

AC Transit Begins Fueling Buses with Hydrogen Made From Solar Electricity and Water

AC Transit, and a coalition of regional transit partners serving 7 million people in the San Francisco Bay Area, this week inaugurated the newest hydrogen production and dispensing station to fuel the latest generation of zero-emission fuel cell buses operating throughout the region. Congresswoman Barbara Lee and Chair of the California Air Resources Board Mary Nichols were joined by over 300 guests and a dozen other federal, state, and local officials as they formally dedicated the station at AC Transit's Emeryville division, where hydrogen to fuel the fleet is produced in part by solar-powered electrolysis.

AC Transit General Manager David Armijo said, "For over a decade, AC Transit has been developing the most comprehensive, zero-emission, fuel cell transit program in North America, and operating zero-emission buses in real-world service. Now, with increased fueling capacity, we have a greater capability to offer clean, quiet, zero-emission transportation to the communities we serve."

"AC Transit continues to be a model for the rest of the nation," said Congresswoman Lee. "Today's unveiling of these innovative, zero-emission fuel cell buses and this state-of-the-art HyRoad Fueling Station further highlights AC Transit's commitment to excellence in promoting and maintaining zero-emission vehicles."

California Air Resources Board Chair Nichols added, "We are building on a record of success and partnership between the federal and state governments and AC Transit – which has truly been a pioneer in bringing fuel cell technology into the community and demonstrating its virtues for clean air and energy efficiency."

AC Transit's newest on-site energy station, engineered by Linde North America, Jacobs, and EPC, and built by W.L. Butler Construction, demonstrates the use of "renewable" hydrogen – hydrogen produced using Proton OnSite's solar-powered electrolyzer. Engineering and construction firm Cupertino Electric, Inc. installed a 510 kilowatt DC solar photovoltaic system for AC Transit that will generate energy to help fuel the transit system's hydrogen-powered buses running throughout the Bay Area.

The station also features Linde's latest advancements in compression and dispensing technology, enabling buses to be refueled at rates up to 5 kilograms/minute – a time comparable to refueling diesel buses. Thanks to a major grant from the California Air Resources Board, one dispenser is accessible to the public for fueling hydrogen fuel cell electric passenger cars, including the Mercedes-Benz B-Class F-CELL, now on the road in both Northern and Southern California.

"Linde is excited to provide a clean fuel solution that delivers so many quality-of-life benefits to Bay Area residents. Their public transportation has just gotten quieter, the air they're breathing is fresher and cleaner, and we're using a domestically produced fuel instead of imported oil. These are positive, concrete steps toward reducing greenhouse gases and increasing sustainability. Linde is proud to take such a prominent role in improving our future," said Pat Murphy, President, Linde North America.

Fuel cells do not burn the fuel they use. Instead, they combine hydrogen with oxygen from the air electrochemically to produce electricity and emit only water vapor. AC Transit operates twelve 40-foot hybrid-electric, zero-emission fuel cell buses, each powered by a 120 kW UTC Power fuel cell system and a Siemens ELFA Drive System.

"We believe the future of energy is here and embodied in the fuel cell buses operated by AC Transit," said Joe Triampo, Vice President and General Manager, UTC Power. "With multiple fuel cell buses in operation today, AC Transit and the community they serve are already reaping the benefits of superior efficiency, increased reliability and reduced emissions for environmentally responsible operations."

In recognition of AC Transit's solar installations across its facilities, Pacific Gas and Electric Company (PG&E) presented a check, representing what will amount to more than \$500,000 in rebate incentives from PG&E through the California Solar Initiative (CSI) program, to AC Transit's General Manager. Additionally, in honor of AC Transit's HyRoad Program, Tom Sullivan, Chairman of Proton OnSite, presented a \$20,000 check to Lawrence Hall of Science at UC Berkeley to further youth science education in alternative fuels.