October 7, 2019

Mary Nichols
Chair
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

Subject: Proposed Fiscal Year 2019-20 Funding Plan for Clean Transportation Incentives for Low Carbon Transportation Investments and the Air Quality Improvement Program

Dear Chair Nichols:

Please accept these comments from Environmental Defense Fund on the Proposed Fiscal Year 2019-20 Funding Plan for Clean Transportation Incentives. EDF is a national non-profit dedicated to finding science-based solutions to the local and global environmental problems. One of the problems EDF focuses on is pollution from medium and heavy duty transportation and the solutions needed to address it.

While goods movement is a critical component of our state and national economy, traditional operation of goods-movement has long been a source of asthma-causing NOx and other harmful chemicals, as well as the global warming pollutant CO_2. When directly fueled by oil and gas, it can be the source of methane, another climate-change forcing gas. However, modern technology has increasingly unlocked strategies that enable goods movement to be conducted using zero emissions equipment that do not impose negative impacts on human and environmental health. It is in the pursuit of these solutions that makes CARB's focus in the funding plan so important.

EDF therefore broadly supports the incentives for clean transportation outlined in the "Proposed Fiscal Year 2019-20 Funding Plan for Clean Transportation Incentives for Low Carbon Transportation Investments and the Air Quality Improvement Program." In particular, EDF calls out support for certain aspects of the plan to fund critical zero-emission projects at ports, including:

- *The Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)* is an important program necessary for the continued cleanup and transformation of California's goods movement system and associated air quality emissions, as well as support of its fleets. We support the $142 million identified for this program, and it's robust funding going forward.

- *The South Coast Air Quality Management District*'s (SCAQMD) demonstration of 44 battery-electric, plug-in hybrid electric, and range-extending Low NOx Trucks at the ports of LA, Long Beach, San Diego, and Oakland. This project, budgeted at $24 million, leverages $16 million for a project total of $40 million (page 81).

- *SCAQMD*'s project to create a zero-emission goods movement system connecting the Ports of Long Beach and Los Angeles to four freight handling facilities in disadvantaged communities using 23 Heavy-duty battery electric trucks (HDBET), 29 Off-road battery electric tractors, 58 Non-proprietary Level 2 and DC fast chargers, and1.9 million kWh annual solar energy. This project, budgeted at $44.8 million, leverages $45M for a project total of $90M (page 84).

- *The Port of Long Beach*'s utilization of 102 pieces of zero-emissions terminal equipment and trucks at three California seaports; including development of a near zero-emissions tugboat; two American-flagged Jones Act container vessels with clean engines; and advance workforce development programs. This project is budgeted at $50 million, and leverages $52M for a project total of $102M (page 83).

- *Los Angeles Harbor Department (Port of LA)*'s plan to bring multiple zero- and near zero-emission technologies installed at the port. This includes microgrid, battery storage, and energy management systems to power the various port infrastructure components. Budgeted at $15M, this project leverages $11M for a project total of $26M (page 81).

- *In addition,* we support the staff's proposed $40 million allocation for large-scale deployment of zero-emission drayage trucks and cleaner ocean-going vessels (page 85).

EDF encourages the board to move forward with the adoption of these elements of funding plan in the ports of LA and Long Beach, in addition to other elements, because these two facilities are the single largest contributor of pollution in the Los Angeles area, with 40% of all goods entering the United States travelling through them. As a result, investment in electrification in these ports help cut pollution at home while also helping scale the adoption of zero-emissions transportation technology at other ports in the state and the country. Though the initial investments in electric trucks is currently higher than diesel for many applications in the near term, soon the total cost of ownership is will be lower and the state investment will pay dividends in the form of market maturation and pollution reduction.

Importantly, switching to electric fueling will help the people living around ports breathe healthier air. Right now, ARB estimates that port air pollution creates cancer risks exceeding 500 in 1 million for tens of thousands of residents. Research we conducted near the Port of Oakland, for example, has shown that living in areas with the most elevated levels of pollution increases heart attack risk in the elderly by 40 percent, similar to a history of smoking.[1] As those trucks line up and often idle along the nearby roads and freeways, they also emit pollutants including black carbon. In Oakland, sensors we deployed on the busy Maritime Street along the Port boundary measured black carbon concentrations that averaged 200 percent higher than sensors placed upwind.[2] This cannot continue.

Of course, EDF acknowledges that the Board is also making decisions around whether to fund near-zero technology as well in this plan. We agree that, notwithstanding the fact that natural gas engines can reduce NOx and black carbon emissions to a certain degree when compared to diesel counterparts, the maturity of that market and the fact that the state has limited investment dollars means that it should direct its investments towards electrification rather than these low-emission technologies. Vehicles

[1] https://www.edf.org/airqualitymaps/oakland
[2] https://www.edf.org/airqualitymaps/oakland/study-shows-how-pollution-changes-over-space-and-time

without tail-pipe emissions result in less GHGs, can help to integrate renewables, and are generally more in line with the state's goals to reduce our contribution to global warming.

For these reasons, we support funding for electrification of drayage trucks and operations around all ports, with the ports of LA and Long Beach being major examples for the port industry and key opportunity to promote human health and clean technology. Due to the fact that the economics around drayage truck conversion are some of the most challenging for electrification, CARB's provision of this funding is extra-critical at this time.

Thank you,

Lauren Navarro

Senior Policy Manager