REINVENTING PERSONAL URBAN MOBILITY:
EN-V (ELECTRIC, NETWORKED VEHICLE)

http://www.youtube.com/user/generalmotorsenv
“BOSS” WINS DARPA URBAN CHALLENGE (Nov 2007)!
A self-driving Chevrolet Tahoe wins the 6 hour, 60 mile race

Forward Vision System
- Lane tracking
- Object detection
- Far IR Capability

Rear Vision System
- Object detection
- Far IR Capability

Enhanced Digital Map System

Short-Range Sensors

Long-Range Scanning Sensor

Short-Range Sensors
PETROLEUM DISPLACEMENT
“AND” SCENARIO

Illustrative Schematic

- Fuel Economy Improvements and Mix Shift
- Alternate Fuels: Liquid Biofuels and Compressed Natural Gas
- Electricity
- Hydrogen

Start soon with early options; finish with strongest long-term portfolio
VEHICLE APPLICATION MAP

- Fuel Cell
- E-REV
- BEV

- Light Load
- Duty Cycle
- High Load

- City
- Intra-Urban
- Highway-Cycle
- Highway

- Stop and Go
- Drive Cycle
- Continuous

- Electrification
- Diesel
- Gasoline
GM Advanced Propulsion Technology Strategy
No silver bullets (pending a surprising technology “miracle”)
Chevrolet Volt
An Electric Vehicle (with an extended range capability)

BATTERY Electric Drive
(typically 25-50 mile EV range)

+ 

EXTENDED RANGE Driving on Gasoline

Designed for 40 miles

Designed for over 300 miles

New EPA label: EV @ 93mpg (35 miles) + Gas @ 37mpg comb (344 miles) = Overall 60mpg (379 miles)
Chevrolet Volt EREV
Consumer Results

~80% of Volt customers are participating in OnStar’s vehicle data collection program . . .

- Median Volt driver is achieving 66% electric miles
- Median Volt driver is getting almost 1,000 miles per tank of gasoline (9 gallon tank)
Cars are parked at Home. Or at Work.

Source of Data - 2001 National Household Travel Survey ; GM Data Analysis (Tate/Savagian) - SAE paper 2009-01-1311