

Overview of Durham's GHG Inventory and Forecast

Community

CAP & GHG Emission Forecast Summary (Tons)

Year & Scenario	NOx	SOx	CO	VOC	PM10	GHGs	GHG Increase (%)
2005	16,295	20,661	61,729	6,473	776	6,837,434	-
2005 w/o Measures	16,465	20,989	62,546	6,558	784	6,980,847	2%
2030 BAU	20,024	24,819	93,989	9,137	909	10,238,223	50%
2030 Planned	19,995	24,746	93,972	9,135	907	10,097,046	48%

Local Government Operations

CAP & GHG Emission Forecast Summary (Tons)

Year & Scenario	NOx	SOx	CO	VOC	PM ₁₀	GHGs	GHG Increase (%)
2005	207	429	329	35	11	102,204	-
2005 w/o Measures	209	433	330	35	11	103,432	1%
2030 BAU	212	452	392	39	12	128,918	26%
2030 Planned	191	420	387	38	11	115,486	13%

Comments

1. Comments received from the last meeting: many of the comments were related to clarity in the report and therefore clarifications have been addressed in the draft. The memo discussing the discrepancies between the 1998 report and the 2006 report has been included as an appendix to the report.
2. Background information on climate change, the benefits of participating in the CCP program and a community profile of Durham has been added to the introduction.
3. Should public school operations to be included in local government sector? There had been some discussion of this; however, this could be problematic for comparing with other municipalities in the CCP program. Schools would typically fall under commercial/institutional sector, rather than the local government buildings sector.

Existing & Planned Emission Reduction Measures in Durham

Sector	Status	Measure	Implemented By	Info Req'd?	
				Yes	No
Residential	Existing	Solar Hot Water Heaters	Private Sector		x
	Existing	NC Green Power	NC Green Power		x
	Existing	Energy Conservation Loans	Duke Energy	x	
	Existing	Equipment Loan	Duke Energy	x	
	Existing	Heating & Cooling Equip. Loans	Duke Energy	x	
	Existing	Off Peak Water Heating	Duke Energy	x	
	Existing	Public Info - Duke Power	Duke Energy		x
	Existing	Public Info - PSNC	PSNC		x
	Existing	Heat Pump Loans - Piedmont	Piedmont		x
	Existing	Energy Audits - Piedmont	Piedmont		x
	Existing	NC Healthy Built Homes	NC Solar		x
	Existing	Soltera	Private Sector	x	
	Existing	Eno Commons	Private Sector	x	
	Existing	Social Security Income Rate	Duke Energy	x	
	Planned	Campaign for Solar Water Heaters	Private Sector		x
	Planned	Manufactured Home Heat Pump Prog.	TJCOG		x
	Planned	Heat Pump Loans - Piedmont	Piedmont		x
	Planned	Energy Audits - Piedmont	Piedmont		x
Commercial/Institutional	Existing	Customer Resource Center	Duke Energy		x
	Existing	Equipment Loan	Duke Energy	x	
	Existing	Off Peak Water Heating	Duke Energy	x	
	Existing	Public Info - Duke Power	Duke Energy		x
	Existing	Public Info - PSNC	PSNC		x
	Existing	Steam System Upgrade or Repl.	NCCU	x	
	Existing	Low-Level Waste Generator	NCCU	x	
	Existing	Utilities Savings Initiative	NCCU	x	
	Existing	Duke University Energy Management	Duke University		x
	Existing	Duke University LEED Buildings	Duke University	x	
	Existing	Green Building Program	TJ COG		x
	Existing	LED Traffic Signals	NC DOT	x	
	Existing	High Pressure Sodium	NC DOT	x	
	Existing	US EPA RTP (Main Building)	US Government		x
	Existing	EPA Nat'l Computer Centre - LEED	US Government		x
	Planned	Energy Audits for Commercial Bldgs.	TJ COG	x	
	Planned	Imperial Point LEED Certified Rest.	CH Rest.Grp.	x	
	Planned	NCSSM - Facility energy efficiency	NCSSM	x	
	Planned	Duke U. Power Plan (low-sulfur coal)	Duke University	x	
	Planned	Green Purchasing Policy - Energy Star	Duke University		x
	Planned	Public School Energy Efficiency	Durham PS	x	

	Planned	LEED for New Schools	Durham PS	x	
	Planned	Public School Temperature Controls	Durham PS		x
	Planned	First Env. Early Learning Center, EPA, RTP	US Government	x	
	Planned	LEED Bldg - Research Triangle Foundation H, 12 Davis Dr.	RTF	x	
	Planned	LEED Building - 3054 Cornwallis Rd, RTP	Syngenta	x	
Industrial	Existing	Customer Resource Center	Duke Energy		x
	Existing	Equipment Loan	Duke Energy	x	
	Existing	Off Peak Water Heating	Duke Energy	x	
	Existing	Public Information - Duke Power	Duke Energy	x	
	Existing	Public Information - PSNC	PSNC	x	
	Planned	NONE			
Transport.	Existing	Compressed Natural Gas Vehicles	Duke U & TJ COG		x
	Existing	Ethanol 85 Fuel Use	TJ COG	x	
	Existing	Biodiesel Use	TJ COG, Durham PS, Duke U & Private Sector		x
	Existing	Alternative Fuel Use in DATA vehicles	DATA	x	
	Existing	Durham County Commute Trip Reduction Ordinance	Coordinated by TTA		x
	Existing	Duke University Car/Vanpool	Duke University		x
	Existing	Duke University Alternative Vehicles - Electric	Duke University		x
	Existing	Duke University Alternative Vehicles - Prius Hybrid Vehicles	Duke University		x
	Existing	Carpool Parking Permits	Duke University		x
	Existing	Land Use Planning - Transit Friendly Communities	City/County	x	
	Existing	Fannie Mae Smart Commute™ Mortgage Program	Greater Triangle RC	x	
	Existing	Anti-idling Program for Vehicles	DATA	x	
	Planned	Smart Commute Challenge	TTA		x
	Planned	No Idle Policy	Durham PS		x
	Planned	Hybrid Electric Buses - DATA	DATA	x	
	Planned	NC Central U Petrol Displacement Plan	NCCU	x	
	Planned	NCSSM Petroleum Displacement Plan	NCSSM		x
	Planned	DCHC Long Range Transportation Plan (LRTP)	DCHC MPO		x
Waste	Existing	Yard Waste Recycling	City of Durham		x
	Existing	Tidewater Fibre Corporation (TFC) Recycling	City of Durham		x
	Existing	Commercial Corrugated Cardboard	City of Durham		x
	Existing	White Goods	City of Durham		x

	Existing	Recycling Bins Provided to Community Events	City of Durham		x
	Existing	Keep Durham Beautiful	City of Durham		x
	Existing	Compost Demonstration Centre	City of Durham		x
	Existing	Multi-departmental Code Enforcement Nuisance Abatement Team (CENAT)	City of Durham		x
	Existing	Swap Shop at Waste Disposal and Recycling Center	City of Durham		x
	Existing	Stickers Listing Banned Recyclables Placed on Garbage Carts	City of Durham		x
	Existing	Compost Bins	City of Durham		x
	Planned	Ordinance Amendments in 06/07 provide for Civil Enforcement	City of Durham		x
	Planned	SWM Code Enforcement Officer (Proposal for Funding)	City of Durham		x
	Planned	Household Hazardous Waste - long term plan	City of Durham		x
	Planned	Compost Bins	City of Durham		x
	Planned	Waste Management Plan	City of Durham		x
	Planned	Bar & Restaurant Recycling in NC	State of NC - lead initiative		x
	Planned	New Development Requirement - Cardboard Dumpsters and Recycling Bins with each garbage dumpster	City of Durham		x
	Planned	Recycling - Mixed Paper	City of Durham		x
Buildings	Existing	Energy Efficiency: Administrative Complex	County	x	
	Existing	Energy Efficiency: Carmichael Building	County	x	
	Existing	Energy Efficiency: Community Shelter	County	x	
	Existing	Energy Efficiency: Cooperative Extension	County	x	
	Existing	Energy Efficiency: Detention Facility	County	x	
	Existing	Energy Efficiency: Health Department	County	x	
	Existing	Energy Efficiency: Judicial Building (including 3 parking lots)	County		x
	Existing	Energy Efficiency: Main Library (Before Expansion)	County		x
	Existing	Energy Efficiency: Social Service Building	County	x	
	Existing	Energy Efficiency: Durham Solid Waste Operations Facility	City	x	
	Planned	LEED for New Buildings Contained within Capital Improvement Plan	County		x
	Planned	Administrative Complex 200 E. Main Street - Direct Digital Control	County		x
	Planned	Detention Facility 217 S. Mangum Street - Solar Energy	County	x	
	Planned	General Services Complex 310 S. Dillard Street	County		x
	Planned	Jail Annex 326 E. Main Street - Roof Insulation	County	x	
	Planned	Main Library EXISTING SPACE	County		x

	Planned	Main Library AFTER EXPANSION PROJECT	County	x	
	Planned	Stanford L. Warren Library - Energy Efficient Upgrades	County		x
	Planned	Youth Home 2432 Broad Street	County	x	
	Planned	City Hall Elevator & Energy Efficiency Upgrade	City	x	
Fleet	Existing	Hybrid Vehicles	City		x
	Existing	Ethanol 85 Fuel Use	City		x
	Existing	Compressed Natural Gas Vehicle	City		x
	Planned	Underutilized Vehicle Study	City		x
	Planned	Vehicle Replacement Plan - improved technology	City	x	
	Planned	Vehicle Replacement Plan - improved fuel efficiency of police fleet	City		x
	Planned	Alternative Fuel Vehicles - Biodiesel	County	x	
	Planned	Ethanol-fuelled vehicles and infrastructure	County	x	
	Planned	Biodiesel/Ethanol	County	x	
	Planned	Hybrid Vehicles	County	x	
	Planned	Idle Reduction Policy	County	x	
Lights	Existing	LED Traffic Signals - replacements/installations	City		x
	Planned	LED Traffic Signals - replaced after FY 2005	City		x
	Planned	LED Traffic Signals - new lights after FY 2005	City		x
Water	Existing	Showerhead Exchanges	City		x
	Existing	Water Conservation Team	City		x
	Existing	Biogas Capture and Flaring	City	x	
	Existing	Water Use Assessments	City		x
	Planned	Landfill Gas Utilization	City		x
	Planned	Water Reclamation Project	County	x	
	Planned	Triangle WWTP - LEED certified	County	x	
Solid Waste	Existing	Waste Reduction Policy		x	
	Existing	Recycling Program	City		x
	Existing	Recycling Program	County		x