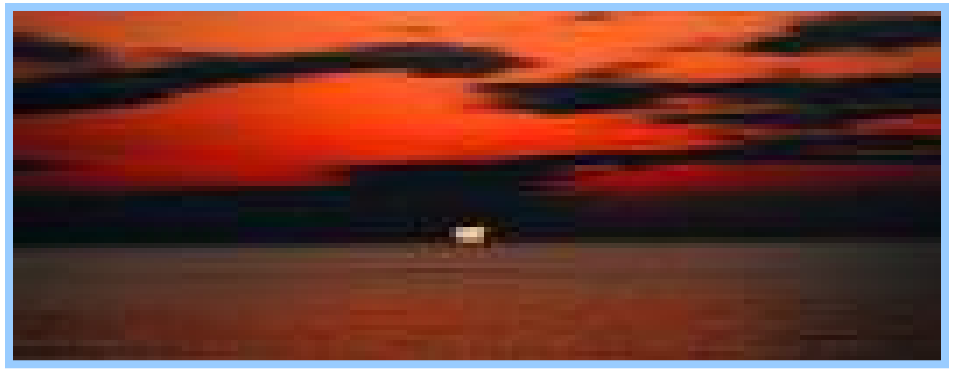
MARYLAND

Department of the Environment

The Mitigation Working Group Update



Tad Aburn, Air Director, MDE

Commission Meeting – January 17, 2008

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The Mitigation Working Group (MWG)

AES Warrior Run	Ed Giugliano
Annie Casey Foundation	Scot Spencer
Baltimore City Community College	Dr. Michelle Harris Bondima
BP Solar	John F. Szallay
Citizen	Frank Heintz
Citizen	Dr . Paul Chan
City of Annapolis	Mike Mallinoff
Constellation Energy	John Quinn
Curtis Engine & Equipment	Thomas Koch
DJ Consulting	Debra Jacobson
Environment Maryland	Brad Heavner
Environmental Banc & Exchange	George Kelly
Environmental Defense	Michael Replogle
Frostburg State University	Johnathan Gibralter
Johns Hopkins, Bloomberg School of Public Health	Dr. Cindy Parker
Maryland Petroleum	Drew Cobbs
Mirant	Robert E Driscoll
Mirant	Misty Allen
Montgomery County Council	Nancy Floreen
Natural Resource Defense Council	Elizabeth Martin-Perera
Parsons Brinckerhoff	Uri Avin
Rummel Klepper & Kahl	William Hellmann
Synergics Energy	Richard D'Amato
The Climate Project	Dr. Lise Van Susteren
The Conservation Fund	Joel Dunn
Transitions Energy	William Chandler
UM, Center for Integrative Environmental Research	Matthias Ruth
WL Gore	William Livingston
Yellow Transportation	Mark Joseph

Participants From State Agencies

"Topic Area Experts"

- **Maryland Department of Agriculture**
  - Royden Powell, John Rhoderick, Louise Lawrence
- **Maryland Department of Environment**
  - Brian Hug, Renee Fizer, Liz Entwistle, Marcia Ways
- **Maryland Department of Natural Resources**
  - Zoe Johnson, John Sherwell, Sean McGuire, Pete Dunbar, Dan Rider
- **Maryland Department of Planning**
  - Joe Tassone, Jason Dubow
- **Maryland Department of Transportation**
  - Howard Simons
- **Maryland Energy Administration**
  - Michael Li, Crissy Godfrey, Chris Rice
- **Maryland Public Service Commission**
  - John DeFelice, Scott Everngam, Robert Howatt, Jerry Hughes
- **University System of Maryland**
  - Don Boesch, John Frece

MWG - Quick Update

- MWG meetings
  - November 30 ’07
  - January 15 ‘08
- Catalog of Options – originally 300 plus options, voting process leaned to 53
- Straw proposals being developed for each option

TWG Update

- Lots of calls for the 5 Technical Workgroups (TWGs)
- 2 TWG meetings held at MDE
  - Transportation & Land Use
  - Residential Commercial Industrial Use
- Straw proposal development has been very dynamic
- Currently working on the quantification of GHG reductions, costs and benefits for each straw proposal

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Stepwise Planning Process

1.	Develop inventory and forecast of emissions	- Ongoing
2.	Identify a full range of possible actions	- Sept. 28
3.	Identify initial priorities for analysis	- Oct. 26
4.	Develop straw proposals	- Nov. 30
5.	Quantify GHG reductions and costs/savings	
6.	Evaluate externalities, feasibility issues	- Jan. 15
7.	Develop alternatives to address barriers	
8.	Aggregate results	- TBD
9.	Iterate to final agreements	- TBD
10.	Finalize and report recommendations	- TBD

Policy Option Template

- Policy Description (Concept)
- Policy Design (Goals, Timing, Coverage)
- Implementation Methods
- Related Programs and Policies (BAU)
- Estimated GHG Reductions and Costs/Savings
  - Data Sources, Methods and Assumptions
  - Key Uncertainties
- Additional (non-GHG) Benefits and Costs, as Needed
- Feasibility Issues, if Needed
- Status Of Group Approval
- Level of Group Support
- Barriers to Consensus, if any

Ag/ Forestry and Waste

1. Forest Management for Enhanced Carbon Sequestration
2. Managing Urban Trees and Forests for Greenhouse Gas Benefits
3. Afforestation, Reforestation and Restoration of Forests and Wetlands
4. Protection & Conservation of Ag Land, Coastal Wetlands and Forested Land
5. “Buy Local” Programs
6. Expanded Use of Forest and Farm Feedstock and By-Products for Energy Production
7. In-State Liquid Biofuels Production
8. Nutrient Trading with Carbon Benefits

Energy Supply

1. Promotion of Renewable Energy
2. Technology-Focused Initiatives for Electricity Supply
3. GHG Cap and Trade
4. Combined Capture Storage and Reuse Requirements/ Policies
5. Clean Distributed Generation
6. Integrated Resource Planning
7. Renewable and/ or Environmental Portfolio Standard
8. Efficiency Improvements and Repowering Existing Plants
9. Carbon (GHG) Tax
10. Generation Performance Standards

Residential, Commercial and Industrial

1. Improved Building and Trade Codes for Energy Efficiency
2. Demand Side Management/ Energy Efficiency Programs
3. Low Cost Loans for Energy Efficiency
4. Improved Design, Construction, Appliances, and Lighting in New and Existing State and Local Government Buildings (Government Lead by Example)
5. Energy Efficiency and Environmental Impacts Outreach
6. Promotion and Incentives for Improved Design and Construction (LEED, Green Buildings, etc.) in Private Sector
7. More Stringent Appliances/ Equipment Efficiency Standards
8. Rate Structures and Technology to Promote Reduced GHG Emissions (Including Peak Pricing and Inverted Block Rates)
9. GHG or Carbon Tax
10. Energy Efficiency Resource Standards (EERS)
11. Phase Out Incandescent Light Bulbs in State

Transportation and Land Use

1. Carbon Fuels Tax
2. Land Use and Location Efficiency
3. Transit
4. Low Greenhouse Gas Fuel Standard
5. Intercity Travel: Aviation, High Speed Rail, Bus
6. Pay As You Drive Insurance
7. VMT Reductions
8. Bike and Pedestrian Infrastructure
9. Pricing Measures
10. Off-Road Engines/ Vehicles
11. Evaluate the GHG Emission Impacts of Major Projects

Cross-Cutting Issues

1. GHG Inventory and Forecasting
2. GHG Reporting and Registry
3. Statewide GHG Reduction Goals and Targets (Complete)
4. State and Local Government GHG Emissions (Lead by Example)
5. Public Education and Outreach
6. Tax and Cap Policies
7. Seek Funding for Implementation and MWG Recommendations
8. Participate in Regional and Multi-State GHG Reduction Efforts
9. Promote Economic Development Opportunities Associated with Reducing GHG Emissions in Maryland
10. “After Peak Oil” Initiative
11. Evaluate Climate Change Policy Options to Determine Projected Public Health Risks, Costs and Benefits
12. Innovative Financing Efforts

Next Steps

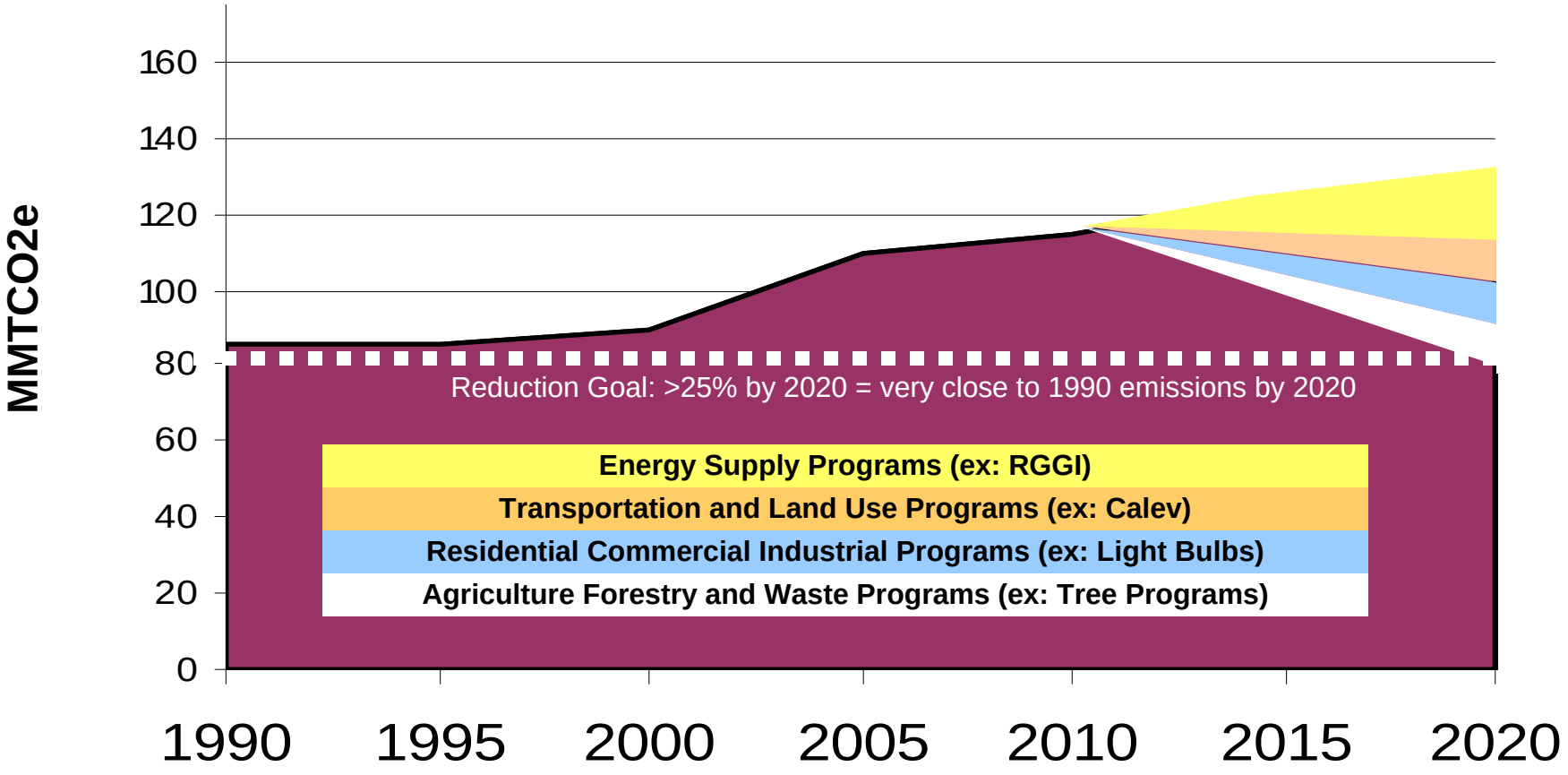
TWGs

- Refine priority policy options and quantification approaches based on MWG review
- Revise quantification GHG reductions and cost/ savings of priority policy options
- Revisions to the draft inventory and forecast

MWG

- Review and approve consensus policy options
- Review and approve quantification of priority policy options
- Review aggregation of policy options
- Review and approve proposed revisions to the inventory and forecast

How to do we get to our 2020 Goals? – Hypothetical Example



For Demonstration Purposes Only

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Questions?

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