Session 1: Mobile Source
Zero Emission Catenary Truck Project

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Proposed Project: Catenary System With Heavy Duty Hybrid Electric Truck

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- In June, 2009 the Ports released a Request for Concepts and Solutions that would provide zero-emission movement of containers between the ports and near-dock rails facilities
- Must have capability to provide zero-emission drayage of containers between the near-dock rail yards and the ports
- The system will be required to interface with existing terminal operations
- 90% of containers currently entering Southern California through the ports travel to locations other than near-dock rail yards

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- Therefore, a system that can work on a regional level is of significant interest
- In the proposed system a natural gas hybrid truck is envisioned that can operate solely on electrical power from catenary lines
- Architectures that include battery electric, fuel cell and series hybrid electrics can be adapted to the catenary system
- When travelling longer distances, the trucks would revert to a low-emission on board power system

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- The trucks can be built and deployed while the catenary infrastructure is being developed
- The near-term goal would be to deploy catenary systems along CA-47/103 to address the needs of the communities around the near-dock rail yards

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- GNA Study Found That The CNG Catenary Hybrid Truck Was The Most Cost Effective Cargo Transport Solutions
- Competing Technologies: Fuel Cell Hybrid Trucks, Battery Electric Trucks And Fixed Guideway
- Infrastructure, Vehicle And O&M Costs of Each System Were Taken Into Account In The GNA Study

Location for Demonstration

- Two locations are under consideration: Navy Way inside the port of LA and on the Terminal Island Freeway

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- The long-term goal is for a zero-emission truck corridor along the I-710 and CA-60 freeways as proposed in the Southern California Association of Governments (SCAG)

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- Catenary systems that support heavy duty trucks have been demonstrated in Europe

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- On May 15 AQMD in partnership with The Zero Emission Freight Movement Regional Collaborative submitted a proposal to the DOE for Zero Emission Cargo Transport solicitation that included the catenary truck project
- The catenary portion of the project was rejected by the DOE

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- Plan Is To Move Forward With Project
  - Challenges:
    - Secure funding from alternative sources in addition to the ports and AQMD
    - Select a site that will meet all stakeholder requirements with the least amount of disruption and cost
  - Commitments:
    - Community and government stakeholders through the Zero Emission Freight Movement Regional Collaborative
    - A committed supplier – Siemens Mobility

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- Questions for the Advisory Groups
  - What other zero emission cargo transport systems should we be investigating?
  - Which technology offers the least amount of impact due to costs and complexities?