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Addressing Climate Change with Energy-Efficient and Resilient Housing

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My name is Katie Tubb, and I am a research fellow at The Heritage Foundation. Thank you for the opportunity to speak before you today. The views I express in this testimony are my own and should not be construed as representing any official position of The Heritage Foundation.

The title of this hearing is, "Addressing Climate Change with Energy-Efficient and Resilient Housing." In some ways, this is a misemphasis or distraction from the issues Americans are facing today.

The Intergovernmental Panel on Climate Change (IPCC) estimates warming of 1.1 degrees C since 1850. In the past century of warming, there has been remarkable progress for human well-being and adaptation, giving reason for optimism looking toward the future if political and economic freedom advance. Since 1980, property damage from weather disasters has indeed increased in the U.S.[1] However, this does not tell us whether climate change is getting worse, but rather that there are more people, who are building more valuable real estate, and filling it with more valuable things. Accounting for this growth, disaster losses in both the U.S. and globally have been decreasing as a percent of gross domestic product (GDP).[2]

More importantly, the death toll from climate-related disasters has decreased 96 percent over the past century. To put this in perspective, Our World in Data (a project of Oxford University) records 15,071 people died in natural disasters in 2020; the Centers for Disease Control records 93,331 deaths in the U.S.

[1]Roger Pielke, Jr., "The Key to Avoiding Future Climate Disasters? Adapting." *Wall Street Journal*, July 16, 2021, https://www.wsj.com/articles/the-key-to-avoiding-future-climate-disasters-adapting-11626443600 (accessed May 17, 2022).
[2]Roger Pielke, Jr., "U.S. Disaster Costs 1990 to 2019," The Honest Broker, February 2, 2022, https://rogerpielkejr.substack.com/p/us-disaster-costs-1990-to-2019 (accessed May 17, 2022).

from drug overdose in 2020.[3] Progress on climate resiliency is the result of more people living under economic freedom, enjoying the benefits of economic growth, and benefitting from improved access to energy. Poverty makes people more vulnerable to the whims of climate. In the past century, extreme poverty—the normal condition for most people and for most of human history—plummeted 80 percent.[4]

The IPCC also finds no discernible trends for hurricanes, winter storms, floods, tornadoes, or thunderstorms. It does find trends in heat waves, heavy precipitation, and some kinds of drought.[5] Importantly, the most extreme projections for warming—those deemed "most likely" in the 2014 Assessment Report—have been downgraded to "low likelihood."[6]

However, there are other reasons I believe this hearing is particularly timely. The budget of the Department of Energy's Office of Energy Efficiency and Renewable Energy has steadily increased over the past decade, as have the amount of funds dedicated to its weatherization programs (including the Weatherization Assistance Program).[7] The Infrastructure Investment and Jobs Act which Congress passed last November includes an additional $3.5 billion over the next five years to the Weatherization Assistance Program, or roughly $700 million per year. This could easily put the program budget over $1 billion per year. The last time Congress authorized such a huge influx of taxpayer spending (under the American Recovery and Reinvestment Act), the federal government and state partners struggled to maintain the program's integrity or responsibly use taxpayer resources.

Additionally, the Office of Energy Efficiency and Renewable Energy is initiating scores of regulatory reviews and updates to energy-efficiency standards for common household and commercial appliances—from kitchen cooking ranges and ovens, furnaces, water heaters, air conditioners, lightbulbs, ceiling fans, washing machines and dryers, dehumidifiers, dishwashers, microwaves, and, of particular interest to this Committee, manufactured housing.[8] While perhaps of little importance to the workings of a massive federal government, these standards directly impact the daily lives of Americans.[9]

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[3]Hannah Ritchie and Max Roser, "Natural Disasters," November 2021, Our World in Data, https://ourworldindata.org/natural-disasters#what-share-of-deaths-are-from-natural-disasters (accessed May 17, 2022). News release, National Center for Health Statistics, "Drug Overdose Deaths in the U.S. Up 30% in 2020," Centers for Disease Control and Prevention, July 14, 2021, https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2021/20210714.htm (accessed May 17, 2022).

[4]Joe Hasell and Max Roser, "How do we know the history of extreme poverty?" Our World in Data, February 5, 2019, https://ourworldindata.org/extreme-history-methods (accessed May 17, 2022).

[5]Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis*, Sixth Assessment Report, Working Group 1, August 2021, https://www.ipcc.ch/report/ar6/wg1/ (accessed May 17, 2022).

[6]Referring to RCP8.5, which has largely been discredited as outdated and implausible. For instance, RCP8.5 assumes coal consumption per capita increases sixfold by 2100.

[7]Kelsi Bracmort and Corrie Clark, "DOE Office of Energy Efficiency and Renewable Energy: FY2017 Appropriations and the FY2018 Budget Request," Congressional Research Service, IF10661, May 25, 2017, https://crsreports.congress.gov/product/pdf/IF/IF10661 (accessed May 17, 2022). Melissa Diaz and Corrie Clark, "DOE Office of Energy Efficiency and Renewable Energy FY2022 Appropriations," Congressional Research Service, IF11948, October 19, 2021, https://crsreports.congress.gov/product/pdf/IF/IF11948 (accessed May 17, 2022).

[8]Daren Bakst, ed., "37 Biden Administration Regulations in the Pipeline that Americans Should Know About," Heritage Foundation *Special Report* No. 250, December 8, 2021, https://www.heritage.org/sites/default/files/2021-12/SR250.pdf.

[9]According to the DOE, "products covered by standards represent about 90% of home energy use, 60% of commercial building use, and 30% of industrial energy use." Office of Energy Efficiency and Renewable Energy, "Appliance and Equipment Standards Program," U.S. Department of Energy, https://www.energy.gov/eere/buildings/appliance-and-equipment-standards-program (accessed May 17, 2022).

In both cases, it is essential that Congress engage in meaningful oversight to better protect taxpayers.

The remainder of my testimony will focus on some of the problems with federally run weatherization and efficiency programs, their efficacy as climate polices, and what I believe are more constructive proposals moving forward.

Pitfalls of Federal Weatherization and Efficiency Programs

Americans clearly want energy-efficiency products that meet their unique circumstances and diverse needs. For example, the Environmental Protection Agency reports that over 90 percent of Americans recognize the ENERGY STAR label, and 56 percent knowingly chose an ENERGY STAR–labeled appliance.[10] Both consumers and suppliers respond to energy-efficiency options and demand. For example, over 500 electric utilities offer energy-efficiency programs providing consumers with information about energy use and financial incentives to participate, which the U.S. Energy Information Administration (EIA) estimates reduced electricity consumption by over 28 billion kilowatt hours in 2020. Savings were roughly split evenly between residential and commercial customers.[11] Residential customers also accounted for nearly 80 percent of electricity demand reduction in similar programs offered by utilities. Overall, the EIA notes a dramatic, steady decrease in energy consumption per dollar of GDP over the past 70 years, which reached an all-time low in 2020.[12]

Competition and the powerful incentive for families and businesses to get the "biggest bang for their buck" work together to drive down prices, get better performance, and provide greater efficiency. In a free-market economy, manufacturers both large and small are driven to provide consumers with better products at lower costs, while high prices drive innovation. In other words, market economies are inherently driven to do more with less.

However, problems arise when federal subsidies and mandates enter the equation.

1. Weatherization programs have a history of waste, fraud, and abuse of taxpayer resources. The Department of Energy (DOE) Inspector General recently published a special report reviewing implementation of the Weatherization Assistance Program in preparation for the significant influx of taxpayer spending from the Infrastructure Investment and Jobs Act.[13] It notes a variety of "risk areas that warrant immediate attention" given past problems under the similar flood of spending with the 2008 Recovery Act, including: fraud at all levels, substandard work, billing errors, erroneous or missing verification of applicant eligibility, insufficient training and oversight, and slow or nonexistent consequences for bad actors. The report details a number of examples, including:

- In Ohio, 585 (70 percent) of the 837 weatherized homes reviewed by Ohio required additional work to meet standards, with "a significant number" comprising health and safety issues. Among other billion irregularities uncovered, a clever weatherization program manager split

[10]ENERGYSTAR.gov, "ENERGY STAR Awareness," U.S. Environmental Protection Agency, 2020, https://www.energystar.gov/partner_resources/awareness (accessed May 17, 2022).
[11]U.S. Energy Information Administration, "Use of Energy Explained: Energy Efficiency and Conservation," January 21, 2022, https://www.eia.gov/energyexplained/use-of-energy/efficiency-and-conservation.php (accessed May 17, 2022).
[12]U.S. Energy Information Administration, "U.S. Energy Intensity Has Dropped by Half Since 1983, Varying Greatly by State," *Today In Energy*, August 3, 2021, https://www.eia.gov/todayinenergy/detail.php?id=48976 (accessed May 17, 2022).
[13]U.S. Department of Energy, "Prospective Considerations for the Infrastructure Law-Funded Weatherization Assistance Program," Office of Inspector General, DOE-OIG-22-30, April 26, 2022, https://www.energy.gov/sites/default/files/2022-04/DOE-OIG-22-30.pdf (accessed May 17, 2022).

procurement of spray foam insulation into 92 smaller purchases to avoid the threshold for seeking competitive bids.

- In Missouri, eight of the eleven homes visited failed final inspection "because a furnace or hot water heater was not working properly and emitting carbon monoxide at higher than acceptable levels."
- In Illinois, contractors overcharged 120 percent to 200 percent for smoke alarms, fire extinguishers, and thermostats. The DOE and state also found "widespread deficiencies in weatherization work including a lack of pressure release pipes on water heaters, doors improperly hung, and heat barrier around chimneys that were not installed, causing fire hazards. In a July 2010 State Monitoring report, officials cited a significant number of gas leaks in single-family homes weatherized by contractors, noting that the number of gas leaks verified during the monitoring review was "alarming."'
- In Virginia, a weatherization program agency failed to do final inspections of 70 percent of units in multi-family complexes reviewed by the DOE, and another could only explain $63,200 of nearly $540,000 in expenses for labor and materials.
- In Texas, the DOE found instances where half to two-thirds of the projects in multi-unit builds reviewed by the DOE did not meet eligibility requirements for the weatherization program.

This is to say nothing of the shell companies and fraud the Inspector General uncovered and which, in some cases, led to criminal convictions.

2. Weatherization subsidies and efficiency mandates have delivered underwhelming results and do not account for the diverse preferences of the American people. Despite perceptions, too many energy efficiency programs unfortunately promise more than they deliver when reviewed with actual customer experience and usage. Research by the University of Chicago conducted a randomized sampling of 30,000 weatherized homes in Michigan and found that up-front costs of the program were nearly double the long-term savings.[14] It also found underwhelming results for savings in energy use and costs with a similar house weatherization program in Wisconsin and a California building efficiency program for K–12 schools, such that many participants will likely not recoup the costs of their investments.[15]

Similarly, energy-efficiency mandates set by the DOE have overstated benefits. Researchers at George Washington University's Regulatory Studies Center have done extensive work analyzing individual household appliance standards over decades of examining real-world use. For example, researchers studied consumer experiences with the 2001 DOE efficiency standard for clothes washers through 2011. Though the DOE projected over 80 percent of consumers would realize benefits in energy and cost savings, the George Washington researchers found that half to three-fourths of consumers received negative or no benefit when looking at real world usage through product reliability, repair costs, and

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[14]Meredith Fowlie, Michael Greenstone, and Catherine Wolfram, "Do Energy Efficiency Investments Deliver? Evidence from the Weatherization Assistance Program," National Bureau of Economic Research, Working Paper 21331, July 2015, https://www.nber.org/papers/w21331 (accessed May 17, 2022).

[15]Sam Ori, "Why Government Energy-Efficiency Programs Sound Great–But Often Don't Work," *Wall Street Journal*, November 13, 2017, https://www.wsj.com/articles/why-government-energy-efficiency-programs-sound-greatbut-often-dont-work-1510629018 (accessed May 17, 2022). A study by the John Locke Foundation also found that a sampling of North Carolina schools that made investments to be LEED-certified in many cases used more energy per square foot or ranked below average for energy efficiency amongst comparable schools in the district and other states. John Locke Foundation, "Green school buildings fail to deliver on promises," press release, February 22, 2016, https://www.johnlocke.org/press/green-school-buildings-fail-to-deliver-on-promises/ (accessed May 15, 2022).

lifespan using data from class action lawsuits, Consumer Reports, and industry reports.[16] Humorously, to arrive at their cost-benefit conclusions the DOE had assumed that consumers used their washing machines 392 times per year (more than once per day).

Part of the reason for these mixed results is the DOE's failure to account for the diverse preferences and circumstances of American consumers and to rarely (if ever) reflect on real-world usage to inform their assumptions and data. As noted by researchers from the University of Chicago, the DOE's estimates of costs and savings for the Weatherization Assistance Program were "based on dubious assumptions, invalid extrapolations, the invention of a new formula to measure benefits that does not produce meaningful results, and no effort to evaluate statistical significance."[17]

Similarly, researchers from George Washington University concluded, "Among the gimmicks that DOE has used over the years to inflate the benefits of energy-efficiency standards are obviously false assumptions, such as: (1) all households are the same size, (2) all states have exactly the same climate, and (3) the "usage elasticity" of appliances is zero—i.e., consumers do not respond at all to the cost of operating appliances."[18]

Both note that federal efficiency programs seem to operate from the assumption that consumers are acting irrationally and must be preempted by standards or coaxed with subsidies—but that little attention has been devoted to either testing this assumption with real-world data or to acknowledging the potential for "market failure" on the side of regulators. Indeed, historically these policies and standards seem to better serve the anticompetitive interests of certain business and myopic bureaucratic biases to increase theoretical efficiency at the expense of other considerations—such as safety, size, performance, and cost.

The experience of Brian Mannix, who worked with the DOE at the outset of its energy efficiency standards program under the Carter and Reagan administrations, is telling:

> As the [Carter administration's Regulatory Analysis Review Group] had argued in its 1980 review [of DOE's proposed standards and a supporting analysis], appliance efficiency standards were dangerously anticompetitive. By 1987 some of the larger manufacturers had made substantial investments in more energy-efficient models, but were having trouble convincing consumers to buy them. Mandatory efficiency standards would override consumers' preferences, allow manufacturers to charge a price premium for the newer models, and exclude less-expensive

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[16]Art Fraas and Sophie Miller, "Measuring Energy Efficiency: Accounting for the Hidden Costs of Product Failure," George Washington University Regulatory Studies Center, January 1, 2019, https://regulatorystudies.columbian.gwu.edu/measuring-energy-efficiency-accounting-hidden-costs-product-failure (accessed May 17, 2022).

[17]Meredith Fowley, Michael Greenstone, and Catherine Wolfram, "Are the Benefits to the Weatherization Assistance Program's Energy Efficiency Investments Four Times the Costs?" Energy Policy Institute, University of Chicago, October 6, 2015, https://epic.uchicago.edu/insights/are-the-benefits-to-the-weatherization-assistance-programs-energy-efficiency-investments-four-times-the-costs/ (accessed May 17, 2022).

[18]Brian Mannix, "Wasted Energy: DOE's Inaction on Efficiency Standards and Its Impact on Consumers and the Climate," testimony before the Committee on Energy and Commerce, U.S. House of Representatives, March 5, 2019, https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/Testimony/GW%20Reg%20Studies%20-%20Wasted%20Energy%20Hearing_House%20Cmte%20on%20Energy%20%26%20Commerce%2C%20Subcmte%20on%20Energy%20-%20BMannix.pdf (accessed May 17, 2022).

(especially imported) appliances from the market. Intense lobbying by the industry was able to override the Carter and Reagan administrations defense of consumer choice.[19]

While there are many, we are now on the cusp of another such example. In December 2020, Congress passed the American Innovation and Manufacturing which, among other things quickly sunsets the production of hydrofluorocarbons (HFCs), ubiquitous and inexpensive coolants used in a variety of commercial and household appliances like refrigerators and air-conditioning units for homes and automobiles. Congress did so with little to no information on the costs to Americans – aside from those provided by several international suppliers which lobbied for the standards.[20] Conveniently for them, the standards will phase out the current suite of affordable coolants in favor of their more costly patented boutique varieties. Already, prices for HFCs have quadrupled, just as Americans are heading into summertime.

Of particular concern are the impacts on those least able to afford them. As noted by the Office of Management and Budget, "some research indicates that energy-efficiency regulations adversely affect lower-income consumers more than those who earn a higher income."[21] Research from George Washington's Regulatory Studies Center finds that the DOE's assumed discount rates to project the costs and benefits of its energy-efficiency standards best describe the benefits to households making $160,844 or more. (That is, those that can absorb higher costs up-front in anticipation of future savings.)[22]

If the DOE is wrong about how Americans prioritize future savings over immediate costs, then energy-efficiency regulations are reducing choices and burdening middle-income and low-income Americans with billions of dollars in costs. It is hard to see how government policies that increase costs and reduce choice for many Americans are actually making them better off.

To be clear, there is no question that some weatherization and energy-efficiency investments pay off and that efficiency is a desirable attribute. However, federal subsidies for weatherization and mandates for efficiency distort incentive structures and ownership of decision-making that inherently inspire accountability, and instead myopically prioritize efficiency over many other relevant factors in choosing household upgrades and appliances.

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[19] Ibid. See also, Tim Carney, "Big Business and Big Government," *Cato Policy Report,* July/August 2006, https://www.cato.org/policy-report/july/august-2006/big-business-big-government accessed May 17, 2022).

[20] Ben Lieberman, "America Can Keep Its Cool If Senate Rejects Kigali Amendment," Competitive Enterprise Institute, January 6, 2022, https://cei.org/blog/america-can-keep-its-cool-if-senate-rejects-kigali-amendment/ (accessed May 17, 2022). Ben Lieberman, "Kigali Amendment Would Raise Air Conditioning Costs and Undercut American Competitiveness," Competitive Enterprise Institute, April 5, 2022, https://cei.org/blog/kigali-amendment-would-raise-air-conditioning-costs-and-undercut-american-competitiveness/ (accessed May 17, 2022). Ben Lieberman, "Businesses Critical of Costly Climate Bill Finally Get to Weigh In," Competitive Enterprise Institute, April 16, 2022, https://cei.org/blog/businesses-critical-of-costly-climate-bill-finally-get-to-weigh-in/ (accessed May 17, 2022).

[21] Office of Management and Budget, "2018, 2019, and 2020 Report to Congress on the Benefits and Costs of Federal Regulations and Agency Compliance with the Unfunded Mandates Reform Act," January 2021, https://www.whitehouse.gov/wp-content/uploads/2021/01/2018_2019_2020-OMB-Cost-Benefit-Report.pdf (accessed May 17, 2022).

[22] Katie Tubb, Nicolas Loris, and Paul Larkin, "The Energy Efficiency Free Market Act: A Step Toward Real Energy Efficiency," Heritage Foundation *Backgrounder* No. 3144, August 17, 2016, https://www.heritage.org/environment/report/the-energy-efficiency-free-market-act-step-toward-real-energy-efficiency/.

The Efficacy of Weatherization Programs as Climate Policies

Importantly, climate change and carbon-dioxide-emission mitigation are not stated goals, considerations, or metrics in statute which the DOE is to consider in implementing either the Weatherization Assistance Program or its energy-efficiency-standards program. This has not stopped the current or previous Administrations from expanding the mission of these programs to include climate change.

Regardless of one's opinion of the nature and pace of global warming, house weatherization programs and efficiency regulations are costly and ineffective ways to reduce emissions. The DOE's projected environmental benefits to Americans from reducing greenhouse-gas (GHG) emissions total a paltry 1 percent of all benefits projected from efficiency regulations from 2007 to 2014.[23] The other environmental benefits (10 percent) come from global benefits of reducing carbon dioxide and ultimately do not come close to outweighing costs. Americans then bear all the costs and enjoy only a minority of any environmental benefits. In its assessment of investments made through the Weatherization Assistance Program, University of Chicago research estimated a cost of reducing carbon-dioxide emissions of $329 per ton.[24] The Biden Administration's interim social cost of carbon in $51 per ton.[25]

A realistic view of global warming must also acknowledge that the GHG-emissions reductions by weatherizing American homes and improving energy efficiency will have no meaningful impact on global temperatures. Heritage Foundation modeling using the Model for the Assessment of Greenhouse Gas Induced Climate Change shows that even if the U.S. and other Organization for Economic Co-operation and Development (OECD) countries reduced all of their emissions to zero today, the averted warming would be a meager 0.4 degrees Celsius by the year 2100.[26]

This is because two-thirds of GHG emissions come from developing nations,[27] some of which still do not have access to electricity or enjoy anything near the standards of living that affordable, reliable energy has enabled in the United States. These countries cannot afford costly energy policies, and as countries like India and others have shown, they do not intend to follow the United States in the costly policy model proposed by the Biden Administration.

China, for example, is the world's largest GHG emitter and is allowed to continue to increase emissions through 2030. China's emissions are more than double those of the United States and more than the entire developed world combined.[28] China's total energy consumption has more than tripled since 2000 and it is the world's top consumer and producer of coal, second for oil consumption, and third for natural gas

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[23]Sophie Miller, "Whose Benefits Are They, Anyway? Examining the Benefits of Energy Efficiency Rules 2007–2014," George Washington Regulatory Studies Center, September 2, 2015, https://regulatorystudies.columbian.gwu.edu/whose-benefits-are-they-anyway-examining-benefits-energy-efficiency-rules-2007-2014 (accessed May 17, 2022).
[24]Fowlie, Greenstone, and Wolfram, "Do Energy Efficiency Mandates Deliver?"
[25]Kevin Dayaratna, "Why the 'Social Cost of Carbon' Is Most Useless Number You've Never Hear Of," The Daily Signal, March 2, 2021, https://www.dailysignal.com/2021/03/02/why-social-cost-of-carbon-is-most-useless-number-youve-never-heard-of.
[26]See forthcoming paper, Kevin Dayaratna, Katie Tubb, and David Kreutzer, "The Costs of President Biden's Climate Agenda," Heritage Foundation *Backgrounder*, 2022.
[27]International Energy Administration, "Global Energy Review 2021: CO2 Emissions," April 2021, https://www.iea.org/reports/global-energy-review-2021/co2-emissions (accessed May 17, 2022).
[28]Hannah Ritchie and Max Roser, "CO2 Emissions," Our World in Data, 2020, https://ourworldindata.org/co2-emissions (accessed May 17, 2022).

consumption.[29] With per capita energy consumption far below the OECD average, China likely will continue to grow as it looks both to its domestic energy needs and to international energy markets. Consequently, as noted several times by the President's special climate envoy John Kerry, developed nations could eliminate all GHG and there would still be no meaningful climate impact.[30]

The EIA's International Energy Outlook projects no scenario in which global demand for oil and natural gas do not increase through at least 2050.[31] The International Energy Outlook expects coal use to decline, but to persist as an important source of energy globally. Global energy use is expected to increase by 50 percent by 2050. Indeed, despite years of political goals and aspirations to reduce use of conventional energy, today coal, oil, and natural gas still meet over 80 percent of the world's energy needs for heat, power, and fuel—much as they did decades ago.

Americans want a clean and safe environment. This is a shared value regardless of ideology; neither the left nor the right has a monopoly on caring about the environment. But just as cost is not an irrelevant factor when considering major military investments to improve strategic capability, so environmental policies that are cost-prohibitive or do not show meaningful benefits are counterproductive to improving Americans' resiliency.

Reframing the Conversation and Alternative Policy Proposals

Following the 2019 Polar Vortex, Governor Gretchen Whitmer requested task forces to assess Michigan's energy infrastructure and ability to prevent or respond to supply disruptions. One assessment reviewed energy vulnerabilities to homes in the Upper Peninsula, which are "disproportionately impacted by high energy costs" and many of which rely on propane for heat.[32] The Mackinac Center for Public Policy evaluated the task force recommendations, including home upgrades through the Weatherization Assistance Program and transitioning homes from propane to electric or natural gas.

It is worth mentioning here because the Mackinac Center's evaluation helps to clarify some of the trade-offs, costs and benefits, and limiting factors unique to homes that are involved in making energy-efficiency investment decisions. For example, heat pumps could be a more efficient, theoretically less expensive replacement for propane—but they do not work well below 30 degrees Fahrenheit, a nonstarter for a region that routinely sees sub-zero weather for months. Weatherization also offers an incomplete answer, with many homes in the Upper Peninsula not qualifying for the Weatherization Assistance Program. The Mackinac Center estimated it could cost up to $9 million to complete the requisite house inspections to determine eligibility, and $15 million to $470 million to weatherize the 23,000 homes that rely on propane (assuming they qualified).[33] Michigan's allotment for the Weatherization Program was

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[29]Katie Tubb, "It's Time for Climate Realism When It Comes to China," The Daily Signal, May 27, 2021, https://www.dailysignal.com/2021/05/27/its-time-for-climate-realism-when-it-comes-to-china/ (accessed May 17, 2022).
[30]Ebony Bowden, "Kerry Admits Zero Emissions in US Wouldn't Make Difference in Climate Change," *New York Post*, January 27, 2021, https://nypost.com/2021/01/27/kerry-zero-emissions-wont-make-difference-in-climate-change/ (accessed May 17, 2022).
[31]U.S. Energy Information Administration, "International Energy Outlook 2021," October 2021, https://www.eia.gov/outlooks/ieo/pdf/IEO2021_Narrative.pdf (accessed May 17, 2022).
[32]As described by the Michigan Department of Environment, Great Lakes, and Energy. Isaac Orr and Jason Hayes, "Assessing the Costs of the U.P. Energy Task Force Committee Recommendations," Mackinac Center for Public Policy, September 10, 2020, https://www.mackinac.org/archives/2020/s2020-07.pdf (accessed May 17, 2022).
[33]Mackinac Center uses the Department of Housing and Urban Development's per home estimates for "bronze standard" and "emerald standard" efficiency upgrades. Orr and Hayes, "Assessing the Costs of the U.P. Energy Task Force."

$17.9 million in fiscal year 2019. This spending would reduce but not eliminate the need for propane as a source of heat.

The Mackinac Center's assessment is also useful because it identifies the unspoken premise or assumption made by the Whitmer administration. As the authors write: "It is important to emphasize that the feared disruption in heating and transportation fuels is not an unavoidable caprice on the part of markets, nature or geography; it is entirely due to a deliberate policy choice on the part of the state government."[34] As discussed further in the report, the authors had in mind Governor Whitmer's intent to close the Line 5 pipeline, which supplies the Upper Peninsula (and the entire Great Lakes region) with oil and natural gas products and prevent the construction of a new one.

In other words, perhaps a far better approach to climate, housing, and energy is to look at the policies that unnecessarily increase prices, inject risk, and inhibit Americans' ability to be resilient. The more Americans must devote to housing, energy, excessive government spending, and fighting inflation, the fewer resources they have to address other pressures from climate or elsewhere. Estimates from Penn Wharton's Budget Model and the Joint Economic Committee expect that the average American household will have paid $1,200 more on energy in 2021 than in 2020. Estimates show that every income bracket will have spent a larger share of its budgets on household energy bills in 2021, with Americans in the lowest income quintile spending 11 percent of their budgets on energy in 2021, compared to 8 percent in 2020.[35] According to the Office of Energy Efficiency and Renewable Energy, "The energy burden for low-income households is on average three times that of non-low-income households and low-income households typically receive a lower quality of energy services."[36] The EIA projects that the average U.S. household will spend about 18 percent ($455) more on gasoline in 2022 than it did in 2021.[37] While there are significant state and regional differences due to policies and access to energy resources, average residential prices for electricity continue to climb and broke $0.14 per kilowatt-hour in September 2021.[38]

Reducing the costs of energy and housing by addressing these policy-induced pressures on Americans would give Americans more resources to make the energy efficiency and weatherization investments that make sense for their unique circumstances and priorities. A number of energy and housing policy reform ideas for both Congress and the Administration can be found in the Heritage Foundation *Special Report,*

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[34]Ibid.

[35]Hugo Dante and Kole Nichols, "To Combat Rising Energy Prices, Unleash American Production," Joint Economic Committee, February 2, 2022, https://www.jec.senate.gov/public/index.cfm/republicans/2022/2/to-combat-rising-energy-prices-unleash-american-production (accessed May 17, 2022). Zheli He and Xiaoyue Sun, "Impact of Inflation by Household Income," Penn Wharton Budget Model, University of Pennsylvania, December 15, 2021, https://budgetmodel.wharton.upenn.edu/issues/2021/12/15/consumption-under-inflation-costs (accessed May 17, 2022).

[36]U.S. Department of Energy, *FY2022 Congressional Budget Request*, Vol. 3, Part 1, June 2021, https://www.energy.gov/sites/default/files/2021-06/doe-fy2022-budget-volume-3.1-v5.pdf (accessed May 17, 2022).

[37]U.S. Energy Information Administration, "Summer Fuels Outlook," April 2022, https://www.eia.gov/outlooks/steo/report/summerfuels.php (accessed May 17, 2022).

[38]U.S. Energy Information Administration, *Electric Power Monthly*, "Table 5.3 Average Price of Electricity to Ultimate Customers: Total by End-Use Sector, 2011–November 2021 (Cents per Kilowatthour)," https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_03 (accessed May 17, 2022). For wholesale prices, see U.S. Energy Information Administration, "Wholesale Electricity Prices Trended Higher in 2021 Due to Increasing Natural Gas Prices," *Today in Energy*, January 7, 2022, https://www.eia.gov/todayinenergy/detail.php?id=50798 (accessed May 17, 2022).

"Inflation: Policymakers Should Stop Driving It and Start Fighting It."[39] While there are other factors at play in energy markets, the Biden administration unfortunately has to date refused to make the policy changes necessary to put downward pressure on energy prices. Instead, it continues to propose or finalize regulations restricting nearly every aspect of conventional energy: financing and private sector investment, exploration and production, pipeline construction and operation, and consumer use. Certainly, policies at the state and local level (such as zoning restrictions and counterproductive restrictions on energy production and distribution) play a role in reducing barriers to affordable housing and energy.

Congress should also completely reform the National Flood Insurance Program and increase the role of the private sector. As noted by the Government Accountability Office and others, federally subsidized rates "in many cases do not reflect the full risk of loss and produce insufficient premiums to pay for claims," creating an unsustainable system that discourages adaptation and actually encourages risky development in flood zones.[40] Related to this is the continual need to improve weather tracking and early warning systems to protect the most important asset – American lives.

Finally, Congress must reduce taxpayer burdens. From $4.76 trillion in 2019 to $7.02 trillion in 2021, Congress is spending at unsustainable rates that will hurt Americans and leave them with less of their own resources to respond to whatever the future holds.[41] Spending more on federal programs to subsidize weatherization does not reduce energy prices or housing costs for Americans. It only means that Americans pay for the full cost of these programs by other means – as taxpayers – whether they use them or not. An environmentally resilient future is one in which the country's finances are in good order and Americans are not crushed under the burden of federal debt and regulation.

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[39] Daren Bakst and Peter St. Onge, eds. "Inflation: Policymakers Should Stop Driving It and Start Fighting It," Heritage Foundation *Special Report* No. 252, January 20, 2022, https://www.heritage.org/sites/default/files/2022-02/SR252.pdf.
[40] U.S. Government Accountability Office, "Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas," GAO-21-119SP, March 2, 2021, https://files.gao.gov/reports/GAO-21-119SP/index.html#appendix38. Diane Katz, "The National Flood Insurance Program: Drowning in Debt and Due for Phase-out," Heritage Foundation *Backgrounder* No. 3224, June 22, 2017, https://www.heritage.org/sites/default/files/2017-06/BG3224.pdf.
[41] Heritage Foundation, *Budget Blueprint for Fiscal Year 2022,* https://www.heritage.org/budget/index.html.