Scenario Planning for Climate Change

October 28, 2010
Overview

• Challenges faced by the Atlanta Region
• Modeling Results Synopsis
• Lessons Learned
• Goals for the Future
State Population Growth 2010 to 2040

Georgia 4th largest forecasted growth.

Source: Woods and Poole 2010
Challenge 1 – Increase in VMT

Source: GDOT, ARC
Challenge 2 – Fleet Inefficiency

Source: US Census Bureau, 2002 Economic Census
Challenge 3 – On Road Freight Traffic

• Trucks account for 84% of the region’s freight movement
• 55% increase in VMT between 2005 and 2030
• Heavy-duty diesel engines are a primary source of CO₂ emissions
Challenge 4 – Congestion

- Low travel speeds and idling
- 1.35 TTI in 2007 → 1.64 by 2030
Modeling Results – Composite

Increase in CO₂ Emissions

- Future Local Plans (Trend)
- Envision6
- Trend + EISA
- Envision6 + EISA
- Density Land Use + EISA
- TPB Concept 3 + Transit
- Focused Land Use + EISA
- C3 + TFLU + 2009 CAFE

Modeling Results – Per Capita Composite

Graph showing the increase in CO₂ emissions from 1990 to 2030 with various scenarios and trends.
Lesson’s Learned

• The Atlanta region faces many challenges to combating greenhouse gas emissions due to its rapid growth
• Technology improvements drive emission reductions
• Good planning and smart land use can have a large impact on regional emissions
Plan 2040 Initiatives

• Environmental sustainability is a key plan goal
• Added CO$_2$ as a criterion for benefit cost analysis
  – Projects should be responsible for their “hidden” externalities
  – Assigned a price per ton of emissions
Goals for the Future

- **Goal 1**: Promote sustainable development through integrated land use and transportation strategies
- **Goal 2**: Reduce VMT by supporting alternative modes and implementing transportation pricing measures
- **Goal 3**: Support the use of cleaner and more fuel-efficient vehicles and alternative fuels
- **Goal 4**: Work with stakeholders to set meaningful and realistic emission reduction targets
- **Goal 5**: Consider adaptation strategies