Transportation and Climate Change – the New York State DOT Perspective

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Women in Transportation Seminar-Connecticut Valley Chapter
October 15, 2009
Rocky Hill, CT
NYSDOT General Approach

- Climate Change strategies should consider
  - vehicle technology
  - fuels
  - VMT/demand
NYSDOT General Approach

- State DOTs have greatest opportunity to affect climate change on VMT/demand
- State DOTs should support vehicle technology and fuel improvements
NYSDOT General Approach

- “Think globally – Act locally”
- Individual transportation actions may have small effect
- Cumulatively start to make a difference
Objective

- Commit to a statewide goal of reducing greenhouse gas emissions 5% below 1990 levels by 2010, and 10% below 1990 levels by 2020.
- Working with regional and local planning organizations, analyze and quantify the energy use and air pollution emissions expected to result from transportation plans and programs.
- Include in the State transportation planning and State Environmental Quality Review Act (SEQRA) related processes, consideration of CO₂ production and mitigation strategies, as appropriate.
Objective

- Consider the energy and greenhouse gas impacts of transportation actions
- Assess and compare the energy and greenhouse gas impacts due to the implementation of projects listed in TIPs and Long Range Plans
- Assess and compare energy and greenhouse gas impacts among alternatives at project level
Analysis Guidelines

- Direct and Indirect Energy Calculations for
  - No Action Scenario
  - TIP/Plan Scenario
Statewide initial results

Direct energy reduction: $43.5 \times 10^9$ BTUs/day

Carbon Reduction: 6,381 tons/day
Project level analysis

- Analysis for major projects
- Comparison among alternatives, including No-Build
- Includes operational, construction and maintenance aspects of projects
- Typical differences among alternatives range from 1700 tpy to 15000 tpy carbon emissions
NYSDOT Climate Change/Energy Efficiency Team

- Multi-disciplinary group from all relevant program areas
- Executive level support and commitment
- Team will look at: reducing transportation energy costs for public; promoting energy efficient programs and projects; reducing NYSDOT’s carbon footprint; funding opportunities
NYSDOT Climate Change/Energy Efficiency Team

- Charge to Team – “Institutionalize climate change/energy efficiency in everything we do”

- Includes major policy and project directions to actions of individual DOT employees
NYSDOT Climate Change/Energy Efficiency Team

- ~ 70 members
- Divided into 6 workgroups
  1) NYS transportation sector
  2) NYSDOT carbon footprint
  3) fuel availability and cost forecasts
  4) adaptation
  5) outreach and education
  6) funding availability
Actions to Date

- TIP guidance/direction to include explicit climate change/energy efficiency consideration
- Joint research co-funded with NYSERDA
  - 2 rounds of RFPs
  - $3.2 million
  - 20 projects selected
- Involvement with RGGI
  - Portion of allowance revenue stream for transportation
  - DOT is member of staff operations work group
- B5 biodiesel in NYSDOT diesel fleet
Actions to Date

- Pilot compressed work week for NYSDOT employees
  - 12% of DOT employees participating
- Shut down computers at night
- Smart Growth website
- Selective building/residency retrofits/upgrades
- LED traffic lights
  - consideration of select signals on flash at night
- Fax machines on national Do-Not-Call list
Actions to Date

- Experiment Warm Mix Asphalt, tire shreds, sign reflectivity, other construction and maintenance practices
- GreenLITES Initiative
  - Limitations on idling
  - Consideration of Sustainability
- Transit oriented Development training
  - Tappan Zee/Hudson Valley corridor
- Clean Air NY
  - www.cleanairny.org
- Much more to come
External influences

- Interagency VMT Reduction Workgroup
  - outgrowth of Governor’s Renewable Fuels Task Force
  - State environmental agency is lead agency
  - 10% reduction from “business as usual” case in 10 years
- State Energy Plan
  - Governor’s Executive Order
  - covers all sectors
  - Draft August, 2009
  - Final December, 2009
External influences

- Climate Action Council
  - reduce emissions 80% from 1990 levels by 2050
  - interim emission targets
  - 1 year to develop draft Climate Action Plan to meet targets