

' KRZ # P H # NKH # P RQH /  
**Grant Funding Opportunities**  
for the **Western Region**



EDUEDUD # MRKQ ' RQ

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# The Road Ahead



# Policy Focus To Get Results in Support of Air District Goals to Reduce Emissions

- Importance of NGVs
  - Clean
  - Climate Friendly
  - Cheap
  - Abundant
  - Renewable
  - H2 Bridge
- Importance of learning from others to build LDV, MDV and HDV Markets
- Need to require NGVs in key Markets



# Policy Develops Sources of Other Funding



Federal Sources  
State Sources  
Local Sources



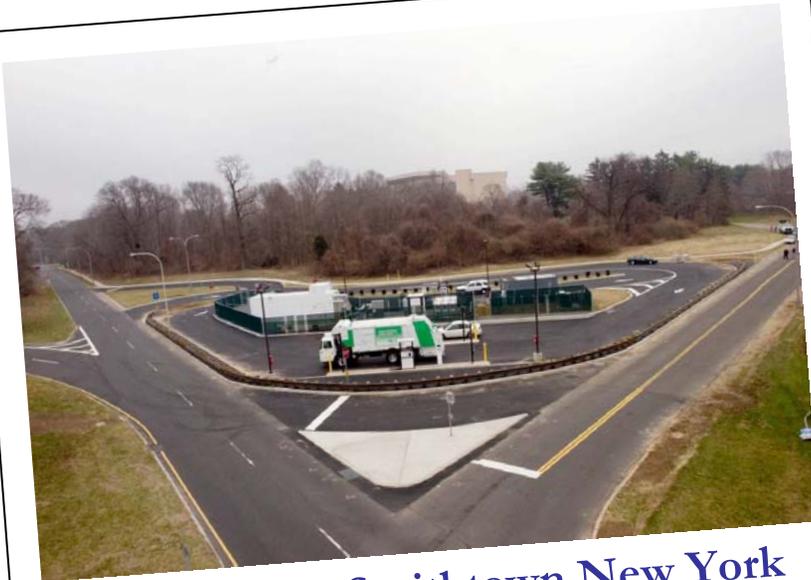
# Potential Funding: CY 2008



## California Funding 2008

- \$ MSRC Work Program - \$12MM
- \$ California Clean Air Legislation (AB118) -\$210MM
- \$ Prop 1B: Clean Air & Goods Movement Program - \$1B
- \$ Carl Moyer Memorial Air Quality Standards Program - \$78MM
- \$ MSRC Off-Road Engine Funding - \$1MM
- \$ MSRC 0.2g Engine Funding - \$1.5MM
- \$ AQIP Funding - \$2.9MM
- \$ Ports of Los Angeles & Long Beach - \$68MM over 5-years
- \$ San Pedro Bay LNG Truck Program - \$22MM
- \$ Bay Area TFCA Funding - \$10MM
- \$ PM Traps for School Buses - \$5.4MM
- \$ San Diego Unified Ports Funding - \$850,000

# Grant Funds in Action



Hauppauge – Smithtown New York



Class 8 LNG Truck for Goods Movement Applications





# Public Private Partnerships

- Develop opportunities for grant applications by leveraging private capital with public funds
- Provide quantifiable, surplus emission reductions
- Launch new alternative fuel technologies
- Offsets incremental costs of alternative fuel vehicles and infrastructure
- Promote embracing of new fueling alternatives to traditional fuels



# Grant Writing 101

- Researching & Qualifying Funding Opportunities
  - Registering for List-serves of Key Funding Sources
- Partnerships defined
- Deadlines
- Roles of each partner clear
- Authority level of partners identified
- Reading & Understanding the RFP
  - Details of RFP is critical roadmap to developing proposal
- Presentation format
  - Grammar, punctuation, style
  - Minimize industry jargon so evaluator clearly understands project
- Cost Share and Budget clearly defined
- The Challenges with Providing Quotes
- The Applicant's Role in providing key information
  - When will this kill the opportunity?
- Letters of Support
- Emission Reductions and Cost Effectiveness could be different for each opportunity
- What happens when things change
- Contracts
- Quarterly and Annual Reports
- Successful Completion

# Grant Writing 101

## Detailed Applications VS. Simple Forms

### DETAILED

- Provide information on the number of employees
- Primary contact information
- Identify person responsible for the project
- Provide proof of ownership
- US DOT Number
- Proof of old truck
- Provide the following information:
  - Copy of DMV registration
  - Make, model, year
  - Engine make, model, year
  - Current odometer reading
  - Owner's vocational use
  - Primary cargo, weight
  - Secondary cargo, weight
  - Other cargo, type
  - Trade corridors
  - Average annual miles traveled
  - Average annual fuel consumption
  - Average annual fuel cost
  - Number of annual trips
  - Provide predicted annual fuel consumption
  - Primary cargo, weight
  - Secondary cargo, weight
  - Other cargo, type
  - Predicted trade routes
  - Predicted average annual vehicle miles traveled

### SIMPLE FORMS

- Number of Class 8 trucks,

**Vehicle / Equipment Information Form (page 2 of 2)**  
**Project Cost Information**  
 Attach vendor quotes, vehicle valuations, repair estimates (including a detailed breakdown of labor cost) and any other documentation needed to justify project costs.

Engine Repower Costs	
1. New Lower-Emission Engine	
2. Total Unique Parts	
3. Other Parts	
4. Labor Cost (if requested)	
5. Existing Engine Rebuild Parts Cost	
6. Existing Engine Rebuild Labor Cost	
<b>Maximum Grant Request</b> = [1+2-(5+6)]	

Engine Retrofit Costs	
1. Engine Retrofit Parts Cost	
2. Engine Retrofit Labor Cost	
<b>Maximum Grant Request (=1+2)</b>	

New Low-Emission Vehicle/Equipment Purchase	
1. New LEV Purchase Cost	
2. New non-LEV Purchase Cost	
<b>Maximum Grant Request (=1-2)</b>	

Incremental Lower Emission Fuel Cost	
1. Lower Emission Fuel Price (\$/gal)	
2. Average Diesel Price (\$/gal)	
3. Total Lower Emission Fuel Use (gal)	
<b>Maximum Grant Request</b> = [(1-2)*3]	

Fueling Infrastructure	
1. Total Infrastructure Cost	
<b>Maximum Grant Request</b>	

Note: For infrastructure grant requests, be sure to attach a discussion on the fleet commitment at the infrastructure, the funding plan for the project, throughput projections and a project schedule. In addition, letters of commitment from fleets using the station are requested.

All permits needed to complete a project are the responsibility of the project applicant.



# Find Me the Money

## Heavy-Duty Trucks

- Carl Moyer
  - Challenge is funding may not be sufficient to make a change
- New Funding Opportunities
  - Prop 1B Funding – \$1 billion total -- \$250 million annually
    - \$50K per truck for Goods Movement Fleets
  - Other funding
    - \$184k/truck previously offered by Ports of LA & Long Beach for LNG Trucks
    - \$35K/truck offered by MSRC for refuse fleets using 0.2 g engines (2010 standards met in 2007)
- Clean Energy will build NG infrastructure to provide fueling for fleets

# Rule 2202 AQIP Program

## Light-Duty Opportunity

- Approximately \$2M available a year
- Fees paid by companies in lieu of a rideshare program
- Funds to be used to achieve NOx, VOC, and CO credits
- RFP issued semi-annually
  - Funding for Taxis @ \$16,470





# Help Me Apply!

## Potential Surplus Emission Reductions

Calculations based on Program Guidelines

Mileage Based Calculation for Heavy-Heavy Duty Truck using 14.9L NG Engine

- Replacing 91-93 (5.0 g/bhp-hr standard) Diesel Engine, 25K annual miles, with 2008 0.8 g/bhp-hr standard NG engine
  - 96% NOx reduction; 98% PM reduction
    - Per Truck reductions over 7 year life
    - 3.07 tons of NOx
    - 0.1 tons PM

# Potential Surplus Emission Reductions

## Goods Movement Scenario

### Mileage Based Calculation

- Replacing 2007-2010 Diesel Engine at 1.2 standard with 0.2 g/bhp-hr NG engine
  - 97% NOx reduction
    - 1.12 tons of NOx per truck over 7 year-life; 25K miles
    - 3.57 tons of NOx per truck over 7 year-life; 80K miles



# Potential Surplus Emission Reductions

## Fuel Based Application

### Heavy-Duty Refuse Trucks using 8.3L NG Engine

- Replacing 2007 Diesel Engine (1.2 g/bhp-hr with 0.2 g/bhp-hr NG engine)
  - 10K gallons annual fuel usage
    - 97% NOx reduction
      - » 3.26 tons of NOx per truck over 7 year-life
      - » Qualifies for \$44,500 in funding
      - » CE = \$15,965/ton NOx



# Results of Successful Opportunities Year 9 AQMD Carl Moyer Program

- \$38.3 million awarded
  - 56 projects
- Emission Benefits
  - 1,084 tons NOx per year
  - 33 tons PM per year



# Carl Moyer Year 10

## Helping the Customer

- Clean Energy grant assisted projects recommended for funding
  - Enterprise Car Rental – 10 customer courtesy shuttles @ \$31,150 each
  - Vanguard Car Rental – 12 customer courtesy shuttles @ \$31,150 each
  - MCA Distribution – 100 Class 8 trucks @ \$51,000 each



# Recent Natural Gas Engine Applications

## South Coast MSRC Engine Buy-down Programs

- On-Road Heavy-Duty Engine
  - 21 applications submitted for 411 engine replacements
    - Total requested \$12.2 million
  - 9 applications funded for 148 engines
    - Total Funded \$1.5 million



# Recent Natural Gas Engine

## Application Awards

### South Coast MSRC Engine Buy-down Programs

- Westport Innovations' ISX HPDI Engine Buy-Down (\$50K/\$35K per engine)
  - Toys-R-Us
    - 6 trucks
  - Los Angeles County Sanitation
    - 5 trucks
  - Los Angeles International Airport (LAX)
    - 4 trucks
  - City of Los Angeles
    - 2 trucks





# California Energy Commission

## What does AB 118 do?

- Provides the California Energy Commission funding for the Alternative & Renewable Fuel & Vehicle Technology Program (\$120 Million/Yr for 7 ½ years)
- Provides CARB funding for two programs (\$80 Million/Yr for 7 ½ years)
  - Enhanced Fleet Modernization
  - Air Quality Improvement Program

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# **CEC's plans for AB 118 funds**

- Develop and improve new fuels
- Support in-state fuel production plants
- Expand fueling infrastructure
- Develop and deploy vehicle technology
- Education and workforce training

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# AB 118 Next Steps

- Established Advisory Committee in March
- Develop draft Annual Investment Plan (July 2008)
- Complete regulations (March 2009)
- Initiate funding solicitations and make awards

# Questions & Answer Period

Thank you for your participation and  
interest in funding  
for Alternative Fuel Projects

