a year.<sup>161</sup> These wait times are conducted via local providers, resulting in widely differing wait times across the nation, with significant delays in highly populated regions.<sup>162</sup>

Energy audits are conducted to determine how much energy a home uses, where the home is inefficient, and problem area/fixes to be prioritized to save energy and enhance comfort.<sup>163</sup> In doing so, the government utilizes the “whole house weatherization” approach.<sup>164</sup> It looks at four different measures: (1) mechanical; (2) health and safety; (3) building; and (4) electrical.<sup>165</sup> This process has been identified as problematic for two reasons.<sup>166</sup> First, it takes a lot of time to provide this type of holistic evaluation, and second, as will be discussed in the next subsection, many of the households are found to have major issues that make them ineligible for funding.

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<sup>158</sup> *About the Weatherization Assistance Program*, DEP’T. OF ENERGY, <https://www.energy.gov/scep/wap/about-weatherization-assistance-program>.

<sup>159</sup> *Id.* WAP contracts with “roughly 700 local organizations nationwide that consist of communication action agencies, other nonprofits, and local governments.” *Id.*

<sup>160</sup> Mann & Schuetz, *supra* note 8.

<sup>161</sup> *Id.*

<sup>162</sup> *Id.*

<sup>163</sup> Drehobl, *supra* note 142.

<sup>164</sup> *Whole-House Weatherization*, DEP’T. OF ENERGY, <https://www.energy.gov/eere/wap/whole-house-weatherization>.

<sup>165</sup> *Id.*

<sup>166</sup> Drehobl, *supra* note 142.

Home energy audits are a computerized assessment of the home's energy use, which "includes an analysis of energy bills, a blower-door (pressurized) test to determine the infiltration of outside air into the house, and an inspection of all energy equipment for potentially health and safety issues."<sup>167</sup> As will be discussed in more detail *infra*, inspectors may find homes to be ill-equipped to take on the weatherization process, resulting in a deferral. If the home, however, is deemed eligible for weatherization repairs, the energy auditor may use the audit to determine a recommended scope of work "of the most cost-effective energy conservation measures for [the] home."<sup>168</sup>

Under DOE rules, the weatherization allocation formula consists of two parts: the base allocation and the formula allocation.<sup>169</sup> The base allocation for each grantee<sup>170</sup> is fixed, but differs for each grantee, while the formula allocation is based on three factors: (1) low-income population, (2) climate, and (3) residential energy expenditures.<sup>171</sup> The population factor involves taking into account the share of the nation's low-income households in each grantee expressed as a percentage of all U.S. low-income households.<sup>172</sup> The climate factor takes into account the heating and cooling degrees for each grantee, treating the energy needed for heating and cooling proportionately.<sup>173</sup> The residential energy expenditure factor approximates the financial burden that energy use places on the specific low-income household.<sup>174</sup> These factors help to determine the scope of work needed for weatherization repairs on a specific home.

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<sup>168</sup> *Id.*

<sup>169</sup> DEP'T OF ENERGY, Weatherization Assistance Program Briefing Book 27 (Dec. 2019), [https://www.energy.gov/sites/prod/files/2020/01/f70/wap\\_briefing\\_book\\_v2.4\\_01.2020.pdf](https://www.energy.gov/sites/prod/files/2020/01/f70/wap_briefing_book_v2.4_01.2020.pdf).

<sup>170</sup> A grantee is someone who is eligible for weatherization repairs under WAP.

<sup>171</sup> Weatherization Assistance Program Briefing Book, *supra* note 169 at 27.

<sup>172</sup> *Id.*

<sup>173</sup> *Id.*

<sup>174</sup> *Id.*

Once the scope of work is decided, an energy auditor crew leader typically meets with the family to explain how the weatherization process will be conducted. From there, the repairs typically take a day or two and an inspector will review the work to ensure all aspects meet the Standard Work Specifications<sup>175</sup> outlined by the local weatherization provider.<sup>176</sup> From start to finish, the weatherization process can take months, even years. Providers in states across the country have identified the process to take anywhere from 2 to 24 months, depending on the popularity of the provider's location.<sup>177</sup>

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<sup>175</sup> *Standard Work Specifications*, NATIONAL RENEWABLE ENERGY LABORATORY, <https://sws.nrel.gov/>. Standard Work Specifications are used as a guide to ensure work performed during home energy upgrades is effective, durable, and safe.

<sup>176</sup> *How to Apply for Weatherization Assistance*, *supra* note 167.

<sup>177</sup> Indiana – 2-24 months.

*Weatherization/Energy Conservation*, Indiana Housing and Community Development Authority, <https://www.in.gov/ihcda/homeowners-and-renters/weatherizationenergy-conservation/>; Vermont – 6-8 months, but can take up to 18 months, *Frequently Asked Questions*, Champlain Valley Office of Economic Opportunity, <https://www.cvoeo.org/weatherization-faq/>; Idaho – 4 months from the time the audit is complete, but can be on a waitlist for an audit for up to 3 years, *Weatherization*, Eastern Idaho Community Action Partnership, <https://www.eicap.org/our-programs/weatherization/>; Utah – 6-18 months, *Weatherization Assistance Program*, Housing Authority of Utah County, <https://summitcounty.org/DocumentCenter/View/492/Application-Form-PD>.

Local providers in larger states, such as Texas and California, do not even provide a timeline for the applicants, citing each applicant's weatherization timeline as unique and on a case-by-case analysis. Texoma Council of Governments (TCOG) provides weatherization assistance in 19 counties in northeast Texas and does not offer how long the weatherization waitlist is, but rather supplements the question with identifying the priority for weatherization repairs goes to the "most in need" as previously described.<sup>178</sup> People determined to be "most in need" generally include elderly residents, disabled people, and children.<sup>179</sup> While this seems like a good policy on its face, it can result in additional confusion and delay.<sup>180</sup> With constant movement in the list, people who are eligible for weatherization but are not deemed "most in need" may find their weatherization repairs postponed indefinitely. After identifying the tedious aspects of the weatherization process from application paperwork and energy audit waitlists to actual weatherization waitlists and repair times, it is now no surprise that only 0.2% of the eligible low-income households received weatherization services.

### 3. *Flawed Deferral Process*

Households found to have major structural issues are ineligible for weatherization funding until the home can be structurally repaired, because weatherization is intended for homes that are structurally sound and can remain habitable for years.<sup>181</sup> While this makes sense that one would not, for example, want to invest in new ceiling insulation if the roof is leaking, deferring any weatherization until it meets specified structural requirements has resulted in significant delay in administering much needed energy efficient upgrades. In addition, households that are ineligible for weatherization due to structural deficiencies appear to be unaccounted for, which suggests the problem is bigger than what is being reported.

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<sup>178</sup> *Weatherization Assistance Program*, Texoma Council of Governments, <https://www.tcog.com/energy-services/wap/>.

<sup>179</sup> Mann & Schuetz, *supra* note 8.

<sup>180</sup> *How to Apply for Weatherization Assistance*, *supra* note 167.

<sup>181</sup> *Id.*

The National Association for State Community Services Programs (NASCSPP) outlines the process of a deferral, why it was issued, and makes recommendations on how to resolve the problem causing the deferral.<sup>182</sup> NASCSPP states that a “deferral does not mean that assistance will never be available, but that work must be postponed indefinitely until the problems can be resolved and the home can be made ‘Weatherization Ready’.”<sup>183</sup>

Reasons for a deferral range widely, including, but are not limited to: a client having a health condition that prohibits the installation of insulation and/or other weatherization materials; dangerous conditions existing due to high carbon monoxide level due to combustion appliances; and sewage or sanitary problems that would further endanger client and weatherization installers.<sup>184</sup> While NASCSPP claims that crews and contractors are expected to “pursue all reasonable options on behalf of the client,” deferral rates are at a shocking high. In Philadelphia, a dense metropolitan area, it is estimated that roughly “25% to 50% of WAP applicants who get an energy audit are required to defer their weatherization” until repairs can be made.<sup>185</sup> Nationally, 10-30% of WAP applicants are deferred due to health and safety issues.<sup>186</sup> With plentiful deferrals,<sup>187</sup> NASCSPP provides clients with referrals to other organizations that may be able to remediate the identified issues.<sup>188</sup>

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<sup>182</sup> NAT’L ASS’N FOR STATE COMMUNITY SERVICES PROGRAMS, *Deferrals*, <https://nascsp.org/wap/waptac/wap-resources/health-safety-resources/deferrals/>.

<sup>183</sup> *Id.*

<sup>184</sup> *Id.*

<sup>185</sup> Mann & Schuetz, *supra* note 8.

<sup>186</sup> *Weatherization Barriers Toolkit*, E4TheFuture, (Apr. 2022), [https://e4thefuture.org/wp-content/uploads/2022/04/E4-EFG\\_Weatherization-Barriers-Toolkit-4-7-2022.pdf](https://e4thefuture.org/wp-content/uploads/2022/04/E4-EFG_Weatherization-Barriers-Toolkit-4-7-2022.pdf).

<sup>187</sup> *Weatherization Deferral Form*, Georgia Environmental Finance Authority, [https://gefa.georgia.gov/sites/gefa.georgia.gov/files/related\\_files/document/Weatherization-Deferral-Form-Appendix-6.pdf](https://gefa.georgia.gov/sites/gefa.georgia.gov/files/related_files/document/Weatherization-Deferral-Form-Appendix-6.pdf) example of deferral form.

<sup>188</sup> *Deferrals*, *supra* note 182.

These referrals may range greatly, however, there are no current standards or minimums as to how referrals should be drafted, and how detailed they may be.<sup>189</sup> For the above reasons, few qualifying households finalize the application process, let alone ever complete the weatherization process.<sup>190</sup>

### *III. Recommendations*

Affordable housing should include access to clean and affordable energy. One avenue to facilitate energy justice for low income households is to engage HUD and the DOE to work together to administer a more efficient, inclusive, and effective weatherization program. This article has identified several flaws in the existing WAP and makes recommendations to, at the very least, expand its reach, streamline the application, audit, and deferral processes and enhance the administrative support for the program. Each will be discussed in

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<sup>189</sup> Example form... Case by case basis and depends on the home energy auditor.

<sup>190</sup> Interestingly, due to the heightened deferral numbers and lack of guidance in deferrals, many states have gone in a different direction and enacted programs to incentivize investment in household energy efficiency measures and weatherization outside of WAP. For example, Maine has a goal of installing “100,000 additional high-efficiency heat pumps over five years (by 2025) and requires the State Housing Authority to include information in its annual planning process for low-income weatherization programs on targets and budgets related to the heat pump goal.” Berg, et al., *supra* note 22 at 35-36. Furthermore, utilities in several states, including Virginia, Minnesota, Illinois, Washington, and Massachusetts, are required to increase their energy efficiency investments for low-income customers. In Virginia, state utilities are required to increase their investment in low-income customer energy efficiency programs from 5% to 15%. Berg, et al., *supra* note 22. In Minnesota, state law works to “strengthen [] low-income spending targets for electric and gas utilities.” *Id.* In Illinois, “The legislature in September 2021 passed the Climate and Equitable Jobs Act, which contains an array of utility reforms to decarbonize the power sector by 2045. Included are increased low-income energy efficiency spending requirements, as well as provisions to ensure investment in multifamily programs, whole-building weatherization, and health and safety measures” *Id.* “Washington’s Clean Energy Transformation Act prioritizes low-income programs and funding for those with high energy burdens (>6% of household income).” *Id.* And, in Massachusetts, “As part of their 2022–2024 Energy Efficiency Plan filed in October 2021, Massachusetts utilities have proposed strengthening investment in income-eligible programs by setting specific goals for heat pump installations in low-income households and developing an offering to facilitate deep energy retrofits in low-income multifamily housing. The 2022–2024 Plan also includes significantly increased investment and new incentives for moderate-income customers.” *Id.*

turn.

*a. HUD and DOE Must Work Together Under Justice 40*

As noted *supra*, the Justice40 Initiative specifically allocates 40% of federal investments in clean energy and energy efficiency to disadvantaged communities. And, as noted *supra*, HUD and the DOE are the two prominent agencies in charge of assisting low-income households with energy efficiency and weatherization opportunities. Unfortunately, neither HUD nor the DOE have yet to mention WAP in their Justice40 implementation plans. While both take note of WAP by briefly identifying the substantial benefits of home weatherization, they have thus far failed to utilize WAP in response to Justice40, which is a major missed opportunity to provide clean, efficient energy to disadvantaged communities.

*1. The Department of Energy (DOE)*

The DOE has responded to the Justice40 Initiative by providing eight policy priorities when guiding the implementation of Justice40.<sup>191</sup> These policy priorities include: (1) decreasing the energy burden in disadvantaged communities (DACs)<sup>192</sup>;

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<sup>191</sup> U.S. DEP'T ENERGY, *Justice40 Initiative*, <https://www.energy.gov/diversity/justice40-initiative>.

<sup>192</sup> U.S. DEP'T ENERGY, *General Guidance for Justice40 Implementation*, <https://www.energy.gov/sites/default/files/2022-07/Final%20DOE%20Justice40%20General%20Guidance%20072522.pdf>, "DOE's working definition of disadvantaged is based on cumulative burden and includes data for thirty-six (36) indicators collected at the census tract level 7. These indicators fall within the following four categories (the number in parenthesis provides the number of indicators in each category): Fossil Dependence (2) Energy Burden (5) Environmental and Climate Hazards (10) Socio-economic Vulnerabilities (19)."

(2) decreasing environmental exposure and burdens for DACs; (3) increasing parity in clean technology access and adoption in DACs; (4) increasing access to low-cost capital in DACs; (5) increasing clean energy enterprise creation and contracting in DACs; (6) increasing clean energy jobs, job pipeline, and job training for individuals from DACs; (7) increasing energy resiliency in DACs; and (8) increasing energy democracy in DACs.<sup>193</sup> Additionally, the DOE has drafted a 28-page document outlining the general guidance for Justice40 implementation.<sup>194</sup> This document outlines implementation methods and protocol, the benefits of the initiative under the DOE, and case studies highlighting approaches made by different jurisdictions that ensured benefits from funding opportunities flowed to “underserved, overburdened, and frontline communities.”<sup>195</sup>

The document touches on many options and methods to funnel funding to low-income households, but it fails to mention weatherization funding.<sup>196</sup> The only discussion of the Weatherization Assistance Program is in the case study section, highlighting the Hawaii Clean Energy Wayfinders Program.<sup>197</sup> In this program, community representatives were provided training for “energy conservation, efficiency, and clean transportation to facilitate community access” to Low Income Home Energy Assistance Program (LIHEAP) funds, Weatherization Assistance Program (WAP) funds, community based renewable energy (CBRE) subscriptions, and clean energy workforce development opportunities.<sup>198</sup> WAP was mentioned as an example of the Wayfinders Program’s investment in resources toward connecting most in need communities with energy assistance.<sup>199</sup> The lack of WAP mentioned by DOE or in their guidance document alludes to the department likely not including WAP in their Justice40 implementation plan.

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<sup>193</sup> *Justice40 Initiative*, *supra* note 191.

<sup>194</sup> *General Guidance for Justice40 Implementation*, *supra* note 192.

<sup>195</sup> *Id.* at 14.

<sup>196</sup> *Id.*

<sup>197</sup> *Id.*

<sup>198</sup> *Id.*

<sup>199</sup> *Id.*



2. *The Department of Housing and Urban Development (HUD)*

HUD announced 24 programs to join the Biden-Harris Administration's Justice40 Initiative.<sup>200</sup> The Secretary of HUD, Marcia Fudge, identified these 24 programs as aligning with Biden's goal of addressing environmental injustice by investing in underserved communities.<sup>201</sup> Secretary Fudge stated that "HUD's mission is rooted squarely in service to disadvantaged communities and to ensuring equity and justice for the communities we serve. As an agency, we are committed to supporting neighborhoods that have been disinvested for generations and overburdened by pollution and the impacts of climate change."<sup>202</sup>

HUD's covered programs include those that create affordable and sustainable housing for both individuals and communities, while also serving communities that have been impacted by disasters in an effort to spur economic growth.<sup>203</sup> HUD's goal of releasing the 24 covered programs in the Justice40 Initiative was to create greater visibility and transparency with the general public.<sup>204</sup> HUD does not mention WAP in its Justice40 implementation plan. HUD released an 83-page document detailing their strategic plan for the fiscal year 2022-2026.<sup>205</sup> Under the Initiative, HUD denotes an equity focused strategy, which includes, but is not limited to: increasing community awareness of lead, aligning and enforcing HUD-assisted housing inspections, and minimizing residential radon exposure.<sup>206</sup> HUD briefly identifies the Weatherization Assistance Program as having "substantial net benefits of home weatherization as well as of healthy homes interventions. The program generated a savings-to-investment

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<sup>200</sup> U.S. DEP'T HOUSING & URBAN DEVELOPMENT, *HUD Announces 24 Programs to Join Biden-Harris Administration Justice40 Initiative*, (July 15, 2022), [https://www.hud.gov/press/press\\_releases\\_media\\_advisories/hud\\_no\\_22\\_132](https://www.hud.gov/press/press_releases_media_advisories/hud_no_22_132).

<sup>201</sup> *Id.*

<sup>202</sup> *Id.*

<sup>203</sup> *Id.*

<sup>204</sup> *Id.*

<sup>205</sup> U.S. DEP'T HOUSING & URBAN DEVELOPMENT, *Fiscal Year 2022-2026 Strategic Plan*, <https://www.hud.gov/sites/dfiles/CFO/documents/FY2022-2026HUDStrategicPlan.pdf>.

<sup>206</sup> *Id.* at 54.

ratio of 1.4 and a benefit-cost ratio, including health and safety benefits, of 4.1.”<sup>207</sup>

However, WAP is not mentioned anywhere under the implementation plan for the Justice40 Initiative. Actually, WAP is not mentioned, with the exception of its brief praise, anywhere throughout HUD’s entire strategic plan. The absence of WAP has made it clear that HUD does not currently view WAP as a priority, especially when implementing a plan under Justice40.

Unfortunately, the DOE and HUD have both shown that WAP is not currently on either agenda as they begin to implement the Justice40 Initiative into their programming. Omitting WAP from HUD and DOE’s programming would be a mistake, as it looks to be the perfect match for the Justice40 Initiative, reducing energy burdens and increasing energy efficiency amongst low-income households.<sup>208</sup> Justice40’s mission is to allot 40 percent of the overall benefit of certain federal investments to these disadvantaged communities.<sup>209</sup> WAP’s mission is to improve the long-term energy performance of low-income households.<sup>210</sup> The American Council for an Energy-Efficient Economy (ACEEE) has stated that low-income energy efficiency programs not only reduce barriers to affordable energy, but also improve health and comfort, create local jobs, and keep money in communities.<sup>211</sup> With WAP creating energy efficiency within disadvantaged communities, they are also improving and benefitting the overall welfare of these low-income households. Benefitting and improving the general welfare of low-income households is the sole purpose of the Justice40 Initiative. Thus, it is imperative to have both HUD and DOE adopt WAP as a covered program under the Justice40 Initiative. Using Justice40 funds to strengthen the weatherization program would provide better resources for the program, propelling their efforts forward substantially.

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<sup>207</sup> *Id.* at 51.

<sup>208</sup> U.S. DEP’T ENERGY, *DOE Justice40 Covered Programs*, <https://www.energy.gov/diversity/doe-justice40-covered-programs>. “The Weatherization Assistance Program (WAP) reduces energy costs for low-income households by increasing the energy efficiency of their homes, while ensuring their health and safety. Through weatherization improvements and upgrades, these households save on average \$372 or more every year according to a national evaluation of the program. \*\*This program received additional funding in the Bipartisan Infrastructure Law (BIL).”

<sup>209</sup> *Justice40*, *supra* note 65.

<sup>210</sup> Martin, et al., *supra* note 131 at 10.

With the proposed revamp of the HUD/DOE partnership, the DOE will be able to use their funds to support weatherization of HUD-assisted buildings, creating energy efficiency and, thus, lessening the energy burden on low-income households. Investing in underserved communities by supporting weatherization of low-income households achieves the Justice40 goal of providing 40 percent, if not more, of the overall benefits of certain federal investments to disadvantaged communities.

*b. Address Known Challenges to the Weatherization Assistance Program*

To reach our goal of lessening the energy burden on low-income households, we must also resolve WAP's long-term challenges. Based on past success, the DOE/HUD partnership should be the foundation, once again, for a positive change in WAP productivity. In addition, four key changes to WAP would likely create lasting changes under the DOE/HUD partnership. First, WAP should broaden its reach. A partnership between HUD and DOE will help this so that if someone qualifies under HUD, their home would qualify for weatherization under the DOE. Second, WAP should focus on outreach opportunities and Pre-WAP programming. Only 2% of eligible homes apply for weatherization due to property owners' lack of eligibility, resources, and knowledge surrounding the weatherization program. Giving eligible households notice on relevant information of the program will no doubt create an influx of applicants. WAP should also include Pre-WAP program information in eligible households' notices. Third, inconsistent audit processes and deferrals are an issue. Pre-WAP programs are employed to reduce deferrals. However, it is a better plan of action for property owners to act proactively and tackle any trouble areas that may arise during the audit process before applying to WAP. As such, WAP should create uniform audit and deferral requirements. Across the nation, WAP funds are distributed to local organizations to complete weatherization for low-income households, but lack of uniformity in auditing and deferrals creates inequity among applicants. Creating uniformity across audit and deferral criteria will create a streamlined,

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<sup>211</sup> American Council for an Energy-Efficient Economy, *Low-Income Energy Efficiency Programs*, <https://www.aceee.org/topic/low-income>.

speedier weatherization process. Fourth, WAP's funds should be used to combat the program's lack of capacity.

Insufficient capacity stems from WAP employees that are either new to the program, deficiently trained on audit/deferral protocols, or in scarcity. Lack of capacity results in major delays in application processing times, wait time for audits, and if a deferral is given, reapplication processes.

IJA has designated \$3.5 billion for WAP, but without substantial changes in outreach and Pre-WAP programming, uniformity in audits and deferrals, and a change in capacity measures, WAP is heading down a slippery slope to the same, poor long-term results the 2009 Recovery Act endured. With the positive changes provided in this Article, WAP could become the best avenue to lessening the energy burden on low-income households in America.

### *1. Broadening WAP's Reach*

As noted *supra*, in 2009, the federal government invested in the American Recovery and Reinvestment Act (Recovery Act), specifically providing \$5 billion for weatherization efforts.<sup>212</sup> HUD and the DOE entered into a partnership in an attempt to streamline the use of the Recovery Act's weatherization funds issued through the Recovery Act for HUD-assisted buildings.<sup>213</sup> In accordance with this partnership, qualifying HUD-assisted buildings would automatically meet income requirements under the DOE's weatherization program without any additional verifications/applications needed.<sup>214</sup>

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<sup>212</sup> Martin, et al., *supra* note 131 at 5, "The last and only other time the federal government invested at this magnitude was through the 2009 American Recovery and Reinvestment Act (ARRA) and its \$5 billion appropriation. The ARRA-supported WAP attempted to increase service delivery to multifamily properties while scaling to ten times its normal delivery capacity in two years included new statutory provisions such as higher per unit project dollar caps and prevailing wage requirements."

<sup>213</sup> 10 C.F.R. sec. 440.22 (2010).

<sup>214</sup> *Id.*

This means that qualifying applicants living in multi-family homes would also automatically qualify under the joint program, and would not leave behind the majority of affordable households in the U.S. Once the building is identified by HUD and included on a list<sup>215</sup> published by the DOE, initial qualifications for the weatherization program have been met.<sup>216</sup> The 2009 Recovery Act increased weatherization productivity substantially, with the number of multifamily housing units served by WAP quadrupling compared to previous annual averages.<sup>217</sup> While the Recovery Act proved promising during its reign, it left persistent WAP challenges in its wake.<sup>218</sup> Some of the biggest challenges included obstacles discussed in this article such as outreach and Pre-WAP programming, uniformity in audit and deferrals, and a lack of capacity. These challenges were known at the time the Recovery Act was drafted and enacted, but were not cared for with a head-on approach, resulting in WAP's present, lingering issues.<sup>219</sup> The best way to enact change would include DOE and HUD partnering once again, but this time under the Infrastructure Investment and Jobs Act (IIJA).

The Recovery Act was a fiscal stimulus act created in response to the 2008 recession and funds have ultimately drained.<sup>220</sup> IIJA has since similarly allotted \$3.5 billion to WAP and could act as a vessel the same way the Recovery Act was used in 2009.

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<sup>215</sup> "As of January, 2017, interested owners of HUD-assisted or public housing should use this self-certification procedure for securing HUD approval of placing properties on the DOE list," *HUD-DOE Partnership: Multifamily Weatherization of Public and Assisted Housing*, U.S. DEP'T HOUSING & URBAN DEV., [https://www.hud.gov/program\\_offices/economic\\_development/eegb/programs/huddoepartnership](https://www.hud.gov/program_offices/economic_development/eegb/programs/huddoepartnership).

<sup>216</sup> 10 C.F.R. sec. 440.22 (2019).

<sup>217</sup> Martin, et al., *supra* note 131 at 15, "Ultimately, the program tripled overall production and, more significantly, entered this previously underserved sectors during those years. The distribution of this effort varied: three quarters of WAP agencies reported weatherizing fewer than 1,000 multifamily units, 18 percent reported between 1,000 and 5,000 units, and 8 percent reported more than 5,000 units. By final ARRA expenditures, the number of multifamily housing units served by WAP had quadrupled compared to previous annual averages."

<sup>218</sup> *Id.* at 21.

<sup>219</sup> *Id.* at 18.

<sup>220</sup> FED. TRANSIT ADMIN., *American Recovery and Reinvestment Act (ARRA)*, <https://www.transit.dot.gov/regulations-and-guidance/legislation/arra/american-recovery-and-reinvestment-act-arra>.

The only key difference is that HUD and DOE have not yet pronounced a partnership the way they did with the Recovery Act. It is crucial to have this partnership form once again. DOE and HUD published a memorandum of understanding announcing their 2009 partnership and can easily draft a new MOU to announce a reignited partnership. WAP made incredible strides under the DOE/HUD's partnership and, with the right changes and a revamped partnership, can substantially change and sustain the program for the foreseeable future. By creating change in WAP's trouble areas, IJJA's WAP funding will likely create lasting change.

## 2. *Focus on Outreach and Pre-WAP Programming*

The second problem revolving around WAP is the lack of applicants. Out of the estimated 30% of eligible households, only about 2% of them apply for the WAP program.<sup>221</sup> This is due in large part to the lack of outreach conducted by local WAP-funded organizations and a lack of Pre-WAP guidance. This SubPart will discuss opportunities to implement dual efforts.

**Outreach.** Property owners and authorized agents miss out on weatherization opportunities due to lack of knowledge of the program. We recommend creating a model brochure that contains crucial weatherization information to all HUD-funded housing. Indiana Housing & Community Development Authority currently has a brochure that includes substantial weatherization information.<sup>222</sup>

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<sup>221</sup> Ariel Dreihobl, *Weatherization Cuts Bills and Creates Jobs but Serves Only a Tiny Share of Low-income Homes* (July 7, 2020), <https://www.aceee.org/blog-post/2020/07/weatherization-cuts-bills-and-creates-jobs-serves-only-tiny-share-low-income>. “The National Association for State Community Services Programs’ (NASCSPP) most recent [funding survey](#), published in May, estimates that WAP funding from DOE and other leveraged sources weatherized 90,541 homes in 2018. About 30% of U.S. households, or 38.6 million households, are eligible for weatherization. This means that only about 0.2% of low-income households in the United States receive much-needed weatherization services each year.”

<sup>222</sup> Indiana Housing & Community Development Authority, *Weatherization Assistance Program*, [https://www.in.gov/ihcda/files/ihcda\\_WEATHERIZATION\\_brochure\\_2018\\_FINAL.pdf](https://www.in.gov/ihcda/files/ihcda_WEATHERIZATION_brochure_2018_FINAL.pdf).

The brochure details unknowns such as: what weatherization is; why a home should be weatherized; how to apply to WAP; documentation needed for application process; eligibility requirements; and a brief description on what the weatherization process entails.<sup>223</sup> Barriers to entry most usually include a lack of knowledge and a lack of understanding. By distributing brochures to property owners and authorized agents, eligible households are put on notice of their eligibility to the program and may be more inclined to apply for the program after being properly informed.

It may also be worthwhile to incentivize property owners to apply for WAP. WAP has proven to be incredibly beneficial for energy efficiency, but a major drawback in the WAP program is the application process. The application process requires property owners or their authorized agents to complete a self-certification,<sup>224</sup> as well as a complete WAP application.<sup>225</sup> No doubt many landlords are not inclined to provide both a self-certification and an application, and it appears that it would only be beneficial for large apartment complexes and not for individual landlords. Thus, creating some type of incentive for landlords to benefit from would likely increase WAP applicants. Tax incentives are popular amongst HUD-funded housing and could be a feasible route to increase applicants. HUD currently issues the Low-Income Housing Tax Credit (LIHTC) and has discretion and authority to issue tax credits for the “acquisition, rehabilitation, or new construction of rental housing targeted to lower-income households.”<sup>226</sup> Weatherization is an act of rehabilitation of a home and may, thus, be considered when dispersing LIHTCs. Incentivizing landlords to self-certify and apply for the weatherization program will increase applicants substantially and lead to the ultimate goal of more weatherization of low-income households.

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<sup>223</sup> *Id.*

<sup>224</sup> Self-certification procedure identifies interested owners of HUD- assisted or public housing and certifies them for securing HUD approval and placement on the DOE list. *HUD-DOE Partnership: Multifamily Weatherization of Public and Assisted Housing*, *supra* note 215.

<sup>225</sup> 10 C.F.R. sec. 440.22 (2019).

<sup>226</sup> U.S. DEP’T HOUSING & URBAN DEV., Low Income Housing Tax Credit (LIHTC), <https://www.huduser.gov/portal/datasets/lihtc.html>.

**Pre-WAP Programs.** Another way to facilitate outreach and to streamline the application process is to develop a Pre-WAP program. Most Pre-WAP programs that we identified currently take place after a deferral has been imparted upon an applicant due to the home being deficient in some regard. We recommend incorporating a Pre-WAP programming process before eligible households apply for WAP so that the households are prepared for the weatherization audit process. Preparation will cut delays greatly.

Pre-WAP Programs intervene in the WAP application process and help to make homes weatherization-ready.<sup>227</sup> Programs provide services that include: mold remediation, moisture control, pest control, electrical repairs, structural repairs, and/or roof repairs.<sup>228</sup> Pre-WAP Programs aim to tackle common problems leading to deferrals. Per the NASCSP website, only a few states have taken it upon themselves to establish Pre-WAP programs, including: Delaware, Indiana,<sup>229</sup> Pennsylvania, and Ohio.<sup>230</sup> We researched some of the programs in these states to better understand how they are administered and run. It appears Delaware's Pre- WAP programs are somewhat more

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<sup>227</sup> Amy Klusmeier, *The Weatherization Assistance Program (WAP)*, National Association for State Community Services Programs at 9 (Feb. 2019), <https://www.congress.gov/116/meeting/house/108877/witnesses/HHRG-116-AP10-Wstate-KlusmeierA-20190213-SD003.pdf>.

<sup>228</sup> *Id.*

<sup>229</sup> NAT'L ASS'N FOR STATE COMMUNITY SERVICES PROGRAMS, *Pre-WAP Program Examples*, <https://nascsp.org/wp-content/uploads/2019/08/Pre-WAP-Programs.pdf>. The State of Indiana created a Pre-Weatherization program and has seen great success. In 2016, Indiana's Pre-WAP moved 198 homes from permanent deferral to fully weatherized.

<sup>230</sup> Katrina Metzler, *Midwest Energy Efficiency Alliance Weatherization Deferrals Workshop*, <https://www.meeaconference.org/sites/meeaconference.org/files/Metzler-Katrina-Workshop-C3.pdf> - Across Pennsylvania and Ohio, Low-Income Home Energy Assistance Program (LIHEAP) has created a Pre-WAP program to address deferral issues arising from households being ill-equipped to take on the weatherization process. LIHEAP, with the help of other local resources, in the Pennsylvania/Ohio area has created a long list of conditions preventing weatherization for Pre-WAP households to view and consider. From standing water and mold to deteriorated lead-based paint surfaces, the list outlines the eligibility of a home for WAP. LIHEAP then offers services to repair those issues. In recent years, LIHEAP funds have been specifically set aside to address deferral causes and have made strides in their programming to further reduce deferrals.



developed than the other states, but a review of each follows.

**Indiana.** The NASCSP identifies Indiana's Pre-WAP Program being funded by mortgage settlement funds and having successes in the 2016 program year, as moving 198 homes from permanent deferral to fully weatherized.<sup>231</sup> While some other resources cite similar statistics,<sup>232</sup> the reports seem to be cyclical, all leading back to NASCSP's examples.<sup>233</sup> Indiana, like all states, grants weatherization funding through local organizations. Through the Indiana Weatherization/Energy Conservation webpage, Indiana residents are to choose their county and, from there, are directed to a webpage and phone number that is designated for weatherization in that specific county.<sup>234</sup>

We inquired with three Indiana counties to learn about their specific weatherization operations. We were unable to reach two of the three counties due to what appeared to be a lack of administrative support. One inquiry went direct to voicemail<sup>235</sup> with a statement that there is no staff available to accept the call and one inquiry was never answered after twenty minutes on hold, likely due to the same lack

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<sup>231</sup> Pre-WAP Program Examples, *supra* note 229.

<sup>232</sup> Midwest Energy Efficiency Alliance Weatherization Deferrals Workshop, *supra* note 230.

<sup>233</sup> We were not able to find the original sources of these statistics or anywhere identifying where these numbers or information came from.

<sup>234</sup> Weatherization, Western Indiana Community Action Agency, Inc., <https://www.wicaa.org/weatherization/>.

<sup>235</sup> *Id.* WICAA's direct phone number to the weatherization department results in a direct- to-voicemail call. The voicemail contains language establishing that there is no secretary on staff and the office is taking calls when they have the availability to do so. The voicemail ends with a sentiment acknowledging to either leave a voicemail and they will call back when available, or simply to just call back in the hopes of getting through next time. WICAA's website does not contain an online form to apply for weatherization services, so their phone number is the only way to gain more insight on the program. *Id.*

<sup>236</sup> Allen County's local organization governing weatherization is BrightPoint. The website provided on the Indiana Weatherization/Energy Conservation webpage contains a broken link, so we were unable to connect to BrightPoint via Indiana's resources. The phone number is listed as 800-589-3506. The phone number provided was a general hotline and, after choosing the weatherization extension, we waited on hold to be connected for more than twenty minutes. After the long wait time, we eventually gave up our endeavor to be connected with a weatherization program specialist, which would likely be the same for all potential applicants with busy schedules and obligations.

of support.<sup>236</sup> Information on their websites was minimal<sup>237</sup> and sometimes conflicted with information from partner sites.<sup>238</sup>

We were able to get through to one county, where the agent talked to us about the process and wait times.<sup>239</sup> With regard to the process, the agent directed us to their website, which allows applicants to input their information and helps identify if the applicant is eligible for the weatherization assistance program. Pertaining to the wait times and “most in need” jumping the line, the agent preferred not to answer but told us that when an applicant does reach the top of the list they are generally given a one-day notice before the audit is scheduled.

**Ohio.** Ohio is similar to Indiana to which the Ohio Department of Development identifies each local organization and their corresponding counties that disperse weatherization services.<sup>240</sup>

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<sup>237</sup> Putnam County is governed by the Western Indiana Community Action Agency, Inc. (WICAA). *Weatherization*, Western Indiana Community Action Agency, Inc., <https://www.wicaa.org/weatherization/>. The information available on the website is minimal, but it includes a description of the weatherization program being “designed to insulate and tighten up homes of the low-income in an effort to reduce heating costs and improve the overall comfort of the home.” *Id.* The website also states:

“The program provides services to both the homeowner and renters, and there is no cost to either the homeowner, landlord or tenant for services provided. Thorough inspection of furnaces, gas water heaters and other gas appliances are performed as well as a general inspection by our Building Analyst prior to services being provided. Furnace replacement is provided when cracked heat exchangers are detected. Household income guidelines are based on 200% of the Federal poverty guidelines.” *Id.*

<sup>238</sup> We note that the phone number provided by the Indiana Weatherization/Energy Conservation webpage and the phone number provided by WICAA webpage are different. The Indiana Weatherization/Energy Conservation webpage gives a general call number (812-232-1264) and does not have a weatherization extension. WICAA lists a weatherization-specific number (812-446-4000).

<sup>239</sup> The local phone number is 765-447-7683 and a long-distance phone number is 800- 382-7556. The Indiana Weatherization/Energy Conservation webpage gave both a local phone number and a long-distance phone number to receive information about Tippecanoe County’s weatherization assistance. Tippecanoe County was the only county we were able to get through on the telephone. After a short wait time, we spoke with an Area IV Agency representative. Area IV Agency governs weatherization services for Tippecanoe County.

<sup>240</sup> OHIO DEP’T OF DEVELOPMENT, *Home Weatherization Assistance Program (HWAP)*, <https://development.ohio.gov/individual/energy-assistance/6-home-weatherization-assistance-program>.

Websites for these organizations are not available, but phone numbers are. We once again gathered information from three<sup>241</sup> organizations at random and called to gain more insight on how these counties proceeded with weatherization services.<sup>242</sup>

One county gathers information of potential applicants over the phone and then mails a full application to the potential applicant. He stated that a big issue in the county is the incompleteness of applications, as they only send and receive weatherization applications through the United States Postal Service.<sup>243</sup> Once the application is complete, county staff meet with the applicant and conduct brief evaluations of the home, similar to what we have recommended to be an updated Pre-WAP program. A brief evaluation of the home includes looking for anything that may be a reason for future deferral. Once this sweep is complete, it is generally four to six months to complete a full energy audit. One significant cause for delay is apparently a lack of qualified energy auditors – apparently there are only six in the entire county.

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<sup>241</sup> We acquired information from three different organizations. Four organizations, Corporation for Ohio Appalachian Development, Community Action Wayne/Medina, Bridges Community Action Partnership, and Mahoning-Youngstown Community Action Partnership (MY-CAP), were all sent directly to voicemail.

<sup>242</sup> OHIO DEP'T OF DEVELOPMENT, *2023 Home Weatherization Assistance Program Service Providers*, [https://development.ohio.gov/static/individual/energyassistance/HWAP\\_MapListing\\_Revision\\_02162023.pdf](https://development.ohio.gov/static/individual/energyassistance/HWAP_MapListing_Revision_02162023.pdf).

<sup>243</sup> Summit County's weatherization processes are conducted through the County of Summit's Department of Community and Economic Development. OHIO DEP'T OF DEVELOPMENT, *2023 Home Weatherization Assistance Program Service Providers*, [https://development.ohio.gov/static/individual/energyassistance/HWAP\\_MapListing\\_Revision\\_02162023.pdf](https://development.ohio.gov/static/individual/energyassistance/HWAP_MapListing_Revision_02162023.pdf). We called the phone number (330-643-2537) provided and was immediately connected with the weatherization department. We spoke with a man who has worked in the department for only two months, but he was knowledgeable on the process and willing to explain Summit County's weatherization program.

Another county schedules in-person and over-the-phone appointments and applications are completed during these appointments.<sup>244</sup> Once these appointments are completed and proof of income is given, people are automatically put on a waitlist for a home energy audit. If the applicant's income qualifies, they are applicant automatically is placed on the audit waitlist.<sup>245</sup> Wait times for an energy audit can reportedly exceed a year's time, and there is a limit in the county of weatherization for 25 houses per year. As of the date of our contact, the county had 72 houses on the waitlist.

Finally, we spoke with Hamilton County, the county seat for Cincinnati.<sup>246</sup> The weatherization application process appeared relatively streamlined. It takes place over the phone and a receipt of such application is later mailed and/or emailed to the applicant. Once the applicant sends income verification information, the application is processed, and the applicant is placed on a waitlist for a home energy audit. Wait times for an audit were relatively short, usually less than a month.

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<sup>244</sup> Fulton County's weatherization services, along with five other counties, are run by Northwestern Ohio Community Action Commission, Inc. (NOCAC). Along with Fulton County, Defiance County, Henry County, Paulding County, Van Wert County, and Williams County are all under the umbrella of Northwestern Ohio Community Action Commission, Inc. Henry County has the shortest waiting list with 42 applicants. Henry County, however, only has the capacity to complete weatherization for 16 homes a year. *2023 Home Weatherization Assistance Program Service Providers*, *supra* note 242. The agent was very knowledgeable, and we greatly appreciate her willingness to share the ups and downs of the weatherization process.

<sup>245</sup> We asked her about Pre-WAP Programs in Ohio, to which the NASCSP identifies as one of the better states to conduct them, and she said they do not currently work with any Pre-WAP programs.

<sup>246</sup> Weatherization procedures are governed by People Working Cooperatively, Inc. (PWC). *2023 Home Weatherization Assistance Program Service Providers*, *supra* note 242 The agent was unaware of any Pre-WAP Programs in the county and state.

**Pennsylvania.** After Indiana and Ohio, we researched Pennsylvania WAP programs, which grant weatherization funding through local organizations as well. Pennsylvania expressed information on WAP on Pennsylvania's Department of Community and Economic Development webpage.<sup>247</sup> Different from Indiana and Ohio, Pennsylvania contains all their WAP information on one website. Their information is minimal, but the website does include eligibility requirements, weatherization FAQs, and a full list of all 67 counties and their corresponding phone numbers.<sup>248</sup>

**Delaware.** Delaware is the only state that divulges specifics on their Pre- WAP programming, and the success of such. The State of Delaware created a Pre- Weatherization program in 2015, and later relaunched the program in 2020.<sup>249</sup>

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<sup>247</sup> PA. DEPT. CMTY AND ECON DEV, *Weatherization Assistance Program (WAP)*, <https://dced.pa.gov/programs/weatherization-assistance-program-wap/>.

<sup>248</sup> PA. DEPT. CMTY AND ECON DEV, *Agency List*, <https://dced.pa.gov/housing-and-development/weatherization/agency-list>.

<sup>249</sup> Energize Del., *2020 Annual Report* 4, [https://www.energizedelaware.org/wp-content/uploads/2021/03/DESEU-32810-FY21-Annual-Report\\_Full-Report\\_v4.pdf](https://www.energizedelaware.org/wp-content/uploads/2021/03/DESEU-32810-FY21-Annual-Report_Full-Report_v4.pdf).

A partner change led to the subsequent relaunch, but the popularity of the program propelled it forward. Delaware's Pre-WAP program helps deferred WAP clients make "minor repairs to be eligible to receive valuable WAP program benefits."<sup>250</sup> The Pre-WAP program is aimed to help low-income families in Delaware prepare their homes to meet the requirements for the state of Delaware's Weatherization Assistance Program.<sup>251</sup> The Pre-WAP program assists applicants with structural home repairs needed to qualify the home and make them eligible to participate in WAP.<sup>252</sup> In Delaware, Pre-WAP participants are those who have been deferred by WAP for structural reasons, and are thus referred to Delaware's Pre-WAP program.<sup>253</sup> The pre-Weatherization Program will "inspect homes, hire contractors, schedule repair work, and perform a quality assurance post-inspection, then readmit [the] units into the Weatherization Assistance Program."<sup>254</sup> Delaware remains firm in its belief that without the Pre-WAP program, these families would not be able to receive the benefits of the Weatherization Assistance Program.<sup>255</sup> As of Fall 2020, Delaware's Pre-WAP Program is funded by the Energy Coordinating Agency.<sup>256</sup>

Indiana, Ohio, and Pennsylvania, however, have shown that a solid, uniform foundation is imperative for positive changes in Pre-WAP programming, and Delaware provides the beginnings of a model for other states. Building on Delaware's foundation, a widespread Pre-WAP program should be adopted by all WAP-funded organizations. This program should be publicized in WAP brochures and should be the first landing point for potential WAP applicants. This way, potential applicants are informed of possible structural issues before applying. If applicants determine they do suffer from structural issues barring their future application to WAP, Pre-WAP Programs should work with the potential applicant to repair such damage. Further, current Pre-WAP Programs have been funded by local organizations, but we propose Pre-WAP Programs be funded by the WAP funds from IJJA. With these funds, Pre-WAP Programs can get the resources and

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<sup>250</sup> *Id.* at 25.

<sup>251</sup> *Id.* at 9.

<sup>252</sup> *Id.*

<sup>253</sup> *Id.*

<sup>254</sup> *Id.*

<sup>255</sup> 2020 Annual Report, *supra* note 249 at 9.

<sup>256</sup> *Id.* at 3.

assets they need to create long-lasting and valuable programming.

### *3. Create Uniformity in Audits and Deferrals*

A current lack of uniformity in Pre-WAP programs, as well as auditing and deferrals has created a cycle of perpetual wait times and a resulting absence of weatherization. Uniformity across audit and deferral criteria is pivotal in streamlining the weatherization process. Once Pre-WAP and the application process is completed, applicants are notified that they are in a ‘waiting’ period, awaiting a home audit to be conducted. This waiting period can last indefinitely, depending on the circumstances. Waiting periods can be extended sometimes due to “most in need” applicants jumping the line, resulting in a never-ending push to the bottom of the list. While “most in need” applicants should receive some level of prioritization, their priority should not create an indefinite wait time for a home energy audit. Thus, we propose that WAP adopt a standard that sets forth a timeframe for energy audits to occur at no longer than one year of a submitted application. One year gives WAP time to allow “most in need” to jump the line while also giving realistic and attainable timelines for standard applicants to have their own energy audits completed.

The next obstacle to tackle is the home energy audit criteria. Audit criteria vary from organization to organization, with some giving much more leeway than others. Creating uniform audit criteria will result in equity across the nation. Criteria should state exact elements to identify, including: visual inspections of the exterior of the home; visual inspections of the interior of the home; inspections of all mechanical systems and their uniform conditions; the types of moisture problems; the types of ventilation problems; etc. Having a detailed uniform list for auditors to follow will allow auditors to quicken the audit process and allow for easier and more seamless audits to occur. A detailed list identifying key elements of a home will also result in less deferrals since auditors will have to identify which element on the list specifically held back weatherization, rather than the current general deferrals being handed out.

On top of streamlined audits, auditors should take a holistic approach when auditing an applicant’s home. It is necessary to lower

the bar for applicants and review the home in a holistic style rather than structure by structure, item by item. The approach should be more general with the auditor asking the question “Will this home benefit from weatherization in its current condition?” If the answer is yes, then weatherization efforts should proceed regardless of whether each item on the audit list was positively marked. With a holistic approach coupled with a detailed criteria list, audits will be conducted in a swifter and specific manner. This audit method will result in quicker turnarounds and shorter energy audit wait times.

Finally, a better system in dealing with deferrals stemming from unsuccessful energy audits must be developed. The NASCSP links sample deferral of service forms on their website,<sup>257</sup> highlighting Georgia,<sup>258</sup> New York,<sup>259</sup> and Wisconsin.<sup>260</sup> Georgia<sup>261</sup> and New York<sup>262</sup> are forms are somewhat vague, with blank space covering almost the entirety of the form for the auditor to write in (1) conditions the deferral is based on and (2) recommended measures for remedying the existing conditions. Such wide discretion can lead to inconsistencies in deferral reasons and recommendations. Wisconsin has a more straightforward form to which the auditor must check the reason for the deferral.<sup>263</sup> The reasons listed on Wisconsin’s form include: building is for sale or in foreclosure; chemical or combustion hazard; clutter/restricted access to work areas; lead paint hazard; moisture/mold; and more.<sup>264</sup> Each reason has a comment attached listing exactly what is necessary to complete and change before reapplication.<sup>265</sup> This boilerplate form is more helpful than Georgia and New York, but is still lacking a robust recommendation section. Lack of weatherization first and foremost stems from lack of knowledge and lack of resources. Applicants need guidance as to how and where to fix

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<sup>257</sup> *Deferrals*, *supra* note 182.

<sup>258</sup> *Weatherization Deferral Form*, *supra* note 187.

<sup>259</sup> *Weatherization Assistance Program Forms*, New York State Homes and Cmnty Renewal, <https://hcr.ny.gov/weatherization-assistance-program-forms>, Form 54.

<sup>260</sup> Home Energy+ Deferral of Service Notification (I have the word doc)

<sup>261</sup> *Weatherization Deferral Form*, *supra* note 187.

<sup>262</sup> N.Y. STATE HOMES AND COMMUNITY RENEWAL, *Weatherization Assistance Program Forms*, <https://hcr.ny.gov/weatherization-assistance-program-forms>, Form 54.

<sup>263</sup> Home Energy+ Deferral of Service Notification

<sup>264</sup> Home Energy+ Deferral of Service Notification

<sup>265</sup> Home Energy+ Deferral of Service Notification



the condition causing the deferral. Without it, they will likely not know where to begin the process of fixture, leading to unchanging conditions and subsequent lack of weatherization.

As such, we propose all WAP audits utilize a boilerplate form, similar to that of Wisconsin, but add a recommendation section that ultimately circles back to Pre-WAP Programs. If auditors can provide applicants with the name and number of the applicant's closest Pre-WAP Program, along with a detailed deferral form outlining the specific issues, Pre-WAP Programs should then take it upon themselves to get the deferred applicant squared away with whatever fix is necessary. Pre-WAP Programs should conduct business before applicants submit their applications, but there can be a separate division of Pre-WAP Programming that solely takes on deferrals. This way, pre- and post-applicants will not intermingle, which may cause delays, and deferred applicants will have access to the same resources if they would have entered the Pre-WAP Program. Resolving deferral conditions will push applicants back into the WAP rotation, resulting in higher rates of weatherization in low-income households.

#### *4. Create Uniformity in Audits and Deferrals*

Finally, WAP's lack of capacity issues must be resolved to fully change the program for the better. Crucial capacity issues to resolve include: (1) Hiring of new WAP employees; (2) New auditors becoming properly trained on audit and deferral standards; and (3) Currently employed auditors retrained on up-to-date audit and deferral standards.

This article proposes new standards across the board, from expanding eligibility and enhancing Pre-WAP programming to recommending new audit/deferral benchmarks. These standards will only function appropriately if WAP employees are hired and trained on the proper, up-to-date standards. While delays revolving around WAP have to do with a plethora of different reasons, many have cited that a lack of WAP administrators and energy auditors has greatly magnified delays. Thus, we propose a portion of the funds allocated for WAP be set aside for new employees. A program cannot meet its highest potential if there are not enough employees to meet with applicants, file paperwork, operate audits, and propose recommendations. New employee hires are essential for the success of WAP.

In addition, new and existing hires should be properly trained on up-to-date protocols. Proper training is crucial and proves to be a good time to discuss both the standards for the job, as well as the expectations of new hires. For example, auditors should be expected to perform full and complete audits and fill out both the audit form and deferral form to the best of their ability, leaving almost no room for vagueness or confusion. We have seen the repercussions of lackluster form-filling and want to move away from that. A standardized training program for WAP new and existing employees will strengthen the program and increase weatherization of homes.

#### *IV. Recommendations*

Low-income households constantly face adversity. Household difficulties can range anywhere from misfortunate housing locations to hazardous housing conditions. On top of these difficulties, lower income families pay on average three times more in energy costs than non-low-income families. Household difficulties impose a long-term burden, adding to the high cost of being poor, which can lead to a cycle of poverty that is difficult to break.<sup>266</sup> Unfortunately, being poor costs more. Weatherization, on the other hand, can save lives, enhance comfort, and provide more economic benefits, and provide at least some level of energy justice for low-income households.

HUD and the DOE have both sought for more energy efficient households in the past, specifically targeting low-income households as these households suffer the greatest costs. The coming together of HUD and the DOE to once again partner and focus their energy on the weatherization of low-income households will once again result in a more successful weatherization program. Further, a weatherization program with appropriate outreach, audit mechanisms, and deferral processes are available and should be immediately implemented. With funding through the Infrastructure Act and incentives through the Justice40 initiative, WAP could lead the way in closing the gap of affordable energy access for low-income households.



