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I-710 Corridor Project EIR/EIS

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Air Quality Status Update

presented to the

Technical Advisory Committee

January 22, 2014



Air Quality – New Data

2

- **I-710 Zero Emissions Freight Corridor Power Systems Analysis Study**
 - Defined the electric power requirements of the ZEFC
 - A lot of electric power required (equivalent of 57,000 households) (analysis does NOT include additional power needed to recharge truck batteries while trucks on the FC)
 - A lot of electric power distribution infrastructure needed
 - Additional SCE/DWP transmission circuits
 - Traction Power Substations
 - Extensive electrical conduits within/along the Freight Corridor



Air Quality – New Data

3

- **I-710 Project Zero Emissions Truck Commercialization Study (CalSTART)**

- Developed a commercialization plan to develop and deploy a fleet of ZE/NZE trucks in the I-710 Corridor
- Pathway to ZE/NZE trucks involves a 5 stage process: assessment of vehicle technologies, development of supporting regulatory framework, power infrastructure, and financial incentives
- Battery Electric Vehicle (BEV) trucks have a more challenging business case than other ZE/NZE technologies
- Linear, wayside electric power distribution technology (e.g. FC) appears to be more costly and less flexible than other ZE/NZE technologies



Air Quality – What Can We Expect?

4

- **Vehicle fleet (trucks, autos) is cleaner today (2013-2014)**

- Previous analysis: Base Year = 2008
- Updated analysis: Base Year now 2013-2014
- Positive effect of current efforts (i.e., Ports' Clean Truck Programs, ARB Truck rules, Incentive Programs)

- **Port and Non-Port Trucks**

- Diesel Particulate Matter (DPM)
- Updated analysis: Year 2035 Conditions, latest emission factors
- Less room for improvement between 2014 and 2035 because of reductions between 2008 and 2014.



Air Quality – What Can We Expect?

5

- **Nitrogen Oxides (NOx): Increasing Concern**
 - Near Roadway Health Effects
 - Increasing concerns by Regulators, Environmental, and Community Groups
 - More stringent NOx standards
- **Cleaner Fleet Improves NOx**
 - Cleaner fleet today (2013-2014) compared to 2008
 - Updated analysis: Year 2035 Conditions

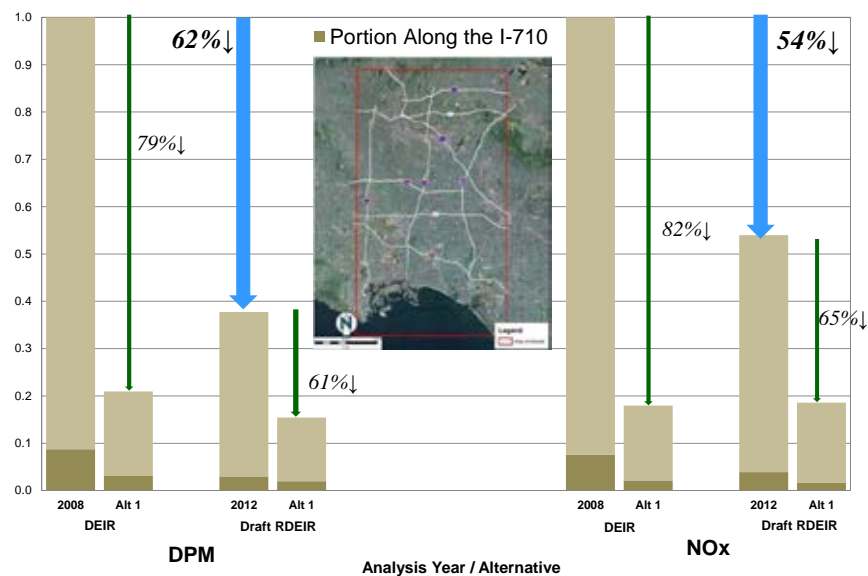


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Peering Ahead: Emissions Will Change

6

Emissions relative to 2008 Area of Interest emissions



Air Quality – What Can We Expect?

7

- **Implications:**
 - Fewer ZE/NZE vehicles using the Freight Corridor means less air quality benefits for the study area.
- **Other potential air quality benefits the Project could consider?**
 - Programmatic approaches that can reduce emissions, air quality and/or health risk impacts, including but not limited to:
 - ZE/NZE truck incentive programs, exposure reduction programs (i.e., Port of Long Beach Grant Programs), other grant programs



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