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OXNARD

November 30, 2015

Sustainable Freight Action Initiative
Air Resources Board
Via email: freight@arb.ca.gov

Subject: California Sustainable Freight Action Plan: Pilot Project Application

To Whom It May Concern:

The Oxnard Harbor District is pleased to submit an application for the California Sustainable Freight Pilot Project Program. The Port of Hueneme is integral to California's freight transportation system and has been striving to improve operational emissions and overall sustainability. Recently, the Port installed shore-side power capacity so vessels docking in the port can plug in to an electric power supply and eliminate the need for running their diesel engines while in port. The system was installed to comply with California Air Resources Board's (CARB's) California At-Berth Ocean-Going Vessels regulation, which requires the use of land-based power systems to reduce pollution coming from ships, to prevent the emission of nitrogen oxides, and to reduce particulate matter into the air.

As the Port modernizes and continues to increase its freight capacity, it has identified an opportunity to grow freight efficiency by extending the current, shorter shore-side power cords so that they reach the larger vessels that are starting to service the Port. These vessels will then have increased access to the shore-side power supply when the upcoming berth deepening project. Oxnard Harbor District's Increased Shoreline Power Capacity Using Mobile Alternative Maritime Power (AMP) System project has the potential to significantly further reduce the Port's diesel and greenhouse gas emissions.

The following provides details regarding the project, in accordance with the California Sustainable Freight Action Plan: Pilot Project Format.

1. Name and contact information

Christina Birdsey
Director of Operations & Engineering
Port of Hueneme
Oxnard Harbor District
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2. Descriptive (under ten-word) project title

Increased Shoreline Power Capacity Using Mobile AMP System

3. Location of project

Port Hueneme
333 Ponomo Street
Port Hueneme, CA 93044-0608

Latitude: 34° 9'6.45"N
Longitude: 119°12'36.59"W

4. Concise two paragraph executive summary of project

In 2014, the Oxnard Harbor District initiated a Port modernization program. As part of the program and in accordance with CARB's At-Berth Ocean-Going Vessels regulation, the Port of Hueneme installed land-based shore-side power systems at Berths 1, 2, and 3. The shore-side connection allows electricity from the grid to power the berthed vessel so that the ship's diesel engines can be turned off. The premise of the program is that shore-side power nearly eliminates diesel emissions and reduces emissions of greenhouse gases and air pollutants that would otherwise be generated from vessels at berth running their diesel engines during the loading and unloading of freight. These reductions in emissions significantly improve air quality and reduce health risk from diesel and other air pollutant emissions near the Port.

Recently, the Harbor District initiated an overall modernization program to increase their cargo capacity, efficiency, and sustainability. As part of this program the Harbor District secured funding and began preparing for a berth deepening project that will allow the Port to offer access to larger more modern vessels. However, the newly installed fixed shoreline power system only extends a short distance and is inaccessible to the larger cargo vessels in the extended berths. Thus the recent State mandated air quality improvements made by the Port are at risk of being unused as the Port increases its freight capacity. Therefore, the Oxnard Harbor District has identified the Cavotec Mobile Alternative Maritime Power System as a cost effective remedy to extend the useful life of the existing shore-side power and continue to reduce diesel particulate and greenhouse gas emissions. The Oxnard Harbor District's proposed project is a cost effective solution to meet the requirements of CARB's At-Berth Regulation and the mission of Governor Brown's Executive Order B-32-15 that will ensure California makes progress toward a sustainable freight transportation system.

5. Detailed description of how the pilot project will incorporate advanced technologies, alternative fuels, freight and fuel infrastructure, and local economic development; and advance goals of improving freight efficiency, transitioning to zero-emission technologies, and increasing competitiveness of California's freight system



In 2014, the Oxnard Harbor District initiated a Port modernization program. The modernization program has been broken into many phases included Shore Power Phase I and II and the Intermodal Improvement Phase. Shore Power Phases I and II included the installation of fixed shore-side power systems. The shore-side power system was installed in accordance with CARB's At-Berth Regulation and was intended reduce GHG and air quality impacts associated with freight transportation by allowing at-berth ships to shut down their diesel auxiliary engines. CARB has recognized the Port of Hueneme for airborne toxic control measure for the diesel engines operated at-berth.

On October 29, 2015, the Department of Transportation's (DOT's) Transportation Investment Generating Economic Recovery (TIGER) competitive grant program was awarded to the Port of Hueneme for its Intermodal Improvement project. The award recognizes projects nationwide that will advance key transportation goals of safety, innovation, and opportunity. The intermodal improvement project includes deepening of Berths 1 and 2, strengthening Wharf 1, modernizing cargo handling infrastructure, and extending on-dock rails. The completed project will extend the useful life of the wharf up to 30 years, allow vessels with 36-foot drafts to serve the Port, and stimulate subsequent investment from private terminal operators. Implementation of the project will enhance economic competitiveness by allowing the Port to accommodate larger vessels and reducing shipping costs for the port's users. In addition, it is also expected to extend the useful life of the existing wharf and increase the volume of goods transiting the port via rail. Modernized cargo handling infrastructure is expected to reduce environmental impacts.

An unintended consequence of the Intermodal Improvement is that the existing Shore Power system will not reach the larger vessels accessing the deepened port. Therefore, the Oxnard Harbor District has identified the Cavotec Mobile Alternative Maritime Power System as a cost effective remedy to extend the useful life of the existing shore-side power. The proposed project will retrofit/or complement the existing shorter power cords to facilitate the larger vessels. It will further reduce the Port's greenhouse gas emissions at the same time as it allows the larger vessels access to the port. This increases freight efficiency and reduces the cost for the port's users. The mobile AMP, self-propelled Cavotec power caddy incorporates special, flexible rubber cables, can be transported easily, and is easily deployed and activated once a ship has posted. The AMP is a cold ironing system that allows ships to turn off their engines when in Port, and plug into shore-side electricity supply, thus helping to bring cleaner air to ports and surrounding communities. Specifications have been attached.

6. Estimated cost for implementation and existing funding commitments (include any funding limitations or constraints) by stakeholder and amount

The mobile AMP system is an integral part of the Harbor District's modernization program and is expected to cost \$150,000 per unit. The modernization program has been broken into many phases included Shore Power Phases I and II and the Intermodal Improvement Phase. Shore



Power Phase I is completed and Phase II will be completed by the end of December 2015. The Intermodal Improvement Phase has just recently been initiated. The mobile AMP system is intended to be incorporated into the Deepening Phase. Currently, the Oxnard Harbor District has committed funds and received funds and funding commitments from various providers throughout the modernization program. Funding for each Phase is detailed below:

Shore Power Phase I:

- Approximately \$6M from Oxnard Harbor District
- Approximately \$4.5M from the South Coast Air Quality Management district-Prop 1B Goods Movement Emissions Reduction
- Approximately \$1.8M from New Market Tax Credits
- Approximately \$250,000 from Ventura County Air Pollution Control District

Shore Power Phase II:

- \$1.7M from Congestion Mitigation and Air Quality Improvement (CMAQ)
- \$500,000 from Diesel Emission Reduction Act (DERA) with \$1.7M Oxnard Harbor District DERA match.

Intermodal Improvement Phase:

- \$7.5M from US Army Corps of Engineers with \$2.5M Oxnard Harbor District match
- \$12.3M from Department of Transportation's Investment Generating Economic Recovery (TIGER), with \$5.5M Oxnard Harbor District TIGER match
- \$1.5M from US Economic Development Administration (EDA) with \$1.5M from Oxnard harbor District as EDA match

These commitments have made it necessary for the Port to extend its capacity to provide shoreline power and thus it requests further funding from the Air Resources Board.

7. Timeline

The project is scheduled to begin immediately after the receipt of funding. Ideally, the project would start between March and April. Project implementation at Berths 1 and 2 should be completed in about two-three years, including engineering, construction and then the Port deepening.

8. Means for measuring progress toward meeting goals over time

The following key performance indices will be established to track the progress towards meeting the following goals:

1. Increase in freight
2. Operation hours (energy usage)
3. Greenhouse gas and diesel particulate emissions reduction
4. Cost reduction



9. Description of the potential roles each of the interagency partners could provide to support the project's implementation

Oxnard Harbor District will manage and oversee the purchase and installation of the Increased Capacity for Shoreline Power project. Oxnard Harbor District will work with CARB and the VCAPCD to track and report the air GHG and air quality benefits of the project.