What Would it Take?
To Reduce Mobile CO2 Emissions

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Presentation to the COG Climate Change Steering Committee

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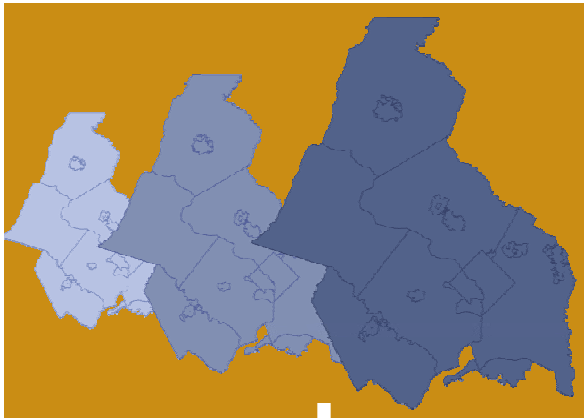


Goals

2012

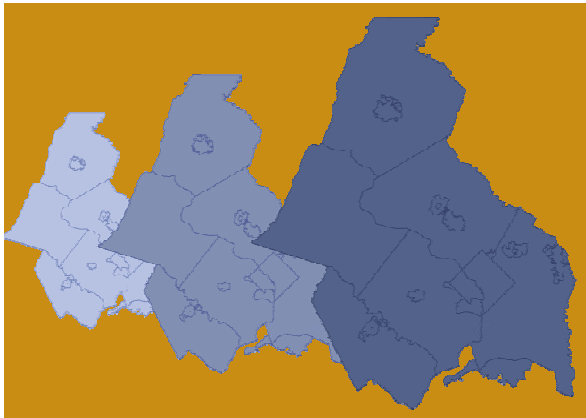
10% reduction in CO2 below 2012 business as usual levels, getting us to 2005 levels

2020

20% reduction in CO2 below 2005 levels

2050

80% reduction in CO2 below 2005 levels



Mobile CO_2 Projections

CO_2 Emissions from Cars, Trucks, and Buses All figures are Annual Tons of CO_2 Emissions (in Millions) in the 8-hour Ozone Non-Attainment Area			
	2005	2020	2030
Baseline Emissions (prior to 2007 CAFE)	**24.89**	**31.02**	**34.45**
% Change from 2005 levels	---	24.6%	38.4%
Emissions With 2007 CAFE (35 mpg by 2020)	**24.89**	**26.83**	**26.91**
% Change from 2005 levels	---	7.8%	8.1%
CCSC Proposed Regional Goal	**24.89**	**19.91**	**15.75**
% Change from 2005 levels	---	-20.0%	-36.7%
Emissions with Enhanced CAFE (55 mpg by 2020)	**24.89**	**23.63**	**20.86**
% Change from 2005 levels	---	-5.1%	-16.2%

Possible CO_2 Reduction Strategies

Fuel Efficiency

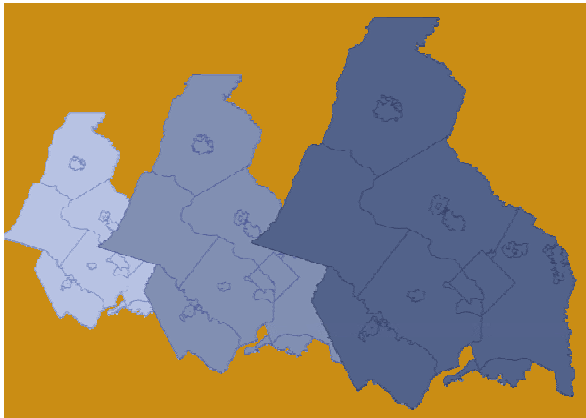
Beyond CAFE standards [currently 35 mpg by 2020]

Fuel Carbon Intensity

Alternative fuels
Vehicle technology

Reducing Vehicle Travel

Changes in land use development
Changes in travel behavior
Changes in prices for travel



Evaluating Strategies

The Context

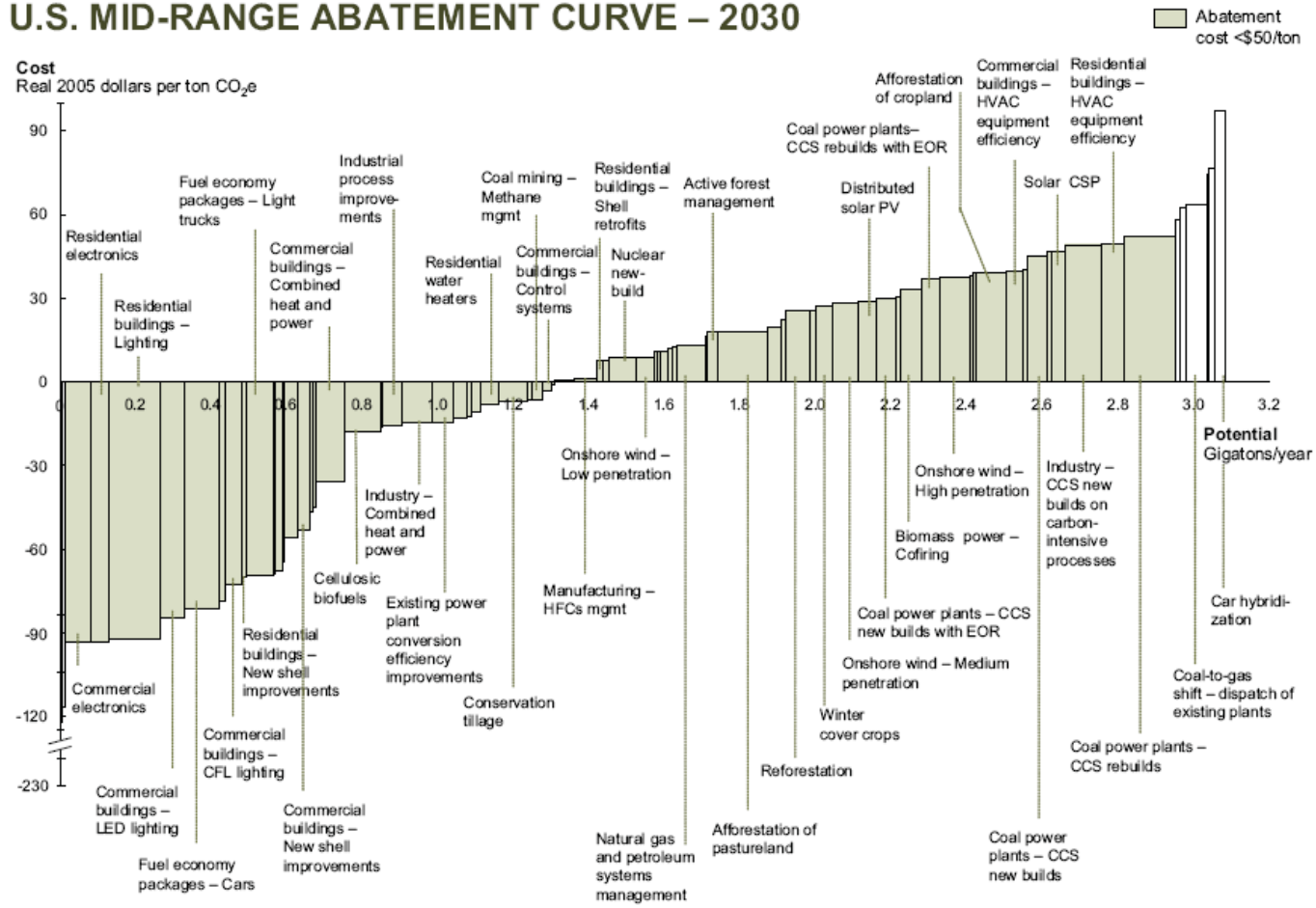
This is a *global* challenge.

A global or national **cap and trade** program (e.g. Lieberman-Warner Bill) or a **carbon tax** is expected to set a price threshold for CO2 abatement, which will help determine cost-effectiveness of strategies

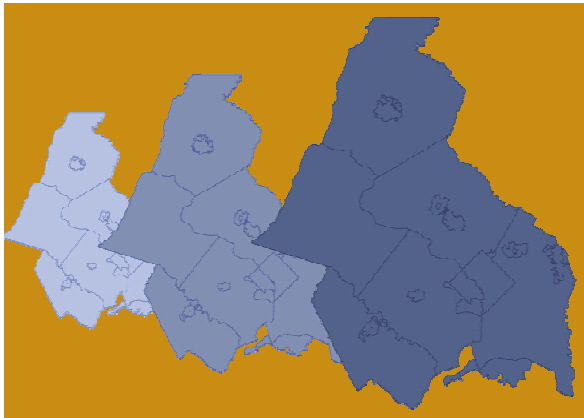
McKinsey & Co. Report

Exhibit B

U.S. MID-RANGE ABATEMENT CURVE – 2030



Source: McKinsey analysis



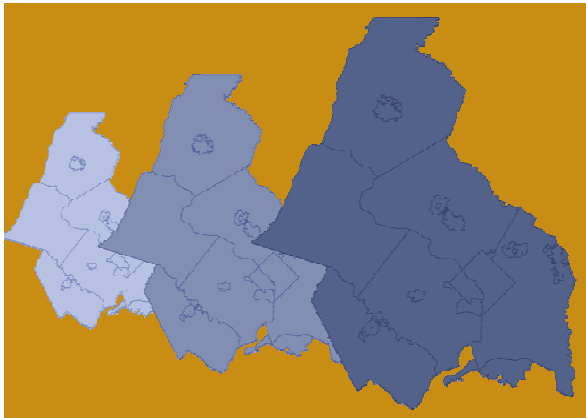
Cost-Effectiveness

The Current Threshold

Current studies put the price threshold somewhere between **$30 and $50 per ton** of CO2 abated.

Some Examples Within the Threshold

- The Commuter Connections is at $17 per ton
- More fuel-efficient/alternative fuel vehicles
- Reduce travel with awareness campaigns



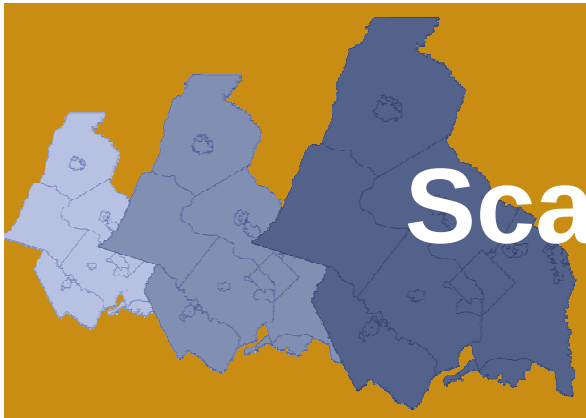
Possible Priorities

If we want to **reduce carbon-intensive behavior**, we must offer **alternatives:**

Incentives to purchase fuel-efficient/alternative fuel vehicles

High quality transit possibly funded through revenues from carbon taxes or cap and trade programs

Development policies to support walking and biking [large impacts are possible, but currently too limited]

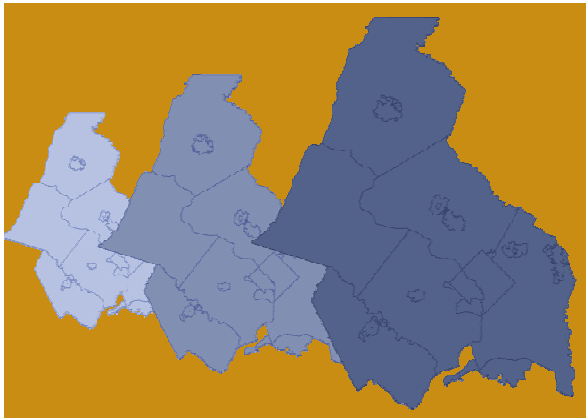


Scale of Emissions Analyses

Local CO and PM are analyzed for local “hot-spot” effects

Metropolitan Ozone precursors (PM and NOx) are analyzed for metropolitan effects

Global CO2 should be analyzed for global effects



Other Considerations

CO_2 differs from CO, PM and ozone in that its effects are *global.*

Different context means **different goals** and **different strategies**

Maybe appropriate to purchase **carbon offsets** for high-value investments

Need to **maintain economic progress** while reducing CO2 emissions