

ALAMEDA-CONTRA COSTA TRANSIT DISTRICT



STAFF REPORT

MEETING DATE: 9/14/2022

Staff Report No. 22-461

TO: AC Transit Board of Directors
FROM: Michael A. Hursh, General Manager
SUBJECT: Permission to Solicit Bids to Upgrade the Hydrogen Fueling Infrastructure (D4)

ACTION ITEM

AGENDA PLANNING REQUEST: ☐

RECOMMENDED ACTION(S):

Consider authorizing the release of an Invitation for Bids (IFB) and/or Request for Proposals (RFP) to upgrade the hydrogen fueling infrastructure at the Oakland (D4) Division.

STRATEGIC IMPORTANCE:

Goal - Environmental Improvement
Initiative - Zero Emission Programs

Authorizing these solicitations will support the continued implementation of AC Transit's Zero-Emission Bus (ZEB) Transition Plan by increasing the capacities and throughputs of the hydrogen fueling infrastructure at the Oakland (D4) Division.

BUDGETARY/FISCAL IMPACT:

This hydrogen system upgrade project will be entirely funded by the California Energy Commission (CEC) Zero-Emission Transit Fleet Infrastructure Deployment Grant and a Bay Area Air Quality Management District (BAAQMD) Carl Moyer Program grant.

BACKGROUND/RATIONALE:

On June 22, 2022, the Board approved the AC Transit Zero-Emission Bus Transition Plan. The Transition Plan provided for an increase in Fuel Cell Electric Bus (FCEB) capacity at the Oakland (D4) Division to at least 75 buses per daily fueling window.

In order to achieve that level of capacity, upgrades to the existing hydrogen station infrastructure must be made and capacities expanded with the following upgrades.

1. The quantity of liquid hydrogen storage needs to be increased to 25,000 gallons with a larger tank. This will provide for the increased throughput and minimize the number of hydrogen deliveries AC Transit needs to take in normal operation;

2. The current vaporize-compress-store process needs to be changed to a liquid cryogenic pumping model utilizing pressure build vaporizers and two (2) dual cylinder cryogenic liquid pumps. The current IC-50 compressor will be decommissioned;
3. The fuel island needs to be expanded in size to accommodate two (2) additional dispensers and;
4. The programable logic controller (PLC) needs to be modernized to provide for simultaneous fueling at all four (4) dispensers.

These improvements include the option to add an additional liquid hydrogen storage tank and two (2) more liquid pumps in the future, if additional capacity should become necessary. While federal, state, and local funding programs are available for ZEB infrastructure, staff highly recommends expediting capital projects to help reduce the overall cost of the ZEB Transition Plan.

ADVANTAGES/DISADVANTAGES:

The advantage of authorizing these solicitations is that it will allow staff to continue moving forward with the timely implementation of the Board approved ZEB Transition Plan. Contractual agreements that result from these solicitations will achieve both the quantity and timeline detailed in the ZEB Transition Plan. Staff are unable to identify any disadvantages to the issuance of these solicitations.

ALTERNATIVES ANALYSIS:

The only alternative to issuing these solicitations now would be to delay or cancel the hydrogen infrastructure project until a later date. Staff does not recommend a cancellation or delay in the project as it will prevent the District from attaining the milestones in the ZEB Transition Plan and taking advantage of available funding.

PRIOR RELEVANT BOARD ACTION/POLICIES:

SR 20-437 Application for CEC Zero-Emission Transit Fleet Infrastructure Grant
SR 21-215 Application for funding agreements with the Bay Area Air Quality Management District
SR 22-319 AC Transit ZEB Transition Plan
BP 465 - Procurement Policy

ATTACHMENTS:

None

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