

ORLANDO'S CITY ENERGY PROJECT: ENERGY FOUNDATION PROPOSAL



OFFICE OF SUSTAINABILITY & RESILIENCE

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1.0 BACKGROUND

In January 2014, the City of Orlando was selected as one of the first 10 (Phase One) cities to take part in the City Energy Project. This partnership has allowed the City of Orlando to pursue the recommendation set forth in the City's Community Sustainability Action Plan (2013) to adopt a policy for building benchmarking and reporting, auditing, and retro-commissioning—to increase the energy and water efficiency of Orlando buildings and achieve our goals of social, environmental, and economic sustainability. Since this time, we have worked to inform, develop, pass, and provide the initial implementation of this policy.

1.1 Policy History

- From his appointment in January 2014 through the time of policy passage in December 2016, the Senior Energy Advisor (and later Director of Sustainability for the City), Chris Castro, held over 350 stakeholder meetings to discuss the policy goals, purpose, and strategy, and develop the key elements of the ordinance.
- In October 2015, Brittany Sellers was brought on as a part-time Contractor Associate (and later full-time Sustainability Project Manager and City Advisor) to assist with stakeholder engagement, resource development, and moving the policy forward to City Council.
- In December 2016, Orlando City Council unanimously passed the Building Energy and Water Efficiency Strategy (BEWES), the City's benchmarking and transparency policy.
- From the time of policy passage through summer of 2018, the City of Orlando continued to conduct outreach and stakeholder engagement, as well as establishing a Help Desk, sending out notification letters, and completing the necessary preliminary steps for the City's first year of policy compliance, all of which was additionally informed throughout the experience of co-chairing the City Energy Project's Implementation Working Group.
- The City's first policy compliance deadline was August 1, 2018.

1.2 Prior Funding

- Upon being selected for the City Energy Project in January 2014, the City of Orlando was awarded a grant of \$195,000. Over the last four and a half years, the City of Orlando has utilized \$129,700 of this total. The \$65,300 that is requested from Energy Foundation in this proposal represents the remaining funds from this grant.
- In addition to the City Energy Project funding, additional services were provided by way of Environmental Defense Fund Climate Corps Fellow, Ben Stacey, (full-time employee, paid directly by program funder), who worked with the City from May through August 2018. This work included the creation of a data verification and compliance trends analysis tool to be used in reviewing data submitting in compliance with the policy.

2.0 GOALS AND PURPOSE

In addition to meeting the climate-related goals set forth in the City of Orlando's Community Sustainability Action Plan, the City's participation in the City Energy Project was driven by several core principles: Leading by example, engaging stakeholders and developing key partnerships, and spurring market transformation. Throughout the last four years as a participant in the City Energy Project, the City has demonstrated numerous successes across each area.

2.1 Lead by Example

Successes to Date: Energy Efficiency Municipal Operations: In 2015, the City of Orlando, a participant in the Department of Energy's Better Buildings Challenge, made an \$18 million energy efficiency investment in public buildings and began benchmarking, auditing, and retrofitting more than 55 municipal buildings. At completion, this project will save the City up to \$2.5 million per year in energy costs, which can then be applied toward community programs and other projects, such as paying for half the cost of the new LEED-certified police headquarters.

Successes to Date: Requirements for Municipal Buildings Surpass Those of Private Buildings The requirements for the City of Orlando's municipal buildings are both more aggressive and occur sooner than the requirements for private buildings.

	<i>Private Buildings</i>	<i>Municipal Buildings</i>
<i>Benchmarking Deadline</i>	August 1, 2018 (<i>extended</i>)	May 1, 2017
<i>Building Size Threshold</i>	50,000 square feet	10,000 square feet
<i>Transparency Deadline</i>	September 1, 2019	September 1, 2018
<i>Audit Requirement</i>	ASHRAE Level I (<i>offered free of charge by utility</i>)	ASHRAE Level II

2.2 Engage Stakeholders and Develop Key Partnerships

Successes to Date: Stakeholder Engagement Throughout Policy Development: Throughout the policy development process from January 2014 through November 2016, the City of Orlando engaged heavily with local stakeholders to discuss the purpose of this effort, as well as inform the policy elements, timeline, and various stipulations:

- Held 350+ meetings, ten workshops, seven stakeholder roundtables, and two summits with utilities companies, trade associations, building owners, managers, and operators, and labor interest groups.
- Collected 40+ letters of support.
- Hosted a three-part series of ENERGY STAR Training workshops, including data verification training.

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Successes to Date: Energy & Green Buildings Sub-Committee: As discussed throughout policy development, the implementation of this policy is informed by a group of community stakeholders who meet regularly to discuss and provide recommendations for current and upcoming policies and programs related to Energy and Green Buildings (as one of seven focus areas specified within the Green Works Community Sustainability Action Plan).

- The diverse group of stakeholders includes representation from the following sectors:
 - Commercial Office: Building Owners and Managers Association (BOMA)
 - Hospitality: Central Florida Hotel and Lodging Association (CFHLA)
 - Multifamily: Apartment Association of Greater Orlando (AAGO)
 - Industrial Warehouse: National Association of Industrial and Office Parks (NAIOP)
 - Retail: International Council of Shopping Centers (ICSC)
 - Health care / Hospitals: Florida Hospital
 - Academia: UCF Florida Solar and Energy Center (FSEC)
 - Developers: Urban Land Institute (ULI)
 - Green Builders: U.S. Green Building Council (USGBC)
 - Facilities Managers: International Facility Management Association (IFMA)
 - Architects: American Institute of Architecture (AIA)
 - Utility: OUC
 - Engineering: American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
 - Energy Engineering: Association of Energy Engineers (AEE)
- Members have committed to attend the quarterly meetings; provide input for policy and program development and implementation, including resource development, outreach and education plans, and compliance support; identify support and resources in the community; and share ideas and productive insight into making these initiatives a success.
- The kickoff meeting was held on April 12, 2018 and the next meeting will be held in fall 2018.

Successes to Date: Central Florida Energy Efficiency Alliance (CFEEA): The City of Orlando is also a member of CFEEA, a group that includes representation from local utilities, energy service providers, property managers, trade organizations and labor interest groups, other local municipalities, and others. Two of the key roles of this group, relative to the benchmarking policy, are as follows:

- CFEEA also runs the Central Florida Battle of the Buildings, is a seven-county-wide building performance competition that is co-branded with the Environmental Protection Agency. This voluntary challenge provides free resources and education for building operators to assist reduce energy, water, and waste consumption at their facility through benchmarking with ENERGY STAR Portfolio Manager, as well as the opportunity to receive recognition across a wide variety of categories (including highest performance, highest reduction in energy use, etc.) at an annual awards banquet.
- With many of the organizations and property management groups at the table who have properties covered by the policy, this group provides an opportunity for exposure to the benefits of benchmarking, free audits, energy efficiency financing mechanisms that available, as well as camaraderie through connection (and healthy competition) with peers

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and service providers. Additionally, the City regularly solicits informal feedback regarding outreach, education, and support for the policy, as well as opportunities for potential recognition for building performance.

Successes to Date: Workforce Development and Training Programs: The City of Orlando has collaborated with local organizations to develop several innovative programs that provide education and training to grow the local workforce of energy management professionals

- Orlando-based Valencia College now offers an Energy Management and Controls Technology Associate in Science degree program. The development of this program was funded by a \$900,000 grant from the National Science Foundation and, upon its launch in fall 2018, is the first of its kind in Florida. The curriculum was designed in consultation with the City of Orlando, engineering professors, and major regional employers, such as Siemens, Automated Logic, Trane and Honeywell, each of whom are committed to hiring Valencia students for internships and hiring the program's graduates.
- In conjunction with the Central Florida Battle of the Buildings, the City of Orlando partnered with the University of Central Florida to create an Energy-Specialists-in-Training program. These twenty-five students completed a month-long curriculum in which they received full training on ENERGY STAR Portfolio Manager and high-level overview of energy management basics. They were available to provide data entry, building benchmarking, site visits, and provide basic feedback and suggestions for building operators who participated in the competition. In return, these students obtained valuable skills and experience, gained exposure to various organizations and sectors, and received recognition from both the University of Central Florida, CFEEA, and the City of Orlando.
- The City of Orlando is also exploring the possible development of a "Greenprint" Program to provide local clean energy and green building workforce training and opportunities for local disadvantaged and vulnerable populations. This program would focus on building the green economy through mentorships and potential job placement with contractors, vendors, and community-based organizations.

2.3 Reduce Barriers and Enable Information

Successes to Date: ENERGY STAR Training Workshops: In order to increase knowledge and awareness of building benchmarking, the City of Orlando, in partnership with U.S. Green Building Council's Florida Chapter has hosted a series of ENERGY STAR Portfolio Manager 101 training workshops over the last three years. By partnering with local organizations, such as Building Owners and Managers Association (BOMA), Apartment Association of Greater Orlando, International Facility Managers Association (IFMA), American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), and Central Florida Hotel and Lodging Association, these tri-annual workshops have provided training to nearly 200 building operators in Central Florida. These 4-hour courses have covered a number of topics, including the following: Basics of energy benchmarking, obtaining the verification and statement of energy performance reports from Portfolio Manager, ENERGY STAR certification process (including eligibility requirements, and validation process), lighting, thermal comfort and ventilation requirements associated with the verification reports.

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Successes to Date: Enabling PACE Financing: In March 2016 the City of Orlando's City Council unanimously approved a resolution to establish Property Assessed Clean Energy (PACE) financing to remove the barriers of high upfront costs and provided low-interest financing for home and business owners. In its first year of operation in the City of Orlando, PACE financing was utilized for over 80 projects, totaling nearly \$2 million in improvements providing improved energy and water efficiency, climate resiliency, and/or solar panel installation for local buildings.

Successes to Date: Utility Developing Whole Building Data Aggregation Tool: After several years of continued engagement, Orlando Utilities Commission (OUC) is currently in the process of finalizing a data access platform for whole-building utility data and ENERGY STAR web services, set to debut in November 2018. This platform will provide Orlando's building managers with automatic benchmarking data for use in Portfolio Manager. OUC is also currently developing a data access platform to provide energy use data for community-planning. Additionally, OUC is currently piloting a Green Button data sharing program with Orlando's Lake Nona Community.

Successes to Date: Utility Program Outreach: Throughout the extensive policy stakeholder engagement, involvement in CFEEA and the Central Florida Battle of the Buildings, ENERGY STAR trainings, and other collaborative efforts, the City of Orlando has conducted extensive outreach to building owners and managers regarding existing the local utility offerings for energy efficiency improvements, from free audits, to commercial rebate and financing programs.

2.4 Spur Market Transformation

Successes to Date: Policy Impact Study: Extensive empirical data has consistently demonstrated that improvements to energy efficiency spurs economic investment through reduced operating costs, increased asset values and improved worker comfort and productivity, and new job creation. To quantify these impacts locally, the City of Orlando contracted the GreenLink Group to perform a third-party policy impact study to determine the costs and benefits to implementing the benchmarking policy.

- This study cost a total of \$15,000 and was paid through the City Energy Project grant award funding.
- The study forecasted the following significant policy impacts by 2030:
 - \$208 million in energy and water cost savings
 - 2 billion kWh (kilowatt-hours) of electricity saved
 - 1.08 million tons of CO2 abated
 - \$57 million in public health benefits
 - 900 million gallons of water saved
 - 500+ new high-wage jobs created

Successes to Date: Support Resources Development: In order to provide information regarding energy efficiency, building benchmarking, the future role of transparency, and to provide policy compliance support, the City of Orlando has developed numerous resources for building operators.

- The policy webpage, orlando.gov/buildingefficiency, has extensive support resources and tools available including: The list of buildings covered by the policy and contact form, compliance checklist, benchmarking guides, policy background, elements, and frequently asked questions, and benchmarking reporting link directly to ENERGY STAR Portfolio Manager.
- The City has also produced a number of printed factsheets and overview documents, including benchmarking 101; audits 101; retro-commissioning 101; the purpose, goals, and estimated impacts of the policy; the policy elements; and a compliance checklist.

Successes to Date: Help Desk and Newsletter: In addition to the web-based and printed guides, the City of Orlando has also established a Help Desk to assist building operators with their energy-efficiency-related questions and will begin providing updated news via a digital newsletter in fall 2018.

- Building owners and operators can contact the Help Desk directly with any questions by emailing buildingefficiency@cityoforlando.net or calling 407-246-2534. Trained staff provide assistance to building owners and operators regarding the topic of energy efficiency, help with using ENERGY STAR Portfolio Manager, complying with the policy, applying for an exemption, verifying their benchmarking submission, and other related inquiries.
- Beginning in fall 2018, building operators will be provided with information such as upcoming ENERGY STAR training workshops, benchmarking tips, helpful resources for policy compliance, Central Florida Battle of the Buildings information, and success stories.

3.0 TASKS

3.1 Second Year Policy Notification and Compliance Materials

Amount Requested: \$6,000

Dates: November 2018 through April 2019

Needs: The City will pay for printing services for the notification and compliance letters, flyers and post cards, and also pay for postage.

Purpose: In order to notify building owners about the policy, notification, reminder, and compliance documents will be mailed to the point of contact for each property.

3.2 Marketing Materials:

Amount Requested: \$3,500

Dates: October 2018 through April 2019

Needs: The City will develop and order a high-quality policy toolkit folder that includes policy overview, fact sheets, how-to documents, and other resources can assist building owners and managers, particularly those who are new to the policy, with compliance.

Purpose: The City will provide a complete toolkit of printed resources and information to help building operators understand the purpose of the policy, becoming familiar with ENERGY STAR Portfolio Manager, the process of benchmarking and submitting data to the City, understanding and anticipating how the data will be made publicly transparent, and, if applicable, preparing to complete audits and/or retro-commissioning. In addition to serving as a basic guide, additional material describing how to leverage the benefits of the policy elements to improve their building performance and competitive business performance will also be included.

3.3 Implementation Assistance:

Amount Requested: \$12,800

Dates: October 2018 through April 2019

Needs: A paid part-time Help Desk Coordinator position will assist the City in providing reliable, high-quality assistance and compliance management.

Purpose: In support of ongoing implementation of the policy, create a paid position for an assistant who will support the Sustainability Project Manager and act as Help Center Coordinator. This individual will manage student volunteers in providing Help Center support, expanding the necessary data infrastructure to support the development of new integrative software, assisting with managing notification, outreach, and compliance communications, and further developing marketing materials and compliance toolkits. One current intern, who has volunteered with the City for over a year and is very familiar with the policy, data, and customer service needs, has been identified as an appropriate and qualified candidate for this position. However, a second individual may be required in a seasonal capacity during periods of high volume for the Help Desk.

3.4 Policy Help Center:

Amount Requested: \$15,000

Dates: September 2018 through April 2019

Needs: Specialized software (currently in the process of a planned group procurement through City Energy Project) will be utilized by the policy Help Desk to streamline and improve both outward-facing customer service, as well as internal planning, tracking, and organizing policy-related correspondence and policy compliance for various policy elements at the individual building level, among other functional requirements. This task also includes staffing needs beyond those listed in Task 3.3 – Benchmarking Implementation Assistance, particularly in regards to assisting with development, training, and deployment of this software.

Purpose: This software will allow the City to effectively integrate data from Microsoft Excel, ServiceNow (the City's customer relationship management software, which is comparable to Salesforce), and ENERGY STAR Portfolio Manager, thereby reducing unnecessary staff time and improving the customer experience for building operators and internal support procedures.

3.5 ENERGY STAR Training:

Amount Requested: \$10,000

Dates: October 2018 through April 2019

Needs: In order to host the free annual benchmarking educational series for ENERGY STAR Portfolio Manager to building operators in the community, we need to both compensate the technical expert who leads the session and also purchase lunch to continue to successfully draw attendees.

Purpose: In order to continue to encourage and empower building owners and managers who are new to benchmarking and who need to comply with the policy, we will continue to host a series of ESPM 101 courses that include step-by-step directions for entering, managing, and verifying building data into ESPM with a technical expert, in collaboration with USGBC of Florida. This series will be modeled after the 2016, 2017, and 2018 educational series that was co-sponsored by Energy Foundation and City Energy Project

3.6 Visualization Tool:

Amount Requested: \$10,000

Dates: February 2019 through April 2019

Needs: Work with Stamen to develop an online mapping tool that displays building energy performance.

Purpose: In accordance with the transparency component of the policy, we will display an interactive map of the energy performance (Energy Star score or EUI, among other metrics) for all buildings that are covered under our policy on our City website. The functionality of the map will allow for easy and quick browsing and comparison of buildings based on location, space type, and performance for prospective tenants and buyers, as well as competitors.

3.7 Building Performance Scorecard:

Amount Requested: \$8,000

Dates: February 2019 through April 2019

Needs: Data analytics, printing materials, and postage.

Purpose: Providing building owners and managers with specific evaluative and comparative information about the building's performance, based on the score and other data submitted, that can be used to drive energy improvements.

4.0 DELIVERABLES

4.1 Technical Reports

The City of Orlando will prepare and submit two interim progress reports describing the tasks undertaken and progress towards achieving the grant's project outcomes.

4.2 Summary Report

The City of Orlando will also prepare and submit a final technical report describing the completion of tasks undertaken and progress towards achieving the grant's project outcomes activities including successes in achieving the project goals and outcomes.

5.0 TIMELINE

5.1 Table of Deliverables and Associated Tasks by Date

<i>Deliverable</i>	<i>Associated Tasks</i>	<i>Description</i>	<i>Date</i>
Technical Report #1	3.1 Second Year Policy Notification and Compliance Materials 3.2 Marketing Materials 3.3 Benchmarking Implementation Assistance 3.4 Policy Help Center 3.5 ENERGY STAR Trainings	This report will describe the progress being made on these tasks up until this point. Much of this work would be preparatory, as the notification letters for the 2019 policy compliance season will be sent by December 1, 2018.	December 2018
Technical Report #2	3.1 – 3.5 (<i>Continued</i>) 3.6 Visualization tool 3.7 Building Performance Scorecard	This report will review the ongoing progress on the tasks described in the first report, as well as the early procurement and potentially development of the last two tasks in preparation for data transparency in the fall.	February 2019
Final Summary Report	3.1 – 3.7 (<i>Continued</i>)	This last report will both provide a final update on tasks since the prior report, as well as a comprehensive review of the progress made throughout the grant period, in alignment with the goals and purpose of this work.	April 2019

5.2 Contingency for Extension Request

Certain tasks may require additional focus or priority, particularly those which are most time-sensitive in relation to policy milestones. For example, periods of high-volume (e.g., compliance and exemption request deadlines) may require additional implementation assistance rather than building performance scorecard development (which is not required per the ordinance language nor specified for delivery by a particular date). In the case of any potential delays due to policy-related demands, the City of Orlando will file a request for an extension for the application of the Energy Foundation grant funds (and any related changes in the technical reporting as described in the timeline).

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6.0 SUMMARY

With funding for the specified tasks, the City of Orlando will be able to complete the full implementation of our benchmarking and transparency policy. As a result, this work will allow us to drive energy and water efficiency in buildings, diversify the local economy and create high-wage jobs, save businesses and residents money on utility bills, improve Orlando's competitiveness as a global city, foster a cleaner environment, and implement a model of innovative and pragmatic leadership for cities and states to follow.

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We indicate our submission of this grant proposal to Energy Foundation on September 7, 2018 in fulfillment of the final tasks associated with our work as a Phase I City of the City Energy Project.

X 

Chris Castro, LEED GA, CPB

Director, Mayor's Office of Sustainability & Resilience
City of Orlando