State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

MEMORANDUM

To: CHAIR AND COMMISSIONERS
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: May 14-15, 2026

From: STEVEN KECK, Chief Financial Officer

Reference Number: 2.1s.(5), Action Item

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Division of Local Assistance

Subject: **SENATE BILL 1 TRADE CORRIDOR ENHANCEMENT PROGRAM – PROJECT SCOPE AMENDMENT – GREEN POWER MICROGRID PROJECT – HARBOR FACILITIES PROJECT**
RESOLUTION TCEP-P-2526-22

ISSUE:

Should the California Transportation Commission (Commission) approve a project scope amendment for the Senate Bill 1 (SB 1) Trade Corridor Enhancement Program (TCEP) Green Power Microgrid Project – Harbor Facilities Project (PPNO 2090S), in Alameda County, to reduce the scope?

RECOMMENDATION:

The California Department of Transportation (Department) recommends that the Commission approve this project scope amendment for the SB 1 TCEP Green Power Microgrid Project – Harbor Facilities Project (PPNO 2090S), in Alameda County, to reduce the scope.

DISCUSSION:

At the time the project was approved in Cycle 3, the SB 1 TCEP Green Power Microgrid Project was comprised of two components: PPNO 2090S – Harbor Facilities Project and PPNO 2090T – Seaport Terminals.

At adoption, the scope of work for PPNO 2090S (Harbor Facilities) proposed to construct 30 heavy-duty Direct Charge (DC) charging ports, along with solar and energy storage system capabilities to create a multi-functional and modern electrical grid at the Port of Oakland (Port). The scope of work for PPNO 2090T (Seaport Terminals) proposed to construct 115 heavy-duty DC charging ports. These electrical infrastructure systems support zero-emissions equipment and operations that are essential to decarbonizing the Seaport and deliver air quality benefits in support of climate goals.

The Department is now requesting a project scope amendment to remove the solar power component and battery storage system from the Harbor Facilities project, while continuing to deliver 30 heavy-duty DC charging ports. There are no changes to the Seaport Terminals project. These changes are due to an unforeseen increase in overall project cost. Since the award of the SB 1 TCEP grant, Port staff have been engaged in a rigorous design process which has further refined the original project cost estimates since the project components were formulated nearly four years ago. Due to a number of relevant factors, including international tariffs, supply chain constraints, and increased demand for electrical infrastructure components, the projected cost has doubled from the original estimate. Therefore, by removing the solar power and battery storage system, the project cost is significantly reduced, and the project will be able to deliver the remaining 30 heavy-duty DC charging ports.

Although this scope amendment is reducing the project scope for the Harbor Facilities project, the originally proposed 145 heavy-duty DC charging ports will still be delivered by the two projects in total. The SB 1 TCEP funding will be reduced by $3.632 Million and the project schedule may accelerate with the removal of the solar components which are secondary benefits. The funds will be deprogrammed through a program amendment at a future Commission meeting.

ANALYSIS:

The Department's analysis has concluded that the unforeseen increase in overall project cost is beyond the control of the applicant. The revised scope has no impact on the project schedule or the air quality benefits modeled in the project application, and will deliver the same number of chargers as originally proposed.

ANALYSIS RECOMMENDATION:

Based on the Commission's scope change guidance, as well as the analysis of the proposed scope changes, the Department has determined that this scope amendment will provide the same outcomes as originally proposed, with a reduction in project outputs. Therefore, the Department supports the proposed scope amendment for this project.

BACKGROUND:

SB 1 TCEP Guidelines stipulate that any agency implementing a project, present scope changes to the Department in a timely manner. The Department will make a recommendation to the Commission for final approval of this scope change with the understanding that scope changes that are significant and result in a decrease in project benefits may result in either a reduction of SB 1 TCEP funds or removal of this project from the program.

Attachment

Port of Oakland - Green Power Microgrid Project – Cycle 3

Date Analysis Completed: 4/1/2026 CTC Meeting: May 14-15, 2026

Project Information

Project Title: **Port of Oakland – Green Power Microgrid Project**

District: 4

PPNO:
2090S – Harbor Facilities Complex
2090T – Seaport Terminals

Cycle: 3

Nominating Agency: Caltrans & Metropolitan Transportation Commission

Implementing Entity: Port of Oakland

Funding Program(s): TCEP

Submitted Documents

☒ **Scope Change Request**

☐ **Original ePPR**

☒ **Revised ePPR**

Additional Information: The proposed scope modification request includes an updated ePPR, revised Benefit Cost Analysis and justification that demonstrates the removal of originally proposed elements for local renewable power generation and energy storage that are not as critical today as they appeared to be at the time of project application and approval. This scope reduction will provide relief to the overall project cost which has risen significantly since adoption, and aid in the Port of Oakland's intent to deliver the same core benefits of the original project.

Finally, based on the due date for a June 2025 construction allocation, the Port has awarded this Cycle 3-TCEP project (PPNO 2090S and PPNO 2090T). The Port awarded the two bid package contracts associated with this TCEP project at its Board Meeting on March 26, 2026. For PPNO 2090S, the restructured bid showed the base bid for 30 EV chargers, and the Battery Energy Storage System (BESS) and solar components listed are listed as additive alternatives when funding becomes available.

Summary

Reduction in Outputs? Yes: ☒ No: ☐

Reduction in Benefits? Yes: ☒ No: ☐

Increase/Reduction in Total Project Cost?

Increase: ☒ Reduction: ☐ No Change: ☐

Increase/Reduction in SB 1 Funds?

Increase: ☐ Reduction: ☒ No Change: ☐

Do all partners and funding entities approve of the proposed scope change?

Yes: ☒ No: ☐

Does the SB 1 Office recommend?

Yes: ☒ No: ☐

Original Scope

The Cycle 3 Port of Oakland's Green Power Microgrid Project is divided into two packages for the construction phase, as follows:

1. PPNO 2090S - Harbor Facilities Complex. The project as approved includes:
   - 30 heavy-duty EV chargers, plus associated substation work
   - 1-Megawatt (MW) of solar power generated on-site, via photovoltaic panels located on the rooftop of the main building and on a new canopy to be built specifically for the purpose
   - 6.5 MW of storage via a Battery Energy Storage Systems (BESS)
2. PPNO 2090T – Seaport Terminal. The project as approved includes:
   - 115 heavy-duty EV chargers plus associated substation work to be installed at various locations within the seaport.

As originally programmed, the Project will reduce emissions, toxic air pollutants, and noise pollution associated with goods movement in the vicinity of the Port (including in the neighboring disadvantaged community of West Oakland), increase the Port's global competitiveness by introducing operational efficiencies (including the Port's role as a primary and preferred export gateway for California agricultural goods), increase the Port's resilience with increased and modernized power supply, storage and ability to withstand potential power outages, reduce accident risk by upgrading and modernizing electrical infrastructure, provide a back-up renewable energy source of shore power for ships berthed, and reduce congestion by limiting the need for offsite trips necessary only for refueling.

Original outputs in ePPR (PPNO 2090S)

Project Outputs			
Category	Outputs	Unit	Total
ZEV infrastructure	Number of DC charging ports	Each	30
ZEV infrastructure	Solar Capacity	MW	1
ZEV infrastructure	Energy Storage System - Capacity	MWh	6.5

Proposed Scope

The proposed scope modification is to remove the solar and BESS components from the scope of PPNO 2090S. The Port is not proposing any changes to the scope of PPNO 2090T.

The Port will still build 145 heavy-duty EV chargers throughout the seaport, plus all associated electrical infrastructure/substation work to provide power to the chargers.

Outputs in new ePPR (PPNO 2090S):

Project Outputs			
Category	Outputs	Unit	Total
ZEV infrastructure	Number of DC charging ports	Each	30

Outputs in original ePPR (PPNO 2090T):

Project Outputs			
Category	Outputs	Unit	Total
ZEV infrastructure	Number of DC charging ports	Each	115

Reason/Justification

The Port of Oakland (Port) originally envisioned and conceptualized the Green Power Microgrid Project in late 2021, in consultation with regional and state partners, including the Metropolitan Transportation Commission and the California Department of Transportation (Caltrans).

The project was intended to support the ability of the Port to provide clean energy and heavy-duty charging capacity at the seaport to meet the demands of zero-emissions equipment users, in addition to modernizing and upgrading the Port's electrical distribution network and last-mile connections.

However, with the recent enactment of international tariffs, supply chain constraints, and increased demand for all manner of electrical infrastructure components (which is consistent with the increased pace of construction of data centers), the total project cost has risen approximately $48 million from the time of preliminary design to award.

The Port cannot accommodate the entirety of this increase without significantly impacting and/or delaying (or eliminating) other equally critical infrastructure projects that are required to maintain the Port's competitive position as an international trade gateway.

The bid items with significant increases are the scoped electrical components (Solar and BESS) under PPNO 2090S:

- Replacing and upgrading the roof of the Port's Harbor Facilities Center to support solar panel installation
- Building a 20-foot canopy to support more solar capacity (non-rooftop)
- Photovoltaic solar panels
- Batteries
- Electrical equipment: switchgear, transformers

For example, at the time of the original estimate the construction for approximately 1 MW of local solar generation in the original TCEP application which was $4.5 million. Now, based on the construction bids, the construction for the solar component is $16.8 million.

As a result of these significant cost increases for the elements listed above, related to the solar and BESS components under PPNO 2090S, Port staff reevaluated the original scope of the project and have determined they are no longer essential to the core benefits of the project and can be removed at this time. With this scope reduction, the Port agrees to a commensurate reduction in TCEP funding of $3,632,000.

The Port will continue seeking opportunities for additional local/regional goods movement emissions reductions funding to be able to incorporate these upgrades into its electrical distribution system. If successful, the Port would look to reincorporate BESS first if funding becomes available.

Impact to Cost:

With this scope change, to remove the solar and BESS components under PPNO 2090S, the bid cost is $29,791,00. This is an increase of $6,101,000. For the new project, the total cost increase for construction of PPNO 2090S of $6,101,000, the Port intends to absorb this to demonstrate the importance of the Project and the Port's commitment to powering a zero-emissions future. ***However, with this reduction in scope that will also be a proporational reduction in TCEP funding of $3,632,000; reducing the programmed amount of TCEP for this project from $16,507,000 to $12,875,000.***

Revised Project Cost for CON for PPNO 2090S

Funding Type	Original Estimate/Programmed	At time of Bid/ With Scope Change
Local Funding – Port Funds	$7,284,000	$17,017,000
TCEP	$16,507,000	$12,875,000
Total	**$23,791,000**	**$29,892,000**

The Port will still be delivering the same number of heavy-duty electric vehicle chargers (145 total) and delivering the same core benefits (emission reductions) as originally approved, as all of the project benefits are associated with the chargers. The total number of chargers remains unchanged, the emissions benefit and noise pollution benefit stay the same, even if solar and BESS components are removed, as the on-site solar and battery storage are not essential to provide clean power to the chargers.

Impact to Schedule:

The proposed scope change would have no quantifiable impact on the project schedule, although it might accelerate completion of PPNO 2090S. The reason it would have no impact is that the Port was planning to build the solar components in parallel with the EV charger and substation work. The BESS units are long lead time items, but again, the Port anticipated ordering them at the beginning of the project.

This TCEP project has already been designed, advertised, and bid via a competitive public procurement process. The Port awarded the two bid package contracts for PPNO 2090S and 2090T at its Board Meeting on March 26, 2026. This is within the deadline to award, based on the June 2025 construction allocation from CTC.

Therefore, the Port is not requesting any change to allocation milestones

Impact to Outputs

There is a reduction in outputs as the Port is requesting to remove the solar and BESS components of the Project, but is still committed to construction of the originally planned 145 EV chargers, which is not changing.

The reason for the removal of the solar and BESS components is a result of the realities of current bids and a significant increase in the total project costs to deliver the full charging and electrical distribution benefits described in the original application. In this current environment, these components have become too expensive and are outside the Port's control. In addition, these components are not essential to achieve the core project benefits of emission reductions.

The Port remains committed to powering a zero-emissions future and as a result, restructured its bid as follows for PPNO 2090S:

1. Base Bid: for 30 EV Chargers plus substation and associated electrical infrastructure to support the chargers
2. Additive Alternate A: for all Battery Energy Storage System components
3. Additive Alternate B: for all solar components (new roof, new canopy, and photovoltaic panels)

This Port authorization, allows the project to proceed with either or both additive alternatives, subject to funding and financial feasibility. As mentioned earlier, the Port will continue to seek opportunities for additional local/regional goods

movement emissions reductions funding to help close the funding gap to complete the additive alternatives.

Outputs from original ePPR PPNO 2090S:

Project Outputs			
Category	Outputs	Unit	Total
ZEV infrastructure	Number of DC charging ports	Each	30
ZEV infrastructure	Solar Capacity	MW	1
ZEV infrastructure	Energy Storage System - Capacity	MWh	6.5

Revised Outputs from proposed scope change PPNO 2090S

Project Outputs			
Category	Outputs	Unit	Total
ZEV infrastructure	Number of DC charging ports	Each	30

Impact to Benefits

The methodology used to estimate the impacts was kept consistent with the original application. The emissions benefits were not revised, since they were related to the number of EV chargers, which is not changing. The job's benefit was re-estimated using the same multiplier as the previous, but with the higher project cost. The BCR was updated for the higher project cost, but assuming solar and BESS were removed (so their O&M costs were removed).

As a reminder, the project outcomes from the TCEP project are split into the two packages.

- PPNO 2090S for Harbor Facilities only lists the BCR as an outcome.
- PPNO 2090T for the 115 chargers at other locations within the seaport lists the emission reductions and jobs as outcomes.

This discussion includes all of the outcomes because they were all part of the original grant application, even though only PPNO 2090S has a proposed scope reduction.

Emissions: All of the emission reduction benefits for the TCEP package were due to diesel equipment being converted to electric and using the 145 heavy-duty chargers that the Port is building. Since there is no change to the 145 chargers, there is no change to the emission reductions that will be achieved. This analysis was not revised.

Jobs Created: The estimate for the number of jobs created is based on applying a multiplier of 0.0000133 to the total project cost. Since the project cost

increased so much even with the proposed scope reduction, the number of jobs increased by 440.

BCR: The BCR for the project decreases from 2.7 to 1.7 due to the increased cost of the project. Noteworthy is that if we were to use the whole project cost, with no reduction of scope, the BCR would be reduced to 0.72, which means the costs outweigh the benefits that would be achieved

Indicator/Measure	Unit	Originally Approved Scope	With Proposed Scope Reduction	Change
Particulate Matter 2.5	Tons	-94	-94	No change
Particulate Matter 10	Tons	-48	-48	No change
Carbon Dioxide	Tons	-1,102,208	-1,102,208	No change
Volatile Organic Compounds	Tons	-379	-379	No change
Sulphur Oxides	Tons	-10.4	-10.4	No change
Carbon Monoxide	Tons	-1,404	-1,404	No change
Nitrogen Oxides	Tons	-3,465	-3,465	No change
Jobs Created	Number	773	1,213	+440
Benefit Cost Ratio (BCR)	Ratio	2.7	1.7	-1

Summary

This project was intended to support the ability of the Port to provide clean energy and heavy-duty charging capacity at the seaport to meet the demands of zero-emissions equipment users, and secondary to modernizing and upgrading the Port's electrical distribution network and last-mile connections.

With this scope change, the primary benefit of providing clean energy and heavy-duty charging capacity at the Port via the 145 charging EV port is still planned and unchanged. The secondary benefit, due to the significant rising costs of storing power via Solar and BESS components, is being removed.

The Project will still reduce emissions, toxic air pollutants, and noise pollution associated with goods movement in the vicinity of the Port (including in the neighboring disadvantaged community of West Oakland), increase the Port's global competitiveness by introducing operational efficiencies (including the Port's role as a primary and preferred export gateway for California agricultural

goods), and reduce congestion by limiting the need for offsite trips necessary only for refueling.

And although there is a scope reduction to the secondary benefits in the outputs for PPNO 2090S, the original intent to provide clean energy and heavy-duty charging capacity benefits remains the same. In addition, when and if funding becomes available, the Port is committed to the addition of the BESS and solar components for this project, as was outlined in the award bid.

Finally, with this scope reduction it will result in a commensurate reduction in TCEP funding of $3,632,000; reducing the programmed amount of TCEP for this project from $16,507,000 to $12,875,000.