



## Session 4



# Funding Opportunities Federal and State Programs

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# Federal Stimulus Funding

## American Recovery and Reinvestment Act

- EPA-DEIRA; \$300 million
  - Region 9; \$30 million
  - Emerging Technologies; \$20 million
- DOE-Transportation Electrification; \$400 million
- DOE-Clean Cities; \$300 million



# Federal Stimulus Funding

## American Recovery and Reinvestment Act

- DOE-Energy Efficient Building Technology; \$75 million
- DOE-Energy Efficiency Topic 2; \$64 million
- DOT-TIGER; \$1.5 billion



# EPA DERA Emerging Technologies

SCAQMD awarded two projects for \$2M each

- Demonstrate retrofit selective catalytic regenerating technology (SCRT) on HD trucks
- Demonstrate selective catalytic continuously regenerating technology (SCCRT) on HD trucks



# Transportation Electrification

- SCAQMD only government agency to win award
- National effort with partners: EPRI and Eaton
- Cofunding by DOE and CEC
- \$45M DOE, \$5M CEC and remaining \$40M from Eaton and utility/fleet participants



# DOE Clean Cities Awards

Project	Awardee	Amount
LNG Drayage Truck Replacement Program	SCAQMD	\$9.4M
UPS – Ontario	SCAQMD	\$5.6M
E85 Refueling Station Expansion	SCAG Clean Cities	\$6.9M
J.B. Hunt (LNG Trucks and Refueling Stations)	San Bernardino Association of Governments	\$9.9M

# SCAQMD Green Policy

- October 2, 2009 Board approved SCAQMD Green Policy
- Purpose and Objectives
  - Energy independence and efficiency
  - Lower criteria, toxic, and greenhouse gas emissions
  - Minimize environmental impacts
  - Conserve water
  - Reduce waste and use of harmful substances
  - Etc.
- Current on-site power generation
  - 420 kW microturbines with heat recovery
  - 160 kW PV
  - 400 kW natural gas backup generator

# DOE-Energy Efficient Building Technology

- \$75 million DOE funding
- Increase building energy efficiency
- Applies to AQMD's Green Policy
- Install solar collectors and absorption chiller at AQMD headquarters
- 50 ton installed capacity
- Integrate into building HVAC system
- App. 700 ton peak building a/c load supplied by electric chillers
- \$1.7 million DOE funding request





# DOE-Energy Efficiency and Conservation

- \$64 million DOE funding under Topic 2
- Increase building energy efficiency and conservation
- Applies to AQMD's Green Policy
- Install 725 kW solar panel modules and 300 kW molten carbonate fuel cell with waste heat recovery
- 1,800 kW building peak electrical load
- \$4.9 million DOE funding request



# DOT-TIGER

- \$1.5 billion DOT funding
- Grants for public transportation projects
- 50 fuel cell transit buses and fueling infrastructure
  - 25 buses in South Coast Air Basin
  - 10 buses in Seattle area
  - 15 buses in Chicago area
- \$131 million DOT funding request
- \$37 million cost share by transit agencies
- AQMD fuel cell bus projects
  - Sunline ISE B.C. Transit Bus
  - Sunline



# California AB 118 Program

- Created in 2007 under Assembly Bill 118
- Provide funding through 2015
- California Energy Commission
  - \$120 million annually
  - Renewable fuel production and vehicle deployment to reduce greenhouse gases
- California Air Resources Board
  - \$50 million annually
  - Criteria pollutant emission reduction via vehicle and equipment projects
- Bureau of Automotive Repair
  - \$30 million annually
  - Vehicle scrapping and replacement



# CEC AB 118 Program

- AQMD submitted 3 proposals and 12 letters of support
- Proposals
  - Biomethane production and fueling infrastructure
    - ✓ Produce biomethane from green waste
    - ✓ Gasification by electric induction furnace
    - ✓ CNG for vehicles
    - ✓ Syn gas for molten carbonate fuel cell
    - ✓ Fuel cell will meet all process electrical power requirement
    - ✓ Natural gas will fed into natural gas pipeline
    - ✓ \$3.75 million funding request
    - ✓ \$10.2 million total project cost



# CEC AB 118 Program; continued

- Proposals
  - Natural gas fueling stations (two proposals)
    - ✓ 11 CNG and LNG stations
    - ✓ Increase CNG/LNG infrastructure for growing fleets
    - ✓ \$2.9 million funding request
    - ✓ \$11.6 million total project cost



# CARB AB 118 Program

- AQMD submitted 2 proposals
- Proposals
  - Clean Vehicle Rebate Project
    - ✓ Voucher incentive program for zero-emission and plug-in hybrid light-duty vehicles
    - ✓ \$4.1 million funding request
  - Lawn and Garden Equipment Replacement Project
    - ✓ Incentive program to replace ICE equipment with cordless zero-emission equipment
    - ✓ Received \$816,000 grant
    - ✓ \$6.2 million AQMD funding for lawn mower exchange program over 7 years



# AQMD Local Match for CARB AB 118 Program

- December 4, 2009 Board approved local match for AB 118 programs
- Local Match
  - \$1.5 million for Hybrid Truck and Bus Voucher Incentive Program\
  - \$500,000 for Zero-Emission and Plug-In Hybrid Light-Duty Vehicle Rebate Project
  - \$816,000 for Lawn and Garden Equipment Replacement Project
- AQMD local match will increase the scope of the programs in the South Coast Air Basin