

Buncombe County Energy Independence Initiative

Proposal for consideration
from Commissioner Brownie Newman
November 25, 2013



Purpose and Need

1—Buncombe County should be a national leader in demonstrating cost-effective solutions to advance energy independence and achieve reductions in carbon pollution. Buncombe County should do its part and provide practical examples of how these reductions can be achieved in a cost-effective manner.

2—To help manage the short term and long term utility costs to operate the County's buildings, vehicle fleets and other facilities.



Shaw Environmental: Investments over Years 1 -5

Net savings to Buncombe taxpayers: \$1,212,783 over ten years

Efficiency Measure	Recurring Annual Savings	Initial Cost Year 1	Initial Cost Year 2	Initial Cost Year 3	Initial Cost Year 4	Initial Cost Year 5
DDC Scheduling/ Temp Setback	\$ 19,000	\$ 28,800				
Computer Controls	\$ 17,400	\$ 47,200				
Delamp Fixtures	\$ 3,300		\$ 8,200			
Duct Static Reset	\$ 25,100		\$ 25,200			
Vending Miser	\$ 1,200		\$ 2,000			
Replace Chiller Pipe Insulation	\$ 500		\$ 2,600			
Energy Star Clothes Washer- Residential	\$ 2,000		\$ 6,000			
DWH Heating	\$ 500		\$ 1,000			
Thermostat Addition	\$ 20,100			\$ 76,700		
Water Conservation (Fixtures/ Control)	\$ 55,600			\$ 410,900		
Optomise Economizers	\$ 10,300				\$ 33,600	
Commercial Tray Washer	\$ 10,900				\$ 77,200	
Demand Control Ventilation	\$ 7,600					\$ 56,800
Totals	\$ 173,500	\$ 76,000	\$ 45,000	\$ 487,600	\$ 110,800	\$ 56,800
					5 Year Total	\$ 776,200

Annual Recurring Savings from Year 1- 5 investments

Year	1	2	3	4	5	
Recurring Annual Savings (3% index)	\$ 173,500	\$ 178,705	\$ 184,066	\$ 189,588	\$ 195,276	
Year	6	7	8	9	10	Total
Recurring Annual Savings	\$ 201,134	\$ 207,168	\$ 213,383	\$ 219,785	\$ 226,378	\$ 1,988,983

Scientific Basis

“The scientific evidence is clear: global climate change caused by human activities is occurring now, and it is a growing threat to society.”

-- American Association for Advancement of Science

“Climate change is occurring, is caused largely by human activities, and poses significant risks for — and in many cases is already affecting — a broad range of human and natural systems.”

-- National Academy of Science

“... global climate has warmed and that human activities (mainly greenhouse-gas emissions) account for most of the warming since the middle 1900s. If current trends continue, the projected increase in global temperature by the end of the twenty first century will result in large impacts on humans and other species.”

-- Geological Society of America

Potential consequences of inaction on future generations

- 80% reduction will not “stop” global warming.
- It can help avoid the most severe and irreversible impacts on future generations
 - Sea level rise and coastal flooding – NC Outer Banks are especially vulnerable
 - Larger and more and dangerous wildfire conditions
 - More frequent and severe drought conditions, heat waves and other extreme weather events
 - Water shortages
 - Habitat destruction, species extinction and ocean acidification



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Policy Commitment:

1. Buncombe County will reduce its carbon emissions annually by 2% until an 80% is achieved. With this level of commitment, Buncombe County will achieve a 10% reduction over the next five years.
2. To help achieve this goal, Buncombe County will implement the recommendations outlined in the Shaw Environmental energy audit for years 1 – 5.



Other leaders who have committed to clean energy

Republican Governor Swartzenager issued an Executive Order committing the state to an 80% carbon reduction goal, which has been subsequently codified in legislation.

<http://www.forbes.com/sites/justingerdes/2013/02/27/how-will-california-slash-greenhouse-gas-emissions-80-by-2050/>



United States Army, Navy, Air Force and Marines

The US military is committed to reduce its carbon footprint by 15% by 2015. This policy objective was put in place by President George W. Bush.

<http://green.blogs.nytimes.com/2009/07/21/army-works-to-cut-carbon-footprint/>



Camp Lejeune Marine Corps Base, Jacksonville NC

What Buncombe County is already doing

- Buncombe County 1.4 MW landfill gas project
- Installation of new windows in the County Courthouse
- Installation of more efficient lighting
- Recycling of CFL lightbulbs
- Reducing energy use in county buildings and fuel use in fleets.
- Tracking of energy consumption patterns and costs to taxpayers:
<http://www.buncombecounty.org/common/general/EnergyReport.pdf>

Commitment and Implementation

- Spring 2013– Initial proposal and discussion at County Commission Retreat.
- May- Oct– Staff retained Shaw Environmental to conduct an energy audit of all County public facilities and create plan for 20% energy reduction within ten years.
- Tuesday, Dec. 3– Buncombe County Commission scheduled to formally consider Buncombe Energy Independence Initiative
 - 2% annual reduction until 80% carbon reduction is achieved
 - Implement Year 1- 5 recommendations of Shaw Environmental
 - Seek additional opportunities to reduce utilities through clean vehicles, encouraging operational efficiencies, etc.

