



Sustainable Energy and Climate Change

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Reauthorization Policy Challenge

- Transportation produces 33% of CO² emissions
- Highways produce 72% of transportation's share
- Position AASHTO and State DOTs as part of the solution, rather than part of the problem.



Greenhouse Gas Emission Reduction Strategies



- Increase fuel efficiency
- Use cleaner fuels
- Reduce rate of growth in VMT
- Reduce Congestion, Improve System Performance

Where Will Emission Reductions Come From?

- 2010 to 2030
 - 2/3rds of emission reductions from increased fleet fuel efficiency
 - 1/3rd from reducing travel demand
- 2030 to 2050
 - 90% of further emission reductions from Advances in Technology and Pricing: Zero Emission Vehicles: plug-in electric, hydrogen

Fleet Fuel Efficiency

- Energy Legislation: CAFE mandate of 35 mpg by 2020
- The market may accelerate achieving CAFÉ goals
- Future energy legislation may increase CAFÉ to 50 mpg or higher
- Europe today averages 40 mpg vs. US at 21 mpg



Reduce Travel Demand

- Policy Goal: Cut VMT growth rate by 50%
 - Instead of 2% annually, reduce it to 1% annually
 - Fuel prices and slowing economy have caused a reduction in VMT to -2.5%
- 2050: Combination of 100 mpg fuel efficiency and VMT 1% Growth Rate: Emissions reduced 70% below current levels

Reduce Travel Demand



- Double transit ridership from 10 billion to 20 billion by 2030, double again by 2050
- Reauthorization: Increase transit funding 75% from \$10.5 billion to \$18.5 billion by 2015

Reduce Travel Demand

- Increase trips – walking and biking
- Increase telecommuting/on-line shopping
- Supportive land use policies
 - Accommodate 1/3rd of new development through infill of central cities and older suburbs
- Supportive reauthorization policies



Reduce Travel Demand



- Increase market share of freight moved by rail
- Increase intercity passenger rail
- Higher fuel prices will reduce travel, and drive shift to more fuel-efficient vehicles

Reduce Congestion, Improve System Performance

- Bottleneck Fixes, and Adding Highway Capacity can help reduce congestion and improve traffic flow
- ITS technologies and operations solutions can reduce congestion and help reduce greenhouse gas emissions
- Eco driving by individual drivers can increase vehicle fuel efficiency

Challenges for State DOTs

- FHWA NEPA Guidance on Indirect Impacts: eg. Polar ice cap and Polar Bears
- Whether to assess GHG emissions project by project or in aggregate by Transportation Sector?
- How to incorporate a State's climate change action plan into state and MPO transportation investment plans?