

# Dual Path Strategy: Fast Track Action Plan

**June 21, 2007**

Corrected September 18, 2007



# Background

- **April 30, 2007 - Governing Board adopted Dual Path ozone attainment strategy**
  - **Federally Approvable Plan (SIP)**
  - **Accelerated path to attainment (“Fast Track” )**
- **Board directed staff to return with an action plan**

# Why dual path strategy?

- Current and promised technologies do not generate enough reductions: SJV must rely on advanced (unspecified) technologies
- Federal constraints
  - SIP cannot rely on unspecified technologies except for “black box” and extreme classification
  - SIP cannot rely on unsecured funding
  - SIP cannot rely on measures with no legal authority
  - SIP reductions must be enforceable and quantifiable
- Must do more to beat the SIP deadline

# Fast Track Components

1. Push EPA and ARB to adopt the most effective mobile source regulations
2. Significant increase in incentive funding
3. Fast-Track measures

# NOx “Attainment Gap”

	2017	2020	2023
NOx reductions needed to reach attainment from 2005, tons/day	464	464	464
NOx reduction from <i>2007 Ozone Plan</i>	337	365	382
NOx “Attainment Gap”	127	99	82

# 1. Push EPA and ARB on Mobile Source Regulations

- Recent Efforts
  - ARB Off-road (construction) engine rule
  - Support for ARB waiver for greenhouse gas regulation
- Upcoming regulations
  - EPA locomotive and marine vessel regulation
  - ARB: cleaner in-use truck fleet, and others

## 2. Increase Funds for Incentives

- State and federal fundraising efforts
- Self-help measures
  - Past efforts include DMV fees, Indirect Source Review rule
  - Community Clean Air Fund
  - Other ideas?

# Funding Sources

- **\$188 million (average) per year needed**
- **Existing District Funding**
  - \$11.0 million - DMV Surcharge Fees\*
  - \$9.5 million - Carl Moyer Program\*\*
  - \$19.5 million - ISR/Mitigation Contracts
  - \$40 million/year***
- **New Funding Needed**
  - Federal - \$100 million/year***
  - State - \$60 million/year***
- **District is engaged in extensive advocacy in Sacramento and Washington D.C.**

\*Reduced by \$5.8 million/year in 2016 unless reauthorized

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# 3. Fast Track Measures

- Truck Replacement / Retrofit
- Short Sea Shipping
- Alternative Energy
- Inland Ports
- Green Contracting (public sector)
- Episodic/Regional Controls
- Green Fleets (private sector)
- High Speed Rail
- Energy Conservation
- Green Contracting (private sector)
- Green Fleets (public sector)
- Heat Island Mitigation

# Prioritizing the Fast Track Measures

- Assessed by
  - Potential emission reductions
  - Timeline for benefits
  - Total Cost
  - Degree of District/local control
- No “perfect” measures
- Measures with greatest reductions are highest priority

# Truck Replacement/ Retrofit

- *Fleet modernization, SCR retrofit program*
- **Potential Reductions:** 30 tpd (2020)
- **Timeline:** Depends on funding availability, 5-10 years for 100% turnover
- **Total cost:** \$1.5 billion
- **District/local control:** Regulatory authority is uncertain, incentives have most potential
- **Implementation issues**
  - 2010-model engines are still on the drawing board
  - No CARB-certified SCR Retrofits
  - Moyer guidelines need to be changed to allow Triangular Truck Trade
  - Owners' resistance to retrofits

# Short Sea Shipping

- *Transport freight via ocean-going barges/ships instead of trucking it through the SJV*
- **Potential reductions:** Removing 20% of the truck traffic could reduce NOx by 20 tpd in 2020
- **Timeline:** need 5-6 years after securing funding, to build infrastructure and ships
- **Total cost:** ~\$5-\$8 billion, payable over 30-year loan
- **District/local control:** will require major buy-in from state, feds, ports, shippers, trucking industry
- **Implementation issues:** Will require major change in conventional goods movement practices

# Alternative Energy

- *Zero- emission or low-emission fuels and power generation technologies: solar, hydrogen fuel cells; electrify industrial processes*
- **Potential reductions:** depending on scope of measure, could include mobile and stationary sources, 5-10 tpd
- **Timeline:** 10+ years needed to significantly replace current sources
- **Total cost:** attrition-based measures could be relatively inexpensive
- **District control:** Incentives for mobile source changes, regulations for stationary sources
- **Implementation Issues:** Identifying/funding the most promising alternatives from a wide field

# Inland Ports

- *Transport freight from coastal ports to inland ports by rail instead of trucks*
- **Potential reductions:** Similar to Short Sea Shipping – 20 tpd in 2020
- **Timeline:** 5+ years to design and build infrastructure and acquire rolling stock
- **Total cost:** estimated high-moderate
- **District/local control:** Will require buy-in from railroads, trucking industry, state, feds
- **Implementation issues:** Will require major change in goods movement practices

# Green Contracting

- *Encourage/require government agencies and businesses to give preference to contractors who use lowest emission equipment*
- **Potential Reductions:** estimated low-moderate <5 tpd
- **Timeline:** could be implemented fairly rapidly by government agencies
- **Total cost:** estimated low-moderate
- **District/local control:** would require buy-in from municipalities, constituents; legal authority for mandatory green contracting is uncertain
- **Implementation issues:** Public sector green contracting would impact taxpayers; private sector would bear higher costs

# Episodic/ Regional Controls

- *Incentive + regulatory mechanisms to reduce emissions during worst ozone episodes and at “hot spot” regions.*
- **Potential reductions:** estimated moderate ~5 tpd, but focused approach could intensify benefit
- **Timeline:** depends on funding availability to deploy cleaner equipment
- **Total cost:** estimated low-moderate
- **District/local control:** legal authority for mobile source curtailment is limited
- **Implementation issues:**
  - Avoid curtailment of time-critical operations
  - Practical enforcement

# Green Fleets

- *Encourage or require government entities and businesses to upgrade fleets to cleaner vehicles.*
- **Potential reductions:** public sector potential is estimated low-moderate <5 tpd, private sector has much more potential
- **Timeline:** depends on funding availability to deploy cleaner equipment
- **Total cost:** estimated moderate
- **District/local control:** legal authority for public sector mobile source mandates is uncertain
- **Implementation issues:** legal and practical enforcement

# High Speed Rail

- *Support California's High Speed Rail project and focus design on SJV air quality improvements.*
- **Potential reductions:** estimated moderate ~5 tpd
- **Timeline:** completion by 2020
- **Total cost:** \$33 billion (old estimate)
- **District/local control:** District can influence the design of the rail-line system to optimize air quality benefits
- **Implementation issues:** To be determined

# Expanded Spare the Air

- *Develop additional voluntary measures and increase frequency of calls to action. Mandatory measures included in Episodic/Regional Controls.*
- **Potential reductions:** estimated low ~1 tpd,
- **Timeline:** will be implemented as soon as possible (2008)
- **Total cost:** estimated very low
- **District/local control:** District has clear authority for this program
- **Implementation issues:**
  - Increasing STA frequency may desensitize the public,

# Energy Conservation

- *Encourage or require government agencies, businesses, and residents to employ measures to reduce energy consumption*
- **Potential reductions:** estimated low-moderate ~1 tpd
- **Timeline:** voluntary measures can be implemented immediately, regulations/ordinances could require several years
- **Total cost:** estimated low, potential long-term savings
- **District/local control:** ordinances would require buy-in by municipalities
- **Implementation issues:** to be determined

# Heat Island Mitigation

- *Encourage/require practices and materials, e.g. urban landscaping and highly reflective roofs, to reduce temperatures in cities and reduce cooling energy demand*
- **Potential reductions:** estimated low <1 tpd
- **Timeline:** could be initiated soon, full benefit of landscaping depends on growth of trees
- **Total cost:** estimated low
- **District/local control:** ordinances would require buy-in by municipalities
- **Implementation issues:** To be determined

# Initial Action - 2007

- **Green Fleets/Truck Replacement/Retrofit:** develop cost effective proposals, push CARB to include “Triangular Trade” in Moyer Guidelines
- **Short Sea Shipping:** meet with stakeholders, identify funding for studies
- **Inland Ports:** Lobby for Prop 1B funding, meet with stakeholders
- **Green Contracting and Green Fleets:** identify legal boundaries
- **High Speed Rail:** advocate for funding, focus on air quality
- **Community Clean Air Fund:** workshops, GB hearing

# Fast Track Task Force

- Formed by the APCO
- Representatives from health & environmental community, industry, academia, Governor's Partnership for SJV
- Functions
  - Advisory to the APCO
  - Source/Sounding board for new ideas
  - Outreach to the community
  - Advocacy to secure means for implementation
  - Action oriented
  - Consensus-based decision making

# Fiscal Impact

- Fast Track will create significant additional workload
- Need for consultant services
- Staff will recommend fiscal actions to the Board as necessary

# Summary

- 2020 NO<sub>x</sub> Attainment Gap is estimated at 99 tpd
- Preliminary estimate: Fast Track measures could achieve ~90 tpd NO<sub>x</sub> by 2020
- Fast Track success depends on
  - Significant increases in incentive funding for truck clean-up,
  - Major investments for Short Sea Shipping and Inland Port projects

