

# **NC Water & Energy: New Challenges for a New Century**

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## **Leadership on Clean Water – The Hard Way**

**For Jim Hunt Library at NC State University**

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In August and September 1995 millions and millions of fish died in the Neuse River estuary near historic New Bern where the Trent joins the Neuse and where the river widens into Pamlico Sound. It's also where thousands of North Carolinians enjoy fishing, sailing, swimming, and sending their kids to summer camp.

Citizens were outraged. Massive fish kills in North Carolina were unacceptable. They demanded action. Governor Jim Hunt responded. North Carolina became a lab of water policy and animal waste management innovation for other states and the nation. The next three years set the direction of state water quality policy and animal waste management for the next twenty years.

### **Prologue**

Before the fish kills Governor Hunt declared 1993-94 to be Year of the Coast. (The state's most controversial environmental law, the Coastal Area Management Act (CAMA) ([www.dcm2.enr.state.nc.us](http://www.dcm2.enr.state.nc.us)), was enacted with then Lt. Governor Hunt's help in 1974.) Hunt tapped former Congressman L. Richardson (Rich) Preyer to chair the Year of the Coast Commission and identify improvements to state coastal management and water quality policies. The Commission made its recommendations at a major conference in Wilmington in 1994.

Officials at Hunt's Department of Environment, Health & Natural Resources, lead by Secretary Jonathan Howes and Deputy Secretary Steve Levitas, also wrapped up Comprehensive Conservation Management Plan (CCMP) for the Albemarle-Pamlico National Estuary Program ([www.apnep.org](http://www.apnep.org)) in the fall of 1994. The National Estuary Program is a State-EPA partnership.

Hunt signed the CCMP with the US Environmental Protection Agency on a cold, blustery day on the Pamlico River in Washington – the day after the 1994 election swept a new Republican majority bent on stopping and rolling back environmental regulations into the NC House of Representatives and brought 24 members into the 50-member NC Senate. A stronger CAMA and restoration of the Albemarle and Pamlico estuaries would have to wait for another day.

That day came sooner than expected.

The Raleigh *News & Observer's* Pulitzer Prize winning “Boss Hog: The Power of Pork – North Carolina’s Pork Revolution” by Pat Stith, Joby Warwick and Melanie Sill exposed lax state and national regulation of intensive swine operations in February 1995 ([www.pulitzer.org/archives/5892](http://www.pulitzer.org/archives/5892)). A series of major spills at hog waste lagoons starting with 25,000,000 gallons from 10,000 hogs into the New River from Oceanview Farms in Onslow County in the June 1995 confirmed what the journalists had found.

In August 1995 fish began to die by the millions on the Neuse River. The 1995 General Assembly – the most hostile to environmental protection in modern state history – had just adjourned

### **Response to Fish Kills – 1995-96**

Hunt called upon Secretary Howes, DEHNR (now DENR ([www.enr.state.nc.us](http://www.enr.state.nc.us))), and the Environmental Management Commission (EMC) to develop a strategy to solve the problem. They got to work.

In the past environmental regulators focused on one sector at a time such as wastewater dischargers or manufacturers or developers. It was too tough to take on multiple interests. Agriculture was off limits.

All sectors – cities, developers, and farmers – in the Neuse River contributed substantial amounts of nitrogen to the estuary. Cleaning up the river would require all sectors to reduce their pollution. Hunt wanted an effective and comprehensive strategy. All oxen would be gored, including agriculture.

Comprehensive environmental strategies draw comprehensive opposition. As the Division of Water Quality ([www.h2o.enr.state.nc.us](http://www.h2o.enr.state.nc.us)) began drafting comprehensive rules to reduce pollution from all sources and as the memories of the fish kills faded, substantial opposition to stronger rules mounted. Hunt and DEHNR didn’t back down.

During an Earth Day speech at the University of North Carolina at Chapel Hill in April 1996 – one month before the legislature convened for its short session – Senate leader Marc Basnight proposed a new trust fund to provide incentives to help meet or exceed water quality standards in the Neuse and other river basins. He also proposed a way to pay for it – appropriating a percentage of the state’s credit balance at the end of the fiscal year for clean water.

Senator Bev Perdue (D) and Representative John Nichols (R) represented New Bern, Craven County, and thousands of constituents upset about dead fish and water quality. Rep Nichols chaired the House Committee on the Environment. Just months before the fish kills he had sponsored “takings” legislation that would have effectively stopped local

and state environmental regulation in its tracks. The environmental education of Senator Perdue and Representative Nichols began quickly

Senate President Pro Tempore Marc Basnight named Senator Perdue Chair of the Senate Select Committee on Water Quality and Fish Kills to investigate what happened. Senator Perdue convened leading scientists. The scientists were not surprised by the fish kills. They had predicted that loading excess nitrogen in the Neuse River estuary and other estuaries would cause environmental problems. Their science had been ignored.

Perdue and other legislators learned that nitrogen pollution from urban and agricultural runoff and wastewater treatment plants caused algae blooms and eutrophication in the estuary and contributed to the fish kills. She asked the scientists how much nitrogen pollution should be reduced. There wasn't time to develop a calibrated nutrient response model. The scientists debated and argued about reductions ranging from 30-50%. Their best professional judgment was that nitrogen needed to be reduced by at least 30%. Future monitoring and modeling could set a new target in the future. The Senate select committee relied upon the scientists and recommended that the 1996 General Assembly enact legislation directing a 30% reduction in nitrogen in the Neuse. The legislature did.

Dr. Joann Burkholder ([www.cals.ncsu.edu/plantbiology/Faculty/burkholder](http://www.cals.ncsu.edu/plantbiology/Faculty/burkholder)) at NC State University discovered a toxic dinoflagellate, *Pfiesteria piscicida* in the estuary that also killed fish.

With Governor Hunt's and bipartisan support the 1996 General Assembly allowed the Neuse River rules to move forward, rebuffed legislative efforts to block state rules to protect wetlands, established the nationally innovative Clean Water Management Trust Fund ([www.cwmtf.net](http://www.cwmtf.net)) (Senate proposal), and established the Wetlands Restoration Program (now Ecosystem Enhancement Program (EEP) ([www.nceep.net](http://www.nceep.net)))(House proposal). The legislature also strengthened regulation of swine operations. The Neuse and wetland rules were the last major environmental rules adopted before 1995 legislative changes to the Administrative Procedures Act (APA) made environmental rulemaking more difficult.

The EMC went on to adopt comprehensive rules to reduce pollution in the Neuse. The rules included protection of forested riparian buffers along streams, nutrient trading among wastewater dischargers (and establishment of the Neuse River Compliance Association) and required for the first time reductions from urban stormwater and agricultural runoff. The legislature provided funding for additional monitoring and modeling of water quality – dubbed the Neuse modmon project. In 1998 the comprehensive rules enabled US Environmental Protection Agency to settle a lawsuit brought by the Neuse River Foundation ([www.neuseriver.org](http://www.neuseriver.org)) alleging that EPA (and the State) had failed to adopt a total maximum daily load (TMDL) for the river.

Thanks to strong support by Senator Basnight funding for CWMTF rose to \$100,000,000 per year by 2005. CWMTF became the State's premier program to help finance

protection and restoration of riparian buffers. EEP has also protected and restored thousands of acres of riparian buffers and wetlands since 1996.

### **Response to Fish Kills and Hog Waste -- 1997**

Despite strong opposition from the swine industry Representative Cindy Watson (R-Duplin) won re-election in 1996. She called for a one year moratorium on new swine operations and stricter regulations so that state environmental regulations could catch up with the rapid expansion of the industry.

When a hog farmer proposed a new swine operation in Moore County upwind from the golf courses and resorts of Pinehurst Representative Richard Morgan (R-Moore), Chairman of the House Committee on Rules, became concerned. Pinehurst would host the US Open golf tournament in 1999. Representative Morgan learned that in 1991 Senator Wendell Murphy (D-Duplin) had slipped an amendment exempting large swine operations from local regulation into an uncontroversial bill on horticulture and that there was little Moore County could do to regulate the proposed swine operation.

Rep Morgan decided to support Rep Watson's moratorium bill. The swine industry hired the most effective lobbyists in Raleigh – Zeb Alley, John Bode, Roger Bone, and Don Beason – not to negotiate but to kill the bill. Governor Hunt called for a two-year moratorium. Reps Morgan and Watson built a bipartisan coalition and passed legislation imposing a two-year moratorium and stricter regulations on the swine industry in the House.

Senator Basnight countered with the landmark, comprehensive Clean Water Responsibility Act (HB 515/SL 1997-458 at [www.ncleg.net](http://www.ncleg.net) ). The Clean Water Responsibility Act enacted stricter regulations on the swine industry. More importantly it modernized NC's clean water laws. It required river basin plans; science based nutrient response models, reductions from all sources of water pollution, application of nutrient removal technology to wastewater treatment plants discharging to nutrient sensitive waters like the Neuse, regulation of stormwater pollution from the Department of Transportation, and more.

In one of the most unusual House-Senate conference committees in state history the House and Senate conferees tended to accept the stricter provisions in the other chambers version of the bill. Governor Hunt signed the bill in a major bipartisan ceremony at the State Capitol on August 27, 1997. The modern era of protecting and restoring water quality from all sources had begun in NC.

Governor Hunt also pushed through the Fisheries Reform Act in 1997 (HB 1097/SL 1997-400). Among its many provisions the law requires state water quality, coastal management and fishery management agencies to coordinate their water quality and habitat protection efforts and requires the development of the Coastal Habitat Protection Plan (CHPP).

After years of discussion and debate DWQ, the EMC, and legislature used a nutrient response model to develop and adopt a comprehensive nutrient management strategy for Jordan Lake and the Upper Cape Fear River Basin in 2009. DWQ will propose a comprehensive nutrient management strategy for Falls Lake and the Upper Neuse River Basin in 2010 ([www.fallslakestakeholders.org](http://www.fallslakestakeholders.org)).

Implementation of the Clean Water Responsibility Act hasn't been easy. Millions of fish died in the Neuse estuary in the fall of 2009.

([www.ncleg.net/documentsites/committees/ERC/2009-2010/](http://www.ncleg.net/documentsites/committees/ERC/2009-2010/)) Local land use and state water quality policies aren't integrated. Stormwater practices and regulations haven't kept up with the pace of urban development or with advances in technology. The Environmental Management Commission, local governments, legislators, developers, and environmental organizations have been embroiled in debate over phase II and coastal stormwater regulations for over a decade. Reductions from agriculture are difficult to measure. Pollution from atmospheric sources has not been addressed.

Nevertheless advocates for reform of the national Clean Water Act of 1972, last amended over 20 years ago in 1987, look to states like North Carolina that have adopted more comprehensive statutes that use and apply science to reduce pollution from all sources for ideas. The federal law primarily regulates wastewater discharges and lacks effective tools to reduce pollution from agricultural runoff and atmospheric deposition.

North Carolina is also ahead of the curve on the challenging issue of nutrient management and stormwater – top priorities of the new Obama Administration's EPA.

### **Hunt, Hogs & Leadership**

One of the most difficult things for a political leader to do is to tell their friends and supporters that they have to change the way they do business. Governor Hunt delivered the message to swine industry leaders starting in 1995. Since then North Carolina has been an innovator and leader in the regulation of animal waste and in the development of new waste management technologies.

North Carolina is one of the most diverse agricultural states in the country. Throughout his career Governor Hunt strongly supported diversification, including intensive production of swine and poultry, to provide economic opportunities for citizens in rural counties. Agricultural leaders supported Governor Hunt as an effective advocate for their industry. As Governor Hunt started his third term in 1993 agriculture was largely exempt from environmental regulation.

After Smithfield Foods built the world's largest swine slaughterhouse on the Cape Fear River in Bladen County in 1992 the swine industry boomed from 15,000 operations raising 2,600,000 hogs in 1986 to 2300 operations raising 10,000,000 hogs by 1997. The boom brought prosperity to many in eastern NC. However, State and federal regulators were completely unprepared for rapid industrialization of the industry. Land use and environmental conflicts began as quickly as the industry grew.

After the June 1995 spill at Oceanview Farms in Onslow County Governor Hunt ordered inspections of all swine waste lagoons in the state. State water quality regulators and soil and water conservation officials didn't even know the location of all the lagoons.

Hunt and the General Assembly formed the Blue Ribbon Study Commission on Agricultural Waste in 1995. After considerable discussion and debate the study commission recommended that the swine operations be permitted by the Division of Water Quality (DWQ), that DWQ and the Division of Soil & Water Conservation inspect swine operations annually and that operators of swine waste systems be trained and certified. Hunt urged swine industry leaders to support the recommendations. They didn't, but the 1996 General Assembly enacted these recommendations as SL 2006-626 and appropriated funds to implement them.

The 1996 legislation didn't slow the growth of the industry or reduce the conflicts. The debate continued into 1997. In April 1997 Hunt called for a two-year moratorium on new and expanding hog farms so that the state could develop effective regulations. The politics of animal waste regulation in NC and the nation changed that spring. The 1997 General Assembly enacted the two-year moratorium, stricter locations standards, and comprehensive water quality legislation. It was a turning point.

Environmental and swine industry leaders realized that although the lagoon and sprayfield technology used to manage swine waste was simple and inexpensive to operate it failed to manage odors, emissions and often failed to protect ground waters and surface waters. In 1998 environmentalists, NC Pork Council and the Hunt Administration supported an exception to the moratorium for farms that utilized environmentally superior technologies. The 1999 General Assembly extended the moratorium for two more years and maintained the exception for environmentally superior technologies.

In 2000 Attorney General Mike Easley announced a settlement with Smithfield Foods. Smithfield committed \$15,000,000 to the Animal and Poultry Waste Management Center at NC State University ([www.cals.ncsu.edu/waste\\_mgt/apwmc.htm](http://www.cals.ncsu.edu/waste_mgt/apwmc.htm)) towards the development of environmentally superior technologies. By 2006 Dr. Mike Williams and his team at NC State identified several promising environmentally superior technologies. However the technologies were not considered cost effective.

In 2007 with the support of Governor Mike Easley the General Assembly permanently banned new swine waste lagoon and sprayfield systems and created incentives to convert lagoons to environmentally superior technologies.

Emerging markets for renewable energy, carbon credits, solids (compost and soil amendments), nitrogen and phosphorus may finance the conversion to environmentally superior technologies in the future. A partnership between Duke Energy, Duke University, and Cavanaugh and Associates plans to construct environmentally superior technologies on a swine operation in northwestern NC in 2010.

**The Search for Clean Air  
And for Clean Energy  
(Title Borrowed from Hugh Morton's 1993 Film)**

Convening the Governors/Putting Clean Air on the Agenda

Governor Jim Hunt convened the first Governors' Summit on Mountain Air Quality at the Grove Park Inn in Asheville on April 4-6, 1999. Governor Roy Barnes and Governor Don Sundquist from Tennessee joined Governor Hunt on the stage. Governor Mike Leavitt from Utah also spoke. Civic, business, environmental, and university leaders from across the Southeast attended. The seeds for what became the landmark Clean Smokestacks Act of 2002 and substantial improvements in air quality in North Carolina were planted that spring in Asheville.

At the summit Governor Hunt and Governor Sundquist formally signed an agreement that committed the two states to work with the federal agencies that managed the national parks and forests in Western North Carolina and Eastern Tennessee to minimize adverse impacts from new major sources of air pollution. Governor Hunt reiterated support for the comprehensive clean air plan that he proposed in December 1998.

The search for clean air began during Governor Hunt's 1992 campaign. Business and environmental leader Hugh Morton, owner of Grandfather Mountain, invited Hunt to the summit of Mt. Mitchell, the highest mountain in eastern North America. Air pollution and opportunistic insects have devastated the high elevation spruce fir forest on Mt. Mitchell and other peaks in the Southern Appalachians. NC State University plant pathologist Dr. Robert I. Bruck ([www.cals.ncsu.edu/plantpath/people/faculty/bruck/](http://www.cals.ncsu.edu/plantpath/people/faculty/bruck/)) briefed Hunt on the impacts of ozone, smog, and acid deposition on the forests and ecosystems of the mountains.

Hunt understood that the foundation of the tourism economy in the mountains is beautiful views, clean air, healthy forests and clean water. Air pollution threatened both the mountain environment and economy. He was convinced that action was needed to clean up the air to protect public health and the economy.

With Governor Hunt's support North Carolina worked with the US Environmental Protection Agency, other southeastern states, electric utilities, environmental organizations, universities, and others to establish the Southern Appalachian Mountain Initiative (SAMI) (Some records are still at [www.ncair.org](http://www.ncair.org)). Alabama, Tennessee, Kentucky, West Virginia, Georgia, South Carolina, North Carolina, and Virginia participated.

With state and federal funds SAMI studied the sources of air pollution, impacts of air pollution and developed models to help design the most effective policies to reduce pollution. SAMI provided the scientific foundation for regional air quality policy.

While SAMI was improving the science Morton produced a documentary “In Search of Clean Air” ([www.unctv.org/biocon/hmorton/cleanair00.html](http://www.unctv.org/biocon/hmorton/cleanair00.html) and [www.lib.unc.edu/blogs/morton/index.php/](http://www.lib.unc.edu/blogs/morton/index.php/)) narrated by CBS newsman Walter Cronkite in 1994. The film aired on PBS in 1995. It raised awareness. It educated the public about the sources and impacts of air pollution and policies to reduce pollution.

Following the 1993-94 Year of the Coast Governor Hunt proclaimed 1995-96 to be Year of the Mountains. Hunt named Morton Chairman of the Year of the Mountains Commission. Tom Massie of Jackson County staffed the Commission.

The Year of the Mountains not only educated the public about air pollution and other issues, but it also built a coalition of environmental, business and government leaders who advocated for new policies to reduce pollution. Business leaders like Jack Cecil from Biltmore and Todd Morse from Chimney Rock Park, doctors concerned about public health, Karen Wade, Superintendent of the Great Smoky Mountains National Park (7/94-10/99), and others joined together to call for action.

#### Four Governors’ Summits

After the first Governors’ Summit in 1999 the General Assembly enacted legislation implementing Governor Hunt’s clean air plan. The legislation required the sale of cleaner low sulfur gasoline, the expansion of the motor vehicle emission inspection program to more counties, and other measures. The General Assembly also increased state funding for urban and rural transit systems as part of Governor Hunt’s Transit 2001 plan.

Governor Roy Barnes hosted the 2<sup>nd</sup> Governors’ Summit on Air Quality in May 2000 at Stone Mountain State Park in Georgia. Governor Barnes broadened the agenda to include the challenges of protecting public health and of reducing ozone and fine particle pollution in metropolitan regions like Atlanta, Charlotte, Triad, and Research Triangle. Governor Sundquist hosted the 3<sup>rd</sup> Governors’ Summit in Gatlinburg in 2001.

Governor Mike Easley hosted the last summit in Charlotte on May 10, 2002 shortly before the General Assembly enacted North Carolina’s Landmark Clean Smokestacks Act, SB 1078, SL 2002-4, sponsored by Senator Steve Metcalf of Buncombe County and many others ([www.ncleg.net](http://www.ncleg.net)).

#### Cleaner Air Delivered

Governor Hunt and Governor Easley’s clean air policies have delivered healthier air for the citizens of North Carolina. Ozone levels during the 2009 summer ozone season (May 1 – September 30) were the lowest since the 1970’s.

The NC Division of Air Quality (DAQ) estimates that, although North Carolina's economy grew dramatically, between 1999 – 2008 electric utilities reduced their emissions of ozone forming pollution by 73% from 201,428 tons to 54,398 tons. Emissions from motor vehicles decreased 38% from 327,239 tons to 201,609 tons ([www.ncair.org](http://www.ncair.org)).

Governor Hunt and Governor Easley's clean air policies have put North Carolina in a better position to attain newer and stricter national ambient air quality standards for ozone and fine particles than many of our neighbors in Southeastern States.

### Achieving Clean Smokestacks

Clean Smokestacks started with a lawsuit filed by North Carolina, other states, and other parties against a US Environmental Protection Agency proposal to reduce the transport of ozone air pollution from the Southeast and Midwest to the Northeast by regulating emissions of nitrogen oxides from coal fired power plants and large industrial boilers. EPA's proposal was dubbed the NOx SIP Call and was the 2<sup>nd</sup> round of reductions from power plants and large industrial boilers using a market-based cap and trade strategy. (The Clean Air Act Amendments of 1990 implemented the 1<sup>st</sup> round of cap and trade to reduce acid rain and ozone pollution.)

Governor Hunt believed EPA's proposal was unfair to North Carolina. However, instead of just criticizing and suing EPA, he directed Wayne McDevitt, Secretary of the Department of Environment & Natural Resources, to develop an alternative better tailored to meet North Carolina's public health and economic concerns. In December 1998 Governor Hunt announced a comprehensive plan calling for reducing emissions of ozone forming nitrogen oxides from both power plants and from cars and trucks.

The 1999 and 2000 sessions of the General Assembly enacted Governor Hunt's clean air and Transit 2001 recommendations to reduce air pollution from cars and trucks. It was time to turn attention to coal-fired power plants.

In July 2000 the Division of Air Quality and the Environmental Management Commission (EMC) held five public hearings across the State on three plans to reduce air pollution from coal-fired power plants: 1) Governor Hunt's plan, 2) a plan proposed by electric utilities and 3) a "Clean Smokestacks" plan proposed by environmental organizations. Governor Hunt embraced giving the public the option to consider and debate three proposals.

The public hearings and written comments provided the largest expression of public concern and comments on an environmental issue in State history. About 10,000 comments – most in favor of the "Clean Smokestacks" environmental proposal – were received.

During the summer of 2000 southeastern and Midwestern states, including NC, lost a round against EPA in the US Court of Appeals in the NOx SIP Call litigation. NC

reevaluated its position, considered the benefits to NC of reductions from upwind states, and dropped out of the litigation.

Overwhelming public support for cleaning up coal-fired power plants, uncertainty in the courts, and looming stricter national ambient air quality standards for ozone and fine particles brought representatives of Progress Energy and Duke Energy back to the negotiating table with representatives of DENR.

At its October 2000 meeting the Environmental Management Commission adopted rules implementing Governor Hunt's clean air plan. Environmentalists vowed to continue to press for "clean smokestacks" and to take their case to the 2001 legislature.

Forward looking leaders at Progress Energy and Duke Energy approached the environmental community. The utilities were willing to invest in clean smokestacks if provided with sufficient time and the ability to recover their costs. After extensive negotiations the environmental community agreed. On April 4, 2001 Senator Steve Metcalf and 29 bi-partisan cosponsors introduced SB 1078, Improve Air Quality. Secretary of the Department of Environment & Natural Resources Bill Ross supported the bill. SB 1078 was reviewed by the Senate Committee on Agriculture, Environment & Natural Resources and quickly passed the Senate 43-5 on April 23.

Manufacturers strongly opposed the cost recovery provisions in the bill. The Speaker of the House referred the bill to the House Committee on Public Utilities and if favorable, to House Committee on Environment & Natural Resources. The legislation stalled and was carried over to the 2002 short session. It's fate was uncertain.

After the 2001 General Assembly adjourned Governor Mike Easley quietly went to work. He negotiated with the utilities, manufacturers, and environmental organizations. He proposed a deal and persuaded all the parties to sign on. The House of Representatives passed Governor Easley's compromise plan 111-4 on June 12, 2002.

SB 1078, SL 2002-4, will reduce emissions by about 75% from 14 coal-fired power plants owned by Duke Energy and Progress Energy over a ten year period between 2002 – 2012 with little impacts of the cost of electricity. It is a remarkable achievement. It made North Carolina the undisputed leader on clean air in the Southeast.

### Regional Clean Smokestacks

After the General Assembly enacted and Governor Easley signed the NC Clean Smokestacks law, Attorney General Roy Cooper asked the Tennessee Valley Authority (TVA) to make similar reductions pursuant to Section 126 of the Clean Air Act's "good neighbor" provision.

According to the science developed by SAMI, EPA and others, TVA's coal-fired power plants are a major source of ozone, smog and acid deposition in the Southern Appalachian Mountains.

TVA refused to make the reductions. Attorney General Cooper sued TVA in US District Court and won. TVA has appealed.

In response to pressure from NC and other downwind states the Bush Administration proposed the Clean Air Interstate Rule (CAIR) (the 3<sup>rd</sup> round of cap and trade) to reduce emissions from coal-fired power plants and large industrial boilers.

### Beyond Clean Smokestacks

The collaboration between environmental organizations and utilities in 2001-2002 led to another collaboration in 2007. Senator Dan Clodfelter and others sponsored SB 3, Renewable Energy Standard/Baseload Generation (SL 2007-397). The renewable energy/energy efficiency standard requires electric utilities to generate 12.5% of their electricity from renewable energy or energy efficiency by 2021.

North Carolina was the first state in the Southeast to enact a renewable energy standard. North Carolina is better positioned to start the transition to a low-carbon economy than most of its neighbors.

In 2009 Governor Bev Perdue transferred the State Energy Office to the Department of Commerce from the Department of Administration. Green jobs in the energy efficiency and renewable energy industries are a key part of her economic development strategy.

As the US Congress and President Obama debate national climate and energy policy utility leaders and environmental leaders are discussing new strategies to transition electric utilities from a business model dependent upon building expensive new power plants and selling as much electricity as possible to a new model of selling electric services.

North Carolina and other states are also preparing to attain stricter national ambient air quality standards for ozone and fine particles. State and local governments will have to begin integrating their transportation, air quality and land use plans and policies to attain and maintain clean air in the future. Sprawl aggravates both air quality and water quality problems.

