

Port of Los Angeles Shore To Store Project Status Update and Contract Amendments



**Chris Cannon, Director
Environmental Management and
Chief Sustainability Officer
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Background - ZANZEFF Grant Program



- “Zero and Near Zero Emissions Freight Facilities” (ZANZEFF)
- \$205 Million grant program managed by the California Air Resources Board
 - Awarded to various projects in California
- POLA received an award for \$41,122,260
- Connects freight hubs throughout Southern California/development of zero emission capabilities at the Port of Hueneme
- Begins to develop regional Hydrogen Infrastructure



Hydrogen Truck Demonstration Summary



- 10 Hydrogen Fuel Cell Class 8 Trucks
 - Demonstration began August 2021 and ended August 2022
- 2 Heavy Duty Hydrogen Fueling Stations
 - 1 Inland Empire station in Ontario – opened July 2021
 - 1 near-port station in Wilmington –opened November 2022

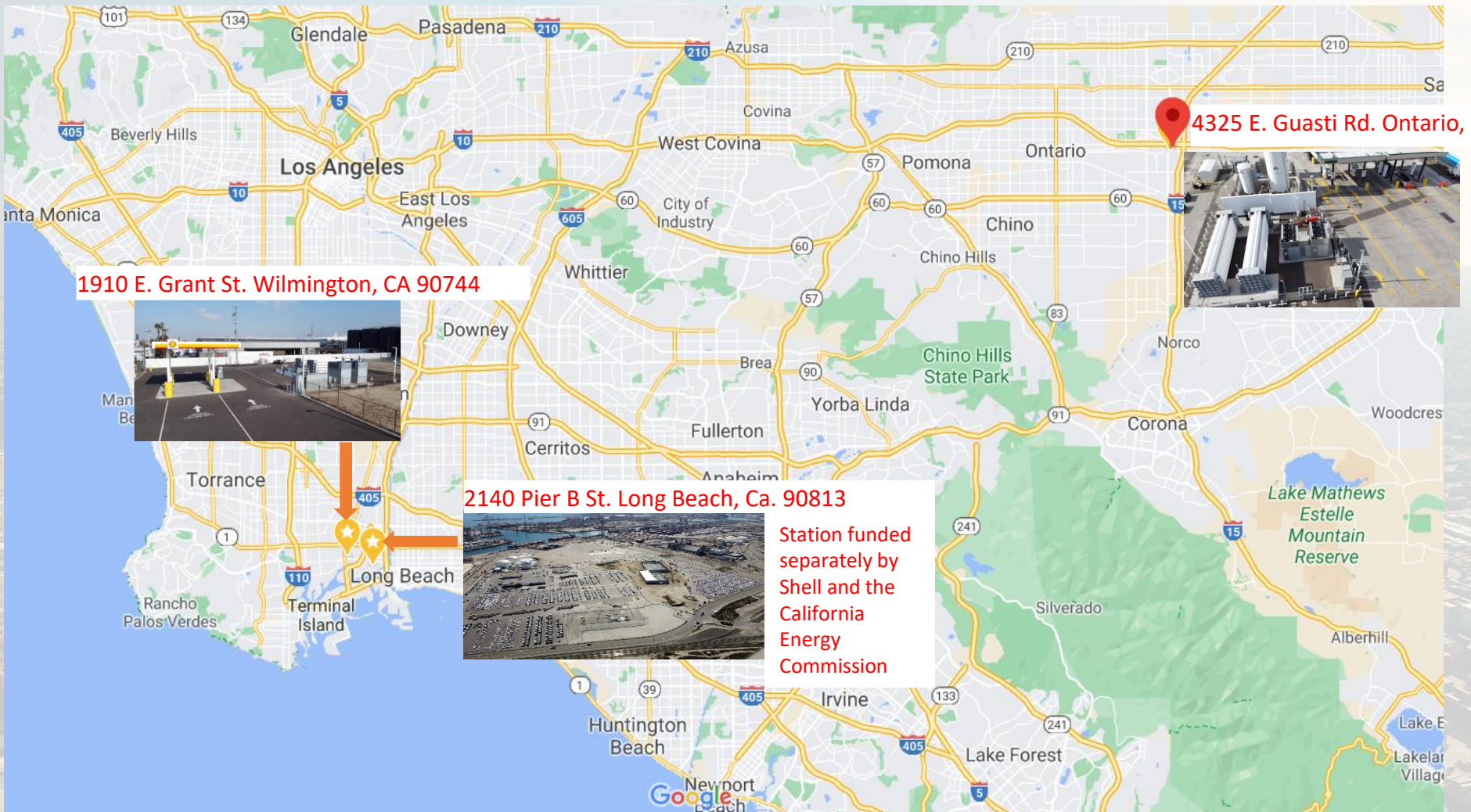


- Key Partners:



- \$42 million in cost share across public and private partners

Shell HD Hydrogen Station Locations



Hydrogen Truck Demonstration Results

- ~60,000 miles accumulated across the truck fleet
 - 22,000 in-service
- Average 6.7 MPG_{DE} Vs. 5.8 MPG for diesel baseline trucks
- Drivers feedback was positive on performance and operator comfort
- Many lessons learned in overcoming challenges related to components and supply
- Kenworth completed the project \$1,856,759 under budget



Port of Hueneme (POH) Deployment

- First deployment of zero emission equipment at the Port of Hueneme
 - Two ZE yard tractors from Kalmar – deployed January 2022
- Infrastructure for a ZE mobile harbor crane
- Major step forward for POH
- Costs were much higher than initially anticipated due to COVID -19 impacts to supply chains
 - Proposed amendment allocates \$1,708,759 from Kenworth's surplus to partially alleviate these increased costs



Key Takeaways

- Final Report submitted to CARB on April 1, 2023
- The trucks performed well overall
 - Similar average fuel economy on a diesel equivalent basis than the conventional vehicles in the baseline fleets
 - Positive driver feedback
- Trucks will continue to be used in public events and demonstrations
- Toyota and Kenworth intend to continue working together on future model development

Key Takeaways (Continued)

- The hydrogen fueling stations remain open for service and provided lessons learned to apply across future station builds
 - Typical fueling rate: 1.5 kg/min
 - Example lessons: component failure points, software refinements, compressor module designs, etc.
- Provided POH with their first ZE cargo handling equipment and the port anticipates more units in operational duty in the future.

Staff Recommendation



Staff recommends that the Board:

- Approve the Second Amendment to Agreement No. 19-3639 between the City of Los Angeles Harbor Department and the California Air Resources Board to revise milestone deadlines, and reallocate budget line items for the Shore to Store Demonstration Project
- Approve and ratify the First Amendment to Agreement No. 19-3684 between the City of Los Angeles Harbor Department and the Port of Hueneme to reallocate funding and extend the Project term to May 15, 2023, for the Shore to Store Demonstration Project