GREENSBORO COMMUNITY SUSTAINABILITY COUNCIL
greensboro-nc.gov/csc
Minutes, Regular Meeting

4pm, Monday, July 26, 2021 (Rescheduled from Monday, July 12)
Virtual Meeting, using the Zoom videoconferencing tool

CSC Members Present:

Dr. Vicki Foust, Chair	Veda Howell	Jacques Pierre

Staff and Others Present:

Will Yearns, CSC Advisor	Elizabeth Link, Planning
Richard Lovett, Field Operations	Zach Petersen, Water Resources
Judson Clinton, Planning	Danny Halterman, Water Resources
Russ Behn, Neighborhood Development	Jeff Sovich, CoG Planning
Sergey Kobelev, CoG Engineering & Inspections	John MacAree, UNC Kenan-Flagler School of Business
Davis Montgomery, Duke Energy	Jean Pudlo, Solar Power Now Coalition
Laura Oxner, Simple Gesture / RePurpose Food Recovery	Margaret Rowlett, Solar Power Now Coalition
Adam Graham-Squire, resident	Angie Kenny, resident
Erin Reis, resident	

1. Chair Greeting / Welcome Visitors

Due to technical difficulties, the start of the meeting was delayed. Chair Foust called the meeting to order at 4:26pm and welcomed visitors and city staff in attendance.

2. Welcome Taylor Jones-Curtis (New At-Large Member)

Ms Jones-Curtis did not attend the meeting. Welcome and introduction of Ms Jones-Curtis will be taken up at a later meeting.

3. Approval of May 10 CSC Meeting Minutes

A quorum of the CSC was not present, in order to approve the May 10 meeting minutes. This item will be taken up at a later meeting.

4. Update on Lighting Ordinance Proposal

Chair Foust stated that the CSC has a subcommittee that has been exploring ways that Greensboro can improve its certification level to gold in the LEED for Cities program. One item that has been identified is the Natural Systems – Light Pollution Reduction credit. The path for Greensboro to score points in this credit involves two steps a) "A minimum of 70% of the street lighting in the city or community should meet the requirements of section on Glare and Sky-Glow requirements of 'ANSI/IESNA RP-8-14 Roadway Lighting'" and b) adopt a lighting ordinance that conforms to Section II to VI of the Model Lighting Ordinance (MLO) developed jointly by the International Dark Sky Association and Illuminating Engineering Society.

The LEED for Cities Technical Manual does not contain the actual Glare and Sky-Glow requirements, and the subcommittee is still working obtaining that information. Once the

specifications are acquired, the data on Greensboro's streetlamps can be evaluated to determine the percentage that meet the requirement.

The Model Lighting Ordinance document is freely available on the internet. The subcommittee intends to discuss with Planning Director Sue Schwartz, the feasibility of adopting a new article within the city's Land Development Ordinance (LDO), similar to the one that exists for landscaping requirements, to add the necessary verbiage to comply with the MLO.

5. Update on Office of Sustainability Recommendation

Chair Foust noted that the CSC is very passionate about this item and has done a great deal of research about it. During the CSC's May meeting, Meg Jamison, Executive Director of the Southeast Sustainability Directors Network (SSDN) gave an informative presentation about trends and best practices among communities in the southeast region that have established an office of sustainability or a director of sustainability position. Ms Jamison emphasized the importance of formalizing this function and an accompanying budget within the local government organization, in order to make substantial progress toward sustainability and resilience goals. Chair Foust stated that Greensboro is the largest city in North Carolina that does not have such an office or staff position. Most larger municipalities or counties have multiple staff positions in their sustainability offices. The CSC's background research has been provided to City Council Member and CSC Liaison Marikay Abuzuaiter, so she is aware of the information. Ms Abuzuaiter will review and follow up with Chair Foust to discuss the next steps in the process. The CSC's goal is to have a formal recommendation to present to the City Council by this Fall.

6. Update on Air Curtain Burner Recommendation

Chair Foust introduced Richard Lovett, Environmental Compliance Support Manager in the Field Operations Department. Mr. Lovett explained that the City currently operates a yard waste composting facility at the White Street Landfill. The permit for that composting operation sets a limit on the amount of land area it can occupy. Although the operation offers compost and mulch for sale to the public at very competitive prices, the amount of land area it occupies, including the incoming yard waste, the processing area, and the stockpiled compost and mulch, is rapidly approaching the limit allowed by the permit. An innovative solution that has been identified is known as an "air curtain burner." The air curtain burner (ACB) could address the space constraints of the composting operation, and produce several co-benefits. ACBs have been in use in western states as a very successful means (from an environmental standpoint) of processing the vast quantities of organic waste material resulting from the wildfires that have become increasingly frequent and destructive throughout the west.

ACBs can also be used to convert composted material into biochar which reduces the volume by up to 90%, so this process could free up much of the space used by the composting operation. Biochar is a form of charcoal resulting from thermal decomposition of organic material in low-oxygen conditions. Biochar is useful in agriculture since it improves soil fertility, increases crop yields, and helps protect against some types of plant diseases. In this respect, biochar would be a very marketable product for both large agricultural operations and home gardeners (local big box stores sell it for around $20 per pound). Producing biochar concentrates the carbon content of organic material, and releases water, bio-oil, and syngas. The bio-oil and syngas components can be captured and used as fuels. Although converting yard waste to biochar would release some carbon dioxide (CO_2) into the atmosphere, more than half of the carbon content would remain sequestered and stable in the soil for hundreds to thousands of years. For each ton of

organic material processed, three tons of atmospheric CO2 is captured. As a result biochar production would be an effective means for helping Greensboro to meet its greenhouse gas reduction goals.

The particular ACB unit we have been researching to potentially purchase has an available option to generate electricity from the waste heat resulting from the biochar production process. This electricity could then be used to help offset some of the power needs and energy costs at the nearby T. Z. Osborne Water Reclamation Facility. The ACB would also significantly reduce costs and fuel consumption resulting from hauling and processing yard waste into mulch and compost. In the research we have done regarding ACBs, we've found multiple benefits for the environment, for the community, and for city operations and finances. We have been unable to uncover any negative impacts that would result from the operation of an ACB at the White Street facility, but we're willing to consider any relevant information that we may have overlooked, or answer any questions that the CSC or attendees may have.

Chair Foust thanked Mr. Lovett for the excellent presentation and asked if he knew of any municipalities using ACBs for the type of biochar production he described. He stated that he was not aware of any municipalities, but that a private tree service company in Pender County, north of Wilmington, recently received a permit to operate an ACB. The local landfill there had reached maximum capacity, and illegal dumping and burning of yard waste had become a significant problem. The ACB operation is expected to help alleviate this issue. We're seeking the CSC's support for this proposal and the Solid Waste Commission's approval, because operating the ACB would require a modification of our composting permit. Chair Foust indicated that although a quorum of the CSC was not present, no formal action was needed; a letter of support would be sufficient to convey the CSC's stance on the proposal.

Ms Howell stated that she thought the proposal is a great idea, but she is aware that there are always people in the community who have concerns. And so the questions she sent Mr. Lovett following the CSC's June work session were posed with the aim of strengthening the entire array of research his team has done for the air curtain burner proposal. Mr. Lovett noted that when he eventually presents the proposal to the City Council he will make sure that he has back-up information about potential truck traffic impacts, air quality impacts, etc. so that everyone understands that we're trying to better manage the facility we have for the benefit of the entire community. Yard waste material will be coming in whether or not this proposal is approved, but right now, we're one major storm away from exceeding the limits of our composting permit.

7. Break (10 Minutes)

Due to the meeting's delayed start time, the CSC members present opted to forgo the scheduled break.

8. Review of Strategic Energy Plan (SEP) Goals and Strategies

Chair Foust noted that a Community Partnership Meeting for the Strategic Energy Plan process was held on Thursday, July 15th, via Zoom. The meeting focused on presenting the initial draft goals and strategies, and receiving feedback from members of the Community Partnership and other stakeholders. She then provided a brief summary of the presentation from that meeting.

The overall energy use of Greensboro's municipal operations consists of electricity, natural gas, and fuels used in vehicles and equipment. Three departments account for nearly 80% of the city's electricity use, Water Resources (49%), Transportation (18%), and Coliseum Complex (12%). When we look at the same total usage by purpose, we find that water and wastewater pumping and treatment account for 48%, buildings for 32%, and streetlamps for 14%. The draft goals and strategies related to the city's use of electricity are:

Overall (Electricity Demand = 134.4 MW)

Goal 1: Clean energy installation/maintenance contracts will give priority to Historically Underutilized Businesses (HUBs).
- **Strategy 1:** Requests for Proposals (RFPs) will contain language indicating a preference for contracting with HUBs.

Water Resources (Electricity Demand = 16 MW)

Goal 1: Reduce water demand by 20% by 2030
- **Strategy 1:** Water efficiency campaign

Goal 2: Reduce electricity demand by 40% by 2025
- **Strategy 1:** Increase equipment efficiency
- **Strategy 2:** Increase building efficiency

Goal 3: Meet electricity demand with 100% renewable energy by 2040
- **Strategy 1:** Install 1 MW ground level solar PV array by 2023
- **Strategy 2:** Plan, fund, and install additional ground level solar PV arrays
- **Strategy 3:** Install in-line hydroelectric generator

Transportation (Electricity Demand = 1.5 MW)

Goal 1: Reduce electricity demand by 40% by 2025
- **Strategy 1:** Increase building energy efficiency

Goal 2: Meet electricity demand with 100% renewable energy by 2040
- **Strategy 1:** Install rooftop solar PV array on The Depot
- **Strategy 2:** Identify suitable rooftop/land for solar PV for GTA Maintenance Bldg
- **Strategy 3:** Identify suitable rooftop/land for solar PV for parking decks

Coliseum Complex (Electricity Demand = 2.5 MW)

Goal 1: Reduce electricity demand by 40% by 2025
- **Strategy 1:** Increase building energy efficiency

Goal 2: Meet electricity demand with 100% renewable energy by 2040
- **Strategy 1:** Evaluate rooftop solar options for all Coliseum Complex buildings
- **Strategy 2:** Identify land for solar PV for electricity offset
- **Strategy 3:** Green fee added to parking price to pay for carbon offsets

City Buildings (Electricity Demand = 5.4 MW)

Goal 1: All City-owned buildings will meet green building standards by 2040
- **Strategy 1:** Pass a resolution requiring use of green building standards on all new construction or substantial renovations
- **Strategy 2:** Decommission older buildings that are inefficient and too costly to upgrade

Goal 2: Reduce electricity demand by 40% by 2025
- **Strategy 1:** Increase building energy efficiency in Tier 1 buildings (≥ 90 kW demand)
- **Strategy 2:** Increase building energy efficiency in Tier 2 buildings (< 90 kW demand)

Goal 3: Meet energy demand with 100% renewable energy by 2040
- **Strategy 1:** Evaluate rooftop solar option for all Tier 1 buildings
- **Strategy 2:** Identify land for solar PV for electricity offset
- **Strategy 3:** Renewable Energy Credits (RECs)

Six departments account for 84% of the city's overall natural gas use of 949,000 Therms), Coliseum Complex (34%), Parks & Recreation (14%), Transportation (12%), Police (10%), Fire (8%), and Libraries (6%). The draft goals and strategies related to the city's use of natural gas are:

Coliseum Complex (Natural Gas Used = 319,000 Therms)
Goal 1: Reduce natural gas demand by 40% by 2025
Strategy 1: Increase building energy efficiency
Strategy 2: Increase heating system efficiency
Goal 2: Meet water heating demand with 100% renewable energy by 2040
Strategy 1: Evaluate rooftop solar thermal option for Aquatics Center

Parks & Recreation (Natural Gas Used = 135,000 Therms)
Goal 1: Reduce natural gas demand by 40% by 2025
Strategy 1: Increase building energy efficiency
Strategy 2: Increase heating system efficiency'
Strategy 3: Improve pool heating systems

Libraries (Natural Gas Used = 56,000 Therms)
Goal 1: Reduce natural gas demand by 40% by 2025
Strategy 1: Increase building energy efficiency
Strategy 2: Increase heating system efficiency'

Together, the Police Department (48.5%) and the Greensboro Transit Authority (30.5%, a division of the Transportation Department) account for 79% of the city's overall gasoline use of 1.2 million gallons. Draft goals and strategies related to the city's use of gasoline in vehicles and equipment are:

Overall
Goal 1: The city fleet will be composed of zero-emission vehicles by 2040
Strategy 1: Adopt a resolution to establish a sustainable fleet policy

Police
Goal 1: Reduce gasoline consumption by 5% per year
Strategy 1: Convert portion of gasoline fleet to hybrid vehicles
Strategy 2: Convert portion of gasoline fleet to electric vehicles
Goal 2: Right size the fleet to eliminate unnecessary leased vehicles
Strategy 1: Review and justify all vehicles in fleet

Greensboro Transit Authority
Goal 1: Reduce gasoline consumption by 5% per year
Strategy 1: Convert portion of gasoline fleet to hybrid vehicles
Strategy 2: Convert portion of gasoline fleet to electric vehicles

Water Resources
Goal 1: Reduce gasoline consumption by 5% per year
Strategy 1: Convert portion of gasoline fleet to hybrid vehicles
Strategy 2: Convert portion of gasoline fleet to electric vehicles

Engineering & Inspections
Goal 1: Reduce gasoline consumption by 5% per year
Strategy 1: Convert portion of gasoline fleet to hybrid vehicles

Strategy 2: Convert portion of gasoline fleet to electric vehicles

Field Operations
Goal 1: Reduce gasoline consumption by 5% per year
Strategy 1: Convert portion of gasoline fleet to hybrid vehicles
Strategy 2: Convert portion of gasoline fleet to electric vehicles

Together, the Field Operations Department (65.3%) and the Greensboro Transit Authority (20.8%, a division of the Transportation Department) account for 86.1% of the city's overall diesel use of 2.25 million gallons. Draft goals and strategies related to the city's use of diesel in vehicles and equipment are:

Field Operations
Goal 1: Reduce diesel consumption by 5% per year
Strategy 1: Ensure diesel vehicles & equipment are right-sized to meet needs
Strategy 2: Convert portion of diesel fleet to hybrid vehicles
Strategy 3: Convert portion of diesel fleet to electric vehicles
Strategy 4: Convert portion of equipment inventory to electric

Greensboro Transit Authority
Goal 1: Reduce diesel consumption by 5% per year
Strategy 1: Ensure diesel vehicles are right-sized to meet needs
Strategy 2: Convert portion of diesel fleet to hybrid vehicles
Strategy 3: Convert portion of diesel fleet to electric vehicles
Strategy 4: Improve transit ridership

Chair Foust stated that the next steps in the Strategic Energy Plan process are Prioritizing Strategies, Developing a Financing Strategy, and Developing the Implementation Process. She then asked if attendees had any questions or comments on the draft goals and strategies. No questions or comments were raised. She noted that in developing the draft goals and strategies, the team has made a strong effort to ensure that stakeholders have been heard in this process by including the ideas and addressing the concerns raised in Community Partnership meetings along the way.

9. Acknowledgement of Absences

Chair Foust noted that the absences of Sophia Dubrovsky, Marcia Hale, and Tiffany Oliva were excused. She added that the absences of Nicole Gaines, Taylor Jones-Curtis, and Susan Phillips were unexcused.

10. Incidentals and Announcements

- **Items from Chair –** None.
- **Items from Vice-Chair –** None.
- **Items from CSC Members –** None.
- **Items from Public –**None.
- **Items from Staff –** None.

11. Adjournment - Chair Foust adjourned the meeting at 5:38 pm.