Charleston Green Team Meeting

Tuesday, June 1, 2021

5:30pm to 7:00pm

Meeting Held Virtually

The public may participate by Zoom at the following link:

https://us02web.zoom.us/j/89397478138?pwd=R083UDF6aG1zK2tCQmJ2ejVlRU53QT09
Passcode: 252012
Phone: 312-626-6799 or 929-436-2866
Webinar ID: 893 9747 8138

I. Welcome
II. Adopting the minutes from the April 27, 2021 meeting
III. Energy Savings in City Buildings Proposal – Emmett Pepper
   A. Presentation by John Balfe of Northeast Energy Efficiency Partnerships (NEEP)
   B. Discussion of proposed letter and accompanying proposed ordinance
   C. Vote on Building Energy Benchmarking Proposal
IV. Updates:
   A. Communications – Linda Frame & Patti Hamilton
   B. Composting – Justin Marlowe & Emmett Pepper
   C. Glass recycling update – Ted Armbrecht
   D. Recycling facility update – Rod Watkins
V. Other business/announcements
   A. Policy recommendations next meeting
VI. Next meeting: Tuesday, June 29, 2021 at 5:30pm
VII. Adjourn

June 1, 2021

Mayor Amy Shuler Goodwin
501 Virginia Street East
Charleston, WV 25301

Dear Mayor Goodwin:

Your Green Team writes to offer our first official policy recommendation to the City of Charleston -- to initiate an energy benchmarking program for all buildings owned or operated by the city, in order to save taxpayer expense, be more sustainable, and lead by example within our community. We have drafted an ordinance for accomplishing this goal for your consideration. Given the multi-year process to accomplish maximum savings for taxpayers, we recommend enacting an ordinance, rather than just a resolution.

Background

Utility costs are a significant portion of the city budget. In the FY2021 Municipal Budget, the Utilities line item is roughly $1.7 million annually, 16% of all contractual services. According to the U.S. Department of Energy, government-owned buildings can be as much as 25% more energy intensive than privately owned buildings.[1] Assessing and addressing energy use can help our city departments better meet their missions by shaving off extraneous costs. By addressing this issue long-term, the city will be able to focus tax dollars on the primary functions of city government instead of spending money on utility bills. The key first step to reducing utility bills is benchmarking.

Energy efficiency builds jobs. Construction workers make buildings more efficient. These jobs are well-paying, skilled labor that keeps builders working, even when demand for new construction is low. Efficient buildings result in lower bills, so the tax burden can be reduced and/or more of a budget can go to providing services. Since the Charleston area is not growing, we need to improve existing buildings and benchmarking can help identify operational changes or improvement projects to cut costs and grow the workforce. .

Charleston will be ahead of other cities and in lockstep with the state

On April 28, 2021, Governor Justice signed HB2667. The bill improves energy savings policies and, importantly, requires benchmarking of state buildings, eventually requiring 25% energy savings in state buildings. Specifically, HB2667 requires (in relevant part):

- Measuring and benchmarking all state buildings by October of 2021, entering the data into the free Energy Star Portfolio Manager;
- Audit 20% of all state meters each year, with all meters audited by 2027;

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https://www7.eere.energy.gov/seeaction/system/files/documents/commercialbuildings_factsheet_benchmarking_localgovt.pdf

    - Notify the appropriate utility if any meters are found to not be in use, requesting the device be removed and/or bill credited/discontinued;
- Establishing a program to reduce energy usage 25% below 2018 levels by 2030;
    - Enter into energy savings contracts, as needed, to meet the 25% reduction goals.

We have modeled our suggested ordinance and resolution on this state law. Specifically, we recommend:

- Measuring and benchmarking all city owned, operated, or controlled buildings by October of 2021, entering the energy use data into the free ENERGY STAR Portfolio Manager;
    - The West Virginia Office of Energy has a staff member who is able to carry the laboring oar for this work;
- Audit all meters and street lights paid for by the city within two years;
    - Notify the appropriate utility (Appalachian Power, Mountaineer Gas, etc.) if any meters are found to not be in use, requesting the device be removed and/or bill credited/discontinued;
- Establishing a plan to reduce energy usage 25% below 2018 levels by 2030;
    - Enter into energy savings contracts, as needed, to meet the 25% reduction goals;
    - Enact "retrocommissioning" and monitoring procedures to maintain the efficacy of improvements that are made; and
- Evaluating buildings for the suitability and cost-effectiveness of installing solar panels.

In addition to the attached ordinance, we also recommend that the city begin to look now into any planned roof repairs or replacements that are slated to happen soon for whether installing solar might be a cost-effective way to cover the roof repairs and save money through lower rates. A law passed in the 2021 legislative session makes solar more attractive to municipalities.

Summary of the timeline of the program

There are several dates in our proposed ordinance, so for ease of understanding, we have compiled a timeline for implementation:

Date	**Event**
October 31, 2021 (recurring annually)	Entering the previous fiscal year's energy and water usage data.
July 1, 2022	• All metering devices will be audited. • The City establishes an energy savings program to reduce energy use by 25% below FY2018 levels by FY2031.

December 1, 2022 (recurring annually)	The City publishes an annual report of the previous fiscal year's implementation of the program.
July 1, 2023	All streetlights will be audited to ensure they are being properly billed.
August 1, 2026	The City reviews the progress toward the 2031 goal
December 1, 2031	The City publishes the annual report showing energy savings of 25% below FY2018 levels

We thank you for the opportunity to investigate and offer suggestions to you and your council. We welcome the opportunity to meet with you or others within your administration to further flesh out any ideas explained in this document. Emmett Pepper and Linda Frame are the point people on this specific issue.

Sincerely,

Charleston Green Team
Ted Armbrecht, Member
Linda Frame, Member
Patti Hamilton, Member
Justin Marlowe, Member
Pam Nixon, Advisor
Emmett Pepper, Chair
Rod Watkins, Member
James Young, Member

CC:
Hon. John Kennedy Bailey, Chair of the Committee on Environment & Recycling
Hon. Jennifer Pharr, Chair of the Committee on Facilities
Hon. Tony Harmon, Building Commissioner
Hon. Rashaun Sayles, Director of Parks & Recreation

Building Energy Benchmarking Ordinance – Charleston, WV

Section A: DEFINITIONS

For the purposes of this section, the following definitions shall apply:

1. ***Benchmark*** means to input and submit the total energy and water consumed for a property for the previous calendar year and other descriptive information for such property as required by the benchmarking tool. Total energy and water consumption shall not include separately metered uses that are not integral to building operations, as determined by the Director.

2. ***Benchmarking submission*** means a subset of:

a. Information input into the benchmarking tool; and

b. Benchmarking information generated by the benchmarking tool, as determined by the Director.

3. ***Benchmarking tool*** means the U.S. Environmental Protection Agency's ENERGY STAR® Portfolio Manager, or any additional or alternative tool adopted by the Director, used to track and assess the energy and water use of certain properties relative to similar properties.

4. ***Building operator*** means the department or agency head that operates, maintains, and/or pays energy utility bills.

5. ***Covered Municipal Property*** means a property that is owned, leased, or managed by the city such that the city regularly pays all or part of the annual energy and/or water bills.

6. ***Department*** means the Building Commission.

7. ***Director*** means the Building Commissioner or a designee on the Building Commissioner's behalf.

8. ***Energy*** means electricity, natural gas, steam, or other product sold by a utility to a customer of a property, or renewable on-site electricity generation, for purposes of providing heating, cooling, lighting, water heating, or for powering or fueling other end-uses as recorded in the benchmarking tool.

9. ***ENERGY STAR score*** means the 1-100 numeric rating generated by the ENERGY STAR Portfolio Manager tool as a measurement of a building's energy efficiency.

10. ***ENERGY STAR Portfolio Manager*** means the tool developed and maintained by the U.S. Environmental Protection Agency to track and assess the relative energy performance of buildings.

11. ***Gross floor area*** means the total property area, measured between the outside surface of the exterior walls of the building(s). This includes all areas inside the building(s) including but not limited to lobbies, tenant areas, common areas, meeting rooms, break rooms, atriums (count the base level only), restrooms, elevator shafts, stairwells, mechanical equipment areas, basements, and storage rooms.

12. Retrocommissioning practices means processes that seek to improve how building equipment and systems function together. Such practices are designed also to resolve problems that occurred during design, construction, or that have developed throughout the building's life; improving a building's operations and maintenance procedures to enhance overall building performance.

13. ***Shared benchmarking information*** means information generated by the benchmarking tool and descriptive information about the physical property and its operational characteristics, which is shared with the public. The information, as defined by the ENERGY STAR Portfolio Manager glossary, shall include, but need not be limited to:

a. Descriptive information

i. Property address

ii. Primary use;

iii. Gross floor area;

iv. Number of floors;

v. Number of years the property has been ENERGY STAR® Certified and the last approval date, if applicable; and

vi. Individual or entity responsible for the benchmarking submission.

b. Output information

i. Site and source energy use intensity;

ii. Weather normalized site and source energy use intensity;

iii. The ENERGY STAR score, where available;

iv. Total annual greenhouse gas emissions;

v. Monthly energy use, by fuel type;

vi. Indoor water use and water use intensity (consumption per gross square foot);

vii. Outdoor water use (where available);

viii. Total water use;

ix. The ENERGY STAR Water Score, where available; and

x. General comments section, if needed, to explain the building's ENERGY STAR scores.

xi. Compliance or noncompliance status.

14. ***Utility*** means an entity that distributes and/or sells natural gas, electric, water, or thermal energy services for buildings.

15. ***Water audit*** means that part of an audit that addresses the water systems.

Section B: PURPOSE

To encourage efficient use of energy paid by taxpayers and to reduce pollution, this Ordinance requires Covered Municipal Properties to annually measure and disclose energy usage to the Department. Furthermore, this Ordinance will authorize the Department to collect energy usage data to enable more effective energy and climate protection planning by the City and others and to provide information to the real estate marketplace to enable its members to make decisions that foster better energy performance.

Section C: APPLICABILITY

This ordinance is applicable to all Covered Municipal Properties as defined in Section A of this ordinance.

Section D: Benchmarking Requirement for Covered Municipal Properties

No later than October 31, 2021, and by October 31 every year thereafter, the total energy and water consumed by each Covered Municipal Property, along with all other descriptive information required by the Benchmarking Tool, shall be entered into the Benchmarking Tool for the previous fiscal year.

Section E: BENCHMARKING REPORTING Procedure

1. For every Covered Municipal Property subject to this ordinance, the building operator shall annually submit to the Director an energy and water benchmarking report in an electronic format as established by the Director, by the date specified in Section D.

2. The information included in the annual energy and water benchmarking report shall include, at a minimum, the Shared Benchmarking Information, as defined in Section A, for the previous calendar year.

3. The building operator of each Covered Municipal Property shall provide to the Director all data necessary for the Director to:

A. Enter it into the benchmarking tool and

B. Create an energy and water benchmarking report based on an assessment of the aggregated total energy and water consumed by the whole property for the entire calendar year being reported.

4. Before submitting a benchmarking report the building operator shall run all automated data quality checker functions available within the benchmarking tool and shall verify that all data has been accurately entered into the tool. In order for the benchmarking report to be considered in compliance with this ordinance, the building operator shall correct all missing or incorrect

information as identified by the data quality checker prior to submitting the benchmarking report to the Director.

5. In order to plan for potential solar panel installation, the building operator shall include information regarding whether any of the building operator's Covered Municipal Properties are, or will soon be, in need of replacing or repairing its roof. The building operator shall also describe any evaluation regarding the suitability for solar panels on the building that has been conducted on any Covered Municipal Properties.

6. Where the current building operator learns that any information reported as part of the benchmarking submission is inaccurate or incomplete, the building operator shall amend the information reported within the benchmarking tool and shall provide the Director with an updated benchmarking submission within 30 days of learning of the inaccuracy.

Section F: BENCHMARKING EXEMPTIONS AND TIME EXTENSIONS

1. Benchmarking is not required for a Covered Municipal Property for the current reporting year if the building operator submits documentation to the Director, in such form and with such certifications as required by the Director, establishing that the property met one or more of the following conditions for the calendar year to be benchmarked:

a. A demolition permit for the entire building was issued during that year, provided that demolition work commenced and legal occupancy was no longer possible prior to end of that year;

b. The property did not receive energy or water utility services during that year;

c. Due to special circumstances unique to the property, strict compliance with provisions of this ordinance would not be in the public interest.

2. Any building operator requesting an exemption from benchmarking shall, by June 1 in the year for which the exemption is being requested, submit to the Director any documentation reasonably necessary to substantiate the request or otherwise assist the Director in the exemption determination. Any exemption granted will be limited to the benchmarking submission for which the request was made and does not extend to past or future submittals. Any requested exemptions, whether approved

or denied, shall be included in the annual report described in Section J of this Article, as well as the reasons for the exemption being approved or denied.

3. Any building operator may apply for a time extension to complete and submit a benchmarking report if, despite such building operator's good faith efforts, they are unable to complete the required actions prior to the scheduled due date due to the failure of either a utility provider or a tenant (or both) to provide the building operator with information needed to complete this report. The building operator requesting an extension shall submit to the Director any documentation reasonably necessary to substantiate the request or otherwise assist the Director in the determination. For each property, the Director may grant no more than two such extensions per year of no more than [30] days each.

Section G: AUDIT OF METERS

The Director shall develop and administer a program for auditing the streetlights and energy metering devices for both electricity and natural gas currently installed at all city buildings or otherwise paid by the city, for purposes of determining whether such devices are active or inactive. Such a program shall be designed to audit all energy metering devices by July 1, 2022 and all streetlights by July 1, 2023. In the event the Director determines during such an audit that an energy metering device is no longer active, the Director shall notify the energy service provider to request removal of such device and adjustment of utility bills to remove any inappropriate charges associated with such meter.

Section H: ENERGY SAVINGS PROGRAM

a. By July 1, 2022, the Director shall establish an energy savings program designed to reduce energy usage for electricity, natural gas, fuel oil, and steam in all Covered Municipal Properties by 25% below FY2018 levels by FY2031, as well as otherwise reducing energy costs.

b. Any program established pursuant to this section shall include:

i. At least one interim savings goal for a percentage savings to be achieved by the fiscal year 2025-2026;

ii. A plan for prioritizing which Covered Municipal Properties should be first audited and identified for efficiency improvements; and

iii. A plan for implementing retrocommissioning practices, ensuring that buildings are operated in a manner that maximizes the energy saving potential of any efficiency improvements made.

iv. A framework for evaluating when a Covered Municipal Property is suitable for installing solar panels in order to reduce energy costs.

Section I: ANNUAL REPORT AND ANALYSIS

Beginning no later than December 1, 2022 and every year thereafter, the Director shall make available on a publicly accessible website an annual report covering the previous fiscal year, including:

a. The measured energy use of all Covered Municipal Properties;
b. A summary of energy and water consumption statistics;
c. An assessment of compliance rates, accuracy and issues affecting accuracy, changes across the portfolio over time;
d. Any energy savings measures taken pursuant to the program established in Section I of this Article;
e. An evaluation of solar for all Covered Municipal Properties, including any buildings that have been identified as needing roof repairs in the next five years; and
f. Trends observed.

If the circumstances of the solar viability of any Covered Municipal Properties has not changed since a previous evaluation, the Director does not need to make a new evaluation.

By August 1, 2026, the Director shall review the progress toward the FY2026 interim goal established pursuant to Section I of this Article. If the FY2026 goal has not been met, the Director shall make recommendations to the City Council as to whether amendments to this section or other measures are necessary to meet the goal of 25% reduction by FY2031.

Nothing in this ordinance shall prevent the Director from including all such information in a combined annual energy and water efficiency report covering the progress of all of the city's energy efficiency ordinances and programs.

Section J: RULEMAKING

The Director may promulgate such rules necessary to carry out the provisions of this ordinance.

Section K: SEVERABILITY.

If any provision, section, subsection, sentence, clause, phrase or other portion of this ordinance is for any reason found or declared to be unconstitutional or otherwise invalid, in whole or in part, by any court of competent jurisdiction, such portion shall be deemed severable, and such unconstitutionality or invalidity shall not affect the validity of the remaining provisions or portions of this ordinance, which remaining portions shall continue in full force and effect and can be implemented without the invalid provisions and, to this end, the provisions of this ordinance are declared to be severable. The City Council hereby declares that it would have adopted each and every provision and portion thereof not declared invalid or unconstitutional, without regard to whether any portion of the ordinance would subsequently be declared invalid or unconstitutional.