

Two North Carolina Efforts on Climate Change – CAPAG / LCGCC

The Carolina's Air Pollution Control Association (CAPCA)

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NORTH CAROLINA
DIVISION OF AIR QUALITY



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Two Major Activities

- ***CAPAG – Climate Action Plan Advisory Group***
 - *DENR Initiated*
 - *Derived from Clean Smokestacks Act*
 - *Focus on Mitigation Options*
- ***LCGCC – Legislative Commission on Global Climate Change***
 - *Legislature Initiated 2005*
 - *Goal for Reduction in GHG*
 - *Mitigation Options*

Purpose & Goals of CAPAG

- ***Develop Climate Action Plan Recommendations***
 - ***Range of individual mitigation actions***
 - ***Benefits and Costs Analysis***
 - ***GHG Emissions Reduced***
 - ***Cost / Benefit Determined***
 - ***Jobs Potential Estimated***
 - ***Consensus of Stakeholders***
 - ***Support Commission on Global Climate Change***

Background – CSA CO₂ Reports

- Sections 13 required reports by DAQ on Sept. 1, 2003, 2004 and 2005 on CO₂
- 2003 Report was “State of Science”
- 2004 Report was “Range of Options”
- 2005 Report was “Recommendations”

CO₂ – Assumptions & “Extrapolations”

- *Science of Global Warming in CSA – Not an Issue to Decide; Look at Options to Reduce*
- *CO₂ Specified in CSA, but Assumed to be Inclusive of all GHG (Basically, Adds Methane, N₂O, and Other but “Less Common” Gases)*
- *CSA Directed Toward Coal-fired Power Plants, but Effort Conducted in Context of all Types and Sources of GHG – 6 Species / Stationary and Mobile*

How Does The CAPAG Effort Relate to the Legislative Climate Change Commission?

- **Complements and Supports Legislative Commission**
- **Technical Support and Knowledge on GHG Reductions to Include Costs and Benefits**
- **Several LCGCC members on CAPAG and Technical Workgroups (TWGs)**

Mitigation Option Sectors / TWGs

- **Agriculture, Forestry and Waste Management**
- **Energy Supply**
- **Residential, Commercial, Industrial Energy Use**
- **Transportation and Land Use**
- **Cross Cutting**

LCGCC

- *Established by Legislature in 2005*
- *Impacts of Climate Change on NC*
- *Need for Goal of GHG Reductions in NC?*
- *If Need Determined; What Should Goal Be?*
- *What Actions Should be Taken to Deal With Issue?*
- *34 Members; 18 Legislators – Others Broad Cross Section of Stakeholders*
- *Interim Report – Early 2007*
- *Final Report April 15, 2008*

What Has Been Done So Far?

■ **CAPAG: Five Meetings**

- *~ 50 Calls or Meetings across Five TWGs*
- *Recommendations / Decisions by Consensus of Stakeholders*
- *Considered Over 300 potential mitigation Options*
- *Decided 53 Are Highest Priority for Analysis of Benefits and Costs*
- *Reached an Early Consensus (Unanimous) on 16 Options – Jan '07*
- *Renewable / Energy Efficiency Portfolio Standard (REPS) Recommended in “Principle” (Levels yet to be decided on)*
- *These Recommended to LCGCC Feb 22, 2007*

■ **LCGCC: Six Meetings**

- *Numerous Science and policy Presentations*
- *Accepted CAPAG “16+” Recommendations*
- *Additional Suggestions from LCGCC Members – Mostly Consistent with CAPAG Options*
- *Some Suggestions by LCGCC Members, that too Early for LCGCC to make Recommendations – Need to Complete Economic Impact Analyses*
- *Anticipate Several Recommendations to be Picked up in Legislation*

What Are the 16+ CAPAG Recommendations?

- **Residential, Commercial, Industrial (RCI):**
 - REPS (In Principle)
 - Expand Energy Efficiency Funds
 - EE Requirements for Government Buildings
 - Market Transformation and Technology Development Programs
 - Improved Appliance and Equipment Efficiency Standards
 - Building Energy Codes
 - “Beyond Code” Building Design Incentives and Targets
 - Education (Consumer, Primary/Secondary, Post-Secondary/Specialist, College and University Programs)
 - Residential, Commercial and Industrial Energy and Emissions Technical assistance and Recommended Measure Implementation

What Are the 16+ CAPAG Recommendations?, cont'd

- **Energy Supply, (ES):**
 - **Removing Barriers to Combined Heat and Power (CHP) and Distributed Generation (DG)**
 - **Incentives for CHP and Clean DG**

What Are the 16+ CAPAG Recommendations?, cont'd

- **Cross Cutting (CC):**
 - **GHG Inventories and Forecasts**
 - **GHG Reporting**
 - **GHG Registry**
 - **Public Education and Outreach**
 - **Adaptation**
 - **Options for Goals or Targets (for CAPAG in Support of LCGCC)**

Potential Benefit of 53 CAPAG Options – Preliminary (Do Not Cite Or Quote)

■ Emissions: (MMTCO₂e)

	<u>1990</u>	<u>2000</u>	<u>2010</u>	<u>2020</u>
• Base w/o Reductions -	115.4	159.8	198.0	241.1
• Reductions -			27.2	117.4
• Proj. after CAPAG Reductions -			170.8	123.7

■ Costs: (\$mil):

- 8 of 16 options - (3530)

■ Cost effectiveness(\$/tCO₂e):

- 8 of 16 options average - (23.67)

SB 3, Renewable / Energy Efficiency Portfolio Standard - REPS

- ***PCS v.9, 29 March '07***
- ***10 % X '18***
 - ***3 X '12***
 - ***6 X '15***
- ***Up to 25% of RPS Requirement Can be Met by EE***
- ***Min 0.2% by Solar***
- ***Min 0.2% by Biomass Resources***
- ***Instate Renewable Source Favored; Out of State Discounted***
- ***Cost Recovery Provisions***
- ***May Consider a Public Benefits Fund***
- ***Utilities Commission Primary Implementing Agency***

What is a Renewable Resource in SB 3?

- *Solar*
- *Wind*
- *Hydropower*
- *Geothermal*
- *Ocean Current or Wave Energy Resource*
- *Biomass – Ag, Animal, Wood, Residues, Liquids, Gases, Energy Crops, Landfill Methane*
- *Waste Heat from Industrial Manufacturing*
- *Hydrogen Derived from a Renewable Energy Source*
- *“Renewable Energy Resource” Does NOT Include Fossil or Nuclear Energy*

Remaining Schedule

- **Next CAPAG Meeting May 8, 2007 in Raleigh**
- **Two or Three more CAPAG meetings through Summer / Fall 2007 to Refine and Complete Analysis**
 - – 37 Remaining Options – Objective to get Consensus on All Options
 - Complete Set of Options
- **Technical work group discussions in between CAPAG meetings**
- **Final Report and Recommendations Dec '07**
- **Assist LCGCC Until Its Conclusion**



Questions?

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