Session 1

Light- and Medium-Duty

Dipankar Sarkar

Technology Advancement Office

Electric Vehicle Charging Infrastructure

- Existing infrastructure
  - Many over 10 years old
  - Not compatible with new vehicles
  - MINI E, Nissan, other EVs, PHEVs
- Upgrade and expand EV charging infrastructure
- Applied under DOE Clean Cities
- Enhance Electric/Hybrid Technologies identified in 2009 Plan Update

Gasoline Hydraulic Hybrid System

- Series Hybrid Hydraulic system
- 50% fuel economy improvement in chassis dynamometer test
- 40% NOx reduction
- Retrofit existing gasoline vehicles
- Regenerative braking energy stored in accumulator
- Fleet delivery vehicles
- Support Electric/Hybrid Technologies in 2009 Plan Update

Plug-In Hybrid Electric Vehicle

- Storage unit of ultracapacitors and battery
- Use in commercial hybrid vehicles; Insight, Civic, Prius
- Battery 6 kWh; ultracapacitors 100 Wh
- Ultracapacitors can store approximately 80% regerative braking energy
- Plug-in capability
- 50% fuel economy improvement
- Vehicles will serve as test beds for hybrid and EV applications
- Support Electric/Hybrid Technologies in 2009 Plan Update

High Emitter Repair or Scrap (HEROS II Program Proposal)

- HEROS I
  - Low turnout – 285 vehicles scrapped and 86 vehicles repaired
  - Preliminary Finding: program technically sound but need to improve program participation

- HEROS II Proposal – October Board Meeting
  - Event based program; re-evaluate after first 4 events
  - Events to be conducted on weekends based on prequalification; modeled after lawnmower exchange program
  - Target approximately 1,500 vehicles for repair or retirement
  - Anticipate starting program in early 2010
  - Use a combination of community and regional outreach strategies to improve program participation