

Town of Carrboro Community Climate Action Plan

Implementation Plan Cost Estimate June 2016

Task ID	Recommendation	One-Time Cost	Annual Cost	Comments / Staffing
CI1	Create Grassroots Partnerships	\$0	\$100,000	Environmental Sustainability Coordinator (ESC)
CI2	Expand Public Partnerships	\$0	\$0	Responsibility of ESC
CI3	Create Green Neighborhood Program	\$0	\$100,000	Neighborhood Program Coordinator (NPC)
CI4	Integrate CAP with Local Living Economy	\$0	\$0	Economic Development Director
CI5	Expand Capacity for Sustainability Initiatives	\$0	\$0	Responsibility of NPC
CI6	Low Cost Financing for Renewable Energy	\$1,000,000	\$0	Capital for Loans; Responsibility of NPC
CI7	Integrate CAP with Social Equity Initiatives	\$0	\$0	Responsibility of NPC
BE1	Reduce Building Emissions by 50% by 2025	\$0	\$50,000	Provide Fiscal Support for Non-Profit; ESC
BE2	Energy Audit / Performance Rating	\$110,000	\$200,000	Enabling Legislation; Hire Energy Inspector (EI) & Financial Analyst; Capital (\$100,000)
BE3	Energy Performance Ratings	\$10,000	\$0	Enabling Legislation; Responsibility of EI
BE 4	Create Rental Property Task Force	\$0	\$0	Responsibility of EI
BE5	Rental Property Registry & Certification	\$10,000	\$0	Enabling Legislation; Responsibility of EI
TM1	Reduce Vehicle Emissions by 50% by 2025	\$0	\$0	Responsibility of ESC
TM2	Enhance Transit Service	\$50,000	\$0	Fund Study; Transportation Planner
TM3	Improve Vanpool/Carpool Options	\$1,000,000	\$10,000	Develop Parking Lots; Transportation Planner
TM4*	Further Promote Walking/Biking/Transit	\$575,000	\$485,000	Bike Sharing; Pay for Parking; Open Streets; Transportation Planner
TM5	Limit Idling in School Loading Zones	\$0	\$0	Transportation Planner
RE1	Pursue Community Solar Projects	\$600,000	\$100,000	Capital for Loans; Funding for Non-Profit; Hire Energy Program Manager (EPM)

RE2	Downtown Geothermal Heating & Cooling	\$650,000	\$0	Capital Plus Study; EPM
RE3	Create Rental Property Task Force	\$0	\$0	Responsibility of EI
ES1**	Pursue Stormwater Utility	\$50,000	\$500,000	Stormwater Utility Manager & ESC
ES2	Evaluate Deer Population	\$50,000	\$0	Study; Responsibility of ESC
ES3	Organic Waste Collection & Composting	\$110,000	\$200,000	Responsibility of Public Works Department
ES4	Create a Tree Coalition	\$0	\$50,000	Funding for Non-Profit
ES5	Invasive Species/Native Plants Regulations	\$0	\$10,000	Enabling Legislation; Responsibility of ESC
DM1.1	Reduce Emissions from Diets by 50% by 2025	\$0	\$0	Responsibility of ESC
		\$4,215,000	\$1,805,000	

*Climate Action Plan Recommendation #TM4 recommends that the Town explore new policies that make driving more expensive and less convenient such as reduced parking supply, increased parking fees, and reduced road speeds. The potential revenue for paid parking is roughly \$1M annually: 300 spaces X \$10 per day per space X 365 days.

The Climate Action Plan does not include any cost estimate for expanded bus transit services which costs approximately \$9.07 per mile.

**Climate Action Plan Recommendation #ES1 recommends the formation of a Stormwater Utility. Annual costs include one employee and \$4M in capital amortized over 10 years. Annual costs are certain to be higher as more than one employee will be needed to operate the utility. However, a dedicated funding source such as a user fee or dedicated property tax rate increase will also be needed to offset costs.

Community Integration

CI1: Create Grass Roots Partnerships to Engage Community

1. Identify partners.
2. Bring partners together and choose programs.
3. Modify programs for Carrboro if needed.
4. Work with partners to recruit and train diverse group of facilitators.
5. Pilot program in facilitator's neighborhoods.
6. Debrief with pilot neighborhoods and modify programs as needed.
7. Install neighborhood and/or town wide dashboard to show progress, and build a climate change action oriented community.

CI2: Expand Public Partnerships to More Explicitly Consider Climate Action

1. Staff and Board of Aldermen to consider in operating budget development.
2. Community champions to self-identify.

CI3: Create Green Neighborhood Program

1. Presentations laying out town's CO2 responsibilities as measured through social equity lens and the urgency of CO2 reduction per the latest science
 1. Town-wide initial presentation followed by
 2. Presentations to neighborhoods that want to engage in green neighborhoods initiative.
2. Create process for developing further program ideas and mechanism for neighborhoods to initiate
 1. Set neighborhood CO2 reduction goals in line with town's at large goal.
 2. Town recognizes savings achieved through existing green initiative successes and allocates these for neighborhoods to use proportional to neighborhood's impact in making the savings. (recurring).
 3. Identify further potential programs and their contributions to reducing CO2 for the neighborhood (ongoing).
 4. Develop neighborhood green participatory democracy process and criteria for new green project initiatives.
 5. Develop way for town to allocate funds.
 6. Support and facilitate neighborhoods participation.
3. Awards program for neighborhoods achieving biggest reductions per energy sector (Trash, Transportation, Housing).
4. Consider on-street parking; park and ride permits.

CI4: Integrate Climate Action with Local Living Economy

1. Include climate change mitigation in local living economy/locally owned marketing messaging.
2. Encourage light manufacturing zone in Carrboro.
3. Set-up Property Assessed Clean Energy (PACE) financing program for commercial buildings to implement renewable energy.

CI5: Expand Capacity

1. Staff and Board of Aldermen to consider in operating budget development.
2. Community champions to self-identify.

CI6: Facilitate Low Cost Financing for Energy Efficiency and Renewable Energy Projects

1. Identify and/or recruit nonprofit organization/local champion to identify project/revolving loan fund that could benefit from Qualified Energy Conservation Bonds (QECB).
2. Pursue bond issuing process.

CI7: Integrate Climate Action and Social/Equity Initiatives

1. Identify relevant federal grants.
2. Develop partnerships with community programs.
3. Investigate legal authority and cost-benefit analysis for Town ordinances.

Building Energy Efficiency Measures

BE1: 50% Challenge

1. Identify a nonprofit organization to become a community champion.
2. Identify neighborhood and business champions and grassroots/community organizing, outreach, and education.
3. Secure support from community leaders, utilities, financiers, and contractors.
4. Identify fiscal support for nonprofit and organizing/coordination support from Board and staff.

BE2: Energy Audit/Performance Rating

1. Pursue enabling legislation for regulatory program.
2. Develop regulatory program or voluntary program.
3. Develop inspection and monitoring program.
4. Energy efficiency revolving loan fund.

BE3: Demonstrate/Pursue Energy Performance Beyond Minimum Requirements for New Development

1. Pursue enabling legislation for regulatory program.
2. Develop regulatory program or voluntary program.
3. Develop inspection and monitoring program.

BE4: Create Rental Property Task Force and Process

1. Develop Task Force charge.
2. Identify relevant stakeholders needed to agree to process in order to make impactful change.
3. Identify outside organization to facilitate Task Force.
4. Commission Task Force.

BE5: Create Rental Property Registry/Certification

1. Pursue statutory authority
2. Outreach to determine interest and feasibility.

3. Create voluntary registry/certification.

Transportation Measures

TM1: 50% Challenge

1. Formal adoption of challenge.
2. Publicity for challenge.
3. Develop system for tracking progress towards goal.

TM2: Enhance Transit Service

1. Explore the feasibility of extending service to new areas by adding more stops in Carrboro well connected to other transit, bike, and pedestrian access, and including more hours of service.
2. Explore siting new Transit Oriented Development in the Northern Transition Area.
3. Work with GoTriangle and Chapel Hill Transit staff to provide additional feedback on plans for future service and ability to accelerate adding service.
4. Enhance transit access points along the 54/15-501 corridor from Chapel Hill/Carrboro to Durham and provide more frequent, reliable bus service.

TM3: Improve Vanpool/Carpool Options

1. Work with GoTriangle to identify currently registered vanpools and carpools.
2. Use this info along with expected increase in use to establish carpool and vanpool parking areas, including downtown Carrboro and Northern Carrboro and nearby areas in Chapel Hill.
3. Add GoTriangle vanpool/carpool parking in Carrboro (including downtown Carrboro and Northern Carrboro) and nearby in Chapel Hill.

TM4: Further Promote Walking, Biking, Transit

1. Continue, accelerate, and intensify efforts to:
 1. Promote bike to work days; consider doing these weekly. Studies have reported long-term increases in bicycling following bike-to-work days.
 2. Work with the Carrboro Bicycle Coalition to: put on and publicize ongoing bicycle training.
 3. Work with the Carrboro Bike Coalition to hold "Open Streets" days.
 4. Work with Chapel Hill Transit and GoTriangle to develop and implement a marketing and educational program on carpooling, vanpooling, and transit use. Promote official car free, carpool, vanpool, and transit use days.
 5. Support the Safe Routes to Schools Program. Work with the Carrboro Chapel Hill City School System and local PTAs to promote bike and walk to school days; consider doing these weekly.
 6. Pursue efforts to implement land use and development policies that help ensure destinations for daily needs, such as school, work, and shopping, are within convenient bicycling distance from home.
 7. Encourage developers to promote multi-modal transportation options.
2. Promote "park and stroll" programs at schools, where students are dropped off at a remote location and walk or bike the rest of the way to school.

3. Research and implement a bike sharing system downtown.
4. Explore new policies that make driving more expensive and less convenient (e.g. reduced parking supply, increased parking fees, and reduced road speeds). Lower speed limits for vehicles make bicycling safer and more attractive. One study conducted in Germany found that reducing general speed limits led to a significant increase in bicycling.

TM5: Limit Idling in School Loading Zones

1. Coordinate with CHCCS to recruiting student and parent volunteers to help with education/outreach.
2. Develop a system for monitoring idling activity.

Renewable Energy Measures

RE1: Pursue Community Solar Projects

1. Pursue enabling legislation to allow a third-party, such as a community entity, to sell electricity directly to consumers.
2. Form a community investment group to purchase and own a solar installation and sell the energy to a large buyer, such as the Town of Carrboro.
3. Develop an agreement to set the electricity price to a rate that is beneficial to both the Town and the community investment group.

RE2: Pursue Downtown Geothermal Heating and Cooling

1. Examine completed projects in Orange County.
2. Solicit contracting support for feasibility study.
3. If deemed feasible, develop preliminary design for Town of Carrboro buildings including financial assessment and environmental benefits.
4. Explore opportunities to develop a municipal utility.
5. Explore ways to encourage developers to install geothermal.

RE3: Create Rental Property Task Force and Process

1. Develop Task Force charge.
2. Identify relevant stakeholders needed to agree to process in order to make impactful change.
3. Identify outside organization to facilitate Task Force.
4. Commission Task Force.

Ecosystem Protection and Enhancement

ES1: Pursue Stormwater Utility

1. Examine both administrative and policy opportunities and challenges.
 - a. Contact nearby jurisdictions and Environmental Finance Center to determine best fit for Carrboro in creating a utility.
 - b. Determine whether or not to partner with Chapel Hill's stormwater utility.
2. Craft public outreach/education campaign about negative impacts of stormwater and economic/environmental benefits of a utility.

ES2: Evaluate Extent to Which the Deer Population and Climate Change affect Native Plant Ecosystems

1. Obtain professional assistance with evaluating impact of climate change and deer herbivory on forest health.
2. Consider outcome of evaluation and identify response that meets needs of community.

ES3: Accelerate/Expand Organic Waste Collection/Composting

1. The solid waste study can include lessons learned from other communities with successful curbside composting (e.g., San Francisco, Portland, Seattle, NYC) and locally successful programs (CHCCS, UNC, etc.) as well as how to collaborate with local contractors (Brooks, CompostNow, etc.).
2. Budget for and choose area for pilot program that includes residential and multi-family units.
3. Expand program to entire town.
 1. Future plans should consider adding a more central drop-off location downtown.
 2. Future studies and plans should include curbside compost collection.

ES4: Create a Tree Coalition

1. Establish a nonprofit organization to become a community champion for education, outreach, and action.
2. Establish goals for the coalition.
3. Recruit members.
4. Form partnerships with those who have technical expertise.
5. Begin education/outreach campaign to community.

ES5: Improve Regulations and Community Capacity to Discourage Invasive and Encourage Native Plants

1. Update the Land Use Ordinance invasive/native plant requirements. Develop a stronger ordinance against invasive species and in favor of native species.
2. Implement an educational campaign, maybe in partnership with the Botanical Gardens or others, to help citizens and businesses understand the importance of planting natives and avoiding invasives. This could be done in conjunction with the Town's newly established annual Pollinator Day.
3. Explore options for implementing invasive removal projects.
4. Develop and regularly update an inventory of areas with excessive invasive plant growth.

Dietary Measures

DM1: 50% Challenge

1. Formal adoption of challenge.
2. Publicity for challenge.
3. Develop system for tracking progress towards goal.