



## TOWN OF CARRBORO

NORTH CAROLINA

### TRANSMITTAL

### PLANNING DEPARTMENT

DELIVERED VIA: ☒ HAND ☐ MAIL ☐ FAX ☒ EMAIL

**To:** David Andrews, Town Manager  
Board of Aldermen

**From:** Randy Dodd, Environmental Planner  
Patricia McGuire, Planning Director

**Date:** March 31, 2016

**Subject:** Follow up Report on Draft Community Climate Action Plan

#### Summary

At the November 10<sup>th</sup>, 2015 meeting, the Energy and Climate Action Task Force presented an updated draft of a Community Climate Action Plan to the Board of Aldermen. The Board provided direction on next steps and referred questions for staff consideration. The purpose of this memo is to provide a follow up report from the 11/10/2015 meeting.

#### Information

In the spring of 2014, the Board of Aldermen created a temporary Energy and Climate Action Task Force charged with supporting the Town with community scale climate action. The Task Force was asked to prepare a report to submit to the Board of Aldermen that addressed:

- 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

In the fall of 2014, the advisory boards sponsored a series of three forums related to climate action planning. Using information from the advisory board forum series reports as a starting point, the Task Force deliberated in 2014 and 2015 and prepared drafts of a Community Climate Action Plan for Board of Aldermen review in June, 2015, advisory board review in September/October, and Board of Aldermen review again in November. The preparation of this plan, designed as a companion document to the Energy and Climate Protection Plan (focused on municipal operations and adopted in May of 2014), is a step toward reducing greenhouse gas emissions community-wide, becoming more energy efficient, generating more renewable energy, and nurturing a social and ecological environment that is more resilient, livable, and attuned with

the epochal change that is occurring. The plan recommends a goal of a 50% reduction in per capita greenhouse emissions by 2025, and includes over 25 specific recommendations relating to community integration, buildings, transportation, renewable energy, and ecosystem protection and restoration.

At the November 10<sup>th</sup>, 2015 meeting, the Board of Aldermen provided direction and feedback for staff consideration. The Board's requests and a summary of the staff response is provided in the following table. A more detailed response follows.

**Table 1: Summary of Staff Follow Up from November 10, 2015 Meeting**

Board Direction	Staff Response
Send plan to CHCCS and OWASA	Completed. CHCC response provided as attachment. OWASA staff have indicated that a response will be prepared prior to public hearing.
Set public hearing	A public hearing has been set for April 26. Additional public outreach is being pursued, as discussed in this memo.
Extend the Task Force until June, 2016	The Task Force met on March 10 <sup>th</sup> . The next meeting has been scheduled for April 20 <sup>th</sup> .
Remove the recommendation on bicycle and pedestrian infrastructure	The recommendation has been removed from the updated draft.
Explore creating a Sustainability Coordinator position	Discussion of staffing considerations and options to address the need for additional capacity included in this memo. Text edits are offered in updated draft of plan to provide more flexibility in implementation.
Report back on deer herd management	Culling of deer is not recommended. The recommendation has been edited to focus on evaluating the extent to which the deer population and climate change may be affecting native plant ecosystems.
Provide fiscal analysis	This memo includes additional information on potential fiscal impacts. It is recommended that a more detailed fiscal analysis that includes an assessment of greenhouse gas emissions reductions be pursued after the public hearing.

### Sustainability Coordinator

The draft plan presented on 11/10/2015 recommends that the Town hire a Sustainability Coordinator. A new Coordinator position is specifically mentioned in the Executive Summary and Implementation sections as well as under recommendations for new grass roots partnerships, integrating climate action with the local living economy, expanded capacity for community sustainability, and facilitating low cost financing. A new full time position to manage neighborhood portfolios and facilitate neighborhood efforts is also included in the recommendations, although the draft plan does not specify if this is in addition to a Sustainability Coordinator, or would be the focus of a Sustainability Coordinator position. (Other recommendations mention the need for expanded capacity for the Town and community, they do not specifically refer to a new Town Sustainability Coordinator.) The following thoughts are offered in consideration of hiring additional staff to support plan implementation.

- 1) The plan includes a diverse set of recommendations that require expertise in separate disciplines: energy efficiency of single family, multifamily, and commercial buildings; renewable energy; transportation; stormwater management; solid waste/recycling;

ecology/botany/forest ecology; finance/funding; and community organizing. A diversity of skills and experience is needed to work in these different areas.

- 2) There has been limited outreach to gauge the degree to which the community would utilize the services a new Sustainability Coordinator (and/or others) could provide, but uncertainty remains as to the degree to which the array of recommendations in the draft plan may gain traction in the community. More clarity on priorities, roles, available resources, and community interest in the different recommendations put forward is needed before determining a position's requirements and responsibilities and proceeding with a hiring process.
- 3) In terms of the Town's involvement in implementing the plan, an alternative, or compliment, to hiring a Sustainability Coordinator is for current staff to assume/continue to assume responsibility for some of the goals and recommendations in the plan, with a more distributed responsibility in which a single person would not bear an inordinate burden. This would involve developing a more detailed implementation plan.
- 4) The degree to which community "champions" step forward is very important to the success of the plan. New Town staff could potentially help identify and organize "champions", but there may also be a rationale (more grassroots, less bureaucracy/centralization) for a more limited involvement from the Town on some of the plan's recommendations. Perhaps others in the community could be as or more effective than a Town employee in reaching the community. The nonprofit sector, along with the business community, HOAs, and others will be important to the success of climate action efforts. Alternatives such as (but not limited to) a community grant program, contractual services/temporary staff, and expanded partnerships are also worth investigating.
- 5) The Town has been pursuing initial steps to address the stormwater recommendation. This will be a major undertaking, and will require time from some of the same staff that could have responsibility for supporting the implementation of the Community Climate Action Plan.
- 6) Partners the Town routinely works with (e.g., OWASA, Orange County, CHCCS, Chapel Hill, UNC) have Sustainability staff that serve the community.
- 7) There would be a fiscal and staff impact associated with hiring a new Sustainability Coordinator staff position, as discussed under "Fiscal Analysis" below.
- 8) In considering the scope of the plan, community greenhouse gas emissions profile, and Town authority and capacity, an important "gap" is supporting improved energy efficiency in buildings. There is some uncertainty on how effective the Town, with or without a dedicated staff person, may be in making progress on the energy efficiency of buildings. Partners for the WISE program stressed the importance of pursuing energy efficiency in buildings at a regional scale. Outreach to potential partners at both local and regional scales is worth exploring. In the absence of an established partnership, it would be more difficult for a Sustainability Coordinator and the Town to make progress. Energy efficiency work could also require resources beyond staffing, for example, funding for subsidies and/or loans.

Given the above, it is recommended that the Town defer the decision to hire new staff until more feedback has been received on community needs and a more detailed implementation plan with a more thorough assessment of the pros/cons and costs/benefits of alternative approaches is available. Part of this assessment should include consideration of the potential reduction in

community greenhouse gas emissions associated with hiring, and a comparison of these reductions with alternative approaches. The Town should explore a host of options for supporting plan implementation including (but not limited to) expanded partnerships, a community grant program, and contractual services in addition to hiring new staff.

Edits to sections of the draft plan are offered in consideration of the above points.

#### Fiscal Assessment

Table 2 provides a preliminary assessment of potential fiscal impacts for selected recommendations that could entail some degree of Town fiscal responsibility. The total fiscal impact of the draft plan to the Town could be significant over the next decade, with variability possible in relation to timing and financing.

#### Statutory Authority

Several of the plan's recommendations provide both regulatory and non-regulatory approaches for pursuing the recommendation. For the regulatory options, the Town Attorney has looked into the degree to which new statutory authority may be needed to implement the recommendation. A summary is provided in Table 3.

#### Implementing the Plan

The draft plan presented in November, 2015 includes implementation recommendations. The following thoughts are offered in consideration of plan implementation.

- 1) It is recommended that staff provide a more detailed implementation assessment later in 2016 (after the public hearing) that will further analyze fiscal impacts.
- 2) Fundamentally, the plan is a community rather than municipal plan, and as such, requires broad community buy in, participation, and leadership. The Town is simultaneously pursuing a municipal plan focusing on Town operations, which represents 2% of the total community greenhouse gas emissions.
- 3) From a greenhouse gas emissions reduction perspective, a critical gap exists in terms of improving energy efficiency of buildings relative to the plan's other recommendations. The rate of improvement in energy efficiency needs to be at least doubled to realize the 50% per capita reduction goal by 2025. A specific challenge is improving energy efficiency in rental and multifamily housing, which comprises a large portion of the housing stock. To help focus implementation efforts, it could make sense to develop a more detailed implementation plan on this specific topic. This has some synergy with the interest in social equity and affordable housing. The plan recommends establishment of a new Rental Property Task Force, and consideration of a Rental Registry.

**Table 2: Potential/Preliminary Fiscal Impacts Associated with Climate Action Plan**

<u>Plan Recommendation</u>	<u>Potential Fiscal Impact</u>
Hire Sustainability Coordinator	A single full time position could require ~\$65k/year plus benefits (equivalent to 0.3 cents/\$100 tax value). This does not include any new operating budget. Staff have begun to assess alternative uses for this level of annual allocation.
Facilitate Low Cost Financing	The primary impact would be the debt burden. There would also be an administrative cost. The scope of efforts needing financing and amount of debt have not been determined.
Integrate Climate Action and Social/Equity Initiatives	Multiple potential partners and grant opportunities are identified. Seed/matching/operating funding would probably be required.
Buildings Recommendations	Potentially significant impacts associated with administration costs, contract support and/or subsidies. For reference, the Federal DOE-funded Carrboro WISE (2011-2013) program required ~\$366k (\$100k to seed EERLF; \$75k for administration; \$190k for subsidies) in public monies to reach 113 residential units and 3 commercial buildings. The projects were estimated to save 21% in energy use and almost \$40,000 a year in total utility bills for the participants. (An educational campaign through Clean Energy Durham reached an additional 77 Carrboro residents, with costs included in the administrative costs.) An analysis of Duke Energy electricity usage data from 2011-15 indicates that the rate of energy efficiency improvement needs to be at least doubled from the improvement during this time period to reach the 50% goal, suggesting that a new program would have to exceed the performance, and by reference, fiscal impact of the WISE program.
Transportation Recommendations	New impacts will need to be determined in cooperation with transit/transportation partners. For reference, the Town currently dedicates about 1.5 FTE to transportation planning/administration, and provides about \$1.5 M as a transit partner. Tracking emissions reductions locally is challenging and will require additional resources and effort. A mechanism for doing so with reliability has not yet been identified.
Community Solar Projects	Capital outlay if Town helps with financing. Preliminary staff discussions with NextClimate have identified a potential of pursuing one or two community solar projects (perhaps at a size of approximately 30kW) per year. A 30kW project currently has ~\$90k capital cost, with a potential public/private 70/30 split. This scale of project accounts for a little less than 1% of the total community electricity demand.
Downtown Geothermal	If feasible, large upfront cost anticipated. Lifetime equipment is ~50 years; heating/cooling costs reduced by ~50%. For reference, Orange County has installed geothermal HVAC systems to serve county buildings in Hillsborough at a cost of ~\$1.8M. Staff can pursue prefeasibility assessment, with a possible nominal fee for contract support.
Stormwater Utility	If a Town run utility is pursued, there would be flexibility in the establishment of a fee structure. For example, the utility could be established as revenue neutral. According to the UNC Environmental Finance Center, there are currently 55 utilities operating in North Carolina. The typical/average stormwater utility fee is \$1/month/1000 sq. ft. of impervious surface. ( <a href="http://www.efc.sog.unc.edu/reslib/item/nc-stormwater-utility-dashboard#">http://www.efc.sog.unc.edu/reslib/item/nc-stormwater-utility-dashboard#</a> ) for details on NC stormwater utility rates.) For reference, Chapel Hill's 2015/16 budget appropriated \$2.4M (with 14 FTEs) for stormwater management. Hillsborough is considering establishing a utility with an annual budget of \$579k in FY 2017, increasing to \$933k by FY 2021: <a href="http://www.hillsboroughnc.gov/media/page-documents/stormwater-utility-fee-analysis-and-report.pdf">http://www.hillsboroughnc.gov/media/page-documents/stormwater-utility-fee-analysis-and-report.pdf</a>
Evaluate Impacts of Climate Change and	There would be costs associated with additional studies; the scope of the studies and extent of costs will require additional investigation. The primary factors influencing the

Deer Herd on Native Plant Ecosystems	magnitude of Town costs will be if Town funding is needed for those providing support and the amount of time and labor rate for work devoted to field studies.
Organic Waste Collection/Composting	The Town is in the process of initiating a contracted study (\$50k with an optional \$7.5k pay as you throw analysis). This study will provide additional information on potential longer term fiscal impacts.
Discourage Invasive Plants and Encourage Native Plants	Amount of funding needed is TBD. For reference, the Bolin Forest and Quarterpath Trace neighborhoods completed a \$30k invasives removal and education grant in 2015. ( <a href="http://www.townofcarrboro.org/DocumentCenter/View/2894">http://www.townofcarrboro.org/DocumentCenter/View/2894</a> ). The cost of on-the-ground work depends in large part on the amount of volunteer versus paid labor.

**Table 3: Statutory Authority Considerations for Selected Plan Recommendations**

<u>Plan Recommendation</u>	<u>Statutory Authority</u>	<u>Notes</u>
Energy Audit/Performance Rating	No explicit authority identified. Because the State regulates building codes, there may be a “preemption” issue if this were to be a requirement	Gen Stat 160A-383.4 authorizes Town to adopt ordinances providing incentives to developers who agree to take steps in their projects to reduce energy consumption.
Energy Efficiency “Beyond Code”	The Town has requested authority to implement Appendix 4 to the 2012 NC Energy Conservation Code (15% additional efficiency-residential building permits)	This request has not made it out of committee. See note above.
Limiting Idling	The Town probably has authority to limit or regulate idling under General Statute 160A-185	For schools, CHCCS Board Policy 6306 “prohibits all unnecessary school bus idling”.
Downtown Geothermal	General Statute 160A-459.1 authorizes Town to “establish a program to finance the purchase and installation of distributed generation renewable energy sources or energy efficiency improvements that are permanently affixed to residential, commercial, or other real property.”	The term “renewable energy source” includes geothermal (General Statute 62-133.8(a)(8)). More investigation needed to determine authority for establishing a utility.
Rental Registry/Certificate Program	No authority identified to require registration; no restrictions identified to a voluntary program.	

- 4) As an alternative to creating a new Task Force, it is recommended that climate action be considered as a core value in the charges to all advisory boards. This would avoid duplication of effort across committees. In addition, a process could be pursued for formal collaboration of existing advisory boards to address the goals of the plan. For example, a periodic joint review and report dedicated to climate action to the Board of Aldermen from advisory boards could be established.

- 5) Staff has not yet been able to complete a more robust assessment of the greenhouse gas emissions reductions of pursuing the different recommendations and actions included in the plan.
- 6) Some of the recommendations include activities that are currently included in staff work plans, and some recommendations could result in new staff impacts, depending on the implementation approach. There will be a staff impact to support one or more Task Forces.
- 7) There is value in identifying and exploring partnership and outside funding opportunities.

Edits have been offered in an updated draft of the plan given the above considerations. A general recommendation is that staff provide a report later in 2016 that addresses the points made above as well as additional public input.

#### **Public Outreach**

The development of the draft plan over the course of the past 18 months has included some community engagement through the Planning Forums, advisory board review, and presentation of two drafts of the plan to the Board of Aldermen. A public drop in session at Town Hall is scheduled for Wednesday, April 6th (5:30 pm-7:30 pm). A survey (online and hard copies) has been created to get feedback on recommendations presented in the Community Climate Action Plan. The survey will be available online until April 15th; survey results will be presented as part of the Public Hearing agenda packet. The Energy and Climate Action Task Force is also performing outreach at the Farmers Market. The Town's website has been updated to include information on the draft plan and public participation opportunities.

#### **Fiscal and Staff Impact**

There is no fiscal or staff impact associated with accepting the staff report.

#### **Recommendation**

It is recommended that the Board of Aldermen receive the staff report and update to the draft plan, and provide any desired direction in preparation for the Public Hearing. It is further recommended that, after further community input and the Public Hearing, staff pursue a more detailed implementation analysis and report back with any new implementation recommendations.