1. Welcome –
   • Heather Tomley from Port of Long Beach and Christopher Cannon from Port of Los Angeles made opening remarks

2. Status Update on Technology Feasibility Assessments
   • Ports reported on the status of the two feasibility studies – Trucks and Cargo Handling Equipment (CHE)
   • Draft of the Drayage Truck Feasibility Study was released on 12/18/2018 with comments received through January 2019
   • Final version of the Drayage Truck Feasibility Study to be released in April 2019
   • Draft Cargo Handling Equipment Feasibility Study was being third party reviewed and finalized
   • Estimated release of the draft CHE Feasibility Study in April 2019 with final version completed in the 2nd quarter of 2019
   • One attendee asked if the feasibility studies would have more than one release (i.e. every quarter). The Ports responded that there was a commitment to do feasibility studies at least every three years. Consideration of how to update more often than the three years will be addressed through ongoing monitoring of significant new developments relevant to the findings.
   • An attendee asked if the Truck Feasibility Study include range extenders with hydrogen. Port of Los Angeles is currently starting a demonstration with Kenworth and Toyota of 10 hydrogen drayage trucks that will begin testing at the end of 2019.
   • An attendee wanted to know the difference between the Kenworth BAE project and the new demonstration with Toyota. The Kenworth project working with BAE on a hybrid truck is a South Coast Air Quality Management (SCAQMD) demonstration and is separate from the Kenworth/Toyota demonstration referenced above. Testing on the Kenworth/BAE project is expected to begin in March/April 2019.

3. Status Update on Clean Truck Program (CTP)
   • Ports provided joint Ports CTP statistics
   • CTP Rate Study currently being prepared by Davies Transportation Consulting with an estimated completion in 2nd quarter 2019.
   • A joint Request for Proposals (RFP) was released on 02/14/2019 for a rate collection mechanism to collect the truck rate from Beneficial Cargo Owners.
   • Ports are expected to select a contractor in 2nd quarter of 2019.
   • SCAQMD for low NOx Truck Early Deployment Program with financial support from both Ports
   • Discussion about low NOx trucks: definition, availability, eligibility for SCAQMD program, and deployment at end of 2019

4. Update on Terminal Equipment Planning
• Ports provided general overview of emissions from CHE and current demonstration projects at the Ports as of Fall 2018
• Discussion of future terminal equipment demonstration projects in the near future (2019-2022)
• Procurement planning for terminals and projected turnover of equipment by 2031 for both Ports
• Next steps on terminal equipment planning and infrastructure planning
• Clarification was provided that electrification and zero emissions is not synonymous with terminal automation. Ports have made no assumptions for automation. Operations are a choice of the terminal operator. All current zero emission demonstrations are with traditionally operated manned equipment.
• Discussion about private vs. public funds used to pay for zero emissions (ZE) equipment.
  - Grant money is being used to test ZE equipment.
  - If there is future funding programs for ZE purchases, they would likely pay for the incremental cost of ZE equipment because ZE equipment often times are 2-3 times more expensive than their diesel counterpart.
  - Currently it is high risk to invest in ZE equipment, so to defray the risk, public funding is being used. Later on purchases of ZE will be considered to be cost of doing business.
  - Ports agree that incentives are not forever.
  - Most public funding is from Cap & Trade that was established to reduce emissions and are specifically for Greenhouse Gas reductions, including ZE equipment.
  - Incentives funding is for faster than natural turnover and must not already be required by law.
• One attendee wanted to know the results of the yard tractor pilot at POLB. Demonstration of yard tractors will be in 2020, so no data at this time.
• One attendee wanted to know the percentages of investment in demonstration equipment (private vs. public) in the Port’s Technology Advancement Program. Information about the amount invested by the Ports are in the Technology Advancement Program (TAP) Annual Report. The 2018 TAP Annual Report was posted later that week. The minimum current cost share requirement is 50/50.
• An attendee wanted to know the locations of charging stations at the Ports for drayage trucks.
  - POLB will have two public stations as a part of the ZANZEFF grant project.
  - Truck feasibility study found most truck charging stations would be at offsite locations throughout the region including trucking facilities, warehouses, distribution centers, truck stops and other sites that are not on Port property.
• Discussion about on-road CHE classification. CARB determines classification of vehicles.

5. Update on Technology Advancement Program (TAP)
• 2018 TAP Annual Report to be released before April 2019
• Overview of 2018 TAP accomplishments
• Discussed priorities for 2019 TAP
• Provided information about upcoming TAP projects expected to begin 2019
• Discussion about TAP Effenco project
- One attendee stated it would not be used at APM Terminals. Ports have not been given any indication that testing was not going forward with AMP Terminals as the current terminal project partner. Project is not part of the terminal’s plan for automation and will be testing an anti-idling device for currently manned diesel equipment.

- TAP funding from Ports is only for the acceleration of commercialization of technology, once proven by the testing it can be utilized by other terminal operators. TAP is not for early stage research & development.

- Technology has been used on different duty cycles and equipment, but current demonstration will be specifically for Port operations.

- One commenter suggested the Ports should use rely on information from demonstrations at other ports. Many of these technologies are being pioneered here, so very few other ports have tested ZE technology.

- Goal of all the testing is for technology providers to obtain CARB certification.

- One attendee stated that a diesel project is a distraction from the goal of ZE. Ports have to be cognizant of the need for emission reductions now/near future on the path to ZE. Anti-idling technology will provide emissions reductions quickly to the existing fleet of equipment and at a relative low cost, as the ZE technologies develop.

- Attendee wanted to know the schedule for the proposed 50-100 Truck Pilot. Ports are currently in the conceptual phase and schedule is dependent on securing funding with agencies.

- Discussion about Tier 3 ocean going vessels. Tier 3 is the currently cleanest available for ocean going vessel engines.

- One attendee wanted to know the status of rail.
  - VeRail project changed from a natural gas locomotive to a ZE locomotive, which has caused some delays.
  - A rail study update is under development with the Ports and is expected to be completed at the end of 2019.

6. Next Steps

- Provide percentage of private vs. public funding for various grant projects and TAP projects.
- Update on work being done on ship emissions
- Ports will be initiating discussions on development of the Clean Truck Program Rate, which will rely on information gather through the feasibility studies, rate collection study, and progress by the state on development of engine manufacturing standards. The ports are also working to secure a rate collection mechanism contractor. There will be public input during the process before going to the Boards around Fall of 2019.