

**Sunshine State Energy Resilience Coalition CPRG Submission**  
**TECHNICAL APPENDIX**

**Overview and Summary:** This technical appendix was created to provide insight into the assumptions, methodology, and modelings used for the greenhouse gas (GHG) emission reduction estimates for the Sunshine State Energy Resilience Coalition (SSERC) project. The project includes two primary GHG emission reduction measures, (1) Energy Efficiency Education and Tools (EEET) and (2) Large Scale Solar and High-Performing Buildings for Climate & Community Resilience (LSSHPB). These measures come from the coalition members' four PCAPS. The GHG methodology was in collaboration with the four MSAs that collectively represent the 15-county project area.

PCAP Lead	Counties Represented
TBRPC	Hernando, Hillsborough, Pasco, Pinellas
Sarasota County	Sarasota and Manatee
Orange County	Lake, Orange, Osceola, Seminole
City of Jacksonville	Duval, Clay, St. Johns, Flagler, Nassau

The GHG implementation measures vary slightly depending on the geographic region, as the SSERC plan draws from 12 priority reduction measures, which are highlighted in Table 3 of the Work Plan. TBRCP, Sarasota County, Orange County, and the City of

Jacksonville have slight variations in assuming calculations, depending on the needs of their geographic region. This appendix additionally serves to clarify the methodology in each of the PCAP regions that form the overall SSERC project. With EPA CPRG funding, each the GHG reduction measures will reduce GHG emissions accordingly:

**1) GHG Reduction Estimate Method:**

**1.1 GHG Measure 1 EEET:** Each MSA determined their project budget based upon pre-existing programs within their communities which they are expanding. Two such strategies are covered within this measure— *Residential Energy Auditing Toolkits (REA Toolkits)* and *Energy Efficiency Toolkits (EE Toolkits)*. The REA Toolkits will be housed in eco-friendly backpacks that may include but are not limited to, infrared thermometers, kill-a-watt plugs, hygrometers, worksheets, educational books, toilet leak detector tablet, caulking gun, indoor air quality monitor, and weatherstripping. The EE Toolkits will be distributed energy efficiency workshops conducted at a variety of locations throughout the community wherein participants will learn residential energy efficiency strategies and how to use energy-saving devices, which will be provided upon completion of the workshop. Energy-saving devices may include, but are not limited to, smart thermostats, lightbulbs, power strips, showerheads, and faucet aerators.

[A spreadsheet was developed](#) to calculate energy savings for both strategies in kWh. For the backpacks, calculations were based on the following factors: community center and [library engagement](#), the number of backpacks in circulation, and an estimated minimum [5% savings](#) on household energy for a simple home energy assessment. For the workshop and energy saving devices, calculations were based off of anticipated yearly attendance and, similarly to the backpacks strategy, an estimated minimum 5% energy savings per year. An average [annual household energy usage](#) for a household in Florida was calculated to be 16,087 kWh. To calculate emissions reduction, the following equation was used:

$$(NREL \text{ Project Year } CO_2 \text{ Emission Rate}) \times (\text{Annual kWh}) / 1000 = \text{Annual GHG Emissions Reduction}$$

**1.2 GHG Measure 2 (LSSHPB):** In order to find GHG emission reductions, a spreadsheet was created to calculate the GHG emissions reduction. In the spreadsheet, building size could be input directly by the municipalities. If building size was not known, then annual energy use could be substituted. In the case of data that only included a building's annual energy use, the Commercial Building Energy Consumption

Survey (CBECS) – 2018 database<sup>1</sup> was used to determine the average commercial office space energy use intensity in kWh/ft<sup>2</sup>. The annual total energy use was divided by the CBECS average energy use per square foot to derive an estimated building area. A preference for using the actual building size was emphasized to the municipalities. If the municipality had not designated which buildings would be retrofitted then it was recommended they input their entire building stock, or as much data was available. In these cases the data was normalized and the average or mean building size was used for the Low-End Estimate and one standard deviation above the mean was used to calculate the High-End Estimate. Any data that was either more or less than two standard deviations from the mean building size was excluded from the dataset. Buildings were identified by MSA accordingly:

### **1.2.1 Buildings:**

- *Orange County:* Orange County reviewed 46 of its buildings for inclusion in this GHG reduction measure: They were assessed first based on the services provided to support LIDAC communities identified using CEJEST and EJScreen tools. Using Orange County's own GIS layers, specific types of community-serving buildings were further identified and mapped. Buildings were also reviewed by other jurisdictions within the MSA, resulting in three additional buildings identified for specific projects. A total of 27 buildings were selected for specific measure-related activity implementation.
- *Tampa:* Over 50 facilities were analyzed for energy usage (kWh/year) to determine available space for solar PV installations, and outputs using [NREL's PV Watts Calculator](#). Projects ranged in size from 50 kW to 2,000 kW per installation for these facilities. 1,547 kWh/kW solar radiation for the Tampa Bay Region was used to convert the size of PV based on the PV Watt Calculator from NREL. GHG reductions were estimated from overall kWh energy saved cumulatively and converted using the FL CO<sub>2</sub> assessment (MT/MWh) from NREL data. These created building averages that were used in the assumptions. The actual buildings will be selected based on a grant application after the grant award.
- *Sarasota County:* Building sizes were either directly input by municipalities or estimated using the (CBECS) database. The actual buildings selected for the project will be selected based on a grant application after the grant award.
- *City of Jacksonville:* Each participating county and municipality within the Jacksonville MSA were provided funding allocation based on a minimum + LIDAC percentage per capita. They also shared with COJ the 5-8 year capital improvement projects which could be eligible to receive grant funding. These inputs were provided into the following calculators to help establish the distribution of funding through the 5 year grant period:

**1.2.2 Renewable Energy/Solar:** To generate measure-related activity data and estimate GHG emission reductions in renewable energy projects, MSAs used the [National Renewable Energy Lab's](#) (NREL) PVWatts® Calculator<sup>2</sup>. The tool estimates the energy production of grid-connected photovoltaic energy systems throughout the world, allowing users to develop estimates of the performance of potential PV installations. The process begins with estimating system size, which is derived either from established engineering calculations or through the use of the PVWatts tool. Energy savings are then calculated based on the outcomes of PVWatts calculations across three distinct categories: Rooftop PV, Parking lot or Solar Canopy PV, and Floating Solar PV (see 2.3).

**1.2.3 Energy Efficiency:** GHG reductions were estimated from overall kWh energy saved cumulatively and converted using the FL CO<sub>2</sub> assessment (MT/MWh) from NREL data (see section 3.1). For each MSA,

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<sup>1</sup> <https://www.eia.gov/consumption/commercial/data/2018/>

<sup>2</sup> <https://pvwatts.nrel.gov/>

building sizes and additional information is based on the prior information in 1.1.1. The HVAC system size is based on an estimated 500 CFM per square foot to derive a system cooling size estimate in tons. Because Florida is predominantly a cooling climate, this estimate was used to estimate HP size. System Costs (see section 2.3) are taken from RS Means filtered for Florida-specific estimates. For system sizes 1.5 to 25 tons Air Source Heat Pump costs were assumed. For system sizes 25.01 up to 50 tons Water Source Heat Pumps were assumed. Larger system sizes were not estimated because data was not available for larger heat pump systems in RS Means. 15% Energy savings is estimated for the upgrade to heat pumps. This estimate is comparable to upgrading a unit that has an efficiency rating of SEER 12 up to a SEER 16. It does not calculate additional savings potential from updating existing electric reheat which is common in Florida, to relying on the heat pumps for heating and so, is considered a conservative energy savings estimate. To calculate Heat Pumps and High-Efficiency AC Retrofits and Commissioning, the data from [FPL Direct expansion](#) and [Chiller Savings](#) programs. For LED Lighting, [FPL](#) and [EnergyStar](#) was used. Finally, [EnergyStar](#) was used to calculate the envelope improvements with roof assessments and Thermostat/BAS data. [RS Means 2023 Data](#) was used for data assistance.

## **2) Measure Implementation Assumptions:**

**2.1. Assumed Rate of Measure Implementation:** The adoption rate for each MSA varied per measure and for each entity. The specific adoption rate can be found in the attached spreadsheets and the rate of solar implementation and toolkits provided below is below. Measure EEET has a constant that provides the same number of toolkits per year (see tables below), whereas there are more variations to LSSHBP. For that measure, the GHG Reduction estimates are equal to annual savings when the chosen implementation scenario is met. The metrics are derived assuming that the implementation scenario is met by 2030, scaling linearly from 2024-2030 and is maintained from 2030-2050.

### **2.2. Capital Cost Assumptions Measure 2: Low- High- End Investment**

Type	Category	Low-End Total Investment	High-End Total Investment	Basis for Assumption
Rooftop PV	Renewable E	\$1.71/watt	-\$2.50/watt	
Parking lot/Solar Canopy PV	Renewable E	-\$4.00/watt	-\$5.00/watt	
Floating Solar PV	Renewable E	\$3.00/watt	\$4.00/watt	Sarasota and Orange Counties used the estimate of \$3/W based on recent project experience.
LED Lighting	E Efficiency	\$2.67/ft2	-\$5.47/ft2	2016 assessment developed by the Pacific Northwest National Laboratory (PNNL) – Linear LED Lighting Retrofit Assessment, September 2016.
Smart Thermostat/BAS	E Efficiency	\$0.49/ft2	\$2.53/ft2	RS Means filtered for Florida-specific estimates
Enclosure	E Efficiency	\$0.57/ft2	\$1.71/ft2	RS Means filtered for Florida-specific estimates

## **3. GHG Reduction Estimate Assumptions:**

**3.1 Electricity Grid Assumption:** GHG reduction estimates for electricity are calculated using the NREL

standard scenarios mid-case 2021 data set for the Florida region<sup>3</sup>. The mid-case scenario uses central or median values for core inputs such as technology costs and fuel prices, end-use electricity demand growth, and both state and federal (but not local) electricity sector policies as they existed in September 2023. The mid-case scenario does not impose any CO<sub>2</sub> emission limit other than those already in place at the subnational level (i.e., regional and state level). The Standard Scenarios include 17 sensitivity scenarios that vary factors such as fuel prices, demand growth, technology costs, resource availability, and transmission conditions. The mid-case scenario reports emissions forecast every 2 years from 2024 to 2050. Emissions rates were converted to CO<sub>2</sub>e using the IPCC 5th Assessment 100-year global warming potentials<sup>4</sup> (GWP).

Florida: NREL Mid-Case Scenario 2021 Data Set			
Year	CO <sub>2</sub> e MT/MWh	Year (cont.)	CO <sub>2</sub> e MT/MWh (cont.)
2024	0.36792265	2038	0.1875273
2026	0.33509451	2040	0.19017459
2028	0.27803486	2042	0.17532672
2030	0.23902312	2044	0.17369258
2032	0.24177249	2046	0.16939309
2034	0.20164811	2048	0.1591973
2036	0.19661166	2050	0.15569892

GHG emission reductions were calculated based on cumulative kWh savings and corresponding CO<sub>2</sub> reductions for 2025 to 2025 based on the NREL data set. An initial emissions rate of 0.000368 MT CO<sub>2</sub>e/kWh for 2025 was applied to the kWh savings calculated - this rate is adjusted every two years out to 2050 based on NREL grid projections. This was done to quantify GHG emissions reduction for solar PV, energy efficiency interventions, roofing and insulation improvements. Windows and doors were excluded from project funding.

**3.2 Solar PV:** Estimated kWh/year savings were taken from PVWatts tool per system and projected out annually through 2050. Cumulative data of kWh savings from solar PV installation over 5 years and corresponding CO<sub>2</sub> reductions for 2030 and for 2050.

**3.3 Energy Efficiency:** HVAC/Chiller system upgrades: savings of kWh are estimated at 15% of the current energy usage, projected out annually through 2050 (see 1.2.3). For roofing improvements, savings of kWh are estimated at 5% of the current energy usage, projected out annually through 2050 with the NREL Data Set.

#### **4. Reference Case Scenario (GHG Emissions or Activity Level)**

**4.1 GHG Measure 1 EEET:** The EEET involves assessing energy and water consumption levels before homeowners utilize the kits and implement any recommended changes. Establishing a baseline of energy and water consumption through conventional methods, such as scheduling appointments with technicians or using standard market practices, the reference scenario provides a starting point for evaluating the effectiveness of the program's measures in reducing GHG emissions. The reference level of energy efficiency for various types of equipment, such as appliances, heating and cooling systems, lighting, and water fixtures, can be determined based on industry standards or typical market practices

<sup>3</sup> See NREL Online Scenario Viewer - <https://scenarioviewer.nrel.gov/>

NREL 2023 Standard Scenarios Report: A U.S. Electricity Sector Outlook - <https://www.nrel.gov/docs/fy24osti/87724.pdf>

<sup>4</sup> [https://ghgprotocol.org/sites/default/files/Global-Warming-Potential-Values%20%28Feb%2016%202016%29\\_0.pdf](https://ghgprotocol.org/sites/default/files/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_0.pdf)

in the region served by the MSAs. Similarly, the GHG emission intensity related to water usage can be established using standard consumption rates and efficiency benchmarks. This baseline data enables the MSAs to quantify the GHG emission reductions achieved by homeowners who participate in the program and implement energy and water-saving measures recommended in the evaluation kits.

**4.2 GHG Measure 2 LSSHBP:** The GHG assumption uses an activity-level scenario – where estimates for energy savings are based on savings from implementing HVAC/Chiller upgrades, roofing improvements, or solar system installations that come from selected tools like PV Watts, or selected referenced programs like Energy Star. With those items selected, energy savings were captured over the 5 year implementation period of this grant with the consideration that capital investment costs might occur in a phased approach over that investment period. Therefore energy savings will occur in that same phased approach. Additionally, emissions factors were selected to align with an assessment of changes in the grid within the state of Florida as assessed by NREL, therefore influencing the emissions reductions. Once the 5 year implementation period is over those energy savings will continue annually over the period of time from 2030 to 2050. Over time, the changes within the emissions factors from the NREL Florida assessment were applied and emissions savings calculated accordingly to 2050.

**Renewable Energy/Solar:** Commercial Buildings with rooftop, ground-mount and covered parking solar PV ranging from 10 kW to 2,000 kW. Commercial Buildings without Rooftop solar PV and without covered parking with solar. Within Orange County MSA, County/City buildings with rooftop, carport, and floating solar PV ranged in size from 11 kW capacity for smaller rooftop systems to 579 kW capacity for floating solar. Large solar arrays serving communities range in size from 1.0 MW to 6.6 MW.

**Energy Efficiency Assumptions:**

Reduction Measure & Strategy	Baseline Case	Explanation
Heat Pump or High Efficiency AC Retrofits and Commissioning High Efficiency HVAC Retrofits	Elec. Resistance Heating COP=1 upgraded to COP= 3.0. AC SEER 12 upgraded to SEER 16. 16 SEER is required for Federal Tax Incentive.	Assumes a 15% Savings from installation of more modern and efficient conditioning units is assumed. The initial cost requirements are calculated based on the electric consumption. This is used in conjunction with equipment and labor cost data from RS Means, a construction cost estimating software.
LED Lighting	Mix of Fluorescent and HID lighting replaced by LED, saving 30% of the electricity	Assumes an average of 15% of total energy use is going toward lighting, 30% electricity savings by conversion to LED. The initial cost requirements are calculated based on the electric consumption. This is used in conjunction with data from the GSA (General Service Administration).
Envelope Improvements with Roof Assessment: Roof Insulation and Reflectivity	R-13 upgrading to R-38; Reflective roof membrane	Assumes a 5% energy reduction by improving roofs. The initial cost requirements are calculated based on electric consumption. This is used in conjunction with data from the DOE.

Smart Thermostats	Units with no automated controls for heating and cooling	Assumes a 5% energy reduction from updating the building automation system. For smaller buildings (<5,000 sf) with only a single zone costs are significantly reduced by installation of a few smart thermostats. Initial cost requirements are based on electricity consumption data from the NREL Report on Commercial Building Sensors and Controls Systems, which assesses barriers, drivers, and costs for such upgrades.
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## 5) Measure-Specific Activity Data:

**5.1 Measure 1 EEET:** Each MSA will implement an EEET in their areas. They will work with community engagement services, such as community-based organizations and local community leaders to help educate community members in low-income and disadvantaged communities. This measure will allow for the distribution of tool kits to help with energy efficiency upgrades in residential homes. This educational program will bring tool kits through workshop facilitations and some home installs to help implement this measure. Tampa and Jacksonville will install 1,000 toolkits in 5 years, Sarasota 1,500, and Orange 3,000.

## 5.2 Measure 2 LSSHBP

### 5.2.1 Projected Solar Energy Capacity Per Region

MSA Lead	Installed Solar capacity (MW)
Tampa	19
Sarasota	7.36
Orange	17.95
Jacksonville	6.7

**5.2 Energy Efficiency:** Each MSA has different energy implementation activities based on their PCAP, and each of the measures have different relevant considerations for GHG reduction calculation. For Sarasota, adoptions of the following measures will reduce consumption accordingly.

### 5.2.1 MWH reduction

MSA and Energy Efficiency Activity	Cumulative Electricity Consumption Reduction by 2030 (MWh)	Cumulative Electricity Consumption Reduction by 2050 (MWh)
Tampa Deep Energy Efficiency Retrofits	100,849 MWh	611,354 MWh
Orange County: HVAC/Chiller upgrades and roofing improvements	2,244 MWh	13,294 MWh
Sarasota County: Light and Deep Energy Retrofits	37,268 MWh	169,613 MWh
Jacksonville: Energy Retrofits	347,237 MWh	2,041,079,602 MWh

## 6. GHG Emissions Reduction

### 6.1 Overall reduction from GHG reduction EEET

	2025	2026	2027	2028	2029	2025-2030
Number of Kits (Households)	6,636	6,636	6,636	6,636	6,636	33,180

Cumulative Annual Electricity Reductions of Kits (MWh)	1,242	2,249	3,257	4,265	5,273	16,286
<b>Cumulative GHG Reductions (MT CO<sub>2</sub>e)</b>	1,929	3,723	5,640	7,089	8,834	29,482

## 6.2 GHG Reduction Measure 2: LSSHPB GHG reduction

### *GHG Reduction from Solar PV*

<b>Solar PV Installation by MSA</b>	<b>GHG reduction by 2025-2030</b>	<b>GHG reduction by 2025-2050</b>
Sarasota – Manatee	20,865 MTCO <sub>2</sub> e	63,948 MT CO <sub>2</sub> e
Orange County	39,695 MT CO <sub>2</sub> e	143,928 MT CO <sub>2</sub> e
Tampa	26,875 MT CO <sub>2</sub> e	111,246 MT CO <sub>2</sub> e
Jacksonville	15,815 MT CO <sub>2</sub> e	73,112 MT CO <sub>2</sub> e
<b>Total</b>	<b>103,250 MT CO<sub>2</sub>e</b>	<b>392,234 MT CO<sub>2</sub>e</b>

### *GHG Reduction from Energy Efficiency Measures*

<b>Energy Efficiency by MSA</b>	<b>GHG reduction by 2025-2030</b>	<b>GHG reduction by 2025-2050</b>
<b>Sarasota – Manatee</b>		
Energy Efficiency Retrofits	17,791 MT CO <sub>2</sub> e	88,956 MT CO <sub>2</sub> e
<b>Orange County</b>		
Energy Efficiency Retrofit	641 MT CO <sub>2</sub> e	2,733 MT CO <sub>2</sub> e
<b>Tampa Bay</b>		
Energy Efficiency Retrofits	24,105 MT CO <sub>2</sub> e	95,187 MT CO <sub>2</sub> e
<b>Jacksonville</b>		
Energy Efficiency Retrofits	95,835 MT CO <sub>2</sub> e	412,901 MT CO <sub>2</sub> e
<b>Total:</b>	<b>138,372 MT CO<sub>2</sub>e</b>	<b>599,777 MT CO<sub>2</sub>e</b>

## 6.3 GHG Reduction by Regional PCAP/MSA Leads

<b>Year</b>	<b>Measure 1 Emissions Reductions MT/CO<sub>2</sub>e</b>	<b>Measure 2 Emissions Reductions MT/CO<sub>2</sub>e</b>	<b>Total Emissions Reductions MT/CO<sub>2</sub>e</b>
<b>Sarasota</b>			
2030	837	38,656	<b>39,493</b>
2050	4,017	152,904	<b>156,921</b>
<b>Orange</b>			
2030	5,761	40,337	<b>46,098</b>
2050	24,755	146,661	<b>171,416</b>
<b>Jacksonville</b>			
2030	9,093	111,650	<b>120,743</b>
2050	10,239	486,023	<b>496,262</b>
<b>Tampa</b>			
2030	366	50,980	<b>51,346</b>
2050	3,228	206,434	<b>209,571</b>

#### 6.4 Overall GHG Reduction

Year	Measure 1 Emissions Reductions MT/CO <sub>2</sub> e	Measure 2 Emissions Reductions MT/CO <sub>2</sub> e	Total Emissions Reductions MT/CO <sub>2</sub> e
2030	10,296	241,623	251,919
2050	17,484	992,022	1,009,506

#### 7) Cost Effectiveness of GHG Reductions:

##### 7.1. SSERC Overall Project Cost Effectiveness and GHG emissions Reductions

GHG Measure 1 EEET	2025	2026	2027	2028	2029	2025-2030	2025-2050
Households Served:	6,636	6,636	6,636	6,636	6,636	33,180	33,180
Annual Bill Savings (\$):	\$621,078	\$821,099	\$1,028,666	\$1,413,859	\$1,467,757	\$6,536,975	\$27,209,415
Annual Emissions Reduction (tons CO <sub>2</sub> e):	1,560	2,233	2,739	2,722	3,207	<b>10,296</b>	<b>17,484</b>
Measure 2 LSSHPB							
Buildings/Projects Completed:	101	104	104	103	97	512	512
Annual Solar Bill Savings (\$):	\$2,292,794	\$5,279,965	\$9,078,607	\$6,759,155	\$17,728,459	\$47,644,928	\$261,227,778
Annual Energy Efficiency Savings (\$):	\$1,700,881	\$5,91,2548	\$10,832,742	\$15,438,953	\$19,688,894	\$55,638,818	\$323,059,783
Annual Emissions Reduction (tons CO <sub>2</sub> e):	12,878	31,356	53,974	271,926	87,472	<b>241,623</b>	<b>992,022</b>
<b>Total Annual Savings (\$):</b>	<b>\$5,089,780</b>	<b>\$11,956,842</b>	<b>\$20,843,901</b>	<b>\$29,566,463</b>	<b>\$38,686,352</b>	<b>\$109,233,206</b>	<b>\$606,297,243</b>
<b>Total Reductions (tons CO<sub>2</sub>e):</b>	<b>14,438</b>	<b>33,589</b>	<b>56,713</b>	<b>274,648</b>	<b>90,679</b>	<b>251,919</b>	<b>1,009,506</b>

Overall cost effectiveness The tables below demonstrate the cost-effectiveness of the GHG reduction by each measure. It was calculated using the following equation:

$$\text{Cost effectiveness of GHG reductions} = (\text{Requested CPRG funding}) / (\text{Sum of Quantified GHG reductions from CPRG funding from 2025 through 2030})$$

Measure	Request	Cost Effectiveness of GHG Reduction 2025-2030	Cost Effectiveness of GHG Reduction 2025-2050
GHG Measure 1 EEET	\$9,190,446	\$892.62	\$525.65
Measure 2 LSSHPB	\$190,809,553	\$789.70	\$192.34
<b>Total Project</b>	<b>\$199,999,999</b>	<b>\$793.90</b>	<b>\$198.12</b>

##### 7.2 Cost-effectiveness and GHG reduction my MSA

###### Tampa Bay

GHG Measure 1 EEET	2025	2026	2027	2028	2029	2025-2030	2025-2050
Households Served:	200	200	200	200	200	1,000	1000



Annual Bill Savings (\$):	5,741	18,307	38,417	66,397	102,599	183,653	2,488,063
Annual Emissions Reduction (tons CO2e):	18	55	124	190	312	366	3228
<b>Measure 2 LSSHPB</b>							
Buildings/Projects Served:	10	9	7	6	6	38	38
Annual Solar Bill Savings (\$):	55,249	1,715,314	3,575,241	6,26,5787	9,879,946	13,492,315	85,739,690
Annual Energy Efficiency Savings (\$):	503,321	1,660,444	3,508,702	5,975,813	9,038,843	12,101,873	73,362,477
Annual Emissions Reduction (tons CO2e):	3,246	9,426	19,782	23,2367	43,834	50,980	206,434
Total Annual Savings (\$):	1,058,570	3,375,758	7,083,943	12,243,390	18,918,789	25,594,188	159,102,167

### ***Jacksonville***

<b>GHG Measure 1 EEET</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2025-2030</b>	<b>2025-2050</b>
Households Served:	5,036	5,036	5,036	5,036	5,036	25,180	25,180
Annual Bill Savings (\$):	\$445,578	\$463,273	\$480,969	\$498,665	\$516,361	\$2,938,902	\$3,946,328
Annual Emissions Reduction (tons CO2e):	1,490	1,411	1,465	1,260	1,305	9,093	10,239
<b>Measure 2 LSSHPB</b>							
Buildings/Projects Served:	80	80	80	80	80	400	400
Annual Solar Bill Savings (\$):	\$298,521	\$791,029	\$1,082,011	\$1,275,999	\$1,372,993	\$6,193,546	\$33,653,405
Annual Energy Efficiency Savings (\$):	\$931,613	\$3,726,452	\$6,521,292	\$8,384,518	\$9,316,131	\$38,196,137	\$224,518,756
Annual Emissions Reduction (tons CO2e):	3,931	13,762	21,190	24,418	25,122	111,650	486,023
Total Annual Savings (\$):	\$1,675,712	\$4,980,755	\$8,084,272	\$10,159,182	\$11,205,484	\$47,328,585	\$262,118,489

### ***Orange County***

<b>GHG Measure 1 EEET</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2025-2030</b>	<b>2025-2050</b>
Households Served:	1,100	1,100	1,100	1,100	1,100	5,500	5,500
Annual Bill Savings (\$):	\$150,528	\$301,056	\$451,584	\$602,112	\$752,640	\$3,010,559	\$18,063,354
Annual Emissions Reduction (tons CO2e):	369	673	1,009	1,116	1,395	5,761	24,755
<b>Measure 2 LSSHPB</b>							
Buildings/Projects Served:	6	10	9	7	4	39	39
Annual Solar Bill Savings (\$):	\$1,860,850	\$2,460,926	\$3,639,616	\$3,919,678	\$4,130,303	\$20,141,676	\$102,747,729
Annual Energy Efficiency Savings (\$):	\$15,738	\$25,235	\$52,122	\$77,788	\$82,877	\$336,636	\$1,994,169

Annual Emissions Reduction (tons CO2e):	4603	5554	8247	7410	7809	40,337	146,661
Total Annual Savings (\$):	\$2,027,116	\$2,787,216	\$4,143,321	\$4,599,578	\$4,965,819	\$23,488,870	\$122,805,252

### ***Sarasota***

<b>GHG Measure 1 EEET</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2025-2030</b>	<b>2025-2050</b>
Households Served:	300	300	300	300	300	1,500	1,500
Annual Bill Savings (\$):	\$19,231.	\$38,463	\$57,696	\$76,926	\$96,157	\$403,861	\$2,711,670
Annual Emissions Reduction (tons CO2e):	52	94	141	156	195	837	4,017
<b>Measure 2 LSSHPB</b>							
Buildings/Projects Served:	5	5	8	10	7	35	35
Annual Solar Bill Savings (\$):	\$78,174	\$312,696	\$781,739	\$1,563,478	\$2,345,217	\$7,817,391	\$39,086,954
Annual Energy Efficiency Savings (\$):	\$250,209	\$500,417	\$750,626	\$1,000,834	\$1,251,043	\$5,004,172	\$23,184,381
Annual Emissions Reduction (tons CO2e):	1,098	2,614	4,755	7,731	10,707	38,656	152,904
Total Annual Savings (\$):	\$328,382	\$813,113	\$1,532,365	\$2,564,313	\$3,596,260	\$12,821,563	\$62,271,335