

**Green Challenge Task Force  
Final Report to City Council  
December 10, 2009**

Energy conservation is an issue of importance to every American, and the leaders and residents of the City of Hendersonville are no exception. Concerns about climate change and other environmental impacts, rising energy costs, and dependence on foreign oil have prompted City officials to appoint a group of citizens to review energy use in the City and make recommendations for improvement.

The Green Challenge Task Force was authorized by the Hendersonville City Council on July 10, 2008, and held its first meeting September 15, 2008. The name Green Challenge comes from an initiative by the North Carolina League of Municipalities which asked cities to put into place practical actions that can save energy, money, and natural resources. The purpose of the task force was to draft an energy conservation plan for adoption by the City Council by

- gathering data on the City's current usage of energy and other natural resources
- surveying the measures the City is currently taking to conserve energy and other natural resources
- developing additional cost-effective strategies for energy efficiency, energy conservation, and renewable resources
- suggesting methods of follow-up and evaluation as measures are implemented

With the assistance of City staff, the task force received copies of the City's budgeted and actual utilities expenditures for 2007–2008 and 2008–2009, as well as reports of monthly usage from Duke Energy and PSNC for 2007 and 2008. This information will be used to evaluate energy-saving measures instituted by the City. Rates of recycling and petroleum usage will give baseline information for data on improvements in those areas. The City's Strategic Energy Management Plan provides a summary of the data.

City Manager Bo Ferguson and staff members from the Public Works, Finance, and Utilities departments briefed the task force on the City's current conservation efforts. The City has several relatively new, or recently renovated buildings, which incorporated current energy-saving technology, resulting in significant improvement over the past few years. City staff members have also been proactive in establishing policies that take energy usage into consideration.

The task force members reviewed these measures and developed recommendations for additional policies and procedures to reduce the City's carbon footprint even further and to follow up on their effectiveness in future years.

This report is divided into three target areas—recycling, petroleum use by vehicles and equipment, and energy use.

## Recycling

**Goal 1. Increase number of households actively recycling by 1% per year through 2015.**

**Goal 2. Increase percentage of recycling to 25% by 2015.**

**Goal 3. All developments and multi-family residential units participate in recycling by 2015.**

**Goal 4. 20% of commercial operations in the City recycle.**

### Current Efforts

The City currently offers curbside recycling of glass and plastic bottles, metal cans, newspapers, corrugated cardboard, and mixed paper to residential customers receiving City trash pickup. The City also collects leaves and brush, which are turned into mulch, and picks up white goods, which are sold for scrap metal.

The Public Works Department provides recycling bins in all City buildings and has distributed information on what should be recycled. Contents of bins are collected weekly by Curbside Management.

Current City policy allows each department to determine its own use of recycled products, permitting the purchase of recycled products if their cost is no more than 15% higher than standard products.

### Recommendations

#### 1. Internal City Recycling

- Continue efforts to increase recycling within City buildings.
- Expand recycling efforts to include reduce/reuse.
- Encourage department heads to purchase recycled products within current policy guidelines.

#### 2. Residential Recycling (using City trash collection)

- Improve rate of recycling through education.

#### 3. Residential Recycling (using outside service)

- Let residents/owners know what recycling options are available to them.
  - City staff will contact Curbside to determine cost of covering Wolfpen and other multi-family housing units or areas.
- Require recycling in all new developments.

#### 4. Commercial

- Establish committee of commercial users to look at options and costs to develop a commercial recycling program through Curbside, GDS, or another company, including recycling of grease, foodstuffs, etc.
  - City staff will contact Curbside to determine cost of collecting recyclables from commercial customers currently using City trash pickup.
- Encourage major institutions in the City (e.g., Pardee Hospital, public schools) to institute or increase recycling efforts.

#### 5. Public Recycling

- Provide recycling bins in City parks and throughout the downtown area.

#### 6. Education Efforts

- Develop educational materials.
  - How recycling works
  - What can be recycled and how to do it
  - Where/how to recycle items not part of City's collection process, including composting
  - Disposal of drugs/pharmaceuticals
- Use a variety of means of public education.
  - City Web site
  - New brochure(s)
  - Water bill inserts
  - Have a City booth during festivals, possibly in conjunction with Henderson County recycling coordinator and ECO.
  - Develop a City recycling slogan.

#### 7. Community-wide Recycling

- Encourage and support efforts of Henderson County to improve recycling efforts.
- Encourage Henderson County to require all haulers to offer recycling service.
- Request that Henderson County include a City position on its Solid Waste Advisory Committee.

#### Follow-up and Evaluation

City staff will annually review the percentage of households actively recycling and the percent of materials recycled.

#### **Petroleum Use by Vehicles and Equipment**

**Goal 1. Reduce petroleum consumption by 2% per year through 2015.**

**Goal 2. Plan for new greenway by 2015.**

**Goal 3. Implement 15% of the City's pedestrian plan per year through 2015.**

## Current Efforts

The City will be purchasing/converting vehicles to use compressed natural gas (CNG), starting with the lowest-mileage vehicles. These will be filled at a CNG station Henderson County has recently received funding to construct. Current City policy is to purchase “right-sized” vehicles and use hybrids or electric for passenger vehicles when these become economically available through state contract. There is a no-idling policy for all City-owned vehicles, except police vehicles in certain situations. The Fire Department has converted a vehicle to use for quick response to medical emergencies rather than use a fire engine.

There is a preventive maintenance program for all vehicles and equipment.

The City has established no-mow areas in City parks to reduce use of mowing equipment and to improve the quality of water runoff into streams.

The City funds Apple Country Transit as an alternative to use of individual vehicles. The City’s 2030 Comprehensive Plan includes goals for developing a multi-modal transportation system that encourages pedestrian and bicycle usage in order to promote pedestrian safety, reduce vehicle miles traveled and encourage community interaction; developing a bicycle infrastructure that encourages bicycling; and promoting an integrated mass transit system that addresses local and regional needs.

## Recommendations

### 1. City Vehicle and Equipment Policies

- Logos on alternative-fuel vehicles to advertise their use
- Conduct an ecodriving class for employees annually
- Investigate use of alternative fuels in equipment (mowers, trimmers, etc.)

### 2. Resident/Visitor Vehicle Use

- Conduct a traffic flow study on City-controlled streets to optimize use (or non-use) of stoplights, stop signs, blinking stoplights after a certain hour, etc., to allow traffic to flow smoothly, taking into consideration safety concerns
- Require interconnections between parking lots whenever feasible
- Consider neighborhood requests in funding sidewalk construction
- As electric vehicles become more prevalent, have spaces in City parking lots with plug-ins for recharging

## Follow-up and Evaluation

City staff will annually review the amount of petroleum used in City vehicles and plans/construction of sidewalks and greenways.

## Energy Use

**Goal 1. Reduce energy consumption in City buildings by 5% by 2015.**

**Goal 2. Use renewable energy for 3% of City operations by 2020.**

### Current Efforts

City Hall has controlled air flow in each office, half-light available in most offices, motion sensor lights in rest rooms and CFLs have recently replaced standard bulbs in the large chandeliers.

Filters are being replaced at Patton Pool, where recent upgrades include a new natural gas heater, new showerheads, and instant heaters at the sinks.

Audits for the Operations Center, the Whitmire Building, and the garage have been conducted by Waste Reduction Partners (WRP) and the reports have been received.

The Water and Wastewater Plants are currently de-watering sludge and sending it to South Carolina, but are looking into pelletizing it.

### Recommendations

- Energy-usage reduction in city buildings
  - Conduct audits of City buildings not yet done.
  - Re-commission all City buildings to ensure energy efficiency.
  - Purchase only Energy Star-rated equipment.
  - Implement the recommendations of WRP for the buildings audited.
  - Upgrade weatherization in buildings.
  - Investigate LEED or Green Building Council certification for older City buildings
  - Investigate solar panels on buildings for hot water generation.
  - Investigate renewable energy options with Duke Energy.
  - Investigate geothermal for heat or cooling at the water and wastewater treatment plants.
  - Investigate using a turbine at the water treatment plant to tap into hydroelectric.
- Citizen water-conservation measures that result in less energy usage at the water treatment plant
  - Distribute low-flow devices to water customers to help them reduce their water usage.
  - Provide incentives to water customers to switch to water efficiency devices.
  - Educate citizens on water conservation measures they can take.

## Follow-up and Evaluation

City staff will annually review the use of energy in each of the City's buildings.

### **General Policies and Recommendations**

- 1. City staff will complete a Strategic Energy Management Plan as required by the State of North Carolina.**
- 2. The City will maintain databases on energy usage and recycling.**
- 3. The City will strive to make all capital investment decisions using long term total costs including energy cost.**
- 4. The City will apply for all grant and similar allocations to help pay for capital improvements.**
- 5. The City will establish a committee of employees to champion efforts among all employees to help the City meet its goals.**
- 6. The City Council will establish a permanent committee of citizens to assist in implementing and monitoring the results of the above and make further recommendations to continue improving the City's energy-saving efforts.**
- 7. The City will encourage its citizens to be energy efficient in their private life, with limited incentives from City funds.**
- 8. The City will seek involvement from its citizens and commercial entities as well as regional agencies, including Henderson County, in implementing its goals.**