

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

4pm, Monday, March 8, 2021
 Virtual Meeting, using the Zoom videoconferencing tool

CSC Members Present:

Dr. Vicki Foust, Chair	Veda Howell	Nicole Gaines
Tiffany Oliva, Vice-Chair	Raleigh Stout	Dr. Susan Phillips
Sophia Dubrovsky	Jacques Pierre	Jonathan King

Staff and Others Present:

Kimberly Sowell, Assistant City Manager	Judson Clinton, CoG Planning
Trey Davis, Assistant City Manager	Elizabeth Link, CoG Planning
Mike Borchers, CoG Water Resources	Jeff Sovich, CoG Planning
Zach Peterson CoG Water Resources	Jim Young, CoG Libraries
Chris Marriott, CoG Field Operations	Will Yearns, CSC Advisor
Richard Lovett, CoG Field Operations	Karen Kixmiller, CoG Budget & Evaluation
Kenney McDowell, CoG Engineering & Inspections	Sergey Kobelev, CoG Engineering & Inspections
Russ Behn, CoG Neighborhood Development	Bob Kollar, CoG Human Rights Commission
Paula Sieber, Guilford Urban Farming Initiative	Margaret Rowlett, Solar Power Now Coalition
Davis Montgomery, Duke Energy	Sue Polinsky, Tech Triad
Sean MacInnes, UNCG Sustainability Office	Laura Oxner, Repurpose Food Recovery
Lindsey Beane, Happy Earth Composting	Happy Rieth, Resident
Hazel Landers, Sierra Club	David Gilbert, Resident
Katredia Martin, Guilford County Manager's Office	Nathan Lewis, Resident

1. Chair Greeting / Welcome Visitors

Chair Foust called the meeting to order at 4:02pm and welcomed visitors and city staff in attendance.

2. Approval of January 11, 2021 Meeting Minutes

Nicole Gaines moved to table review and discussion of the January meeting minutes to a future meeting, seconded by Susan Phillips. The CSC voted unanimously in favor of the motion.

3. CSC Member Representation and Vacancy

Chair Foust noted that Jonathan King's term on the CSC expired in December and that he has stated his decision to not seek re-appointment. This means that his seat is now open; the City Council has been made aware of this vacancy. Based on City Council procedures, it will be Mayor Vaughan's turn to name an appointee to fill this vacant at-large seat. There are active applications on file from residents interested in serving on the CSC, which the City Council will review, likely for an appointment during the March 16 meeting.

Chair Foust stated that on behalf of the CSC, recognition and appreciation of Jonathan King's service was to be entered into the official record. He was a very valuable voice on the CSC and he contributed greatly to the board's efforts. She expressed regret that he will be leaving the CSC. Mr. King served as the Young Adult (under 30 years old) member, so going forward, Tiffany Oliva will be designated as the Young Adult member.

4. Discussion of City Sustainability Manager Position

Chair Foust stated that the CSC has been researching the practices of other North Carolina cities, with regard to organizational structure, staffing, and funding for sustainability efforts. Our city wants to become more proactive with sustainability work, including development of the Strategic Energy Plan, and efforts to advance to the Gold level on our LEED for Cities re-certification. We became aware that Greensboro is the largest city in the state that doesn't have a standing sustainability office or full-time equivalent sustainability personnel. We do have some proficient and dedicated staff who are handling key parts of this work as significant portions of their responsibilities, but we don't have anyone with the formal role and responsibility of being sustainability coordinator or manager for the city organization. We've been evaluating what other local governments across the state currently do, in order to understand what might be an appropriate path for Greensboro. To do this, we reached out to the sustainability staff of these other governments who are members of the Southeast Sustainability Directors Network (SSDN) with a survey. We're still gathering this information, which will include such items as the number of staff and the types of projects, activities, and planning documents. Our ultimate intention will be to develop recommendations to the City Council regarding future staffing needs, to help Greensboro move forward with our sustainability journey.

5. Guest Speaker Line-Up for Remaining 2021 CSC Formal Meetings

Chair Foust stated that during the remaining formal CSC meetings during 2021, there will be presentations from various guest speakers, including key staff from city departments who were involved in the LEED for Cities certification project, and representatives of environmentally oriented businesses or organizations. Some of the individuals we hope to schedule are involved in the sustainability aspects of transportation, water, waste, human rights, and other functions. We'd like to learn what they do and how it fits into the bigger picture.

6. LEED for Cities Light Pollution Ordinance Recommendation Update

Chair Foust noted that although the LEED for Cities certification was a significant achievement for Greensboro, sustainability is a process of continuous improvement. Accordingly, the CSC has been exploring opportunities for Greensboro to become more sustainable and advance to the next level when we re-certify, by scoring points on credits we missed in our initial certification.

One item we're working on is recommendations for revising the City's lighting ordinance so that it meets the requirements of the Light Pollution credit in the Natural Systems & Ecology category. Vice-Chair Oliva noted that light pollution can be defined as "inappropriate or excessive use of artificial light" and the intent of the LEED light pollution credit is "to minimize and manage ambient light levels to protect public health, and the integrity of ecological systems, and increase the night sky access, improve nighttime visibility and reduce the consequences of development for wildlife and people." Chair Foust asked Mr. Sovich to provide contact information for appropriate city staff regarding proposed changes to the Land Development Ordinance, so that the CSC could invite them to sit in on a future Work Session, as recommendations are developed and to help in identifying key stakeholders and avoiding unintended consequences.

Ms Gaines inquired whether the streetlamps that cast a blue or purple hued light are the type of light that's intended to reduce nighttime light pollution. Mr. Yearns pointed out that the streetlamps that shine a faint bluish light have been fitted with LED light fixtures, whereas the physical construction of the light will determine whether it is dark-sky compliant, also known as "full cut-off" meaning that the lamp shines only downward, without light extending above a certain angle from the ground. Traditional streetlamps often use either high-pressure sodium vapor fixtures (which have a faint yellow color) or mercury vapor fixtures (with a faint orange color). Mr. Pierre noted that the traditional "cobra-head" lamp design does not control light direction, while the "shoebox" lamp design is a full cut-off fixture that prevents light from shining sideways or upwards. Mr. Sovich noted that an LED fixture that gives off a distinct blue or purple light indicates that there is a defect with the electronic components of the LED, which can be reported to Duke Energy at <https://salor-web.duke-energy.app/#/home/map/ncsc/DEC> or 1-800-777-9898.

Chair Foust asked the CSC to be ready to discuss re-initiating the Responsible Business Awards program, during the next Work Session.

7. Strategic Energy Plan Update

Chair Foust stated that city staff in various departments are hard at work gathering energy use data and providing that to her, so that she can begin analyzing and calculating the City Energy Profile. The energy profile should be completed in a few weeks, so that baseline can be put into a presentable format. The next steps will be to hold a meeting with the staff team to review, to share that information with the public, and begin developing strategies to reduce the baseline energy usage over the 20 year plan horizon. The overall goal is to achieve 100% clean energy in all city operations by 2040.

8. Break

The CSC recessed for a brief break at 4:47 pm, and reconvened at 4:57 pm.

9. Presentation: Sergey Kobelev, City of Greensboro Energy Management Engineer "Current State of Energy Management of the Assets of Energy Fund"

Mr. Kobelev stated that he would provide information about how Greensboro's energy fund is designed and how the city manages the energy used by its facilities. The Energy Fund applies to most city facilities, and is used to implement energy saving measures at these facilities to achieve two criteria: produce environmental benefit, and produce a return on investment in the form of cost savings. Cost savings are re-invested into the fund, in order to carry out further energy efficiency projects. Projects can include electric vehicles, solar photo-voltaic systems, re-commissioning and modernization of a building's systems, and other improvements.

The Energy Fund covers 1,143 electric meter accounts and 73 natural gas meter accounts at 88 sites. This includes about 2 million square feet of floor space in fire stations, police stations, libraries, recreation centers, city hall, the depot, and various other facilities. There are a few departments or facilities, such as the Coliseum, that are managed separately from the Energy Fund. The Facilities Division of the Engineering & Inspections Department monitors and analyzes the energy used at these facilities in order to optimize efficiency and minimize costs. These efforts also seek to improve resiliency and public safety in the face of impacts from climate change and natural disasters.

Since available resources are limited, we can't carry out all the needed projects at once. So we have to prioritize needed improvements to achieve the greatest return on investment, within our budget constraints. Among the buildings managed through the Energy Fund, we have two main approaches for prioritizing upgrades, what we call the "Dirty Dozen" – the 12 most energy-consuming buildings, and the "Dirty Thirty" – the 30 most energy-inefficient buildings in energy use per square foot. We can monitor all our buildings on a monthly basis and compare energy use and energy cost based on year-over-year comparison, degree heating or cooling days, etc. We can also monitor day-to-day and hourly energy and sustainability metrics for the Dirty Dozen.

Smart Meter deployment, which is coming soon, will allow us to see real-time energy use data for all city electrical accounts. This will enable us to make adjustments to our rates and contracts, and minimize our energy costs. Making strategic changes to the rate and tariff applied to each meter account has allowed us to save about \$42,000 in the past year, irrespective of any changes in energy efficiency or usage. We also use infrared sensors and drone-mounted cameras to inspect building envelope condition and identify energy losses. Each building has its own thermal behavior, and when we see unexpected changes in the pattern this alerts us to problems we need to identify and fix, in order to restore the building's energy efficiency.

Recently we were also responsible for managing a project to deploy Greensboro's new all-electric buses. In Phase I, ten new buses and charging infrastructure were installed and initial charging procedures established in FY 18-19. Phase II, in FY 19-20, brought 6 additional buses and a second complement of charging equipment. And Phase III added a second overhead fast-charger at the Depot in FY 20-21. A separate project during FY 18-19 installed an industrial scale 100kW solar PV array on the roof of the Depot, to power the electric bus fast chargers (rather than selling the power to Duke Energy). During the past fiscal year, we generated 140,000 kWh which saved the City about \$14,000.

At this point, most of the easy improvements have been carried out, so going forward it will be more difficult and more expensive to achieve energy-efficiency gains or energy use reductions. In many cases we have buildings with large flat roofs that would be well-suited for solar arrays, but they have old roof coverings that need to be replaced first, which is expensive. We also have many buildings with a large number of highly inefficient windows; replacing these with modern energy-efficient windows is also very expensive. We are at the point that there will need to be significant capital expenditures in order to improve our energy efficiency and reduce energy costs. Right now we are in a "putting out fires" mode – fixing only the most urgent problems, just in the nick of time. Beyond just energy, we need some sort of office or function within the organization that can coordinate and manage efficiency and sustainability issues that all our departments face in carrying out their responsibilities.

10. Questions for Mr. Kobelev

Paula Sieber asked whether going forward, all new City buildings will be built to green and blue (referring to water efficiency) standards, and whether deconstruction of obsolete City buildings will be carried out sustainably. Mr. Kobelev responded that we have a big problem ahead of us with solar panels; when these panels reach the end of their useful lifespan, they will result in a significant amount of environmentally hazardous waste and will need to be recycled somehow. We need to develop solar panel recycling operations in this country like there are in Europe. When the NC Utilities Commission approves the final Integrated Resource Plan for Duke Energy, we'll have a better sense of what the coming years will bring for energy efficiency, renewable energy sources, and rate structures. Then we can take the actions locally that will produce the best results for Greensboro in

response to the direction that Duke will be going. Also we need to significantly expand our recycling efforts.

Ms Gaines stated that she appreciated what Mr. Kobelev was saying regarding City facilities. She added that she hoped that sometime soon, the CSC can discuss Duke Energy's eTransEnergy subsidiary, which offers electric vehicle fleet procurement options. Mr. Kobelev noted that although there is a great deal of interest and action regarding electric vehicles right now, battery-electric propulsion is not the most efficient option. Hydrogen fuel cell technology is more efficient and economical. When this option becomes widely available in automobiles, it will be a true game-changer.

11. Acknowledgement of Absences

None.

12. Incidentals and Announcements

- **Items from Chair** – The Greensboro Urban Farming Initiative (GUF) starting a new farm at St. Phillip's AME Zion Church, 1330 Ashe St. Kudos to Paula Sieber and GUF on this effort.
- **Items from Vice-Chair** – None.
- **Items from CSC Members** – None.
- **Items from Public** – Hazel Landers of the Sierra Club, Piedmont Plateau Chapter, announced that the chapter had prepared a "Save Our Trees" petition to the City Council to establish a moratorium on clearcutting. The Sierra Club national organization encouraged her to turn her informational slideshow into a video, which she has done. The video and petition are now circulation for signatures. She and other local members are seeking to present at the April 20 City Council meeting. The petition can be viewed and signed online at: <https://addup.sierraclub.org/campaigns/save-our-trees-call-a-moratorium-on-clear-cutting>
- **Items from Staff** – Mr. Sovich announced that the Greensboro Public Library was hosting an Earth Month Challenge game, in which participants can pledge to complete at least 2 challenge tasks in each of 4 categories during the month of April, and be entered into a drawing for a gift basket of Earth-friendly goodies. Anyone interested in participating can email Melanie Buckingham at melanie.buckingham@greensboro-nc.gov.

Mr. Sovich also noted that Mayor Nancy Vaughan, along with the chief elected officials of 10 other local governments throughout the state, has signed a letter to the NC Utilities Commission (NCUC), containing specific comments about Duke Energy's draft Integrated Resource Plan (IRP). The IRP sets out Duke's mix of energy generation sources, rate schedules, efficiency programs, capital expenditures, and other key elements for the next 15 years. If the NCUC directs Duke to revise the IRP and address those comments, Greensboro and local governments throughout the state will be able to achieve their greenhouse gas emissions reduction goals much sooner than they would otherwise. That letter was submitted on February 25. The NCUC's next scheduled hearing to consider the draft IRP and comments received, will be on March 16. The timeline for final approval of the IRP is not yet known.

13. Adjournment - Chair Foust adjourned the meeting at 6:12 pm.