

**CALIFORNIA ALTERNATIVE ENERGY AND
ADVANCED TRANSPORTATION FINANCING AUTHORITY**

*Request to Approve Project for SB 71 Sales and Use Tax Exclusion (STE)*¹

**ALAMEDA-CONTRA COSTA TRANSIT DISTRICT
Application No. 11-SM003**

Tuesday, January 25, 2011

Prepared By: *Heather Williams*

SUMMARY

Applicant – Alameda-Contra Costa Transit District

Location – Emeryville, Alameda County

Industry – Hydrogen Fuel

Project – Hydrogen Production and Fueling Demonstration Station

Value of Qualified Property – \$5,387,950

Estimated Sales and Use Tax Exclusion Amount² – \$490,303

Estimated Net Benefits – (\$200,090)

Application Score –

Fiscal Benefits Points:	559
<u>Environmental Benefits Points:</u>	<u>33</u>
Net Benefits Score:	592

<u>Additional Benefits Points:</u>	<u>0</u>
Total Score:	592

Staff Recommendation – Approval upon a finding that the Project is in the public interest and advances the purpose of the Program pursuant to California Code of Regulations Section 10033(C)(6).

¹ All capitalized terms not defined in this document are defined in the Program’s statute and regulations.

² This amount is calculated based on the average statewide sales tax rate of 9.1%.

THE APPLICANT

The Alameda-Contra Costa Transit District (“AC Transit” or “Applicant”) was founded in November 1956 in Oakland (Alameda County) where it is still located today. AC Transit is a “Special District” under Public Utilities Code §24501 through §27509. AC Transit is the third-largest public bus system in California, serving 13 cities and adjacent unincorporated areas in Alameda and Contra Costa Counties with over 61 million passengers annually and a fleet of more than 600 buses. AC Transit’s mission is to provide safe, convenient, courteous and reliable transit service.

The Board of Directors of AC Transit are:

- Elsa Ortiz, President, Ward 3
- Joe Wallace, Ward 1
- Greg Harper, Ward 2
- Mark Williams, Ward 4
- Jeff Davis, Ward 5
- Joel Young, Director-at-Large
- H.E. Christian Peeples, Director-at-Large
- Mary V. King, Interim General Manager

THE PROJECT

Background

According to the Applicant, AC Transit has been an advocate of fuel cell technology since 1999, organizing a team of public and private partners to develop commercially viable zero-emission solutions for heavy-duty transportation applications. Among AC Transit’s private development partners are international companies such as United Technologies, Van Hool, Siemens, EnerDel, Chevron, Linde, Air Products, and Proton Energy. AC Transit’s three first-generation, hydrogen fuel cell buses have been in service since early 2006, traveling more than 250,000 miles and carrying over 700,000 passengers. Although these buses are 8,000 pounds heavier than a comparable diesel bus, AC Transit indicates they have realized on average 60% better fuel economy.

In the next phase of the plan – now valued in excess of \$54 million – AC Transit will be attempting to demonstrate and prove fleet-readiness. It will be partnering with the San Francisco Bay Area’s bus transit operators (San Francisco Muni, Samtrans in the Peninsula, Golden Gate Transit in Marin, and Valley Transportation Authority in San Jose) to establish a regional program, representing the interests of agencies with a combined fleet of more than 2,500 buses. With the arrival of 12 next-generation fuel cell buses in 2010 and early 2011, each weighing 5,000 pounds less than the first-generation buses, and utilizing more advanced hybrid, fuel cell, and battery systems, this coalition of transit partners is optimistic that it will be able to demonstrate that fuel cell technology can lead to a clean, sustainable future for public transport and the transportation industry.

Project Details

Two, new, state-of-the-art hydrogen fueling stations are being built in Emeryville and Oakland to demonstrate faster fueling to match large fleet operating requirements. This Application relates specifically to the Emeryville Facility. The Emeryville station will have a total dispensing capacity of 420 kilograms per day of gaseous hydrogen, able to fuel 12 buses consecutively, each within five to six minutes, and upwards of 20 cars per day. The first 60 kilograms of fuel will be supplied by an onsite proton exchange membrane (PEM) electrolyzer provided by Proton Energy. The electricity needed to power this electrolyzer will come from renewable energy, largely supplied by a 700 kilowatt solar energy system that AC Transit is installing at its Central Maintenance Facility and Seminary Operating Division, with funds from the American Reinvestment and Recovery Act, and the Federal Transit Administration’s Transit Investments for Greenhouse Gas and Energy Reduction program (TIGGER). The remainder of the fuel needed to operate this station will be delivered as liquid hydrogen supplied by AC Transit’s development partner, Linde. This station will also feature Linde’s ionic compression system that uses ionic fluid to compress hydrogen gas up to 5,000 pounds per square inch (“psi”) (for buses). A second stage compression system at this location, designed by Linde, will compress and dispense hydrogen into cars at 10,000 psi.



Rendering of Bus and Car Fueling Station with Solar System

ANTICIPATED COSTS OF QUALIFIED PROPERTY

The anticipated Qualified Property purchases are listed below:

Compression System Package	\$1,517,375
Dispensing Package	472,625
Proton PEM Electrolyzer	796,000
Fleetwatch to control bus dispenser and record fueling data	17,833
Broadlux Gate Controller	7,602
700 kW Solar Collectors and Racking System	2,232,937
700 KW Solar Inverters	343,578
Total	<u>\$5,387,950</u>

Note: The Qualified Property purchases reported in the Application and shown here in staff's report are estimated costs. At the termination of the conveyance/reconveyance agreement a finalized Project equipment list will be prepared detailing the value of the Project equipment conveyed and reconveyed and detailing the actual tax benefit realized pursuant to Revenue and Tax Code Section 6010.8. Variations from the costs shown in the Application and in this report may occur prior to the closing due to increased costs of certain components of the Project from original estimates, and other reasons. In addition, such costs may vary after closing due also to increased costs, as well as common design and equipment modifications during construction, differences in equipment due to future changes in law or regulation or for other reasons.

TIMELINE

A construction contract has been awarded, and construction work commenced in December 2010. AC Transit's technology vendor, Linde, has completed the production and assembly of the hydrogen supply system, which is due to be commissioned in March 2011. A construction contract has also been awarded for the solar system which will provide energy for the Project. Construction work started in early January 2011, and the system will be fully installed and commissioned by April 30, 2011.

PROJECT EVALUATION

NET BENEFITS

The total cost of the Qualified Property purchases is anticipated at \$5,387,950 and the total net benefits are valued at -\$200,090 for the Project. **The Project received a Total Score of 592 which does not meet the required 1,000 point threshold, and a total Environmental Benefits Score of 33 which does not meet the 100 point threshold under the Program.** The Applicant's relatively low score reflects the fact that the output of this phase of the Project will not be a commercial product capable of producing fiscal and environmental benefits, but rather a demonstration technology with significant potential to create substantial environmental benefits, as well as additional benefits as explained further in the section "Finding of Public Interest" below. In addition, as a government entity, AC Transit does not earn a profit or pay income taxes, which are a source of the program's fiscal benefit calculation for most private sector projects.

- A. Fiscal Benefits (559 points).** The net present value of the total fiscal benefits over the lifetime of the Qualified Property is derived from the Applicant's sales taxes, personal income taxes paid by the firm's employees, firm taxes on profits, property taxes and other indirect fiscal benefits of the Applicant which amounts to \$274,173 resulting in a Fiscal Benefits score of 559 points for the Project.
- B. Environmental Benefits (33 points).** The Project results in \$16,040 of total pollution benefits over the life of the Facility resulting in an Environmental Benefits Score of 33 points for the Project. These environmental benefits derive from the efficiency gains of a hydrogen fuel cell powered bus relative to a conventional diesel powered bus. However, the relatively low score is due to the fact that a significant

amount of energy is required to produce and prepare hydrogen fuel for use in vehicles. As a demonstration project rather than a fully market-ready technology, it is reasonable to expect that the initial environmental benefits and efficiency gains will be modest.

C. Additional Benefits (0 of 200 points). Applicants may earn up to 200 additional points for their Total Score. The Applicant submitted information and received zero additional points.

- 1. Permanent Jobs (0 of 40 points).** The Applicant’s Project will support a total of 1 job at its Facility. CAEATFA estimates that this job is not attributable to a marginal increase in jobs created due to the approved STE. Zero points were awarded because the marginal increase in jobs created does not meet the required threshold.
- 2. Construction Jobs (0 of 20 points).** The Applicant’s Project will support a total of 5 construction jobs at its Facility. CAEATFA estimates that approximately 1 of these jobs will be attributable to a marginal increase in jobs created due to the approved STE. Zero points were awarded because the marginal increase in jobs created does not meet the required threshold.

FINDING OF PUBLIC INTEREST

A. Total Score and Environmental Benefits Evaluation.

AC Transit earns 33 points toward the 100 point minimum threshold value in its Environmental Benefits Score and 559 points toward the 1,000 point minimum threshold value in its Total Score under the Program evaluation criteria.³ This is due, in part, to the fact that the Project is being sponsored by a public agency that does not pay corporate income tax and does not seek a profit from the resale of the gaseous hydrogen fuel it will be producing. California Air Resources Board (“CARB”) staff has indicated that this Project alone will result in a net reduction in energy of 3,285 megawatt hours per year, a reduction in green house gases of 845 tons per year and the elimination of 18,517 pounds of Nitrogen Oxide and 452 pounds of particulates annually. According to the Applicant, if the technology which is the focus of this Application is successfully commercialized, it will advance hydrogen fuel cell technology toward commercial viability in the public transit industry specifically, as well as the transportation industry as a whole, with the potential of entirely eliminating carbon emissions and reliance on petroleum fuels. Therefore, it is expected that the AC Transit Project will ultimately create net positive benefits for the State.

In addition, staff believes the Project is in the public interest and advances the purpose of the SB 71 Program. AC Transit is a public bus system with a mission to “provide safe,

³ 4 CCR 10033(C)(6)

convenient, courteous, and reliable transit service,” which is consistent with advancing the public interest. The Project has largely been motivated by community health and quality-of-life benefits linked to zero tailpipe emissions and quiet electric-drive engines, and the global environmental benefits of utilizing sustainable sources of carbon-free renewable energy. This Project is the state’s only advanced fuel cell bus demonstration project of this magnitude and has been supported at the state and federal levels. The Project is leveraging \$19 million in federal funds in grants from the U.S. Department of Energy and U.S. Department of Transportation and \$18 million in state grants from CARB, California Energy Commission and the California Transportation Commission.

Regarding the advancement of the purposes of the Program, according to SB 71, the purpose of the Program is to “promote the creation of California-based manufacturing, California-based jobs, the reduction of greenhouse gases, or reductions in air and water pollution or energy consumption.” While this Project is a demonstration facility that does not seek a profit, it is anticipated that the new state-of-the-art hydrogen fueling station will demonstrate faster fueling to match large fleet operating requirements which will enable a quick and easy expansion of fuel supply to accommodate more vehicles, green technology to reduce the carbon footprint of fuel production, and more energy efficient operating equipment. AC Transit’s hydrogen fuel production demonstration would clearly advance the purposes of the Program.

As authorized by the Regulations, the Executive Director therefore recommends that the Authority waive the threshold value for the Environmental Benefits Score and Total Score for the AC Transit Application,⁴ given the Project is in the public interest and advances the purposes of the Program.

STATUS OF PERMIT/OTHER REQUIRED APPROVALS

A Conditional Use Permit was approved by the City of Emeryville in January 2009 and a Building Permit was approved in December 2010.

LEGAL QUESTIONNAIRE

Staff has reviewed the Applicant’s responses to the questions contained in the Legal Status portion of the Application. The Executive Director, in consultation with legal counsel, has determined that the legal issues disclosed do not affect the financial viability or legal integrity of the Applicant.

⁴Per 4 CCR 10033(C)(6) : “...where a project receives a total score of less than 1,000, a TPB score of less than 100, or both the Executive Director may recommend it to board for approval upon a statement articulating specific reasons why the approval is in the public interest and advances the purposes of the Program.”

CAEATFA FEES

In accordance with CAEATFA Regulations,⁵ the Applicant has paid CAEATFA an Application Fee of \$5,000 and will pay CAEATFA an Administrative Fee of up to \$21,551.80.

RECOMMENDATION

Staff recommends approval of:

- pursuant to 4 CCR 10033(C)(6), the statement by the Executive Director that it is in the public interest and advances the purposes of the Program to waive the threshold values for reasons including, but not limited to, the fact this is a public Project with the purpose to serve the public, the Project may demonstrate fleet-readiness of hydrogen fueled vehicles, the Project leverages state and federal funds and pursuant to CARB’s analysis the Project will have ultimate environmental benefits to the State; and
- Resolution No. 11-SM003 for Alameda-Contra Costa Transit District’s purchase of Qualified Property in an amount not to exceed \$5,387,950 anticipated to result in an approximate sales and use tax exclusion value of \$490,303.

⁵ 4 CCR 10036

**RESOLUTION APPROVING AND AUTHORIZING EXECUTION OF A TITLE
CONVEYANCE AGREEMENT WITH THE ALAMEDA-CONTRA COSTA TRANSIT
DISTRICT**

WHEREAS, the California Alternative Energy and Advanced Transportation Financing Authority (the “Authority” or “CAEATFA”) has received the Application of **Alameda-Contra Costa Transit District** (the “Applicant”), for financial assistance in the form of a conveyance/reconveyance of title agreement (the “Agreement”) regarding tangible personal property for the design, manufacture, production or assembly of Advanced Transportation Technologies or Alternative Source products, components, or systems (“Qualified Property”) as more particularly described in the staff summary and in the Applicant’s Application to the Authority (collectively, the “Project”); and

WHEREAS, the Applicant has requested the Authority to enter into the Agreement transferring title of Project equipment with an estimated cost not to exceed \$5,387,950 over a period of five years; and

WHEREAS, the Agreement will provide that the Applicant will, prior to any use of the Qualified Property, transfer title at no cost to the Authority from time to time as purchases of Qualified Property are made and the Authority will then transfer title back to the Applicant without having taken possession of the Qualified Property; and

WHEREAS, the Applicant believes that this form of financial assistance will enable it to avail itself of the benefits of an exclusion from sales and use taxes relative to the Qualified Property pursuant to California Revenue and Taxation Code Section 6010.8; and

WHEREAS, approval of the terms of the Agreement and authority for the Executive Director, Deputy Executive Director, or Chair of the Authority, to execute the necessary documents to effectuate the Agreement is now sought;

NOW, THEREFORE, BE IT RESOLVED by the California Alternative Energy and Advanced Transportation Financing Authority, as follows:

Section 1. The Project constitutes a “project” within the meaning of Public Resources Code Section 26003(g)(2).

Section 2. The requested conveyance agreement constitutes “financial assistance” within the meaning of Public Resources Code Section 26003(e)(2).

Section 3. The Applicant is a “participating party” within the meaning of Public Resources Code Section 26003(f).

Agenda Item – 4.A.3
Resolution No. 11-SM003
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Section 4. The Executive Director, Deputy Executive Director, or Chair of the Authority (the “Authorized Signatories”) are hereby authorized for and on behalf of the Authority to approve any changes to the Project as the Executive Director shall deem appropriate, provided that the amount of the Qualified Property to be purchased may not be increased above the amount approved by the Authority.

Section 5. The proposed form of the Agreement between the Applicant and the Authority, as filed with the Authority prior to this meeting, is hereby approved. The Authorized Signatories are hereby authorized and directed, for and on behalf and in the name of the Authority, to execute, acknowledge and deliver to the Applicant the Agreement in substantially the form filed with or approved by the Authority, with such insertions, deletions or changes therein as the Authorized Signatory executing the same, may require or approve, and with particular information inserted therein in substantial conformance with the staff summary and in the Applicant’s Application to the Authority, such approval to be conclusively evidenced by the execution and delivery thereof. The Authority understands and agrees that pursuant to the terms of the Agreement, the obligations of the Applicant may, under some circumstances be carried out or assumed by a successor or assignee entity, or by an affiliate of the Applicant.

Section 6. Each of the Authorized Signatories, acting alone, is hereby authorized and directed to do any and all ministerial acts, including (without limitation) the execution and delivery of any and all documents and certificates they may deem necessary or advisable in order to consummate the Agreement and otherwise effectuate the purposes of this resolution.

Section 7. The Applicant shall assure CAEATFA that all Qualified Property conveyance pursuant to the Agreement shall be installed, maintained and operated in compliance with all applicable local, state and federal laws.

Section 8. The Agreement shall only apply to Qualified Property that the Applicant certifies will be installed, maintained and operated at facilities within the State of California.

Section 9. The adoption by the Authority of this Resolution for the Applicant shall not be referred to in any application before any governmental agency as evidence of the feasibility, practicality or suitability of the Project or in any application for any required permission or authority to acquire, construct or operate the Project.

Section 10. This Resolution is effective immediately and will remain in full force and effect unless the Regulatory Agreement, as defined in CAEATFA Regulations Section 10035(A), is not executed within thirty (30) days of the date of this Resolution. The Executive Director may extend the thirty days if necessary.