

Funding Emission Reduction Projects

**San Joaquin Valley
Air Pollution Control District
Emission Reduction Incentive Program
(ERIP)**

December 15, 2006

- Discussion Outline for SJVAPCD Programs
 - ERIP Department Overview
 - Purpose and evolution of incentive programs
 - Overview of incentive programs
 - Historical funding and emission reductions from incentive programs
 - Funding sources
 - Application process
 - Methods used for funding and verifying emission reduction projects
 - Outreach activities
 - Smoking Vehicle Program

- ERIP became a separate department in May 2005
- Consists of 14 permanent staff
 - 1 Program Manager
 - 1 Supervising Air Quality Specialist
 - 3 Senior Air Quality Specialists
 - 6 Air Quality Specialists
 - 2 Staff Technicians
 - 1 Air Quality Assistant

• ERIP Department Functions

- Develop and administer incentive programs
- Operate Smoking Vehicle Program



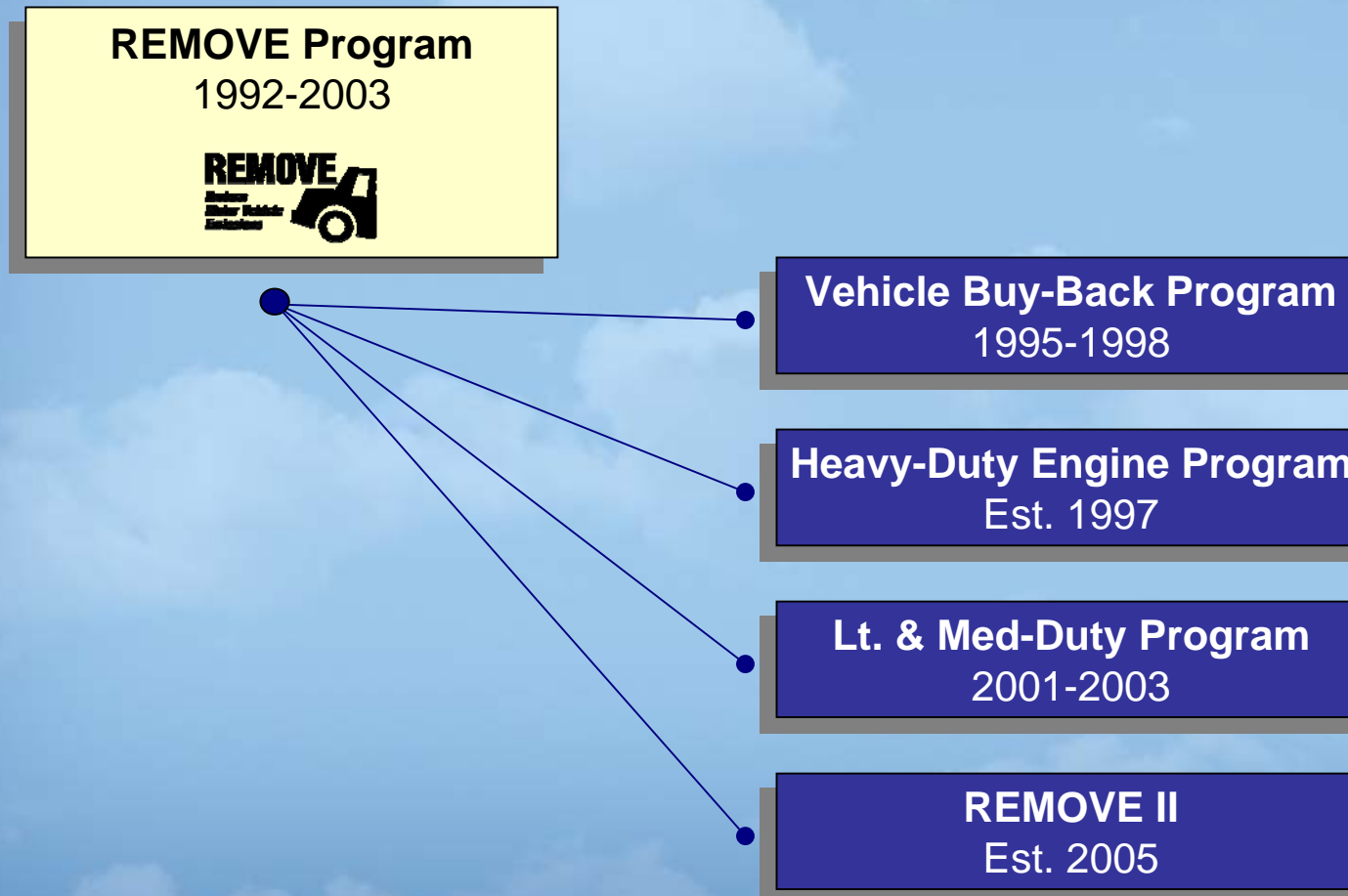
- **District currently operates two major incentive programs:**
 - Heavy-Duty Engine Program
 - REMOVE II Program



- **Purpose of Incentive Programs**
 - Financial incentives are provided to assist in attaining air quality standards by:
 - Early introduction of new technologies
 - Promotion of alternative transportation measures



• Evolution of Incentive Programs



- **Heavy-Duty Engine Program provides financial incentives for:**
 - On- and off-road heavy-duty engine replacements and retrofits
 - Certain new vehicle/equipment purchases and replacement



- **Heavy-Duty Engine Program Components**
 - On-Road Vehicles
 - Off-Road Vehicles
 - Agricultural Irrigation Pump Engines
 - Locomotives
 - Marine Vessels
 - Forklifts
 - Airport Ground Support Equipment
 - Idle Reduction
 - Alternative Fuel Infrastructure

- **On-Road Vehicles**

- GVWR 8,501 and greater
- Engine repowers (replacement)
- Engine retrofits
- Differential cost of alternative fuel vehicles
- Vehicle replacements
 - School Bus Replacement Program
 - Fleet Modernization



- **Off-Road Vehicles**
 - 25 horsepower and greater
 - Engine repowers (replacement)
 - Engine retrofits
 - Vehicle replacements



- **Agricultural Irrigation Pump Engines**
 - 25 horsepower and greater
 - Engine repowers (replacement)
 - Diesel to diesel
 - Diesel to natural gas
 - Diesel to electric
 - New electric motors on new wells
 - Engine retrofits



- **Locomotives**

- Engine repowers (replacement)
- Engine retrofits
- Idle reduction



- **Marine Vessels**

- Engine repowers (replacement)
- Engine retrofits
- Shore Power



- **Forklifts**

- Engine repowers
(replacement)

- Engine retrofits

- Forklift replacements and new purchases



- **Airport Ground Support Equipment**
 - All off-road equipment used on aircraft side at an airport
 - Pushback tugs
 - Baggage and cargo tractors
 - Mobile ground power units
 - Mobile air conditioning units
 - Belt loaders



- **Idle Reduction**

- On-road vehicles
- Off-road vehicles and equipment
- Locomotives and railroad-based equipment



- **Alternative Fuel Infrastructure**
 - Liquid natural gas (LNG), compressed natural gas (CNG), and L/CNG fuel dispensing stations
 - Liquefaction facilities (produce LNG)



- **Potential Future Components**
 - On-Road Fleet Modernization
 - Off-Road Fleet Modernization
 - Auxiliary Power Units
 - Transportation Refrigeration Units



- **REMOVE II Program provides financial incentives for projects that:**
 - Reduce emissions from light- and medium-duty motor vehicles
 - Promote new technologies that reduce vehicle miles traveled
 - Promote alternative transportation measures



- **REMOVE II Program Components**
 - E-Mobility (telecommunications)
 - Bicycle Infrastructure
 - Public Transportation & Commuter Vanpool Passenger Subsidy
 - Alternative Fuels Mechanic Training
 - Light- & Medium-Duty Vehicles

- **E-Mobility (Telecommunications)**
 - Video-conferencing
 - Internet-based business transactions
 - Distance learning or telecommute facilities



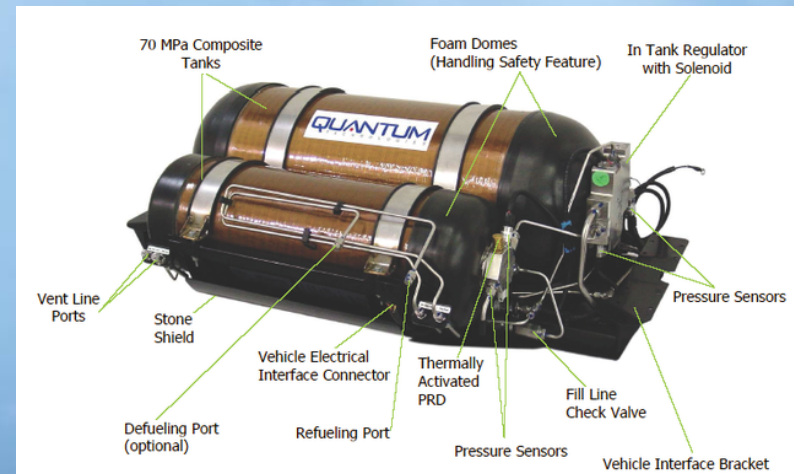
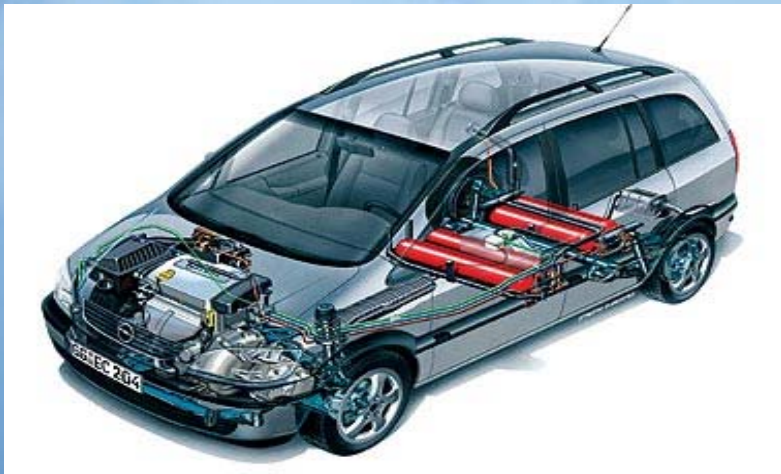
- **Bicycle Infrastructure**
 - Class I and Class II bicycle path construction
 - Promotes bicycling for short commutes



- **Public Transportation and Commuter Vanpool Subsidy Program**
 - Promotes use of public transportation
 - Reduces single-occupant vehicle trips



- **Alternative Fuel Mechanics Training**
 - Increase fleet familiarity with alternative fuels
 - Promotes greater use of alternative fuels in fleets
 - Promotes alternative fuel infrastructure



- **Light- and Medium-Duty Vehicles**
 - Hybrids for public agency and non-profit service organizations only
 - Transition to alternative fuels for public and private sector fleets



- **Potential Future Components**
 - Gross Polluting Vehicle Retirement Program
 - Traffic management (signal synchronization)
 - Certain types of road paving
 - Road shoulder dust stabilization



• Incentive Program Successes 1992 - 2006



- District awarded over \$135 million
- Reduced 52,000 tons of lifetime emission reductions (NOX, PM, ROG)
- Historical lifetime cost-effectiveness of approximately \$2,600 per ton

- **Historical Funding and Reductions**
 - **Heavy-Duty Engine Program** (1997-Present)
 - \$104 million – 49,000 tons (\$2,100/ton)
 - **REMOVE Program** (1992-2003, 2005-Present)
 - \$28 million - 2,600 tons (\$9,490/ton)
 - **Lt- & Med-Duty Vehicle Program** (2001-2003)
 - \$750,000 - 22 tons (\$34,883/ton)
 - **Vehicle Buy-Back Program** (1995-1998)
 - \$2 million - 850 tons (\$2,490/ton)

• **Funding Restrictions**

- Many available funding sources restrict use
 - Certain project types
 - Cost-effectiveness limits
 - One-time funding
 - Specific time frames
 - Administrative staff costs

• On-Going Funding Sources

- \$4 DMV Surcharge Fees
 - \$2.6 million (FY 2006-07)
- \$1 DMV Surcharge Fees
 - \$3.1 million annually
- \$2 DMV Surcharge Fees
 - \$5.8 million annually
- Carl Moyer Program
 - \$9.6 million annually



- **\$4 DMV Surcharge Fee (AB 2766)**
 - Primary use to support air district operations necessary to implement California Clean Air Act:
 - Planning
 - Monitoring
 - Enforcement
 - Technical Studies
 - On- and off-road motor vehicle projects pursuant to ARB guidelines

- **\$1 DMV Surcharge Fee (SB 709)**
 - On- and off-road motor vehicle emission reduction projects pursuant to ARB guidelines



- **\$2 DMV Surcharge Fee (AB 923)**
 - Specific legislative requirements:
 - Eligible Carl Moyer Program projects
 - New purchase of school buses pursuant to Lower-Emission School Bus Program
 - Accelerated vehicle retirement program adopted by ARB
 - New purchase, retrofit, repower, or add-on of previously unregulated equipment for agricultural sources of air pollution

- **Voluntary Developer Mitigation Contracts**
 - Certain developers choose to mitigate 100% of emissions from projects
 - Developers provide funding to be administered by SJVAPCD
 - Most developers submit individual projects for funding that are processed by SJVAPCD

- **Carl Moyer Program** (through ARB)
 - Funding is restricted to specific project types pursuant to legislation and ARB guidelines
 - Emissions must be surplus
 - Cost-effectiveness cap of \$14,300/ton of weighted reductions
 - Lower cost-effectiveness for certain project types

- **Lower Emission School Bus Program** (through ARB)
 - Funding is determined during the annual State budget process
 - No funding for FY 2006-07 due to legislation and passage of State bond measure
 - Bond measure will provide an as yet undetermined amount to SJVAPCD ³⁷

- **Other One Time Funding**
 - San Joaquin Valley Emergency Clean Air Attainment Program
 - \$25 million
 - Back-Up Generator
 - \$1.2 million
 - Peaker Plant Offset
 - \$1.3 million

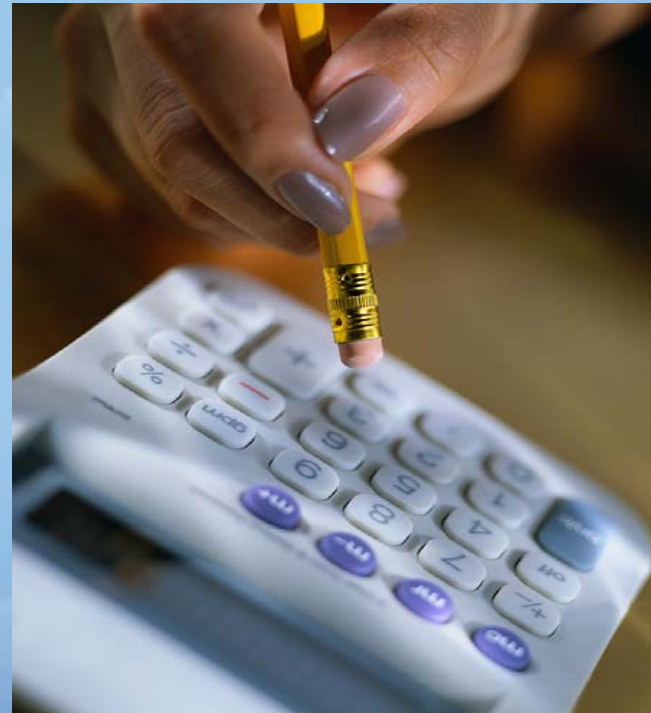
- **Application Processing**
 - Submit application
 - Reviewed for completeness and eligibility
 - Pre-inspection of existing engine/vehicle
 - Engine/vehicle must be operational
 - Emission reduction calculation to determine incentive amount
 - Contract preparation and execution

- **Application Processing** (continued)
 - Purchase and install reduced-emission technology
 - Submit claim for payment
 - Inspect new engine/vehicle
 - Verify disposition of old engine/vehicle
 - Issue payment
 - Submit annual operational reports
 - Periodic follow-up inspections and audits

- **Determining Incentive Amount**
 - Emission reduction calculations
 - Surplus emission reductions
 - Cost-effectiveness
 - Dollar per pound/ton of emission reduced
 - Funding caps or restrictions
 - Eligibility for funds



- **Emission Reduction Calculations**
 - Generally utilize Carl Moyer Program methodologies and emission factors
 - SIP Creditability
 - SJVAPCD has prepared numerous calculation templates
 - Streamlines process
 - Reduces errors



- **Cost-Effectiveness**

- Cost versus emission reduction benefit
- Biggest Bang for the Buck
- Many types of potential projects are not cost-effective



- **Funding Caps or Restrictions**

- Many funding sources have restrictions on the following:
 - Project type eligibility
 - Cost-effectiveness limits
- SJVAPCD imposes funding caps in certain instances to improve cost-effectiveness



- **Outreach Activities**
 - Workshops and informational meetings with industry groups and applicants
 - Printed materials
 - Extensive use of dealer network
 - Participation in conferences, trade shows and conventions
 - Website and email list serve

- **Smoking Vehicle Program**
 - Awareness Program aimed at reducing the number of gross polluting vehicles on the road
 - 51,948 letters sent out to owners of smoking vehicles
 - 150 letters/month sent
 - 4,595 vehicles repaired



Questions