



TOWN OF CARRBORO

NORTH CAROLINA

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To: Mayor and Board of Aldermen
David Andrews, Town Manager
Patricia McGuire, Planning Director

From: Randy Dodd, Environmental Planner

Cc: Department Directors

Date: Wednesday, May 20th, 2014

Subject: Energy and Climate Action Plan

Background and Summary

This memo is a companion to a draft Energy and Climate Protection Plan prepared for Board review. Supplemental information is provided in this memo to support ongoing implementation of energy and climate protection efforts. The draft plan is available at <http://www.townofcarrboro.org/pzi/Env/PDFs/DraftEnergyPlan.pdf>.

Information

Town staff have been collaborating in 2013 and 2014 to recommend new energy and climate mitigation initiatives. After Board review of an update on October 8th, 2013, staff have focused on the best opportunities for inclusion in a draft Energy and Climate Protection Plan. The draft plan has been developed as a step in supporting the Town in reducing greenhouse gas emissions, becoming more energy efficient and generating more renewable energy. It has been created with a near term (1-2 year) and municipal operations focus, with a goal of approximately 5-10% reduction in municipal energy use. The draft plan is not a longer term, more comprehensive plan. While recognizing this focus, the plan includes sections relating to municipal support to the community, climate change adaptation, and appendices with additional contextual information. It is also important to note that the planning effort has focused on energy and climate protection/mitigation and not on climate change/peak fossil fuel vulnerability/adaptation/resiliency.

Topics discussed below are: specific responses to questions raised by the Board; new materials and concepts included in the draft plan that the Board has not yet seen; and recommendations for establishment of a temporary task force.

Response to Board Input

At the October 8th meeting, the Board provided input for staff for energy and climate protection planning as summarized below and organized by topic, along with staff responses.

1. Advisory Board role:

- Alderman Slade suggested the creation of a Climate Change Advisory Board or the Environmental Advisory Board (EAB) becoming more focused on climate change. It was requested that the members of the EAB be consulted on this change.

- Alderman Seils suggested that the implementation of the Sustainability Plan should be the focus of the EAB, if its charge is amended to include climate change.
- Alderman Lavelle suggested that all advisory board members address climate change at least once a year and report back to the Board.

Staff response: The Board's interest has been shared with advisory boards. Staff support a community forum series in the fall of 2014 focusing on energy and climate action planning. Staff have participated recently in discussions with advisory board members about a community forum as has been done the past two years with affordable housing and zoning, and are optimistic regarding staff and advisory board collaboration from these discussions. It is also recommended that the Town support a time limited energy and climate action task force. Additional thoughts on the creation of the task force are provided at the end of this memo.

2. Green CIP

- Alderman Slade asked that staff consider that all cost savings be used to ramp-up a Green CIP.

Staff response: The CIP update presented in January, 2014 included as one of the 6 major goals "Incorporating energy and climate protection strategies." A new section was added to the format for every project in the CIP addressing Energy and Sustainability Measures.

3. First Responders

- Alderman Slade asked if the Police Department could be First Responders instead of the Fire Department.

Staff response: All police officers receive First Responder Training in Basic Law Enforcement Training (BLET). This is currently a 32-hour class teaching basic first aid. This certification does not mean an officer is sufficiently trained to run medical call responses. This is only a very basic introduction to medical care. In addition, this certification has expired for most officers since leaving BLET. The Carrboro Police Department would need to invest in significant training, equipment purchase, and restructuring to be capable to run medical calls. One major issue would involve equipment. The current vehicles that the PD operates are not big enough to contain all the needed medical equipment for a true medical responder. We would be doing the Town and Carrboro Fire and Rescue a disservice if we were to transfer this responsibility to the police department. CFD personnel are at a minimum EMT-B certified and trained to run medical calls. In addition, their vehicles are large enough to accommodate the required medical equipment.

In the last eight years, calls for service have increased from 862 up to 1517 with approximately 62% of these calls being of a medical type. At the same time population has increased and the area we protect has decreased, having recently lost the area near Southern Village. Recognizing the need for EMS as a major customer service avenue, Carrboro Fire-Rescue proactively pursued a higher more demanding EMS certification and this has paid off big with an extremely high cardiac arrest save rate compared to the rest of the state. Effective September 18, 2008, we are the only department in Orange County with Emergency Medical Technicians (EMT) and we are currently pursuing the next level with the endorsement of the Orange County Medical Director, Dr. Jane Brice. To date, five years later we are still the only department operating at this level and striving forward. This program was implemented because Orange County EMS had an ambulance shortage as was discussed during the Assembly of Government meeting several years ago. Since the county was unable to provide quality service at that time, an effort to better serve our citizens in a timely manner was enacted. At that time it was not unusual to have a 25 minute response time from the closest available ambulance. As of 11-5-13 at 1500 hours the county was out of ambulances again due to the volume of calls for service demanded on the local EMS system and the local rescue squad has been requested to staff a unit for coverage.

4. Police Vehicles

Alderman Slade asked that Police Department consider using electric vehicles.

Alderman Lavelle requested that the Police Department consider using bikes for patrol, and if they cannot use bikes, to report back as to why this is not feasible.

Staff response: The police department tried utilizing a hybrid Honda Civic several years ago. The car was only outfitted with LED blue lights. A siren and radio could not be installed due to the limitations of the power system, which presented a problem with the ability to respond to calls and lack of compliance with North Carolina law. Other vehicle requirements and considerations include space for officers, equipment, infrastructure, cost, and training of staff. It is also important to recognize that Police Department annual fuel usage was down in 2013 by 8% compared to the previous years. Steps the Police Department has taken to reduce fuel use and emissions footprint include:

- *Implemented mandatory foot patrols*
- *Engine shuts offs for stationary patrol with testing idle reduction system which monitors the battery's voltage while the vehicle is turned off and electronics are still on.*
- *Implemented use of a radar sign to assist with some speed enforcement instead of assigning a police vehicle in an area*
- *Testing auxiliary power management systems that operate a police cruiser's full electrical system, including lights, camera, radio, computer and communication devices, without engaging the vehicle's engine*
- *Current patrol cars in fleet are 6 cylinder and have variable timing which drops them down to 3 cylinders*
- *Implemented 4 cylinder cars in administrative positions*
- *Teach annual mandatory training in-house versus sending to Community Colleges.*
- *Purchase of Video Conference System which allows officers to appear remotely with Magistrate in Hillsborough*
- *Researching propane dual fuel system for our patrol fleet*
- *All cars except for a 3-4 older cars are outfitted with LED emergency lights*

The main reason that we do not have officers on bikes is staffing. Carrboro is divided into 4 patrol areas covered by 6 officers. These officers consist of a supervisor, assistant supervisor and 4 patrol officers. Due to call volume, scheduled time off, court, and training it is difficult to put a patrol officer on a bike and still provide coverage to the citizens. In the past, the Community Service Division (CSD) was tasked with patrolling on bikes in the downtown area as well as other parts of town. With staff shortages throughout the years, our Community Officers have been pulled to assist with coverage of the town. Currently our CSD is staffed with a Lieutenant, a Sergeant and 2 officers. One of these officers works part-time with the Narcotics Investigator which limits the division's ability to be fully immersed in community projects. We are currently seeking out bicycle training and equipment for some officers in the CSD division to be on bikes. To outfit an officer with proper riding attire and gear for the bikes would cost approximately \$9000. We would also need to look at purchasing some type of tablet computer with a broadband connection that allows the officer access to our Records Management System (RMS) and the Division of Criminal Information (DCI). To accomplish this and allow us to have officers on bikes, the Police Chief suggests that the Town of Carrboro consider hiring three officers. One officer would be assigned to the Narcotics Division freeing up the existing CSD officer who splits time between the two divisions. The other two would be assigned to the CSD division. This would allow the police department to have a consistent bike presence throughout the town and allow the CSD to increase interactions with the citizens and businesses in town.

5. Municipal, Commercial, and Residential Solar Installations

Alderman Slade asked that (A) staff consider solar rooftop banking on municipal and commercial buildings; (B) that staff look into the Solarize Asheville project for possible implementation in Carrboro; and (C) that the Town make the permitting process as seamless as possible for anyone that is interested in installing solar power. Alderperson Haven-O'Donnell requested (D) that staff prepare a visual tool that will demonstrate how the community solar model works. Alderman Seils suggested (E) that staff encourage developers to design buildings with idea of future solar in mind (he used the Shelton Station project as a previous reference).

Staff response: A) For municipal and commercial installations, additional clarity on steps being asked of staff for "solar rooftop banking" would be helpful. B) Staff have been collaborating with Rob Pinder on a Solarize Carrboro initiative. C) For permitting: the Town currently requires electrical and building permits for solar installations with combined fees of approximately \$165. Staff turnaround time for permit requests is 1-3 days. D) Staff have included a graphic in the draft Climate Protection and Energy Plan. E) Staff (and advisory boards) have included such recommendations in their past development review comments.

6. Biofuels Pump

Alderman Slade asked that staff consider supporting a biofuel pump location that is available 24 hours.

Staff response: Public Works staff contacted Piedmont Biofuels and they are not interested in relocating the current pump or installing a new pump.

7. Air Conditioning Study

Alderman Slade encouraged staff to complete an HVAC study at Town Hall and Century Center.

Staff response: Completing studies for the Century Center and Town Hall has been included in the 2014 CIP update and 2014/15 operating budget. The Town Hall study also addresses usability and other mechanical upgrades/renovations.

8. LED Outdoor Lighting

Alderman Seils stated that the LED project has the most return on investment and seems to be the highest priority.

Alderman Lavelle asked staff to check with NCDOT about their position regarding the installation of LED lights on state maintained roads. She asked the Town Attorney to research if the Town can require developers to use LED lights.

Staff response: Staff have been actively working with other local government staff, the NC League of Municipalities, and Duke Energy to move outdoor LED lighting forward as expeditiously as possible and in consideration of Town interests, and anticipate a LED rate option to be available by July 1, 2014, although the fiscal impact and timing of LED implementation are currently not known. Staff have also contacted NCDOT. NCDOT has indicated that they will allow municipal lighting installations by way of encroachment and subject to the requirements as outlined in the NCDOT encroachment manual. They suggest that the Town coordinate interests with representatives of Duke Energy and the NCDOT Lighting and Electrical Squad.

“New” Materials and Concepts in Draft Plan

A good deal of the material presented in the draft plan directly follows from the October Board meeting and subsequent activities that have been shared with the Board via the CIP and Operating Budget updates and Board-Manager memos and are not included in this memo. For those who are not able to read the whole plan, Table 1 is provided below to help in focusing on sections that may be of the most immediate interest.

Table 1: “New” Materials in Draft Plan

Section in Plan	Topic	Notes
1	Background/Context	Sets the stage and scope of the plan
2	Intro to Municipal	This section sets the stage and scope for the municipal operations section of the plan
	Sections on lighting, assessments, facilities, equipment/purchasing, and fleet	These sections mostly repeat information from what was previously presented to BoA and included in CIP update. The main new concepts are: controls/setpoint strategy, life-cycle costs, and purchasing policy
3	Municipal Support for Community	These sections mostly repeat information from what was previously presented to BoA and included in CIP update.
4	Measurement, Inventory, Assessment, Reporting	Recommend: continuing to work with Chris Lazinski for municipal inventory; UNC Capstone Team for community inventory; and potentially seeking other external support
5	Climate Change Vulnerability and Adaptation	This section provides contextual information for climate vulnerability planning in the southeastern US, but does not recommend specific goals or actions for Carrboro.
6	Appendices	“New” appendices included on climate change science and global climate planning

Task Force Recommendation

With regard to the potential establishment of a temporary task force to support planning efforts, the following recommendations are offered:

- 1) The sole purpose of the task force would be to prepare a report to submit to the Board of Aldermen by June, 2015 that addresses, at a minimum:
 - a. Recommendations for new actions the Town can pursue to reduce nonrenewable energy use and greenhouse gas emissions from residential and commercial buildings in Carrboro
 - b. Recommendations for new actions the Town can pursue to reduce nonrenewable energy use associated with transportation in Carrboro
 - c. Recommendations for new actions the Town can pursue to promote renewable energy in Carrboro
 - d. Recommendations for new actions the Town can pursue to better manage vegetation, soil, and impervious surfaces to capture carbon, reduce energy use in buildings, mitigate the heat island effect, and reduce stormwater runoff
 - e. Any other recommendations the task force wishes to propose related to energy use and production and climate protection
 - f. Any other recommendations the task force wishes to propose related to local resiliency in consideration of climate change.
- 2) The task force would meet in the evening on the 3rd Thursday of the month for a total of 9-10 meetings. Staff will attend meetings and support the task force with logistics including agendas and minutes. Staff and advisory boards will coordinate to minimize impact on ongoing advisory board work during this period and leverage efforts with the planned fall 2014 forum, UNC Capstone support, and online collaboration.
- 3) The Board of Aldermen would appoint members to the task force at the Board's discretion, ideally in the spring/summer of 2014. It is recommended that existing advisory board members be recruited to participate on the task force, along with other community members at the Board's discretion, with a maximum of 7 official members. The primary minimum requirement for serving on the task force is recommended to be commitment to attendance at 5 or more meetings and contribution to the drafting of recommendations.
- 4) The task force will have the latitude to plan its meetings to focus on specific topics for individual meetings, collaborate between meetings, and invite participation from outside the task force to most effectively utilize the expertise and interests in the community. The meetings would be public meetings; non-task force community members could participate in one or more given meetings/topics.
- 5) The first task of the task force would be to create a draft report outline and schedule of topics for monthly meetings to help focus and organize the task force's work. It is recommended that a final meeting be reserved to review a draft report.
- 6) The task force may wish to organize participation and subgroups around specific topics to help focus and organize the task force's work, leverage skills/expertise and interest, and facilitate participation.

Recommendation

It is recommended that the Board of Aldermen provide any review comments and approve the draft plan, along with staff recommendations: creating and working with an Energy and Climate Action Task Force; continuing to work with advisory board members to plan a fall community forum on energy and climate; planning for one or more future UNC Capstone teams to provide support to the community in climate action planning; and promoting the use of MindMixer as a tool for online collaboration for energy and climate planning.