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”

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<tr>
<th>NOx reductions needed to reach attainment from 2005, tons/day</th>
<th>2017</th>
<th>2020</th>
<th>2023</th>
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<tbody>
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<td>464</td>
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<th>NOx reduction from 2007 Ozone Plan</th>
<th>337</th>
<th>365</th>
<th>382</th>
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| 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
** Reduced by $9.5 million/year in 2016 unless reauthorized
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 NOx Attainment Gap is estimated at 99 tpd
- Preliminary estimate: Fast Track measures could achieve ~90 tpd NOx 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