



Technology Advancement Office Advisory Group Meeting

Session 5 San Bernardino Projects August 19, 2010



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AQMD Clean Communities Plan

- Clean Communities Plan
 - Two Pilot Communities Selected
 - MATES III Health Risk Data
 - AQMD Emissions Data
 - High Toxic Air Contaminant Emissions
 - Disproportionate Number of Toxics Sources
 - Reduce Toxic Air Contaminants
 - San Bernardino
 - Boyle Heights



EPA Clean Technology Initiative

- July 2008
 - University of California, Merced
 - AQMD, San Joaquin APCD, CARB, EPA Effort
 - Develop Near-Zero and Zero Emissions Technologies to Meet Federal 2014 PM and 2023 Ozone Standards
- December 2009
 - University of California, Irvine
 - Develop Near-Zero and Zero Emission Technology Strategies
 - Mobile Sources and Stationary Sources



EPA Targeted Air Shed Program

- Request for Applications
 - \$10 Million
 - Emission Reduction Demonstration Projects
 - Nonattainment Areas
 - June 4, 2010
- AQMD Proposals
 - On-Road, Off-Road, Indoor Air Quality, Photovoltaic Systems
 - AQMD's Clean Communities Plan Control Measure
 - Part of EPA's Clean Technology Initiative
- Clean Fuels Program
 - Funds for On-Road Categories



EPA Targeted Air Shed Program

- Advanced Locomotive Emission Control System
 - San Bernardino Railyard
 - Exhaust Capture and Emission Treatment Systems
 - Demonstration Projects at Ports and Roseville Railyard
 - Marine Vessel Applications

- Passenger Locomotive Aftertreatment Technology
 - Metrolink Route in San Bernardino Area
 - Main and Auxiliary Engines
 - Meet Tier 4 Emission Levels
 - Required on New Locomotives in 2015



EPA Targeted Air Shed Program

- Heavy-Duty Truck Project

- Retrofit Goods Movement Trucks with NOx and PM Aftertreatment
- Retrofit Technology Needs to be Demonstrated on a Large Scale



- Heavy-Duty Class 8 Battery Electric Truck Project

- AQMD and Ports Developed Battery Electric Yard Tractor
- Battery Electric HD Trucks Being Developed
- Goods Movement Activity
- Port of Los Angeles Pilot Study
- Development of Fast Charging Infrastructure



EPA Targeted Air Shed Program

- Electrification of Cargo Handling Equipment
 - Intermodal Facilities and Railyards
 - Electrify Rubber Tired Gantry Cranes
 - Use 500-600 hp Diesel ICEs
 - Demonstrate Battery Electric Yard Tractors
 - Use 200-350 hp Diesel ICEs



- Installation of Photovoltaic Systems for Goods Movement
 - Provide Power for Transport Refrigeration Units, Cargo Handling Equipment, Electric Vehicles
 - Development of Fast Charging Systems
 - California Solar Initiative Rebate



EPA Targeted Air Shed Program

- Installation of Air Filtration Systems
 - Schools and Community Centers in San Bernardino
 - High Levels of Particulate Matter and Toxics Emissions
 - Goods Movement Activity: Locomotives, Trucks, Cargo Handling Equipment, Intermodal Facilities
 - Reduce Indoor PM_{2.5}, Diesel Particulate Matter, Ultrafines
 - Installation and Performance Monitoring
 - Previous AQMD Projects
 - 90% PM Removal Efficiency

