Energy Efficiency Action Plan

Prepared for the Southeast Florida Regional Climate Change Compact and the Southeast Energy Efficiency Alliance

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Executive Summary

Southeast Florida residents and communities face a wide range of economic and health challenges, which are exacerbated by climate-related extreme heat and weather disasters. Among the issues residents face are lack of job accessibility and stability, high housing and energy costs and eviction risks, as well as housing-related health and safety issues. One important tool for addressing high energy and housing costs is energy efficiency,[1] (EE) a least-cost resource for meeting household and business energy needs. It is common for EE programs to be available through utilities and through federal programs designed to benefit lower-income households.

Nationally, the American Council for an Energy Efficient Economy (ACEEE) estimates that "the total impact of ratepayer-funded energy efficiency programs was a savings of about 286 million MWh in 2020…equivalent to approximately 7.69% of 2020 electricity consumption."[2] However, Florida utility customers benefit from just a fraction of these savings. The benefits from federal energy efficiency programs disproportionately benefit households in colder climates where high heating costs receive more attention than households that face increasingly hot temperatures without adequate (and costly) air conditioning. High household energy costs, and the lack of adequate efficiency resources inequitably harm Florida's lower-income households – particularly those Black and Brown communities that have been subject to historical discrimination.

Recognizing the importance of addressing equitable access to affordable energy bills, the Southeast Florida Regional Climate Change Compact (Compact) seeks recommendations for local and regional actions to increase the availability of EE for its vulnerable communities. This report offers several recommendations to support the Compact's objective, including establishing a "Resource Center" to provide valuable information and application assistance for households trying to navigate potentially dozens of programs, each with unique application and participation requirements. The Resource Center will have a critically important role in making it easier for lower- and moderate-income (LMI) households to get the greatest possible benefit available from the recently passed federal Inflation Reduction Act (IRA). The IRA provides a historic opportunity for the region to support EE for vulnerable households and communities without requiring either Compact members or households to bear the brunt of the investments. In addition to establishing a regional Resource Center, the project team also provides recommendations for the Compact to pursue the following initiatives to complement or enhance the services available through existing programs, such as the Weatherization Assistance Program (WAP):

- Implement regional energy efficiency programs, such as
    - LED light bulb distribution.

[1] The U.S. Office of Energy Efficiency and Renewable Energy defines energy efficiency as "the use of less energy to perform the same task or produce the same result." https://www.energy.gov/eere/energy-efficiency.

[2] Berg, W., E. Cooper, and M. DiMascio. 2022. State Energy Efficiency Scorecard: 2021 Progress Report. Washington, DC: ACEEE. aceee.org/research-report/u2201, p.14.

    - Smart thermostat distribution for homes with central air conditioning.
    - Highly Efficient ENERGY STAR® certified room air conditioner turn-in/upgrade program for renters and others relying on window units.
- Advocate at the state level for
    - Increased investment in utility EE programs for vulnerable households.
    - Legislative action establishing EE goals.
- Create regional assessment/tax-based funding streams to support ongoing EE programs for vulnerable households
- Create a Health Services Initiative (HSI) using untapped administrative dollars allocated through the Children's Health Insurance Program (CHIP) to address weatherization, mold remediation and energy efficiency.

The project team deeply appreciates the opportunity to work on this report, and thanks the Southeast Energy Efficiency Alliance, Compact members, and the many stakeholders who supported this work.

Introduction and Purpose

This report was developed to provide actionable recommendations to the Compact that will improve access to energy efficiency for the most vulnerable households residing in Southeast Florida. The Compact is comprised of representatives from Broward, Miami-Dade, Monroe, and Palm Beach Counties in Southeast Florida, a region that includes 111 local and tribal governments and over 6.2 million people. With nearly a third of the state's population, many, many households face significant risks from the harmful impacts of climate change. Local residents' resilience to climate change is hampered by increasing risk stressors, such as flooding from sea level rise and heat-driven illnesses. Rising temperatures increases energy consumption, which in turn increases energy costs for already vulnerable households and communities. As documented in a recent report from the U.S. Environmental Protection Agency (EPA), "socially vulnerable populations—defined based on income, educational attainment, race and ethnicity, and age…may be more exposed to the highest impacts of climate change in six categories: Air Quality and Health; Extreme Temperature and Health; Extreme Temperature and Labor; Coastal Flooding and Traffic; Coastal Flooding

This report uses the terms "vulnerable households" and "vulnerable communities" to refer to those groups that are economically-disadvantaged from historic and current underinvestment, have low to moderate incomes (LMI) relative to area medians (AMI), and/or are communities of Black, Indigenous, or People of Color that have often experienced systemic racism. In Southeast Florida these same groups are also most vulnerable to the harms brought on by climate change, including increased and prolonged storm activity, hotter temperatures, and sea level rise.

and Property; and Inland Flooding and Property."[3]

The region's vulnerable populations are also disproportionately harmed by high energy bills. Households with less income pay a higher percentage of their income on energy – and must often sacrifice on other household necessities to do so. Supporting access to energy efficiency for vulnerable communities can provide economic relief to households by reducing utility bills while simultaneously contributing to mitigation of climate harms due to energy use. This report provides further analyses and specific recommendations to support the Compact's ability to advance EE and act on the provisions of the Southeast Florida Regional Climate Action Plan 3.0 (RCAP) related to EE and the reduction of greenhouse gas (GHG) emissions that are currently being drafted.

Increased regulatory emphasis on utilities to provide EE programs could facilitate and support more EE for vulnerable households. Allocation formulas for federal WAP and Low-Income Home Energy Assistance Program (LIHEAP) funding could also be addressed to increase benefits in Southeast Florida where energy bills for air conditioning are far greater than heating costs. These changes could enhance opportunities for vulnerable households living in the region to improve the energy efficiency of their homes and thus reduce their energy costs.

The influx of funding that the Infrastructure Investment and Jobs Act (IIJA) and IRA are expected to provide in support of energy efficiency and climate preservation will, if effectively implemented, provide significant benefits to the region's disadvantaged households. The Compact and local governments can play an important role in ensuring that these funds are made accessible to households that might otherwise struggle to navigate potentially complex program rules. There are also independent steps the counties can take to increase access to EE within their boundaries, and in doing so can materially improve the conditions in which their most vulnerable citizens reside. **This report will outline steps that local county and municipal governments can take in partnership with communities and community-based organizations (CBO) in Southeast Florida to advance the well-being of vulnerable community members by reducing their energy bills through energy efficiency.**

Process of Developing the Report and Recommendations

The project team conducted an extensive review of publicly available data describing end use energy consumption and the demographics of the households in the region. Through a series of discussions with stakeholders in the region, including Community-Based Organizations (CBOs) and governmental bodies, the data was debated, validated, fleshed out, and brought to life with the realities of the Southeast Florida community.

[3] Climate Vulnerability Study.

Stakeholder Engagement

In an effort to ensure recommendations are relevant, applicable, and community-informed, the project team facilitated an outreach process to learn from the experiences of residents in the four-county area. In particular, this effort sought to form relationships with CBOs, local governments, and community advocates. Outreach was conducted through two mechanisms: one-on-one interviews and a stakeholder convening.

Interviews

During the initial formative stages of this project, the project team conducted preliminary interviews with a number of organizations to gain a better understanding of the contextual conditions in the region. These included Miami Climate Alliance, CLEO Institute, and Carras Community Investment, Inc.

In the summer of 2022, the project team conducted fifteen interviews with various community-based organizations (CBOs), local municipality offices, and advocates, including the following:

- **CBOs:** South Florida Community Development Coalition; Catalyst Miami; Community Partners; Habitat for Humanity Keys; Rebuilding Together Miami-Dade; and Rebuilding Together Broward
- **Advocacy Groups:** Florida Clinicians for Climate Action; and Enterprise Communities
- **Program Administrators:** Miami Dade County's LIHEAP administrator (Community Action and Housing Services Department); Palm Beach County's LIHEAP administrator; and Centro Campesino
- **Government:** City of Hollywood (Sustainability Department and Community Development Division); City of West Palm Beach; and Monroe County / University of Florida Extension Services - Environmental Horticulture

Interviews and conversations were scheduled in thirty-to sixty-minute sessions, and community-based organizations were offered a stipend of $300 for engagement in the outreach process.

Interview Key Findings

Southeast Florida residents and communities face a wide range of economic and health challenges, which are exacerbated by climate-related extreme heat and weather disasters. Among the issues residents face are lack of job accessibility and stability, high housing costs and eviction risks, as well as housing-related health and safety issues.

One example was highlighted by Hollywood's Community Development Division, which cautioned that "for many residents in Hollywood, the short-term is more important than long-term economics—we don't want to mandate a high capital cost that eventually pays off because people cannot afford it in the short-term." While energy efficiency may not be the top priority for Southeast Florida's frontline and most energy-burdened communities, it is seen as a welcome and useful offering that could simultaneously contribute to a more affordable cost of living, as well as a healthier, safer living environment. Increasing support for EE through the recommendations included in this report may help more households in the region benefit in multiple ways.

The need for more affordable, healthier housing and utility service is great. Moreover, existing utility or statewide offerings are limited and sparse, while federal weatherization programs are over-subscribed. Across the board, interviewees recommended increasing the size and extent of offerings to provide more holistic, flexible weatherization services, specifically those that are accessible

across languages, cultures, and income levels, and to ideally address housing safety, extreme heat, and high utility bills.

Interviewees also urged government officials to see community-based organizations as design and implementation partners. In an interview with Community Partners, it was noted that "sometimes it feels like programs are helping individuals versus working with families and empowering the community they live in." The lack of focus on the community is not only concerning, but arguably less effective. Many of the organizations, as unveiled through the interviews, already offer complementary services to residents, and also have existing trust-based relationships with residents across various demographics, which can support dissemination and uptake of current and future programs. Habitat for Humanity Keys highlighted that "trust is an issue, especially in non-English speaking communities," and suggested to "include communities to help identify needs and work with organizations already serving those communities."

A full report detailing the comments from the interviews is included in Appendix A: Stakeholder Engagement.

Stakeholder Convening

On July 28, 2022, the Southeast Florida Regional Climate Change Compact hosted a stakeholder convening called "Energy Efficiency Intersections in Southeast Florida," which was facilitated by the project team.

The convening was held to share more detailed information about this project with local governments and CBOs and gather stakeholder insight and feedback to inform the final report. The convening presented an opportunity to discuss actionable energy efficiency recommendations for Broward, Miami-Dade, Monroe, and Palm Beach counties of Southeast Florida. About 30 organizations, represented by about 50 individuals attended the convening.

Participants elevated the following ideas:

- Collaborate and partner with trusted community-based organizations for successful implementation
- Address hyper-local differences in conditions through local approaches
- Alleviate barriers to technological literacy and access (not all residents have access to the internet), language access, and information dissemination
- Connect funding across multiple sectors (e.g., health and energy) for holistic and efficient solutions
- Leverage federal program dollars to expand local programs

Following the stakeholder convening, stakeholders were invited to comment on the draft recommendations via survey or email, and/or participate in a 1:1 meeting to discuss unique needs, priorities and perspectives. More detailed information regarding the project team's stakeholder engagement can be found in Appendix A: Stakeholder Engagement.

Data review

To better understand how households in the region use energy and the opportunities that may exist for them to use it more efficiently, the project team reviewed publicly available data from a number of sources, including:

- 2015 and 2020 Residential Energy Consumption Survey
- Energy Information Administration Form 861
- National Renewable Energy Laboratory
- U.S. Department of Energy Low-Income Energy Affordability Tool
- Southeast Energy Efficiency Alliance
- Florida Public Service Commission 2019 Florida Energy Efficiency and Conservation Act Proceeding

- Local utility tariffs and websites
- The Florida Department of Economic Opportunity

We found that average residential customer electricity use varies significantly by utility, illustrated in Table 1:

Table 1: Average Residential Energy and Costs

Data from 2020 EIA 861. For FPL the values are for the full service territory.

	Average annual kWh	Average annual cost
FPL	14,031	$ 1,465
Lake Worth	11,333	$ 1,037
Key West	14,713	$ 1,976
Fl Keys Coop	16,355	$ 1,835
All utilities	14,035	$ 1,468

We also found consistency across the several data sources that air conditioning is likely the largest single consumer of household electricity in the Southeast. 2015 RECS data suggest that air conditioning is, on average, 25% of household electricity use,[4] which correlates closely with the ~30% share of household electricity that Nexant determined in its 2020 market baseline study for FPL.[5] Not surprisingly, on average households pay a high portion of their monthly electric costs towards air conditioning – and households with sub-standard housing have bills that are much higher than average. Twenty-five percent of the average $1,468 annual electric cost is roughly $360, suggesting an average air conditioning cost of about $30/month, yet we heard anecdotally from interviewees that it is common for the households they serve to have electric bills that are $400-$500 monthly, due largely to poor housing conditions and inefficient equipment. The ramifications of high cooling costs and of high energy bills generally for vulnerable households is discussed below. Recommendations for how Compact members can support savings for these households will be found following the discussion of energy burden.

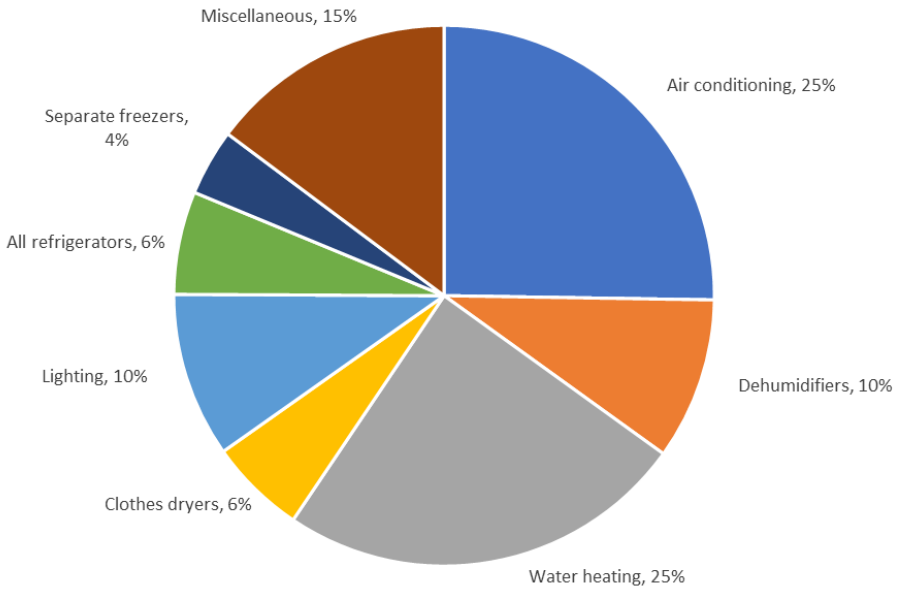
It is common for the households they serve to have electric bills that are $400-$500 monthly

Figure 1 illustrates the average portion of total annual electric use that is used for different categories of appliances. Of course, for the households described above with higher-than-average bills, these percentages would not be accurate. These households often have unique conditions and savings opportunities that do not line up with what analyses based on average conditions would suggest. For energy efficiency solutions to be most effective, especially for households that are not "average," it often requires an approach that addresses unique household needs. That said, it is still useful to observe that cooling, water heating, lighting, and dehumidifiers in combination are likely to consume most of the electricity used by many households in the region.

[4] 2015 RECS data.

[5] Testimony and Exhibits of Mr. Jim Herndon in FPSC Docket Nos. 20190015-EG, 20190016-EG, 20190017-EG, 20190018-EG, 20190019-EG, 20190020, 20190021-EG- Commission Review of Numeric Conservation Goals, Document No. 03679-2019.

Figure 1 : 2015 Percent of average total annual household electric use by category[6]



Context: The Extraordinary Need to Reduce High Energy Burdens

Across the nation, households typically spend 3% of income towards energy bills, with lower-income households spending three times more on energy costs than higher income households.[7] Within the south Atlantic region, including Florida, lies the highest percentage of households with high energy burden (>6%) in the U.S., despite the region having the lowest residential electric rates. In Southeast Florida, low-to-moderate income (LMI) households (<80 % Area Median Income (AMI)) often struggle to pay their bills and lack access to comfortable and healthy homes. Compounding the region's population growth of 10% over the past 12 years, LMI households live in a state of energy insecurity due to energy unaffordability, workforce/labor issues, service disruptions due to weather related events, and an increasing cost of living.

Energy burden and energy costs are considered standard metrics for identifying the scale of need for energy efficiency

[6] 2015 RECS data for South Atlantic, with heating consumption omitted. See https://www.eia.gov/consumption/residential/data/2015/index.php?view=consumption.

[7] Drehobl, Ross, Ayala, How High are Household Energy Burdens?, 2020

opportunities and strategies. Energy burden is defined by the percent of gross monthly household income allocated towards home energy costs. High energy-burdened households spend between 6-10% of their gross income on energy bills, while severely burdened households spend greater than 10% of their gross income. The Energy Affordability Gap (EAG) represents the additional amount a household would need for energy burdens to be less than 6%. Energy burden is a function of both income and energy rates, use, and costs. Income and energy inequity are complex issues that require systemic solutions. Reducing household energy use and therefore energy costs can save money for struggling households and is the focus of this report.

Over 23% of households across the southeast Florida region [have] high to severe energy burden.

There are many factors that contribute to households who experience high energy burden and energy costs. Often, these factors reflect the socioeconomic impacts of systemic racism. National research has shown those experiencing disproportionately high to severe energy burdens are Black, Latine, Indigenous, and older adult households, commonly living in low income multi-family housing, manufactured homes, and aging buildings.[8] In addition, factors such as the physical condition[9] and size of the home, type of fuel used, inefficient appliances, and lack of access to resources and/or energy efficiency programs and incentives all play a part in residents' inability to reduce their energy costs.

The southeast Florida region is demographically mixed, with a population of 40% white, 19% Black, and 46% Hispanic residents. The region's area median income ranges from $53,975 in Miami-Dade County to $72,012 in Monroe County.[10] Extremely low income households (<30% AMI), who are owners of newer and older single family homes are experiencing severe energy burdens at 20% and 17% respectively. Renters of older single family homes have 15% average energy burden. Overall over 23% of households across southeast Florida suffer a high to severe energy burden, with 28% of their homes built prior to 1979 when Florida established its first statewide building energy efficiency code. Energy burden and costs for different groups across the region are illustrated in Table 2.

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[8] Drehobl, Ross, Ayala, ACEEE Report: How High are Household Energy Burdens? 2020

[9] As noted elsewhere in this report, structural deterioration of homes, older, inefficient or non-functioning cooling equipment, and the lack of insulation, functioning windows and doors, and so on are prevalent among vulnerable households. These conditions can lead to high bills and compromised health for occupants - for example from the presence of mold.

[10] Based on US Census Bureau, 2020 data

Table 2: Energy Burden and Energy Costs Across the Region[11]

%AMI, Rent/Own, Housing Type	Average Energy Burden	Avg. Annual Energy Costs	Household Count	Average Annual EAG Per Household	Total Annual EAG by Row	Annual Sum GHG Emissions (lbs CO2e)
0-30% Owners, Newer SF	20%	$ 2,046	22,140	$ 1,348	29M	247M
0-30% Owners, Older SF	17%	$ 1,847	25,290	$ 1,117	26M	250M
0-30% Renters, Older SF	15%	$ 1,974	15,241	$ 1,126	17M	167M
0-30% Renters, Newer SF	15%	$ 1,844	8,529	$ 977	8M	91M
0-30% Owners, Older "Other"	13%	$ 1,393	2,796	$ 679	2M	22M
0-30% Renters, Newer "Other"	13%	$ 1,740	1,067	$ 940	1M	13M
0-30% Owners, Newer "Other"	12%	$ 1,515	2,228	$ 691	2M	19M
0-30% Renters, Older "Other"	12%	$ 1,413	1,305	$ 659	1M	11M
0-30% Owners, Newer MF	12%	$ 1,120	13,530	$ 501	7M	87M
0-30% Renters, Newer MF	11%	$ 1,245	29,403	$ 504	15M	209M
0-30% Renters, Older MF	11%	$ 1,194	34,971	$ 489	17M	243M
0-30% Owners, Older MF	10%	$ 995	18,641	$ 369	8M	119M
30-60% Owners, Older SF	6%	$ 1,954	41,328	$ 220	6M	422M
30-60% Owners, Newer SF	6%	$ 2,015	39,537	$ 308	9M	408M
30-60% Renters, Newer SF	6%	$ 1,910	12,674	$ 168	1M	142M
30-60% Renters, Older SF	6%	$ 1,833	16,393	$ 183	1M	163M

The data in Table 2 also illustrate how housing affordability has become a critical issue in Southeast Florida. A household living in Miami-Dade County earning less than 30% AMI earns about $16,193 in annual income. Given the median gross monthly rent in the county is $1,373, very low-income residents are not able to afford their rent, let alone pay their utility bills.

Using publicly available data, energy burden and energy costs were mapped regionally and by county to illustrate the regional landscape of LMI households. Figure 2 shows the relative average energy burden by census tract across the SEFL region, with cooler blue-green colors indicating lower energy burden and warmer yellow to orange and red indicating higher energy burden.

[11] Energy burden and energy costs map and data provided by the Southeast Energy Efficiency Alliance (SEEA)For geospatial tool map, SEEA used outdoor air quality data from EPA's EJScreen tool based on their NATA respiratory hazard index data captured in 2019. The emissions data were pulled that from EPA's eGRID tool, which gives emission rates by balancing authority. SEEA used data from the EIA to align utilities with particular balancing authorities, and to calculate out total emissions for the utility. Based on that, an emissions rate was developed that was then applied to the 2018 energy data from DOE's LEAD tool, to figure out actual emissions and potential avoided emissions by reducing the energy affordability gap for a particular jurisdiction.

Figure 2: SEFL Region Average Energy Burden

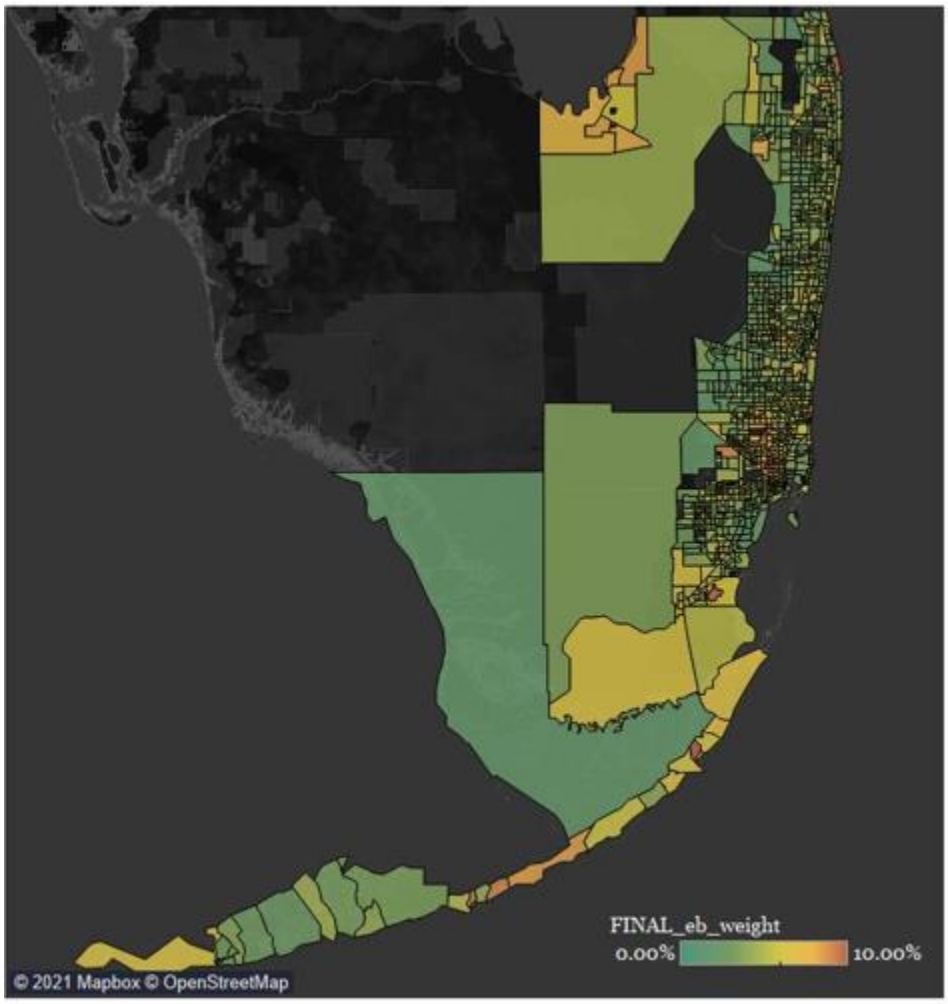


Figure 2 shows the relative average energy burden across the SEFL region

The ability to analyze data that support communities who are experiencing energy burden and energy costs by county was a key component to this report. Providing more granular data could be used as a resource for local governments to do targeted marketing and outreach to their communities that need the most assistance. Data on County-level energy burden, energy costs, and mapping of these metrics by census tracts is provided in Appendix B: County Level Energy Burden Data.

Figure 3: SEFL Region Average Energy Costs

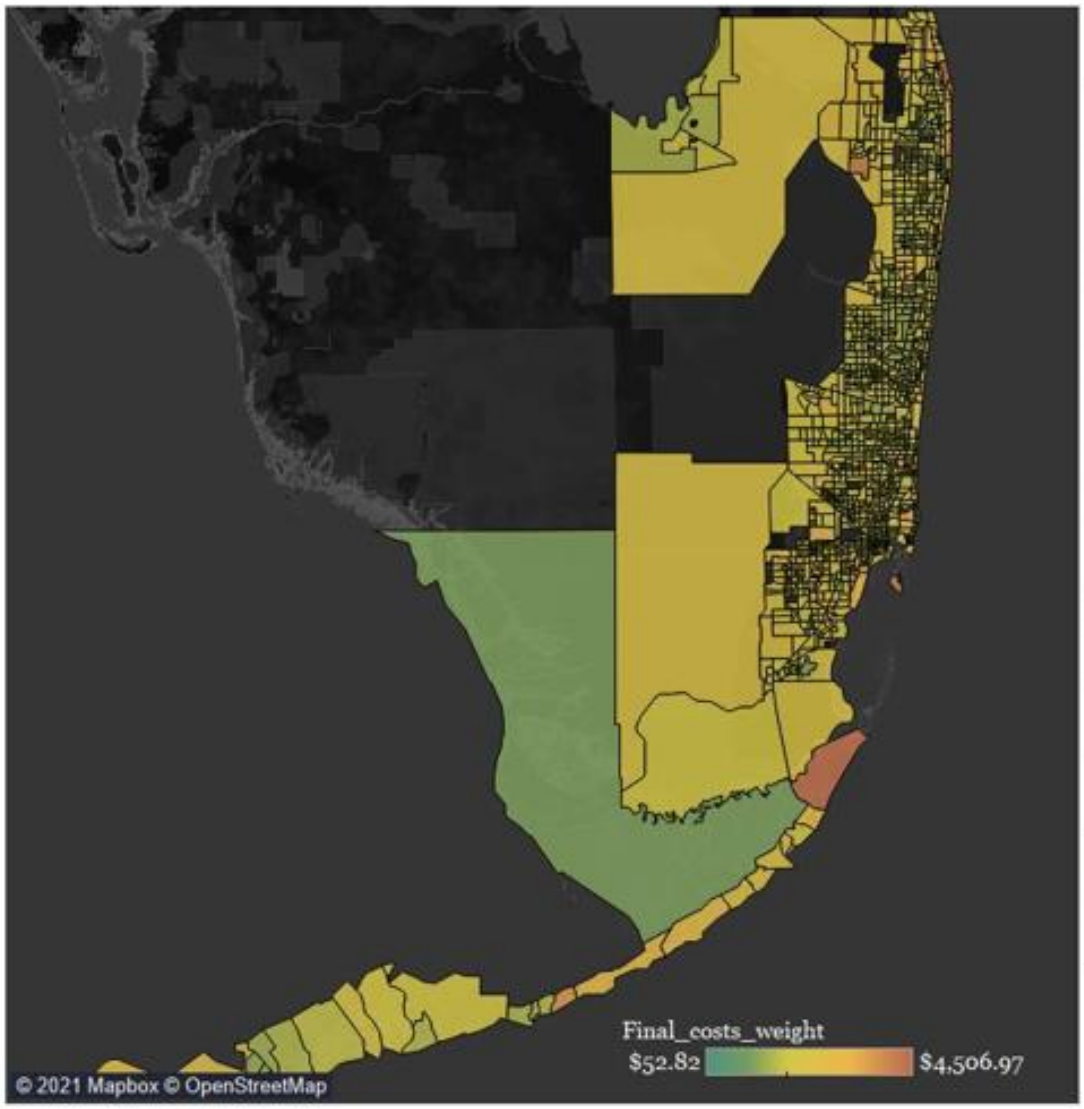
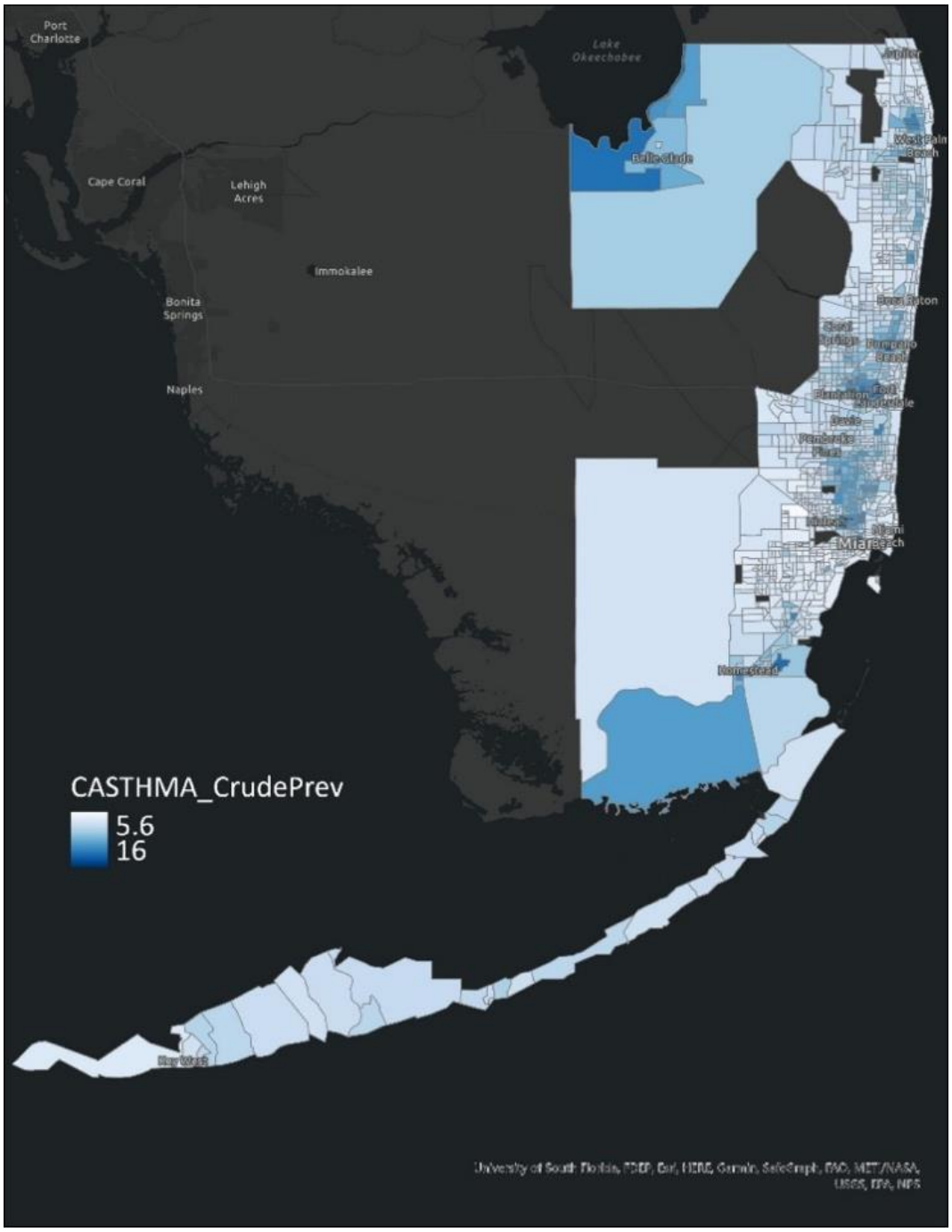


Figure 3 shows the average annual energy costs by census tract for households in the region using the same color scheme as Figure 2.

Figure 4: Crude Prevalence of Asthma Rates in the Region



Energy burden and health

Energy insecurity – the inability of a household to meet its basic heating, cooling, and energy needs over time – has ramifications beyond meeting household energy needs. The interconnection between the physical and economic drivers behind a household's ability to meet its basic energy needs can result in adverse health issues. For example, Figure 4 shows the crude prevalence of asthma rates by census tract in the region, with darker blue areas showing

higher prevalence of asthma.[12] Based on the maps of both asthma rates and energy burden, there is a clear correlation of households who are energy burdened with those having high asthma rates.

The interconnection between the physical and economic drivers behind a household's ability to meet its basic energy needs can result in adverse health issues.

Energy use and bills are not well-represented by "average"

Because the publicly available data regarding household energy use and costs are not detailed, it might be tempting to use simplifying assumptions in analysis. For example, if household energy use by utility was only considered based on data the utilities report to the Energy Information Administration (EIA) one might paint a picture of the average residential energy use, and then use that to estimate annual household energy costs and the value of EE savings opportunities. This is not an uncommon practice when considering the effect that an EE program could have for a large group of participants. For example, if one wanted to know what the effect of 10,000 high efficiency air conditioners would have in aggregate it would be sufficient to think in terms of average savings. However, when considering the potential energy saving benefit of a high efficiency air conditioner it is not sufficient to only look at the average savings. This is because lower-income and disadvantaged households often live in older, poorer quality housing and, therefore, have much higher energy bills than the average customer. The point that there are many deficiencies in the homes that lower-income households reside in, including structural, building durability and integrity issues, as well as life-safety and health concerns, was repeated often in our interviews. The result, not surprisingly, is that **disadvantaged households are likely to have energy bills that are considerably higher than average, and with many related issues that must be addressed before significant EE measures can be installed.** Because of this, estimating the benefits of EE for an average household would likely significantly under-estimate the savings that would be available for a segment of disadvantaged households.

Diverse opportunities for energy efficiency

It is also important to recognize that disadvantaged households live in a variety of housing types and living circumstances, and that each will have unique needs and opportunities – and this is borne out by the research conducted by the project team. According to the 2020 Residential Energy Use Consumption Survey (RECS)[13] almost 94% of homes in the South Atlantic region use air conditioning, and 85% of homes use central air conditioning (CAC). However, only 24% of apartments are primarily cooled by equipment that serves multiple units in the building, suggesting that many households living in multifamily homes may be responsible for their own cooling equipment – likely wall or window units. This is in stark contrast with the CAC that is reported to be present in the majority of single-family homes. RECS also

[12] Data from The Center for Disease Control on asthma rates are per 100,000 people.

[13] 2020 RECS link

reports that 82% of homes do not use window or wall air conditioners, and that of those households that do use them, over half have only one unit, nearly one-third have two units, and nearly 12% have three. These data indicate that at least in terms of cooling equipment efficiency a one-size-fits-all solution will not be effective in the region.

Policies must be implemented that provide specific solutions for a variety of different housing situations. Households living in multifamily apartments have different needs and opportunities than those living in single family homes. The opportunities for EE will also be different for households living in mobile homes than for either site-built single family or multifamily homes.

What is being done to address the need today?

As is the case in many parts of the country, some programs exist to assist homeowners and renters manage their energy bills through energy efficiency, but more funding and programs are needed that meet the needs of vulnerable households.

A one-size-fits-all solution won't be effective in the region.

Interviews with stakeholders included several who lead implementation of EE programs and resources within the four Compact counties. These conversations almost universally spoke to the tremendous needs of lower-income households in the region amidst an overwhelming lack of resources. In particular, the organizations the project team spoke with talked about the poor overall condition of the housing stock serving these communities. For example, stakeholders described that it is common for roof repairs to be necessary before insulation in the attic can be contemplated, yet the funds for such repairs are limited and difficult to access. In fact, stakeholders noted that many roofs in vulnerable areas remain "blue-tarped" from hurricanes dating back several years. The organizations that provide emergency home repairs told us that they must prioritize life-safety improvements over energy efficiency due to lack of resources, even though they recognize the benefits that EE could provide.

Weatherization Assistance Program and Low-Income Home Energy Assistance Program

The federal Weatherization Assistance program (WAP) provides significant assistance to eligible low-income households across the U.S. through a variety of energy efficiency measures and repairs, including adding insulation, air sealing drafty homes, repairing and replacing heating and cooling and water heating systems, and other measures. WAP is available in Southeast Florida, with total funding to the state determined through a formula allocation process at the federal level. The Florida Department of Economic Opportunity (DEO) then allocates this funding to different regions and providers across the state, who in turn deliver services to eligible households.

The Florida DEO developed a WAP Plan for the 2022-2023 program year which includes

$3.2 million in WAP funding plus an additional $5 million in supplemental funding through the Low-Income Home Energy Assistance Program (LIHEAP), which it says will "provide assistance to more than 1,000 households across the state."[14] In the Plan, roughly 14% of the WAP allocation is directed to the Centro-Campesino Farmworker Center that provides WAP services in Broward and Palm Beach Counties, 7% goes to Miami-Dade County, and about 2% goes to Monroe County. The Plan does not specify how the LIHEAP supplemental funds would be distributed.

The WAP Plan and draft LIHEAP ffy2023FY2023 Model State Plan[15] describe the measures that can be provided with this funding, and the list is comprehensive. Households that receive WAP and/or LIHEAP services stand to experience significantly reduced energy bills, though our interviews indicated that following the required WAP rules can be challenging for the local implementation providers. However, given the funding that is available, the number of households that could potentially receive services through this beneficial program is minuscule compared with the need. One interviewee alluded to a waitlist for WAP in their region so long that $13M would be needed immediately to fund projects for all of the households that are currently waiting for services. The funding described in the WAP Plan indicates that Centro-Campesino should be expected to retrofit 41 homes with its WAP allocation, Miami-Dade 17 homes, and Monroe County just a single home. If the per-home project cost with the LIHEAP supplemental funding is the same as projected for WAP, it would mean that slightly more than 100 homes would receive retrofits in the coming year across the Compact region – far, far short of the needs of the at least tens of thousands of households who would likely qualify for the program on the basis of their income.

Utility Energy Efficiency Programs

Utility-sponsored energy efficiency programs that are specifically targeting vulnerable communities at the household level in Southeast Florida are limited. Florida Power and Light (FPL) is the largest electricity provider in the four counties that comprise the Compact, with customers in Miami-Dade, Broward, and Palm Beach Counties. Key Energy Services and Florida Keys Electric Cooperative Association serve customers in Monroe County, and Lake Worth Beach Utility serves customers in part of Palm Beach County. Several of these electric utilities offer EE opportunities to residential customers but the extent of EE programs provided is relatively small. For example, FPL offers a $150 rebate to customers who purchase a new 16 SEER[16] or better central air conditioning system, and Florida Keys offers a somewhat larger rebate for a 16 SEER CAC – 30% of the cost up to $500. Key Energy Services offers a $250 rebate for a CAC with a SEER of 15 or greater.

The installed cost of a new high efficiency CAC is likely in the thousands of dollars, well beyond the means of households living near the poverty line. This means that lower-income, highly energy burdened households, who pay the same utility rates as other customers, are less able to take advantage of the limited rebates and incentives that are available.

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[14] 2022 WAP State Plan

[15] State LIHEAP Model Plan

[16] Seasonal Energy Efficiency Ratio, a measure of the efficiency of an air conditioner.

Low-income households often need rebates that cover the full measure cost of EE, which is common practice in many other jurisdictions where utility EE is a regulatory priority. In its research on this topic ACEEE observes that

> *low-income customers often face unique barriers to participation, and residential programs designed for non-low-income customers may not effectively meet their needs. Since low-income customers pay for energy efficiency on their utility bills, just as all other residential and commercial customers do, utilities have a responsibility to ensure that they have equitable access to efficiency programs. Many utilities and other program administrators, often driven by state policy goals, have developed programs specifically targeted at low-income customers and designed to alleviate some of the common up-front barriers to participation in energy efficiency programs.*[17]

Information on available utility program incentives, as of the writing of this report, can be found in Appendix C: Utility Energy Efficiency Programs.

If it is to succeed in reducing the energy burdens of its most vulnerable households the Compact and local governments must find ways to support their residents in overcoming the myriad barriers they face, or successfully advocate for changes to Florida's utility regulation to strengthen energy efficiency programs for LMI customers. Such advocacy is consistent with the draft RCAP 3.0, in provision EN 2.6, which calls for the county and local governments in the SEFL region to "support and advocate the Florida Public Service Commission (PSC) for increased energy savings through utility-sponsored energy efficiency programs, such as but not limited to the Florida Energy Efficiency and Conservation Act."[18]

Home Repair Programs

Several of the organizations we spoke with administer programs that strive to help vulnerable households make repairs to their homes. For example, the City of Hollywood Community Development Division provides loans for home repairs to eligible households, and the Neighborhood Pride Program seeks to advance affordable housing and implement work skills initiatives in the City's LMI neighborhoods over the next several years. Similarly, Rebuilding Together Broward offers free critical repairs for seniors and people with disabilities. However, the program is focused on life safety improvements, such as fall prevention and indoor air quality. Habitat for Humanity Keys also provides some limited funding for hurricane-related home repairs with funding coming from the City of Key West and the United Way. **Clearly, more funding is needed for such programs, not only to address near-term health and safety concerns, but also to make the kinds of building repairs that will both lead to longer-term housing preservation and allow the installation of extreme-weather-durable, comprehensive, long-lasting energy efficiency improvements.**

For example, several of the organizations the project team talked with described leaking roofs (either from hurricanes or deterioration over time) that had to be covered with tarps because there is no funding to make repairs. Insulating attics can provide significant energy bill savings, but it cannot be done when the roof leaks because the influx of rainwater could damage the insulation and make it

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17 https://www.aceee.org/sites/default/files/publications/researchreports/u1713.pdf, p. 1.

18 Draft RCAP 3.0, p. 22.

ineffective. Even worse, if cellulose insulation were installed in a home with a leaky roof, it could absorb water and become heavy enough to collapse the ceiling, leading to even greater repair costs.

Community Development Block Grants

Community Development Block Grant (CDBG) funds can be used for a variety of purposes, in some cases including home repairs and energy efficiency improvements. Rebuilding Together Miami-Dade receives a significant portion of its funding through CDBG, which it uses for critical repairs in existing buildings. These efforts were initially focused on disaster recovery but have been expanded with a goal of keeping housing safe and affordable for vulnerable households so that they are not displaced as neighborhoods become more gentrified. **The CDBG funds serve a critical purpose in this work but as highlighted by stakeholders, come with significant administrative and reporting burdens that create real challenges for organizations**, such as long reimbursement periods that limit the number of projects that organizations can undertake and number of residents who can be served.

Near-term opportunities and actions

In the following sections the project team recommends a number of actions for the Compact to implement.

In contrast to historic, commonly understood program implementation practices that have often excluded the community voices that would be most directly affected by programs, **the project team strongly urges the Compact to engage fully with communities and CBOs to collaboratively determine priorities, design approaches, and metrics for gauging success.** The outlines below can provide conceptual models for the Compact, but the project team believes that success will be greater if inclusive processes are used to flesh these concepts out into fully operational initiatives.

Improve access to Information and existing programs by creating a centralized Resource Center

The project team recommends creating a regional Resource Center funded from Compact Counties' and/or municipal budgets on an ongoing basis. It is widely recognized that a lack of easy access to information can make it challenging for utility customers to participate in energy efficiency programs. It is even difficult for households to choose energy efficient options when purchasing new equipment whether or not there are programs in place. This is even more true for vulnerable communities, where residents often need to work multiple jobs to try to make ends meet and simply may not have the time to go through the steps needed to find out how energy efficiency could save them money. Where English is not the primary language, the information may not be available at all -- even for households that theoretically might have time to seek it out. And, even where

support is available and potential applicants have time and speak English, the application process can still be confusing to navigate.

It became apparent during the interviews that barriers caused by the lack of ready access to information are front and center in Southeast Florida. We also heard that many communities are distrustful of benefit programs, and of government initiatives in general. This makes sense given that institutions were historically often complicit with practices reflecting racism and marginalization of BIPOC and poor communities. To this day, institutions, by and large, have not done an adequate job of supporting these communities, as evidenced by the large numbers of households who continue to live on the edge, not knowing when the next catastrophe might hit.

These conditions strongly suggest the need for a community resource that can become known as the place to go to for information and support for high energy bills. The Resource Center and any EE initiatives and programs should be closely linked so that households that engage with the EE initiatives are engaged in all of the services provided by the Resource Center. For example, if the Counties implement a high efficiency room air conditioner program, every household that participates should not only be referred to the Resource Center but also by default be engaged by the Center to find out if they would be eligible for any other services or benefits. This will be even more important in the coming months as the specific provisions and requirements to receive benefits through the IRA are developed. Ideally, this resource could serve the following functions:

- Maintain a "catalog" of available energy efficiency, energy bill assistance, and home preservation programs across the region, including eligibility criteria, services provided, and application requirements and process.
- Provide "energy coaching" in multiple languages to help households understand ways they can reduce their energy costs through low- and no-cost actions.
- Provide a supported, language-accessible centralized application process where required application data can be collected and electronically populated into application forms of all appropriate programs and providers – including those that support home repairs and other related services – thus avoiding the necessity of multiple applications for needed services.
- Facilitate participation in IRA funding opportunities as the Department of Energy and state SEO develop programs and participation processes.
- Provide staffing to provide these services in a variety of ways that meet the needs of vulnerable households – including not only web- and email-based information and engagement, but also through community workshops and in-person coaching.
- Design and implement the Resource Center with ongoing collaboration between governmental and community-based organizations, capitalizing on shared purposes and building inroads to communities through existing CBO relationships.

Importantly, we heard through our interviews that relational, community-based outreach will likely be more effective than a website, or bus posters, or any mass marketing approaches that are not culturally accessible to the target communities. Community Partners' BRIDGES neighborhood hubs offer a physical, location-based one-stop-shop model that could be expanded or replicated on a larger scale as one mean of implementing the project team's Resource Center recommendation.

A pilot program implemented in North Carolina provides strong evidence for the kinds of benefits that one recommended aspect of the resource center – resource coordination – can provide. North Carolina Partners in Home Preservation is a pilot program to "help improve coordination among home repair and weatherization service providers, funders, and referral partners that serve low and moderate-income homeowners."[19] The pilot "created a "no wrong door" approach for homeowners seeking assistance by using a unified screening application and data sharing mechanism to provide collaborative case management. The coordinated approach allows residents to receive all the benefits of home repairs and weatherization, including improved energy efficiency – helping homeowners save money on energy bills, improve household health, and ultimately improve residents' quality of life."[20] The pilot used a unified screening tool and intake process, and a cross-organizational information waiver to allow data sharing across organizations. In fact, the partners developed a shared database, vastly improving the ease of applying for and receiving services from multiple organizations. When home assessments were carried out, they

"identified a full scope of work, or list of projects needed to bring the home up to health and safety standards; weatherize and improve energy efficiency; or modify for accessibility. The home assessor also recorded pertinent information that may arise during the assessment – previous service attempts; home or land ownership details; utility connections; or availability of financial resources – so that the assessor, occupational therapist, energy efficiency experts, and community partners have a broad view of the needs of both the home and the homeowner. Once assessments were completed, the coalitions integrated the findings into specific project needs or tasks within the shared database." [21]

Our recommendation is to fund this "Resource Center" from Compact County budgets on an ongoing basis. Doing so would create more stability compared with short-term grant funding and would allow the center to fully develop as a reliable resource for the communities it serves. However, rather than create a new organization that is embedded within government, we recommend that the implementation model be developed through a collaborative process that builds upon on the expertise of the CBOs and trusted community partners operating in the region. Importantly, the Resource Center can be designed within an understanding of the intersectionality of the many issues that distressed communities and disadvantaged households face. Addressing food, medicine, and housing insecurity are all connected to the negative consequences of high energy burdens. We urge the Compact to work with local partners to frame the Resource Center such that it provides support in a "no wrong door" manner, rather than in a narrow scope that could result in missed opportunities for vulnerable households. This approach is already used in Miami Dade County's Community Resource Centers and No Wrong Door initiative which provide an example of county and city departments working together to provide wrap-around services to residents. For example, when residents come for utility bill assistance (LIHEAP), they are offered both county and city funds. They can also be

[19] https://www.tjcog.org/sites/default/files/uploads/Planning/Housing/nc_partners_in_home_preservation_summary_march_2021.pdf

[20] NC Partners in Home Preservation

[21] NC Partners in Home Preservation

referred to the weatherization program, job placement services, and/or housing services, as needed.

The Resource Center can be designed within an understanding of the intersectionality of the many issues that distressed communities and disadvantaged households face. Addressing food, medicine, and housing insecurity are all connected to the negative consequences of high energy burdens.

Develop and budget for locally-funded energy efficiency initiatives

In addition to the Resource Center described above, we recommend the Counties and local governments consider providing direct support to their most vulnerable constituents by providing certain energy efficiency measures at no cost. Such steps would be consistent with RCAP, which calls for the region to "Promote and create local incentive, financing, or loan programs for energy efficiency technologies or building retrofits."[22] As with the Resource Center, the costs of such initiatives could be jointly funded using annual budgets and developed in close partnership with communities and CBOs to overcome lack of trust in institutions. In particular, providing the following measures at no cost to households could be considered:

- LED light bulbs
- Smart thermostats for households with CAC
- Highly Efficient ENERGY STAR® certified room air conditioner turn-in/upgrade program for renters and others relying on window units

Careful thought should be given to maximizing any outreach, communication, and engagement associated with these initiatives. Specifically, the Resource Center and EE initiatives should be connected by a single, over-arching brand representing the four-county energy efficiency initiative, and households that engage with the EE initiatives should be engaged in all of the services provided by the Resource Center

The reasoning behind each of these selections follows.

LED Light Bulbs

While efficient lighting is becoming a common product choice for large retailers, and despite federal lighting efficiency standards that will ban the sale of many types of inefficient lighting in the near future, it is likely that LED bulbs are far less common in the region's vulnerable households and distressed communities. This is likely the case for several reasons:

- To the extent that utility companies promote efficient lighting it is often done in partnership with national big box retailers – but these stores are often not located in disadvantaged communities;
- Florida utilities in general have done far less to promote EE than utilities in other parts of the country;
- Absent programmatic support, efficient lighting still costs more to purchase – even though LED bulbs last much

[22] RCAP 3.0 draft, p. 22.

longer and have considerably lower operating costs.

There are two distribution models for efficient LED light bulbs that we recommend for consideration to the Compact. In either case we strongly recommend that participating households be fully engaged by the Resource Center as well, ensuring that households are connected with all relevant opportunities available to them once an initial contact is made.

- Direct installation of LED lighting as a component of an "energy checkup" or "energy house call" program. In this model, a trained, locally-hired, community-based provider makes in-person house calls to install efficient lighting in locations where existing bulbs are inefficient, while also providing information about steps the household can take to lower their energy bills and directing the household to available programs for which they would be eligible, such as LIHEAP and WAP. This model can be highly effective because the person doing the walk-through can assure that bulbs are installed appropriately.
- Provision of a pack of 4-6 LED bulbs to any household that reaches out to the Resource Center for information, as well as through direct outreach to vulnerable households with the help of CBOs and trusted community partners. EE "kit" programs are fairly common among utilities that provide EE and are most effective when the efficient lighting is used as a tool for catching households' interest and using the contact to maximize benefits through engagement with all other programs for which they may be eligible.

It will be critically important that the outreach and engagement strategies for such initiatives be designed in concert with community members and organizations, to make them as closely connected to community values and needs as possible.

Smart Thermostats

The 2020 RECS data suggest that around 85% of households in the South Atlantic region have CAC, but also that over half of households in the region leave the temperature setting at the same temperature most of the time – and that roughly one-third of households keep the temperature set at 70 degrees or less. Even modest changes to temperature settings can provide significant electricity and bill savings, and we recommend that the Compact and local governments pursue providing both information and education on efficient thermostat settings, and for households with CAC, a smart thermostat that can manage temperature settings to save households energy and money, along with training on how to use it effectively.

To ensure that benefits from investment of public dollars are maximized, we recommend the Compact and local governments consider a bulk procurement process to secure the best possible discounted pricing for any high-efficiency equipment it chooses to provide.

Households that engage with EE initiatives should be engaged in all of the services provided by the Resource Center. For example, if the Counties implement a high efficiency room air conditioner program, every household that participates should not only be referred to the Resource Center but also by default be engaged by the Center to find out if they would be eligible for any other services that might benefit them. Advertising the availability of free energy-saving equipment has the potential to attract the attention of households who could benefit from a range of program services that the Resource Center can identify.

High Efficiency ENERGY STAR Room Air Conditioners

While acknowledging that "average" energy use has limited utility when considering the energy burdens of vulnerable households, air conditioning is indisputably one of the single largest uses of electricity in homes in the region.

Lower-income households often forego cooling altogether, despite extreme heat conditions, simply because they cannot afford the utility bills when it is used.

For households living in multifamily apartments where central cooling is not provided by the building, replacement of older, inefficient window air conditioners with new high efficiency models – such as those with ENERGY STAR "Most Efficient" ratings – could provide meaningful electric bill savings. Many community organizations reported in interviews that lower-income households often forego cooling altogether, despite extreme heat conditions, simply because they cannot afford the utility bills when it is used. For these households, acquiring a high efficiency air conditioner might make the difference between having safe indoor temperature when conditions are severe and having no cooling at all. For these reasons, the project team recommends consideration of a program to provide households that rely on window air conditioners or that have no cooling with a high efficiency window air conditioner at no cost to the household. Many utilities in the U.S. have sponsored room air conditioner turn-in programs, where a household can bring their older air conditioner to a drop-off site in exchange for a coupon or voucher for a new, discounted high efficiency unit. However, the Compact and local governments should consider coordinating a bulk purchase of high efficiency air conditioners and simply offer a trade-in program in which a new unit is provided when an old one is brought to the drop off location.

There are many considerations with such a program:

- The purpose of requiring that participants trade-in an older unit is two-fold: first, to make sure that the old units are taken out of service rather than sold or given to someone else who will then be saddled with high bills; and second to ensure that the materials in the old unit are properly recycled so that harmful refrigerants are not leaked into the environment.
- Provisions should be made for households with no air conditioning, so that they would also be able to receive a new high efficiency unit even if they do not have an old unit to turn in. Messaging to these households should be clear that electric bills will increase if they are running AC when they have not done so before, and guidance for minimizing costs should be provided along with support for accessing LIHEAP assistance.
- Provisions should also be made for delivering air conditioners to households that are elderly or otherwise unable to transport the equipment.
- While gaining air conditioning efficiency will reduce household bills, the project team heard over and over that vulnerable households in the region face a myriad of challenges. With this in mind, the air conditioner program could provide an important opportunity to engage with households regarding other opportunities and services, and to

connect them with the Resource Center for information and potentially to apply for programs.

- All participants should be provided with guidance for managing air conditioner operating costs and setpoints to best meet cooling needs without exacerbating moisture and mold concerns.

Leverage Funding from the 2022 Inflation Reduction Act

The recently enacted federal Inflation Reduction Act includes funding for far-reaching energy efficiency and decarbonization actions for homeowners. The proposed incentives are significant, especially for lower-income households. Our understanding is that the majority of funds targeted for homeowner EE investment are intended to flow through State Energy Offices (SEO), and each state will need to determine the specific participation processes that it will employ to put these funds to use. It also appears that the U.S. Department of Energy needs to flesh out certain details regarding the deployment of the allocated funds before they can be made available to the states.

Our understanding is also that significant funds are available for the installation of heat pumps that provide highly efficient air conditioning and heating. We recognize that heating efficiency is not a concern in Southeast Florida, so heat pumps might seem an odd technology to recommend. However, the funding is so significant that it may be possible for lower-income households to replace their older CAC with a high efficiency heat pump without spending any of their own funds, thus significantly improving the efficiency of their cooling system even if they have no need for heat. There are also generous incentives for highly efficient heat pump water heaters, as well as building insulation, air sealing improvements, and other measures. A partial listing of these is shown below in Table 3. As written, the Act states that households whose annual income is below 80% of Area Median Income (AMI) will be eligible for an incentive of 100% of the installed cost up to the maximums shown in the table. Households with incomes between 80% AMI and 150% AMI will be eligible to receive 50% of the installed cost up to the maximum amounts shown.

Table 3: Expected IRA Incentives[23]

Efficiency Upgrade	Maximum Incentive
Heat Pump Water Heater	$ 1,750
Air Source Heat Pump	$ 8,000
Electric Induction Stove	$ 840
Heat Pump Clothes Dryer	$ 840
Electric Panel Upgrades	$ 4,000
Basic Weatherization	$ 1,600
Electric Wiring	$ 2,500
Whole Home Energy Reduction	$ 8,000

There are also significant increases and extensions of federal energy efficiency tax credit provisions, and it appears that homeowners can use both the incentives and tax credits for applicable purchases. While it seems that lower-income households that don't have any tax liability would not be able to benefit from the tax credits, moderate-income households could.

[23] Information is from Rewiring America and subject to change as rules are further developed: https://www.rewiringamerica.org/app/ira-calculator.

As we heard in our interviews, federal funds often come with cumbersome application and reporting processes. We strongly recommend the Counties engage with the SEO to advocate for streamlined participation processes, including timely release of funds, to ensure that Floridians can take full advantage of the opportunities presented by the Act. The need to provide local residents with a clear understanding of the IRA funding opportunities is an integral component of the services that can be provided by the Resource Center. Without such a resource providing information and support it will be impossible for the region's households to take full advantage of these historic funding opportunities.

Carry out a comprehensive needs assessment to document opportunities

Stakeholders mentioned in interviews that applications for grant funding often require potential grantees to document the community needs that they seek to address. Rather than having to devote resources to this labor-intensive task with each funding cycle, interviewees requested the Compact carry out a regional, comprehensive needs assessment that could be used on an ongoing basis to demonstrate need for grant funding applications. Having this comprehensive needs assessment would allow constrained CBO program staff to put more effort into direct services and less into continuously seeking funding.

Longer-Term Solutions

As we have discussed, the needs of vulnerable households residing in the region are significant and intersectional and will not be mitigated absent longer-term investments and strategies to break free of business-as-usual policies that prolong inequity. Devising these strategies should include the full participation of affected communities to reflect their needs and values, as they articulate them rather than as might be imposed on them by thoughtful policy-makers who are not themselves of the community. Our team strongly urges the Compact to invest in relationships it already has with community groups, advocates, and organizations, to build on those that our team began in the course of this project, and to seek new connections with those that have not to date been well-represented.

Using an inclusive approach, advocacy can be undertaken to codify regional, state, and federal policies that support the well-being of communities by making safe, affordable energy a reality for all households. Several areas for potential advocacy are outlined below.

Improve Effectiveness of Florida Energy Efficiency and Conservation Act

The Florida Energy Efficiency and Conservation Act (FEECA) was enacted in 1980 to charge the Public Service Commission (PSC) with establishing energy efficiency goals for Florida's regulated electric utilities. However, the rules adopted by the PSC to regulate the utilities' planning and program implementation are narrow and provide only a limited opportunity for Florida's utilities to implement meaningful energy efficiency programs. As a result, ACEEE ranks

them among the least productive in the nation.

The PSC established the FEECA rules and has the authority to modernize them. In fact, as of this writing the PSC was in the process of considering updates to the rules, and a public workshop had been scheduled for September 2022. There is no timetable for when the next update to the FEECA rules might take place once the current process has concluded.

Modernizing the FEECA rules could result in requirements for the utilities to implement more and better EE programs for their customers. Updates to FEECA rules could impose savings or investment goals for programs specifically designed to benefit utilities' most vulnerable, energy-burdened customers. Such updates will likely occur only as a result of significant public input. Participation by the Compact, its member counties, and local municipalities and CBOs could influence the adoption of updated rules that could greatly benefit their constituents.

Establish an Energy Efficiency Standard via Legislative Action

Many states have enacted climate mitigation policies into statute or are considering such action. Such policies can take a variety of different forms, including the adoption of an energy efficiency resource standard (EERS) requiring utilities to achieve prescribed levels of energy efficiency in recognition of the value EE provides to ratepayers, both as least-cost procurement resources and as tools for helping customers to better manage their energy bills. A statutory EERS would remove a certain level of discretion from the PSC by requiring that prescribed savings levels be met rather than relying on the PSC to carry out a process for determining the savings that utilities should reach. While enabling laws in many jurisdictions provide room for regulators to require high levels of EE from utilities, there is no guarantee that public utility commissions will impose such requirements absent specific statutory direction. This has borne out in Florida, where utility EE goals are extremely small compared with other jurisdictions.

Numerous states are now also contemplating GHG abatement targets and requirements to mitigate the climate damage caused by human activity. As with FEECA rulemaking, Compact stakeholders could become active participants in attempting to drive move state policy in the direction of clean, efficient energy and climate mitigation that benefits its most vulnerable constituents. "Beneficial electrification,"[24] i.e., converting homes from fossil-fuel energy to electricity, may seem less compelling in Florida than in regions where there is significant fossil fuel use for heating. However, EE is a powerful climate tool that also provides significant bill savings and

[24] The Regulatory Assistance Project states that for electrification (changing from use of fossil fuel to electricity) to be considered beneficial it must meet one or more of the following conditions without adversely affecting the other two: 1. Saves consumers money over the long run; 2. Enables better grid management; 3. Reduces negative environmental impacts. See, e.g., https://raponline.org/be.

health, safety, and quality of life benefits for customers, and whether framed as a GHG abatement standard or an EE standard, statutory requirements for increased clean energy would provide significant benefits for disadvantaged households.

Develop Ongoing Local or Regional Funding Streams

Perhaps the most direct path to sustained investment in the Compact's vulnerable households is to create a regional EE/housing security assessment as has been done in a number of other cities, counties, and states. The jurisdictions that have implemented such approaches recognized that relying on periodic and inconsistent federal investments would not provide a stable, sustainable, and sufficient funding stream to invest in EE measures and climate mitigation at a level consistent with their values and priorities. Some of these funding streams have been in place for decades, and others are more recent. Highlights of several are provided below.

Vermont Home Weatherization Assistance Trust Fund

The Vermont Weatherization Trust Fund has been in place for over thirty years, enacted by statute in 1990. It is funded through the "Fuel Gross Receipts Tax" that imposes a 0.5% surcharge on heating oil and kerosene, propane, natural gas, electricity, and coal. The funds collected through this charge are used specifically to provide funding to supplement federally allocated low-income weatherization assistance program (WAP) funding.

Over the past three decades since its inception, the fund has allowed significantly more investment in improvements in the energy efficiency of low-income households in Vermont. This has included more spending per dwelling on average than would be supported by federal WAP dollars, a broader range of measures including efficient HVAC systems, and greater participation levels. All of this has resulted in more efficient and durable homes for thousands of Vermont households.

City and County of Denver

In November of 2020, Denverites passed a ballot initiative raising the local sales and use tax by 0.25%, thus creating the Climate Protection Fund (CPF).[25] The fund can be used for a variety of activities including workforce development, renewable energy, neighborhood-based environmental and climate justice programs, resiliency programs, safe and clean transportation alternatives, and building energy efficiency. The CPF is expected to raise $40 million every year, and the governments' goal is that "over half of this fund goes to communities in Denver most harmed by climate change impacts. This includes people of color and Indigenous people, low-income communities, people living with chronic health conditions, babies, children, and older adults."[26]

Montgomery County, Maryland

Montgomery County, Maryland established a "Green Bank" in 2015 to promote "the investment in clean energy technologies in the County by offering financing structures to lower the cost of financing these technologies for County residential and commercial properties."[27] The Green Bank was initially established using one-time funds from the Pepco-Exelon and Altagas merger, but recently the Council approved dedicating to

[25] Climate Protection Fund

[26] Climate Protection Fund

[27] See, e.g., Agenda Item 10B Montgomery County Council, pdf p.3.

the Green Bank a portion of the fuel-energy tax that is "levied and imposed on every person transmitting, distributing, manufacturing, producing, or supplying electricity, gas, steam, coal, fuel oil, or liquefied petroleum gas in the County."[28] The fuel-energy tax raises significant revenues for the County, most of which go to the general fund. It is strikingly similar to the mechanism used in Vermont to raise additional funding for low-income weatherization, and a similar assessment could be used by the Compact to fund a regional green bank and/or direct incentives for EE retrofits for distressed communities and lower-income households.

A SEFL Compact Assessment Model

The project team does not have the expertise to develop a specific proposal for how the Compact Counties and local governments could design an assessment or tax-based funding model and recognizes that implementing such a solution would almost certainly be politically complex. However, the success of the models described briefly above suggests that an assessment or tax-based model could accomplish much towards the Compact's sustainability goals by providing a stable, reliable funding stream to reduce energy burdens for vulnerable households, either through direct incentives for EE, low-cost financing, or a combination of the two. This would be in line with the RCAP 3.0 recommendation EN 3.2 which calls for the region to "prioritize existing and create new energy efficiency programs for low- to moderate-income (LMI) households that reduce the burden of upfront costs and target the reduction of high energy burden."[29]

Development of such a funding model would also be consistent with RCAP recommendation EQ 1.2 which calls for the region to "incorporate climate equity considerations and socioeconomic data in fiscal planning, budgeting, project prioritization, and program and policy development."[30] Assessment-based funding could also be used to sustainably implement the Resource Center discussed above. Despite the political complexities, it may be a more viable solution than either influencing FEECA rules or the adoption of an EERS, (though we recommend the Compact pursue both of those mechanisms as well).

Implementation of a regional funding mechanism for EE could vastly improve the availability of energy efficiency for vulnerable households and communities.

Create a Health Services Initiative

Housing retrofits to address weatherization, mold remediation and energy efficiency can result in evidence-based improvements to children's health (e.g. reduced asthma and heat-related illnesses and improved mental health. The Compact could explore the opportunity to unlock state funding for housing retrofits to benefit families with children to create a Health Services Initiative (HSI) using untapped administrative dollars allocated through the Children's Health Insurance Program (CHIP). Such an initiative could both improve health outcomes for children and reduce household energy bills.

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[28] See, e.g., Agenda Item 10B Montgomery County Council, pdf p.3

[29] RCAP p. 23.

[30] RCAP p. 26.

Recommendations

The project team has identified several important next steps for the Compact to take to increase the EE benefits available to vulnerable households and communities. All of these have the potential to benefit the communities of Southeast Florida, but the historic opportunity provided by passage of the IRA creates a special urgency for the Compact to take steps to implement the Resource Center to make sure that Floridians receive the maximum potential benefits available through the new federal tax credits and incentives. The project team recommends the Compact undertake the following specific, concrete next steps:

Immediate/Near Term:

1. **Develop** guidelines and processes for fulsome community engagement on design and implementation of recommendations
2. **Propose** line item budgets to support a Resource Center
3. **Convene** a process with regional CBOs to develop a Resource Center
    a. Purpose statement
    b. Ongoing funding mechanism
    c. Governance and leadership
    d. Staffing
    e. Physical location(s) and branding
4. **Engage** with SEO on IRA implementation for LMI households
    a. Advocate for streamlined participation process
    b. Coordination/integration with other initiatives
    c. Identifying and overcoming barriers to success
        i. Inspector licensing
        ii. Workforce
        iii. Etc.

Medium Term:

5. **Propose** line item budgets to support:
    a. Resource Center
    b. LED distribution and engagement
    c. Regional AC EE initiative
        i. Room AC turn-in/upgrade
        ii. Smart thermostat for CAC
        iii. Education on temperature setpoints
6. **Develop** a strategy and plan to implement an ongoing assessment or tax-based funding mechanism to be used to support the following:
    a. Comprehensive building energy efficiency improvements for LMI households, with 100% incentives for income-eligible households and a combination of incentives and cash-flow positive financing for moderate income households;
    b. High efficiency AC and controls
    c. Long-term, stable Resource Center funding

Conclusions

Vulnerable households and communities in the Compact region have much to gain from implementation of the actions outlined in this report. Given the unprecedented funding opportunity of the IRA, it is imperative that the Compact initiate funding and development processes for the Resource Center as soon as possible to facilitate eligible households' access to the incentives and tax credits that will soon be available. Clear information and application support provided by the Resource Center through relationship-based community outreach will maximize the benefits for Floridians in the Compact region.

The Resource Center can also facilitate participation in other local and regional programs and initiatives that benefit vulnerable communities. The Compact should work in partnership with communities and CBOs in the conception and development of the Resource Center and the other initiatives recommended in this report. Once established, the Resource Center can serve as a one-stop shop to facilitate coordination among complementary programs, including through unified application processes.

The more successful the Resource Center can become at putting relevant, accessible information in the hands of community members and streamlining participation processes, the less time individual program administrators will need to spend on coordination and the more households will benefit. This will also apply to any new initiatives the Compact undertakes, such as improving access to LED lighting, smart thermostat, and room air conditioner programs, as outlined in the report.

To improve the availability of EE resources to vulnerable communities in the longer term, the Compact will either need to successfully influence 1) policies to increase utility EE at the Florida Public Service Commission, or; 2) legislative policy to strengthen statutes requiring EE; or 3) develop regional funding streams, such as an assessment or tax-based mechanism dedicated to funding EE programs and services for vulnerable households in the region.

Appendix A: Stakeholder Engagement

In an effort to ground this report in the realities facing Southeast Florida community members and ensure recommendations are relevant and applicable, the project team facilitated an outreach process to learn from the experiences of residents in the four-county area. In particular, this effort sought to form relationships with community-based organizations (CBOs), local governments, and community advocates. Outreach was conducted through two mechanisms: one-on-one (1:1) interviews and a stakeholder convening.

Conducting Interviews

During the initial formative stages of this project the project team conducted preliminary interviews with a number of organizations to gain a better understanding of the contextual conditions in the region. These included Miami Climate Alliance, CLEO Institute, and Carras Community Investment, Inc. In the summer of 2022 the project team conducted fifteen interviews with various community-based organizations, local municipal offices, and advocates. The project team conducted fifteen interviews with various community-based organizations (CBOs), local municipality offices, and advocates, including the following:

- **CBOs:** South Florida Community Development Coalition; Catalyst Miami; Community Partners; Habitat for Humanity Keys; Rebuilding Together Miami-Dade; Rebuilding Together Broward
- **Advocacy Groups:** Florida Clinicians for Climate Action; Enterprise Communities
- **Program Administrators:** Miami Dade County's LIHEAP administrator (Community Action and Housing Services Department); Palm Beach County's LIHEAP administrator; Centro Campesino
- **Government:** City of Hollywood (Sustainability Department and Community Development Division); City of West Palm Beach; Monroe County / University of Florida Extension Services - Environmental Horticulture

Interviews and conversations were scheduled in thirty- to sixty-minute sessions and community-based organizations were offered a stipend of $300 for engagement in the outreach process.

Interview Key Findings

Communities and Florida residents face a wide range of economic and health challenges, which are exacerbated by climate-related extreme heat and weather disasters. Among the issues residents face are lack of job accessibility and stability, high housing costs and eviction risks, as well as health and safety risks. . This context immediately adds limits to what communities are able to access and invest in, energy efficiency-wise. Hollywood's Community Development Division cautioned that "for many residents in Hollywood, the short-term is more important than long-term economics—we don't want to mandate a high capital cost that eventually pays off because people cannot afford it in the short-term." While energy efficiency may not be the top priority for Southeast Florida's frontline and high energy-burdened communities, it is seen as a welcome and useful offering that could simultaneously contribute to a more affordable cost of living as well as healthier, safer living environments.

The need for more affordable, healthier housing and utility service is great. Moreover, existing utility or statewide offerings are few while federal weatherization programs are over-subscribed.

Across the board, interviewees recommended increasing the size and extent of offerings to provide more holistic, flexible weatherization services, specifically those that are accessible across languages, cultures, and income levels, and that address housing safety, extreme heat, and reduce utility bill burdens.

Interviewees also urged government officials to see community-based organizations as design and implementation partners. In an interview with Community Partners, it was noted that "sometimes it feels like programs are helping individuals versus working with families and empowering the community they live in." The perceived lack of focus on the community is not only concerning, but arguably ineffective. Organizations, as unveiled through many interviews, may already be offering complementary services to residents, and also have existing trust-based relationships with residents across various demographics, cultures, and languages, which can support dissemination and uptake of programs on offer today and in the future. In particular, Habitat for Humanity Keys highlighted that "trust is an issue, especially in non-English speaking communities," and suggested to "include communities to help identify needs and work with organizations already serving those communities."

The following top-line recommendations emerged from interviewees:

1. Expand Program Design Objectives: Design programs to address holistic scope of issues. Programs designed to only address energy efficiency will fall short of expectations because residents have additional pressing near-term needs that impact energy costs and broader quality of life beyond energy savings. This includes, and is not limited to, addressing utility bill hardship, job availability and stability, disaster preparedness and resilience, eviction prevention, and affordable housing rehabilitation and preservation. Improved program designs may include:
    1.1. Reform income, cost, and measure rules that limit offerings and eligible populations.
    1.2. Coordinate with other CBOs and social services departments to offer residents wrap-around services to address other energy and non-energy related issues (e.g., Miami Dade County's No Wrong Door Initiative).
    1.3. Consider resilience and climate adaptation in response to increased storms, flooding, hurricanes, and extreme heat.
    1.4. Reframe programs' outreach efforts to engage enrollees through benefits they care about, beyond energy efficiency. For example, Monroe County Extension Services enrolls program recipients by capturing their attention "with something that appeals to them (e.g., bringing birds and butterflies to the yard, saving honeybees, growing their own food) and then talks about the other issues the program wants to discuss (e.g., water efficiency, reducing pesticides)."
2. Secure additional long-term funding for the following activities:
    2.1. Conduct a needs assessment to better understand 1) the magnitude of need for weatherization and energy efficiency measures and; 2) how residents use and consume energy. Funding should be identified and secured for actions to meet needs as determined by the assessment.
    2.2. Map existing and new weatherization programs, and link them to offerings that address extreme heat.
    2.3. Develop marketing and awareness-building materials that uplift existing programs and local offerings tied to LIHEAP funding, provide resident/landlord education on weatherization programs, and combat misinformation on utility bills and programs.

2.4. Fund long-term staffing and capacity-building within CBOs, City, and County agencies. Many CBOs and agencies are already working with residents to address energy efficiency, weatherization, utility bill payment, job placement, and affordability. These CBOs and agencies have already built trust with community members and created the relationships and processes to implement programs and provide residents services. Interviewees felt that in some cases, funding to create new staff positions for existing organizations is a greater priority than developing new programs.

2.5. Develop and maintain a centralized platform that serves as a "one-stop shop" to provide residents information about available programs, qualified vendors and contractors, and general energy education, and one that is in close coordination with community organizations on the ground. For example, Community Partner's BRIDGES neighborhood hubs offers a physical, location-based one-stop-shop model that could be expanded or replicated on a larger scale.

2.6. Partner with local governments, CBOs, and program administrators to foster information exchange and collaboration on multi-disciplinary solutions (e.g., water savings and energy savings).

2.6.1. Connect non-energy measures to energy savings. Florida Keys Electric Cooperative and Keys Energy Services periodically provide native tree giveaways to residents to help with shading and reduce energy costs. The Monroe County and University of Florida Extension Services supported the initiative with an education and outreach campaign. Future tree giveaways and related education and outreach can include more information about energy efficiency and associated bill reductions.

2.6.2. Enable cross-departmental access to services and programs. In Hollywood, Florida, the Community Development Services Division partnered with a non-profit and the county on LIHEAP implementation. While the resident is waiting for LIHEAP assistance from the county, they can leverage city emergency services as a bridge.

3. Allow flexible spending models to meet the needs of grant recipients.

3.1. Issue grant funding upfront as lump-sum credits so that home upgrades can start immediately and continue uninterrupted. Reimbursement models (e.g., Community Development Block Grant funding) result in delays and, ultimately, fewer projects because organizations have to wait to be reimbursed before starting new projects. This is especially a barrier for projects incorporating construction as these costs are often too large to take on multiple projects at a time through a reimbursement model. For example, through one funding mechanism, Rebuilding Together Miami-Dade received "a lump-sum credit that allowed us to immediately begin work. Within a one-year period, we have close to 30 homes repaired from start to finish." However, "in comparison, we were allocated Community Development Block Grant funding in 2019 but have only been able to repair three houses because of the slow reimbursement process. Needing five months to process a $50,000 reimbursement is a big barrier to participation." The project team notes that there may be other viable options for addressing overly-long reimbursement processes, such as updating payment processes to guarantee net 15 or net 30 days' payment – terms that are common in the building trades, as this could support local bridge financing – but there is no question that the long payment delays experienced by interviewees negatively impact their ability to complete projects.

3.2. Create flexible funding mechanisms to allow for pre-weatherization retrofits. The state of housing stock varies widely in Southeast Florida and homes may need a variety of repairs before being ready for energy efficiency and weatherization upgrades. Funding

should be flexible to allow for this type of preparatory work rather than limiting spending eligibility to specific housing-readiness. Moreover, many homes are still "blue-tarped" from previous hurricanes and have yet to receive repairs.

Barriers and Obstacles

Through interviews, the project team identified barriers and obstacles existing in current day and past practices that address energy efficiency, public programs, utility bill hardship, community outreach, funding, and water conservation efforts. Stakeholders particularly noted the barriers and obstacles below:

- Utility bills are high and utility-community relationships can be improved:
    - Utility bill rates are going up exponentially and people cannot afford much-needed cooling or energy services. Bills in Miami Dade County for low-income communities are too-often reaching $400-500 per month, much more than the average in the area. In the Keys, residents experienced a 30% increase in energy bills during summer 2022.
    - Florida Power and Light (FPL) has not gained the trust of community members and can improve its public image of transparency and commitment to energy efficiency. For example, interviewees reported that FPL is not offering programs nor assistance despite their energy efficiency and conservation goals.
    - The utilities and state have set a two-year payback screen that prevents many energy efficiency measures from even being considered in utility energy efficiency programs. Moreover, utilities are still using the highly restrictive Rate Impact Measure Test (RIM) for cost-effectiveness screening.
    - Cultural barriers exist when talking about high utility bills and available support. For example, some individuals feel ashamed of admitting an inability or hardship with utility bills. Some individuals feel a personal responsibility to handle these hardships themselves.
- Municipal governments are perceived to lack the capacity and cohesive strategy planning to address intersectional opportunities. Action plans are not always implemented due to the required political, staffing, and organizational resources, which are not always available.
    - Housing affordability and climate resilience are often not addressed in a cohesive strategy within county and city governments. While some agencies seek to address these issues comprehensively, they may lack the resources and capacity to do so.
    - Implementation of governmental action plans is challenging due to lack of required political, staffing, and organizational resources, raising concerns for the processes and resources spent on these plans. Community voices echoed that they want to see governmental entities follow-through on recommendations identified.
    - Smaller city agencies do not have the capacity to coordinate and manage all the activities that can be leveraged. Often, a very small number of staff are responsible for a wide variety of community services. While these agencies recognize the need to address energy efficiency and reduce energy burden, they lack the capacity to take on the administration and/or oversight of a new program. Close partnership and coordination with county or statewide agencies

will be necessary to ensure these communities can access the broadest set of resources and programs.

- Federal Government Programs are under-funded difficult to access and have too many constraints to provide holistic community benefits desired.
    - There's not enough funding for weatherization programs throughout the four-county area as funding formulas are often weighted for heating assistance not cooling assistance.
    - Waitlists are incredibly long, some spanning years. Some LIHEAP programs have a waitlist equating to home energy upgrades of roughly $13M. Program Administrators have noted that to stay on the waitlist, applicants have to submit updated income information each year, which can be a deterrent to stay engaged and on the list.
    - There is a lot of confusion about available services from weatherization programs (specifically the Weatherization Assistance Program (WAP)) and what implementers are able to provide. Implementers are constrained on what they can offer because program-required site-specific cost-benefit ratios and the national energy audit tool required to determine eligibility for certain upgrades.
        - This means needed and requested upgrades cannot be provided during a WAP project. For example, high impact windows and other disaster resiliency measures aren't addressed in currently available programs broadly, although they are often requested.
    - Weatherization programs fall short of the communities' need for housing security.
    - There's not enough trained workforce with the correct licenses to fully implement WAP programs, especially if they are expanded. Specifically, WAP requires implementers to have building rehabilitations approved by a staffer with a Quality Control license. However, an estimated 7-8 individuals in the state of Florida currently have this license. This becomes a barrier to scaling weatherization programs, as it will take time to training additional workers with the license. For example, the American Rescue Plan increased funding from 2.5 homes to 65 homes, roughly a $6.7M investment. While money was appreciated and desired, the frameworks in place for hiring and training workers were insufficient, and resulted in a mass, short-term hiring bottleneck for workers without the certifications needed to efficiently approve rehabilitations.
    - WAP requires a 17 year waiting period for previous WAP recipients to get additional efficiency services, which is excessive. This hold is waived for disaster damages.
    - The WAP information and services are not available in different languages, so Centro Campesino had to make their own Spanish application.
    - Program software can be its own barrier in implementation. Palm Beach County does not use the State's Shah NewGen database for LIHEAP and has arguably more flexibility and adaptability because of it.
- Homes of the region have not been built with energy-efficient construction methods, moreover renters, who are in older and often unmaintained buildings face additional barriers in program design and offerings.
    - Programs providing air conditioning without sealing the envelope or other energy efficiency upgrades do not result in reduced energy bills. Unfortunately, this

means that many residents experience increased utility bills from air conditioning, exacerbating their energy burden even further.
    - Insulation in attics, broadly speaking, is insufficient.
    - Many dwellings need pre-weatherization work to even qualify for weatherization, such as new roofing.

Many households, due to the humidity, face mold issues and pest or insect infestations.

    - Landlords and owners will often use band-aid solutions for maintenance issues and may not meet local building and construction codes.
    - Renters have unique needs that often are not addressed in programs. For instance, renters often need permission from their landlord before installing new equipment or appliances. If the landlord is willing to install the measure, this can increase the property value, and potentially displace the original tenant.
- Community and program solutions that are highly dependent on certain data sources are only as good as those data sources are accurate and aligned.
    - Cooling centers aren't being activated in Southeast Florida due to the high temperature threshold and unrepresentative sample point. Specifically, the location of the weather antennae at Miami-Dade Airport (used to determine whether to activate a cooling center) can be 20 degrees lower than temperatures within urban centers. So while the temperature within urban centers can indicate that a cooling center should be activated, because the temperature at the airport is lower, cooling centers are not opened, and residents are left on their own.
    - Data is convoluted, lacking, and not publicly accessible.

Opportunities

The project team identified the following **opportunities** based on organizational interviews.

- Holistic Health, Climate, and Affordability Programs: by intersecting issue areas, of energy, health, safety, cost, and comfort, community advocates hope for solutions that encompass the many overlapping needs of community members. Specific opportunities include:
    - Incorporate utility costs in the definition of affordable housing.
    - Connecting efforts with Miami-Dade County's newly approved tenant bill of rights.
    - Connecting to the Miami Affordability Project.
    - Expand resident education to ensure that AC use doesn't result in mold. Turning the AC on and off throughout the day can result in mold in humid environments, even in well insulated homes. In some cases, it may be better to keep the AC running with the appropriate settings when residents are not home to avoid this issue.
    - Incentivize dehumidifiers to address mold.
    - Begin with free or heavily discounted basic upgrades like water heater blankets and insulation.
- Coordination and collaboration with existing programs, initiatives, and CBO activities can strengthen reach and impact of programs and community benefits in trust-centered approaches.
    - Explore partnerships between health and medical profession/legal services to support residents facing major mold concerns.

    - Reference Thrive 305, Miami-Dade County's largest public engagement initiative. The Action Plan leveraged the input of more than 20,000 residents to define community priorities and aspirations, including creating more housing options that are water and energy efficient.
    - Reference Southern Alliance for Clean Energy (SACE)'s annual Energy Efficiency in the Southeast Report that provides efficiency performance data from nearly 500 electric utilities in the Southeast. This data can be used for benchmarking and performance tracking throughout the region.
    - Elevate that the Florida Energy Efficiency Conservation Act (Docket 20200181) requires utilities to meet energy efficiency goals.
    - Reference Miami Dade County's Community Resource Centers and No Wrong Door initiative which provide an example of county and city departments working together to provide wrap-around services to residents. For example, when residents come for utility bill assistance (LIHEAP), they are offered both county and city funds. They can also be referred to the weatherization program, job placement services, and/or housing services, as needed.
    - Collaborate with the Florida Friendly Landscaping program that teaches residents how to create and maintain attractive and low-maintenance landscaping on their properties. This includes education on native, salt-tolerant, and drought-tolerant plants that can lower watering and fertilizing costs for residents. Additionally, the "Right Plant Right Place" program provides education on strategic landscaping that can reduce residents' overall costs to maintain their landscapes, including reducing energy costs through shading and reduction of heat absorption. These programs take concepts from urban greening and apply them at the home/property level to save residents money.
    - Expand Community Weatherization Coalition tune-up program where trained volunteers act as energy coaches.
- Leverage municipal, county, and state resources and influence to increase impact of actions.
    - Pursue high efficiency window air conditioner bulk buys that are then given away to qualifying residents.
    - Leverage utility franchise agreement renegotiations to get more EE programs for underserved communities.
    - Provide County support to support City programs and/or provide program frameworks for less intensive administrative lift by city staff.
    - Advocate as a coalition or Compact to request changes to LIHEAP/WAP rules to allow for more comprehensive offerings, adjustments to income eligibility, etc..
    - Partner with the Tampa Bay Regional Resiliency Coalition for creative solutions.
    - Gather data on the number of dwellings in need of weatherization/energy efficiency measures and how residents use and consume energy.

Stakeholder Convening: Energy Efficiency Intersections in Southeast Florida

On July 28, 2022, the Southeast Florida Regional Climate Change Compact hosted a stakeholder convening called Energy Efficiency Intersections in Southeast Florida. Common

Spark Consulting, Institute for Sustainable Communities, and Energy Futures Group facilitated the convening.

The convening was held to share more detailed information about this project with local governments and CBOs and gather stakeholder insight and feedback to inform the final report. The convening presented an opportunity to engage in a discussion on actionable energy efficiency recommendations for Broward, Miami-Dade, Monroe, and Palm Beach counties of Southeast Florida. About 30 organizations, represented by about 50 individuals attended the convening.

Draft report recommendations shared during the convening include:

- Near-term:
    - Better access to information;
    - Improved ability to reduce targeted equipment loads;
    - Use of federal block grants combined with county funds;
    - Coordination with utility programs as possible; and
    - Formation of regional partnerships
- Longer-term:
    - Design and implement comprehensive home repair, weatherization, and major equipment upgrades;
    - Expand utility energy efficiency programs; and
    - Policy advocacy on the state and federal level

Additionally, participants elevated the following ideas:

- Collaborate and partner with trusted community-based organizations for successful implementation
- Address hyper-local differences in conditions through local approaches
- Alleviate barriers to technological literacy and access (not all residents have access to the internet), language access, and information dissemination
- Connect health and energy funding for efficiency
- Connect federal program dollars to expanded local programs

Following the stakeholder convening, stakeholders were invited to comment on the draft recommendations via survey or email, and/or participate in a 1:1 meeting to discuss unique needs, priorities and perspectives. A detailed summary of the convening is available in Appendix D: Stakeholder Convening Summary.

Appendix B: County Level Energy Burden Data

Table 4: Palm Beach County

%AMI, Rent/Own, Housing Type	Average Energy Burden	Avg. Annual Energy Costs	Household Count	Average Annual EAG Per Household	Total Annual EAG by Row	Annual Sum GHG Emissions (lbs CO2e)
0-30% Owners, Newer SF	21%	$ 2,038	13,134	$ 1,399	19M	144M
0-30% Renters, Newer "Other"	13%	$ 1,943	506	$ 1,080	1M	6M
0-30% Renters, Older SF	15%	$ 1,923	5,706	$ 1,073	6M	60M
0-30% Owners, Older SF	16%	$ 1,717	9,309	$ 1,021	9M	88M
0-30% Renters, Newer SF	14%	$ 1,766	4,057	$ 933	4M	41M
0-30% Owners, Newer "Other"	13%	$ 1,723	960	$ 802	1M	9M
0-30% Renters, Older "Other"	15%	$ 1,521	377	$ 750	0M	4M
0-30% Owners, Older "Other"	12%	$ 1,408	1,015	$ 658	1M	9M
0-30% Owners, Newer MF	12%	$ 1,172	5,752	$ 549	3M	40M
0-30% Renters, Newer MF	11%	$ 1,251	13,323	$ 531	7M	96M
0-30% Renters, Older MF	11%	$ 1,188	10,801	$ 522	5M	72M
30-60% Owners, Newer SF	7%	$ 2,120	23,941	$ 442	8M	251M
0-30% Owners, Older MF	10%	$ 1,005	5,797	$ 396	2M	36M
30-60% Renters, Older "Other"	5%	$ 1,782	378	$ 259	0M	3M
30-60% Owners, Older SF	6%	$ 1,898	14,584	$ 198	2M	148M
30-60% Renters, Newer SF	6%	$ 1,885	6,370	$ 194	1M	70M

Figure 5: Palm Beach County Energy Burden

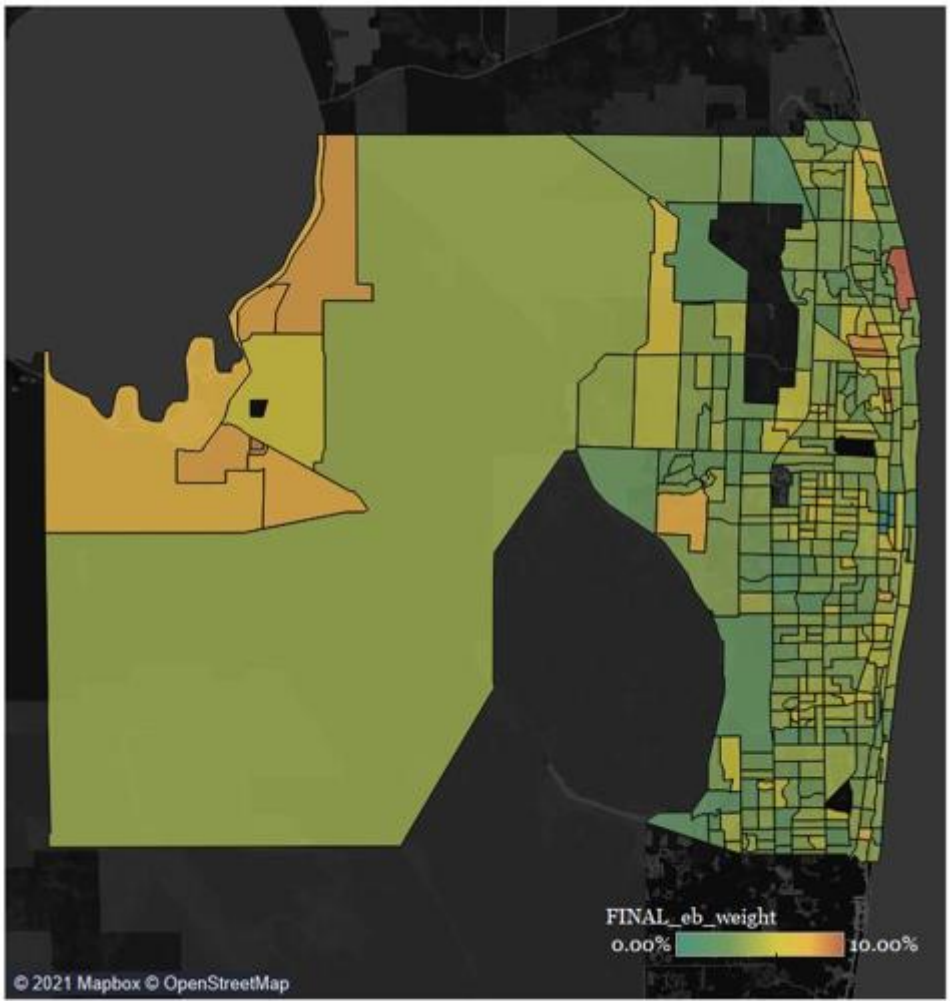


Figure 6: Palm Beach County Energy Costs

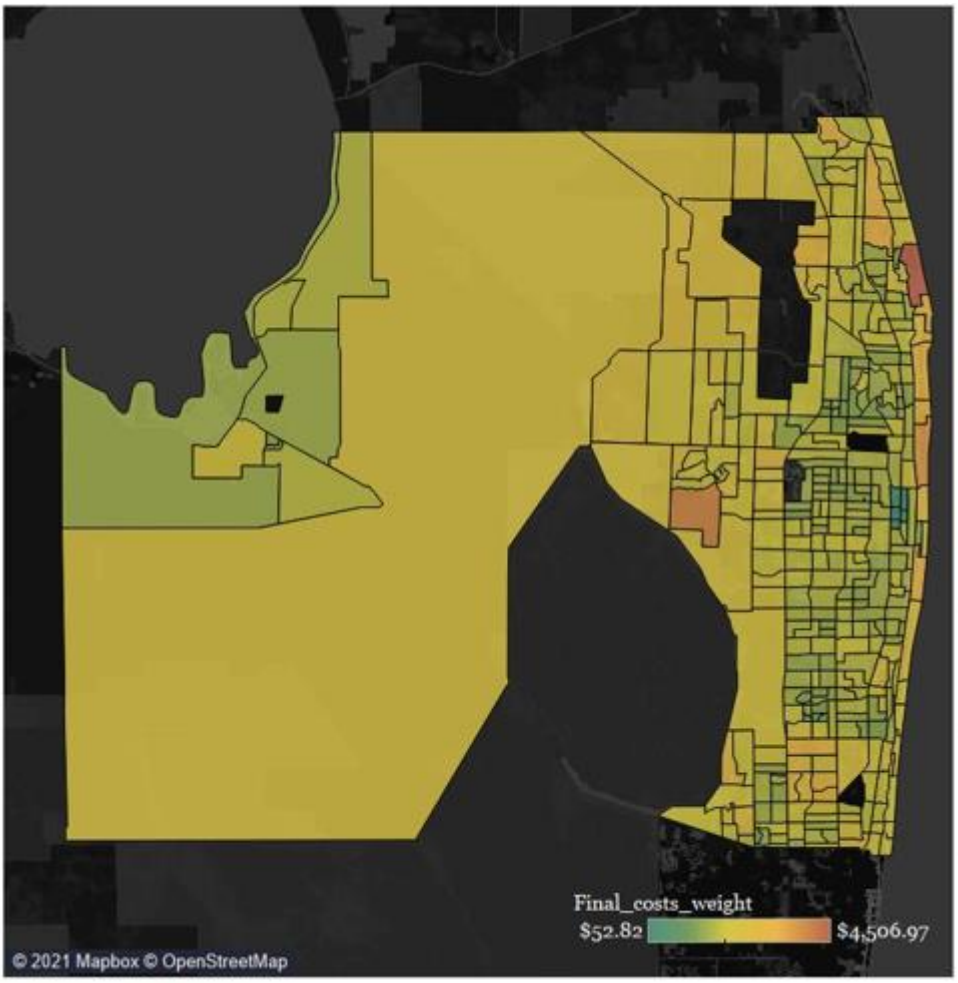


Table 5: Broward County

%AMI, Rent/Own, Housing Type	Average Energy Burden	Avg. Annual Energy Costs	Household Count	Average Annual EAG Per Household	Total Annual EAG by Row	Annual Sum GHG Emissions (lbs CO2e)
0-30% Owners, Newer SF	18%	$ 2,059	8,862	$ 1,308	11M	102M
0-30% Owners, Older SF	17%	$ 1,968	15,660	$ 1,203	17M	159M
0-30% Renters, Older SF	15%	$ 2,024	9,319	$ 1,175	11M	105M
0-30% Renters, Newer SF	15%	$ 1,906	4,310	$ 1,014	4M	47M
0-30% Renters, Newer "Other"	12%	$ 1,492	481	$ 757	1M	6M
0-30% Renters, Older "Other"	12%	$ 1,430	833	$ 675	1M	7M
0-30% Owners, Older "Other"	14%	$ 1,314	1,626	$ 621	1M	12M
0-30% Owners, Newer "Other"	12%	$ 1,287	1,191	$ 540	1M	9M
0-30% Renters, Newer MF	10%	$ 1,235	15,828	$ 477	7M	110M
0-30% Renters, Older MF	10%	$ 1,193	23,943	$ 455	11M	169M
0-30% Owners, Newer MF	11%	$ 1,059	7,443	$ 443	2M	42M
0-30% Owners, Older MF	9%	$ 981	12,813	$ 338	6M	82M
30-60% Ownders, Newer "Other"	5%	$ 1,764	1,188	$ 249	0M	12M
30-60% Owners, Older SF	6%	$ 2,010	26,428	$ 242	4M	271M
30-60% Renters, Older "Other"	5%	$ 1,574	627	$ 229	0M	6M
30-60% Renters, Older SF	6%	$ 1,935	10,204	$ 190	1M	107M

Figure 7 :Broward County Energy Burden

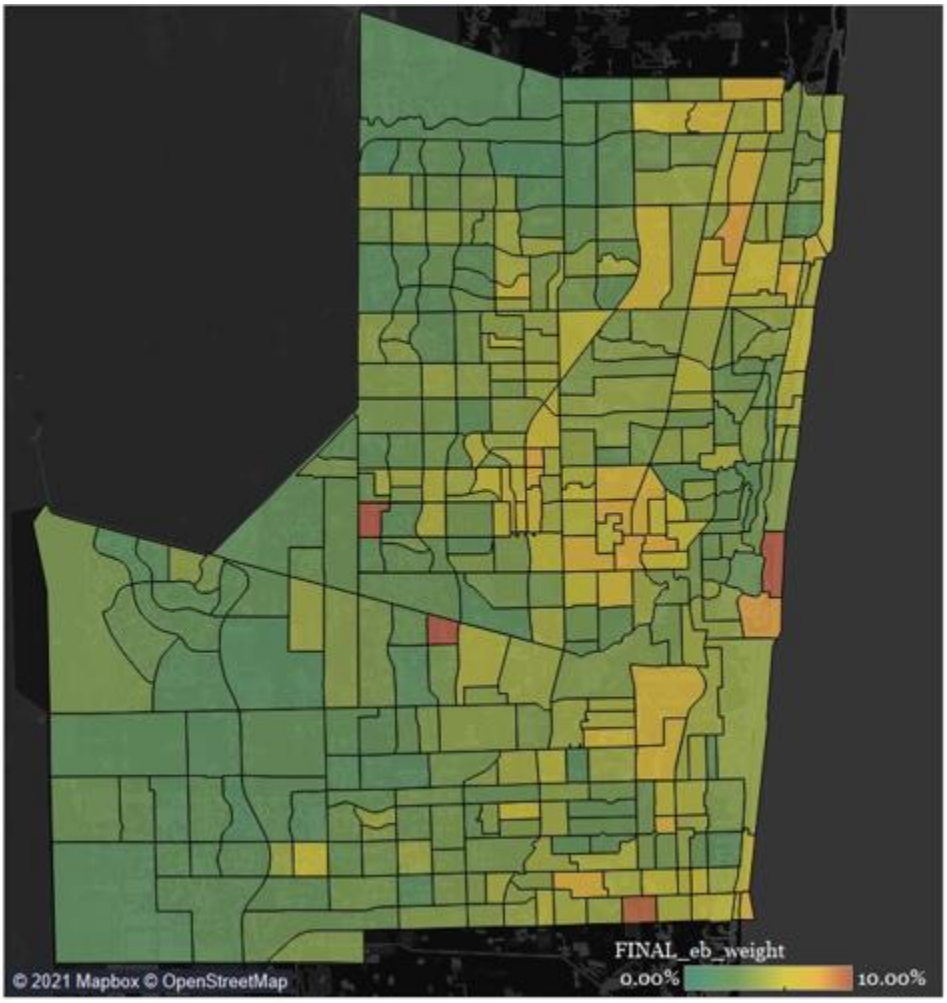


Figure 8: Broward County Energy Costs

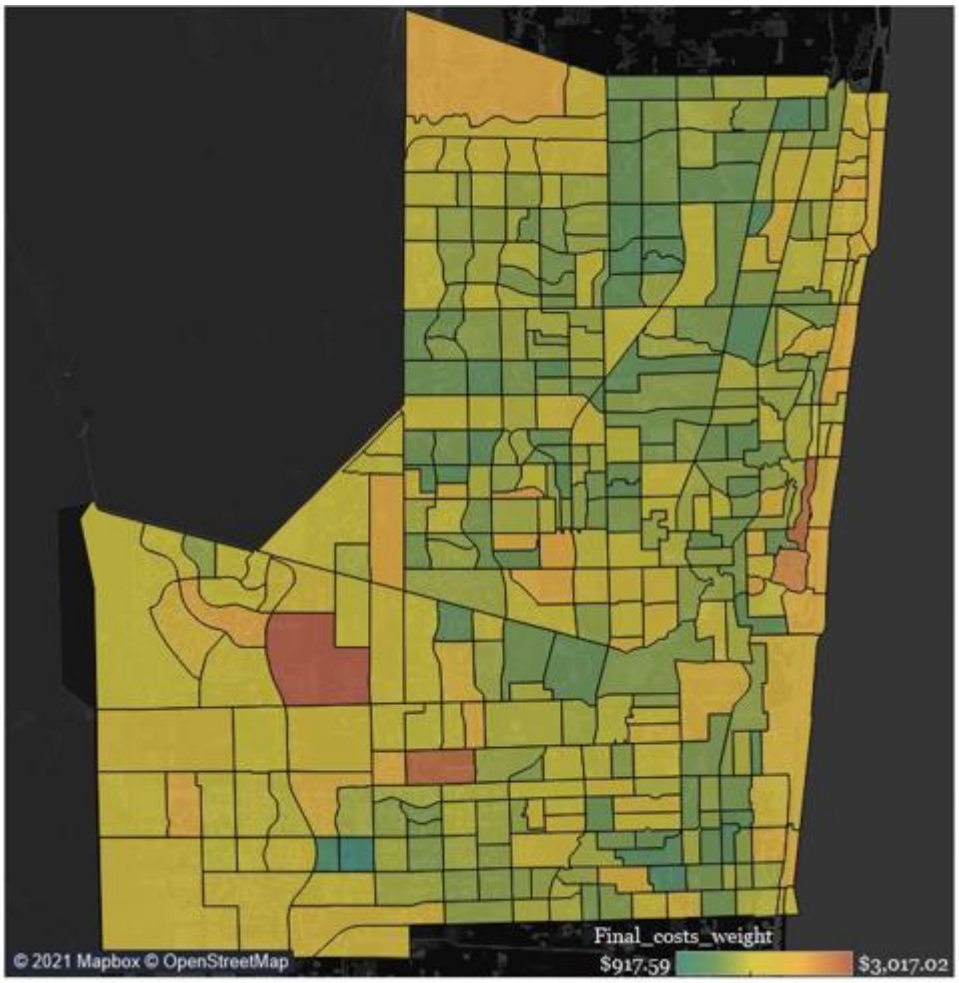


Table 6: Miami-Dade County

%AMI, Rent/Own, Housing Type	Average Energy Burden	Avg. Annual Energy Costs	Household Count	Average Annual EAG Per Household	Total Annual EAG by Row	Annual Sum GHG Emissions (lbs CO2e)
0-30% Owners, Newer SF	16%	$2,144	12,446	$1,274	15M	141M
0-30% Owners, Older SF	16%	$2,019	27,963	$1,223	33M	291M
0-30% Renters, Older SF	13%	$1,842	24,423	$969	23M	236M
0-30% Renters, Newer SF	14%	$1,772	10,937	$926	12M	117M
0-30% Owners, Newer "Other"	14%	$1,492	644	$715	0M	6M
0-30% Owners, Older "Other"	11%	$1,633	635	$703	1M	6M
0-30% Owners, Newer MF	14%	$1,357	5,654	$682	5M	49M
0-30% Renters, Newer MF	11%	$1,256	30,314	$527	16M	212M
0-30% Renters, Older "Other"	9%	$1,270	874	$485	0M	5M
0-30% Renters, Older MF	10%	$1,205	52,233	$477	24M	324M
30-60% Owners, Older SF	7%	$2,329	37,526	$457	13M	423M
30-60% Owners, Older "Other"	7%	$1,764	896	$456	0M	7M
0-30% Owners, Older MF	11%	$1,077	7,934	$438	4M	51M
0-30% Renters, Newer "Other"	9%	$1,234	513	$418	0M	4M
30-60% Owners, Newer SF	7%	$2,270	19,242	$414	6M	222M
30-60% Renters, Older "Other"	5%	$1,610	638	$279	0M	6M

Figure 9: Miami-Dade County Energy Burden

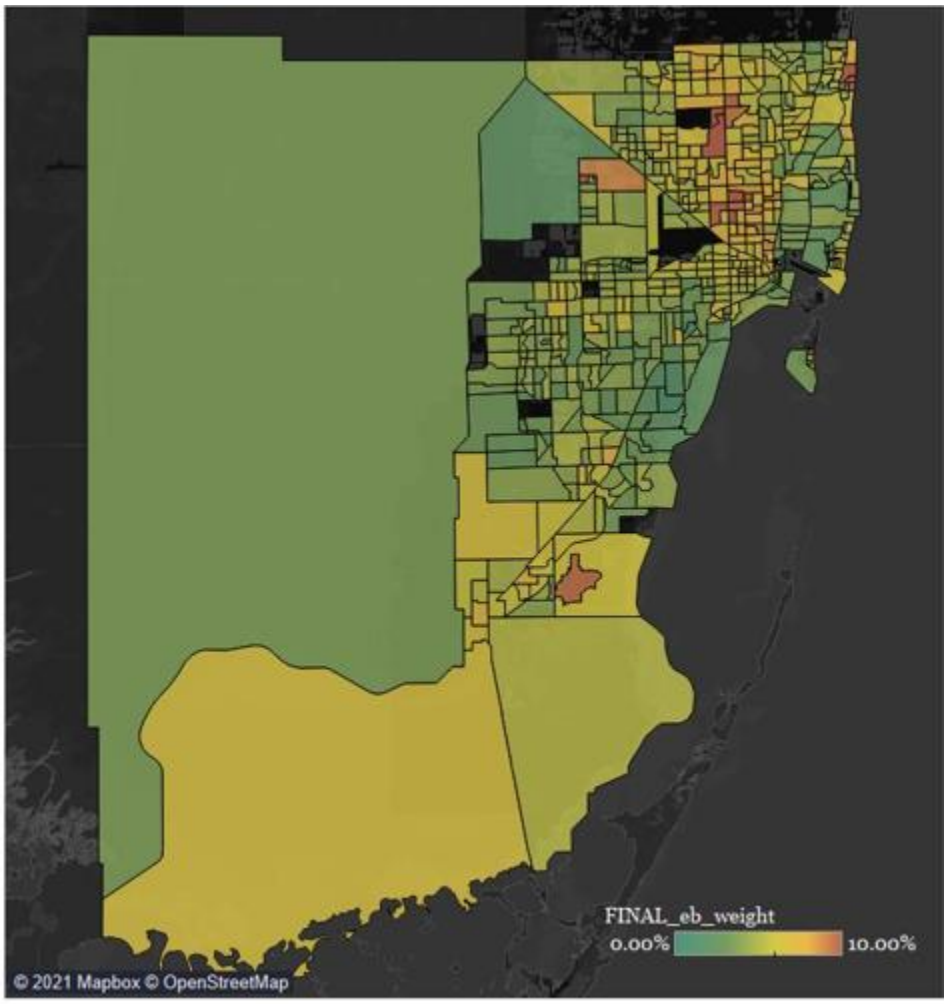


Figure 10: Miami-Dade County Energy Costs

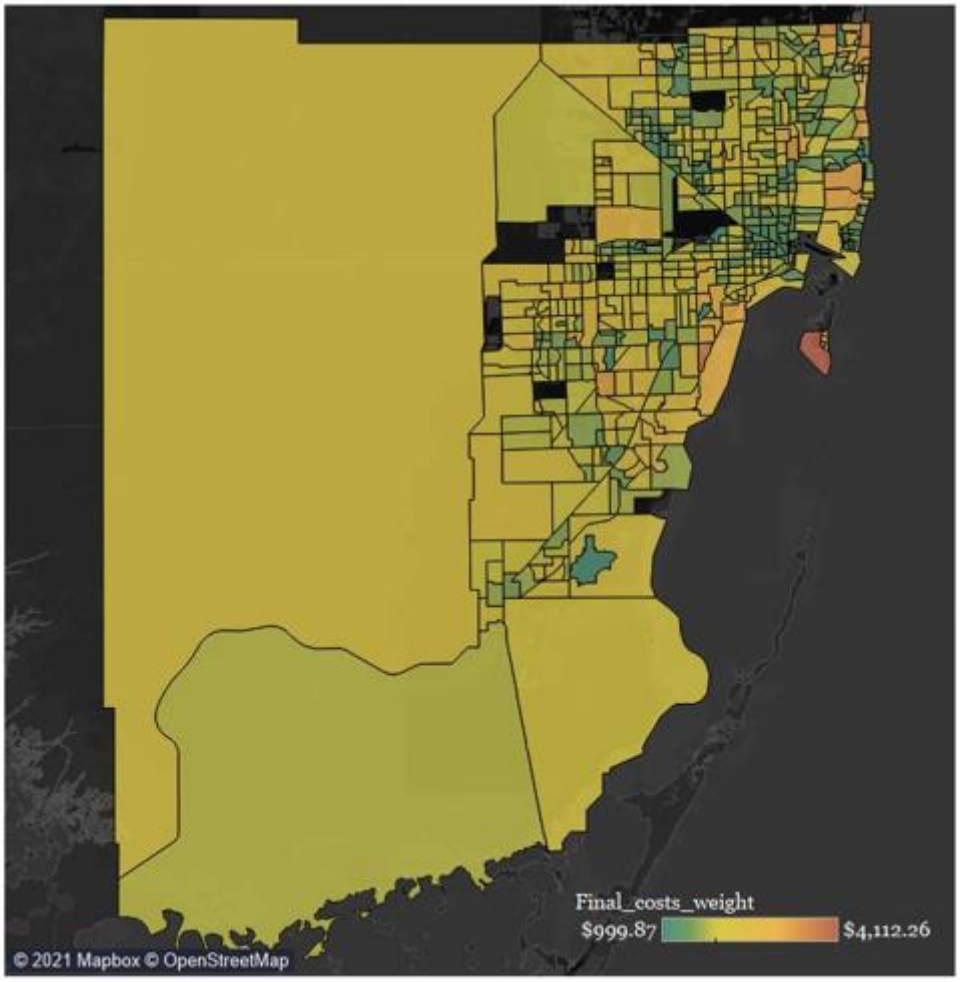


Table 7: Monroe County

%AMI, Rent/Own, Housing Type	Average Energy Burden	Avg. Annual Energy Costs	Household Count	Average Annual EAG Per Household	Total Annual EAG by Row	Annual Sum GHG Emissions (lbs CO2e)
0-30% Owners, Older "Other"	22%	$1,924	156	$1,381	0M	1M
0-30% Renters, Newer SF	13%	$2,150	160	$1,187	0M	2M
0-30% Owners, Newer SF	17%	$1,792	139	$1,076	0M	2M
0-30% Owners, Newer "Other"	16%	$1,525	77	$930	0M	1M
0-30% Owners, Older SF	16%	$1,563	318	$921	0M	3M
0-30% Renters, Newer "Other"	16%	$1,593	80	$893	0M	1M
0-30% Renters, Older SF	14%	$1,616	215	$859	0M	2M
0-30% Owners, Older MF	17%	$1,310	31	$820	0M	0M
0-30% Renters, Older MF	13%	$1,279	211	$687	0M	2M
30-60% Renters, Newer "Other"	7%	$2,258	77	$533	0M	1M
0-30% Renters, Newer MF	12%	$1,263	143	$480	0M	1M
0-30% Owners, Newer MF	11%	$877	4	$368	0M	0M
30-60% Renters, Older SF	6%	$1,942	314	$299	0M	3M
30-60% Renters, Newer SF	6%	$2,081	233	$242	0M	3M
30-60% Owners, Older MF	4%	$1,647	29	$178	0M	0M
30-60% Owners, Newer SF	6%	$2,068	341	$171	0M	4M

Figure 11: Monroe County Energy Burden

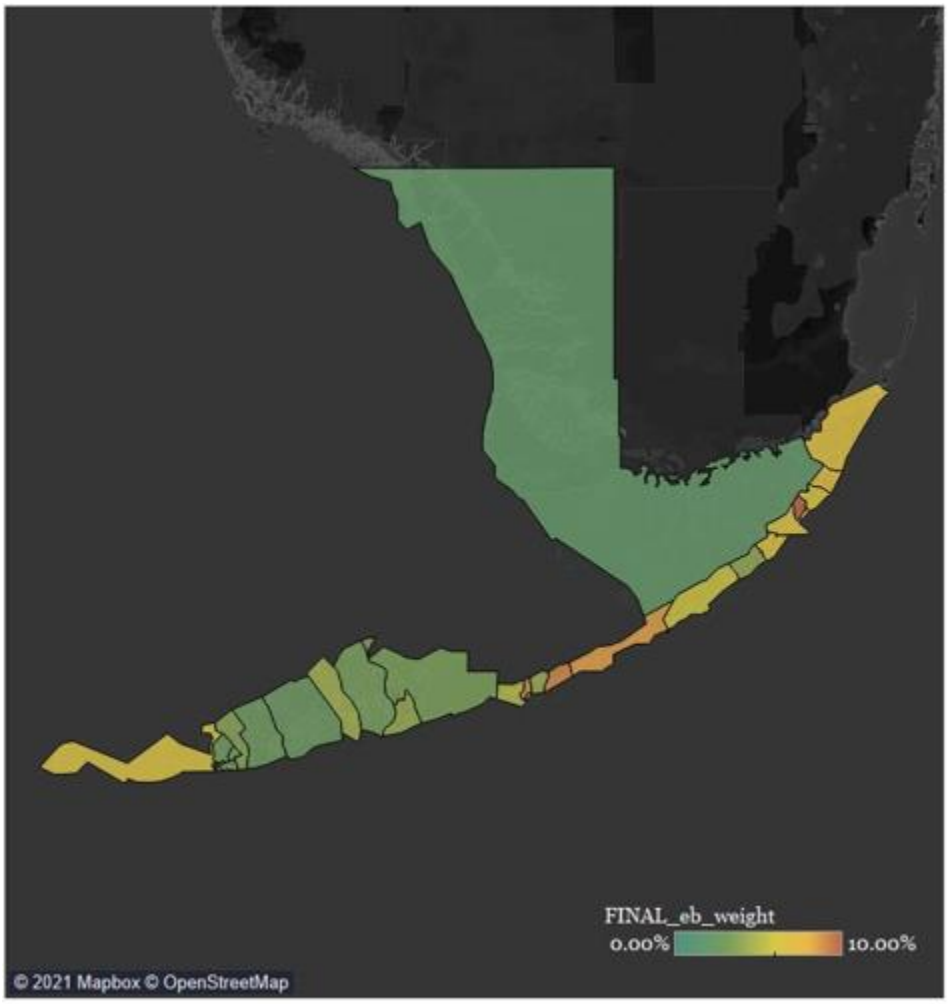
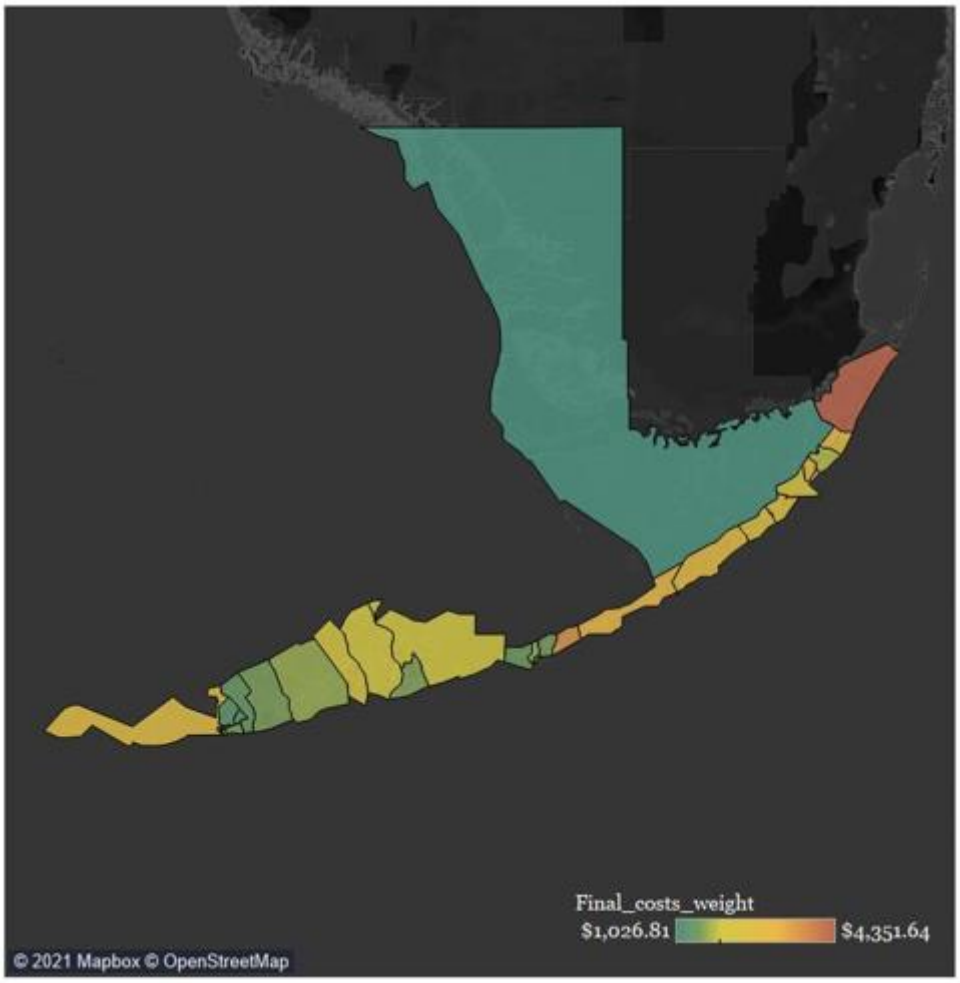


Figure 12: Monroe County Energy Costs



Appendix C: Utility Energy Efficiency Programs

Florida Power and Light (serving electric customers in Miami-Dade County, Broward County, and Palm Beach County)

https://www.fpl.com/save/programs.html

Florida Keys Electric Cooperative Association Inc. (serving electric customers in Monroe County)

https://fkec.com/services/residential-rebate-program/

Key Energy Services (serving Monroe County)

https://www.keysenergy.com/keys-rebate-program/

Lake Worth Beach Utility (serving electric customers in Palm Beach County)

No information found on current rebate and incentive programs

Appendix D: Stakeholder Convening Summary

Energy Efficiency Intersections in Southeast Florida Convening Summary

Date: July 28, 2022 from 1:00 - 3:00pm ET

Slides›

Overview

This convening was established to gather stakeholder insight and feedback for a project that addresses energy efficiency and utility bill hardship for the most energy-burdened residents. The convening presented an opportunity to engage in a discussion on actionable energy efficiency recommendations for Broward, Miami-Dade, Monroe, and Palm Beach counties of Southeast Florida.

Discussions from this convening will be incorporated into a formal recommendation report for local governments in the region this fall.

Key Takeaways

- The Draft Recommendations include:
  - Near-term: Better access to information; improved ability to reduce targeted equipment loads; use of federal block grants combined with county funds; coordination with utility programs as possible; regional partnerships
  - Longer-term: Comprehensive home repair, weatherization, and major equipment upgrades; expansion of utility energy efficiency programs; policy advocacy on the state and federal level
- Participants elevated to following ideas:
  - Collaborate and partner with trusted community-based organizations for successful implementation
  - Address hyper-local differences in conditions through local approaches
  - Alleviate barriers to technological literacy and access (not all residents have access to the internet), language access, and information dissemination
  - Connect health and energy funding for efficiency
  - Connect federal program dollars to expanded local programs
- Next Steps include:
  - **Survey:** this short survey provides an opportunity to comment on the draft recommendations as presented in the Convening. The survey closed COB on August 12, 2022. Fill out the survey ›
  - **Email:** feedback on recommendations is also welcome via email to suhaila@common-spark.com with the subject line “SEFL Energy Efficiency Action Plan Recommendations Feedback”.
  - **One-on-one Meeting:** a scheduled meeting with the outreach team to discuss unique needs, priorities, and perspectives. Please email suhaila@common-

spark.com with the subject line “SEFL 1:1 Request”. Meetings will be conducted in August and early September as availability allows.

Due to an unforeseen glitch, the original agenda was amended to account for the thirty minute late start. Please see the Next Steps section for additional detail on how to continue to engage and share your voice.

Project Overview

The project is a joint effort from the Southeast Florida Climate Change Compact and funded by the Southeast Energy Efficiency Alliance. The project team consists of Institute of Sustainable Communities (ISC), The Energy Futures Group (EFG), and Common Spark Consulting (CSC).

Jason Liechty with Broward County provided an overview of the Southeast Florida Climate Change Compact, noting regional climate change tools, workshops, and the Regional Climate Change Action Plan that is actively being updated.

Russell Paez, ISC, described in detail the purpose and objectives of the project. In particular, Paez identified that energy efficiency in the region is a critical, under-utilized strategy for advancing emissions reduction efforts and for building the economic resilience of the region’s lowest income residents. The goal of the project is to build local government capacity to implement practical and actionable data-driven energy efficiency strategies, alleviate energy insecurity, and address holistic housing affordability. Specifically, the project:

- started in 2021 with a data collection phase to better understand the housing characteristics and programs available to fill in the data gap.
- continued to expand the data collection and identify the top energy efficiency measures.
- is currently finishing with community engagement and the development of the Regional Energy Efficiency Action Plan (Action Plan).

Paez reviewed critical data that was gathered to highlight the importance of the issue:

- the South Atlantic has the lowest residential energy rates (per kWh), but the highest utility bills.
- a distinct connection between energy insecurity, affordability, and housing.
- the Low Income Home Energy Assistance Program (LIHEAP) only covers less than $5 per capita, some of the lowest funding in the U.S.
- factors of energy costs and energy burden include fuel use, home profile, housing stock, household energy efficiency upgrades, and availability of energy efficiency programs and incentives.
- households within 30% AMI have the highest energy burden and energy cost in the region, considering age of housing, type of household, renters vs owners, and other factors.

Participants in the meeting did not raise questions, comments, or thoughts about the project as a whole.

Outreach and Engagement

Maria Stamas, CSC, introduced the role of CSC in this process, noting that outreach and engagement is meant to ground the Action Plan in the realities of the region and to talk to communities addressing and experiencing the impacts directly. Stamas noted that over the past two months, the team reached out to over 15 organizations and conducted 5 interviews in an ongoing outreach effort. *(if you'd like to participate in an one-on-one interview in August or early September, please contact suhaila@common-spark.com).* Stamas provided a high level theme of suggestions, ideas, and priorities that have emerged from outreach thus far; these include:

- There is a huge need for holistic weatherization programs, specifically for expanded programs and to create new programs as well as to tie affordable housing, weatherization, and energy efficiency programs together.
- Program rules are limiting and constraining availability of services in existing programs, and a need exists to reform and expand programs.
- More information is needed about which homes have been served and which homes need to be served. Moreover, tying this information to annual funding allocations can alleviate time-intensive advocacy processes.
- New local offerings exist and present opportunities to uplift and build awareness around them.

Stamas identified the barriers and obstacles relating to energy use and energy efficiency, including, but not limited to:

- Ever-increasing utility bills
- Too expensive to run AC
- Lack of weatherization funding
- Community cooling centers not activated easily
- Confusion about what's available through programs
- Lack of workforce to scale programs appropriately
- Workers with the Quality Worker License is scarce
- Applications are not language accessible
- Connections between affordable housing and energy efficiency are limited within government entities
- Pre-weatherization is needed to qualify for weatherization programs
- Homes are not up to code
- A need to improve trust with and accountability for utilities
- Limited utility programs

Participants in the meeting raised no questions, comments, or thoughts about the outreach and engagement.

Recommendations and Action Plan

Jim Grevatt, EFG, introduced the Action Plan under development, noting that the recommendations are meant to provide concrete actions for the 4-county region. Grevatt noted that the intention is not to write a report that sits on a shelf, but rather for the Action Plan to be aligned to community needs and priorities to ensure its implementation.

To situate the Action Plan and recommendations, Grevatt provided several data points:

- The weighted average utility bill is roughly $1500/year according to several data sources.
- Within the state, utilities have a large range of kWh usage, but cannot determine what is causing these differences.
- The biggest single household energy use is cooling followed by hot water, appliances, and lighting.
- The project team examined how cooling is provided in different housing types, and found that renters may be responsible for their own cooling mechanisms.
- Climate controls (moderating temperature) are an opportunity to provide energy bill savings.

Based on the challenges and barriers identified in outreach and engagement, Grevatt presented both the near-term and longer-term framing of draft recommendations.

Draft Recommendations

Program Accessibility + Offerings

- Near-term: Better access to information; improved ability to reduce targeted equipment loads
  - Centralized "EE Resource Center"
  - Measures (efficient LED bulbs, room AC turn-in/upgrade program, smart thermostats, water-saving showerheads)
- Longer-term: Comprehensive home repair, weatherization, and major equipment upgrades

Policy + Funding

- Near-term: Use of federal block grants combined with county funds; coordination with utility programs as possible; regional partnerships
- Longer-term: Significant policy changes required to create funding streams
  - Utility energy efficiency (work with utilities for increased EE funding, especially for disadvantaged communities)
  - Federal and state programs
    - Replicate public benefits funding approaches used in Colorado (Boulder and Denver), Oregon, Vermont, New Jersey, others
    - Leverage future federal funding to create sustainable EE support

Grevatt noted that to expand programs in the near-term, a one-stop shop providing coordinated information on programs, rebates/incentives, and support could alleviate existent barriers of application information and language. Moreover, Grevatt indicated that the ability to reduce targeted loads could play a key role, particularly programs to trade in or upgrade to efficient LED

lights, room AC, smart thermostats, and water-saving showerheads. In the longer term, Grevatt summarized the need to sustain housing generally.

In terms of policy and funding procurement, the near-term goals could leverage federal block grants, and more importantly, aim for better coordination across the board. Grevatt outlined a few longer-term funding approaches based on the public benefits funding approach by cities and states (e.g. Boulder, Denver, Oregon, Vermont, and New Jersey). Furthermore, Grevatt emphasized the opportunity to prepare for such funding streams so that a pathway to unlock and utilize those funds is established.

Grevatt outlined key items that have yet to be addressed by the project. These include estimating programmatic energy bill, energy usage, and carbon savings; forecasting program costs; estimating reduction of energy burden; and creating an inventory of funding streams.

Discussion

In lieu of breakouts due to time constraints, participants joined a broad discussion about the recommendations. Key themes from these discussions are presented below and facilitator responses as sub-bullets as appropriate:

- The need for disaggregated data on energy burdens/bills for those most impacted.
    - Averages can obscure data and that some households pay $400-500/month in energy bills.
    - Catalyst Miami is conducting citizen science to measure temperatures in the home, preliminary findings are that households are seeing over 100 degrees in their homes. The final report should be public by year's end.
    - Recommendation to focus on impacts for those at 50% of area median income or less.
    - The framing of data is a critical component of representing the realities and experiences of community members.
- Intersection of weatherization and health, in particular how weatherization can be framed (and potentially funded) as a health initiative.
    - The benefits of weatherization extend beyond energy efficiency and include: not being hospitalized and reduced chronic health issues.
    - As part of the data collection process, specific health conditions were analyzed in comparison to energy burden data. These conditions (e.g. asthma and high blood pressure) will be included in the Action Plan.
- Intersection of affordable housing and the need to demystify, center, and build awareness of affordability in the home, e.g. that encompasses operating expenses.
- Regulatory rulemaking at the state level, specifically the status and opportunities within Florida Energy Efficiency Conservation Act (FEECA, Docket 20200181). Moreover, identifying if and how local governments might engage in the rulemaking by submitting comments in order to convince the Public Service Commission to authorize/order energy efficiency funding.
    - Connecting the needs, stories, and data from those impacted most could be an opportunity to showcase to Florida Public Service Commissioners the magnitude of the issue.

    - Redefining what is in the 'public good' and 'just and reasonable' may be a worthwhile evolution to the existing line of thinking and push Commissioners to consider impacts on low-income and energy burdened communities.
- Weatherization funding and the outlook of funding
    - A combined effort to work with elected officials and federal officials may be a pathway to advocate for better funding streams
    - Centro Campesino, a primary Weatherization Assistance Program (WAP) provider, is expecting additional funding from the Infrastructure Bill. Centro Campesino noted that the WAP program has undergone many changes, one of which was to utilize a software to determine eligible services on a given property.
- Project timeline and implementation
    - The project ends Sept 30th, 2022. The Compact would need to approve the report as a resource for local governments to implement programs

To close out the discussion, participants engaged in a poll asking about interesting, concerning, intriguing, and exciting elements of the project and recommendations (*see Appendix for full submissions)*. In general, participants were excited to explore opportunities to reduce energy burden in communities. Participants began building off each other's ideas in alignment to create community-centered pathways. The following recommendations emerged from the poll:

- Collaborate and partner with trusted community-based organizations who have existing relationships with residents for successful implementation
- Address hyper-local differences in conditions through partnerships with local government and CBOs for federal/state program implementation and recruitment
- Alleviate barriers to technological literacy and access (not all residents have access to the internet), language access, and information dissemination.
- Connect health and energy funding for efficiency
- Connect federal program dollars (like WAP) to expanded local programs

Next Steps

Ralston summarized that the information, feedback, and robust conversation will be synthesized to inform ongoing research and community outreach for the Action Plan. Ralston thanked everyone for their honest feedback and Paez noted the intent for the Action Plan to be a resource for local government and CBOs alike.

In addition to this summary, the project team has created several mechanisms to engage further.

1. **Survey:** this short survey provides an opportunity to comment on the draft recommendations as presented in the Convening. The survey will close COB on August 12, 2022.
2. **Email:** feedback on recommendations is also welcome via email to suhaila@common-spark.com with the subject line "SEFL Energy Efficiency Action Plan Recommendations Feedback".
3. **One-on-one Meeting:** a scheduled meeting with the outreach team to discuss unique needs, priorities, and perspectives. Please email suhaila@common-spark.com with the subject line "SEFL 1:1 Request". Meetings will be conducted in August and early September as availability allows.

Questions about the project as a whole can be directed to Russel Paez (russell@sustain.org). The project will end on September 30, 2022, upon which the Southeast Florida Climate Change Compact will vote upon the developed Regional Energy Efficiency Action Plan. The project team will notify registered participants and relevant listservs when the Action Plan is released.

Appendix: Poll Results

The following responses are anonymous submissions to the following poll question about the recommendations and process: *what's interesting, exciting, curious, or concerning to you?*

- Climateprogramportal.org is a great resource for finding federal funding opportunities.
- Options for linking air conditioning/upgrades--trade in programs with heat abatement programs.
- Moving the Florida PSC's EE rules forward to unleash major new utility funding for EE - then leveraging it with state, local, and federal $s!
- Helping local residents
- The opportunity to actually DO something and help people. As much reliable information on the return on investment for particular actions so we know how to get the biggest bank for the least buck
- What not-for-profit organizations are focused on this?
- My biggest concern is that some of the energy efficient programs such as HVAC replacement is geared towards homeowners and not renters.
- I love the idea of the centralized EE Resource Center. I think a focus on encouraging Energy Star Certified Equipment/products.
- I thought Natalie's points were astonishing. I certainly hadn't realized that people in that situation were not being reached by weatherization programs.
- Would love to see the govt members of SEFL CCC engage in policy advocacy to the PSC
- Using data to tie to the historic lens of racial equity in climate justice and energy efficiency to support what we already know to be true from anecdotes.
- The intersection of healthier homes and energy efficiency and/or resiliency and energy efficiency- touching on the opportunity for synergies, even if don't build out this piece in the report.
- Is there a possibility of local governments partnering with the weatherization providers to more quickly provide connection and services with residents?
- Teaching us how to link individual usage data with parcel data so we can more easily pinpoint where to help