



First-of-its-Kind Vehicle-to-Building Resilience Hub Powered by Transit Buses

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The Mobility House, CTE, AC Transit, New Flyer, Schneider Electric to deploy electric transit buses as mobile emergency backup power for community centers

Oakland, California, October 11, 2022 —A new project funded by the California Energy Commission (CEC) will demonstrate the value of bidirectional electric vehicle charging to support a first-of-its-kind vehicle-to-building (V2B) resilience hub. This groundbreaking project will leverage stored energy from zero-emission electric buses, owned and operated by AC Transit, to provide filtered air conditioning at the West Oakland Branch of the Oakland Public Library for local residents in the event of unhealthy heat or smoke conditions. CEC's [Electric Program Investment Charge](#) program awarded the project \$3.2 million in funding, with combined \$400,000 in matching funds contributed by West Oakland Environmental Indicators Project (WOEIP) and AC Transit. This pilot study is known locally as "V2B Oakland" and will be executed by a powerhouse green energy project team: [Center for Transportation and the Environment](#) (CTE), [The Mobility House](#), [AC Transit](#), [New Flyer](#), [Schneider Electric](#), [City of Oakland](#) and [WOEIP](#).

Each battery electric bus (BEB) will contribute six hours of backup power to the critical loads at the library, and each hydrogen fuel cell-electric bus (FCEB) will provide up to 11 continuous hours of backup power, displacing nearly 100 pounds of carbon emissions per hour compared to traditional diesel backup generators. Working in close coordination with bus manufacturer New Flyer of America Inc. (New Flyer), a subsidiary of NFI Group Inc. (NFI), this project also marks the first time a U.S. transit agency will have the capability to use a hydrogen vehicle for V2B backup power.

"Initiating the first community resilience hub powered by a bidirectional V2B charging system has been an incredible journey. By bringing together leading-edge technological innovation and sustainability, we are able to offer much needed emergency response benefits for both transit agencies and communities," said Jason Hanlin, Director of Technology Research at CTE. "For a project with so many key players, we are excited to apply CTE's proven project management approach to usher this novel project from concept to fruition."

The resilient backup power system, which combines Bus Exportable Power Supply (BEPS) capability with bidirectional chargers and smart software, will be integrated and tested at NFI's Hayward facility, then deployed at an AC Transit bus division and the Oakland Library. The system is designed to power the library's upgraded HVAC and air filtration system, providing clean air and electricity inside the building to create a public shelter during emergencies and outages.

"We are thrilled to bring our 'vehicle-to-everything' expertise from numerous projects in Europe and Asia to now develop the first ever vehicle-to-building resilience hub in the U.S.," said The Mobility House U.S. Managing Director Gregor Hintler. "Our ChargePilot system ensures all transit mobility needs are met and orchestrates the charge and discharge of the bidirectional chargers so that the buses can power critical building loads."

Electric-drive bus fleets are uniquely suited for backup power and emergency relief because of their energy storage capacity, electrical architecture, independent mobility and ability to be quickly dispatched. When compared to diesel generators – the current default technology for emergency backup power – BEPS provides quicker response times; avoids emission of harmful pollutants; can be more cost-effective; and increases the value of procuring zero-emission vehicles and chargers by providing community support benefits.

"Powering emergency shelters with islanded energy supply is an innovative feat we are honored to help facilitate," said Jana Gerber, President of Microgrids North America at Schneider Electric. "It is also exciting to demonstrate how different technologies can integrate with each other so seamlessly and intelligently to allow for crucial backup power for the community and infrastructure."

"Unquestionably, delivering reliable public transit service to nearly 22 million annual riders is our highest priority but we also pursue partnerships and initiatives that advance zero emission technology," said AC Transit General Manager Michael Hursh. "V2B is one example of a zero emission program that permits us to leverage our resources to enhance the resiliency and emergency preparedness of the diverse communities we've served for the past 60 years."

"NFI is proud to work with AC Transit and our other partners on this exciting project that enables our vehicles to act as generators supporting resiliency and emergency preparedness. This platform, the first vehicle-to-everything fuel cell-electric bus in the world, will change the game for electric propulsion technology and will vastly expand the capabilities and utility of our mobility solutions," said Paul Soubry, President and Chief Executive Officer, NFI.

"Many low-income communities of color share streets and fence lines with the freight industry and suffer deadly pollution from petroleum combustion. With our electrical grids straining under the demands of global warming and solar and wind not keeping pace with the urgent need, hydrogen may offer another tool in the toolbox of zero-emission freight transportation opportunities. Communities like West Oakland will benefit from an expanded set of transportation energy options by getting cleaner, safer streets and air quality." - Brian Beveridge, Co-Executive Director of WOEIP.

Infrastructure is expected to be installed by mid-2023, and demonstration, analysis, evaluation, and knowledge transfer for the pilot program will continue until July 2025.

About The Mobility House

The Mobility House's mission is to create an emissions-free energy and mobility future. Since 2009, the company has developed an expansive partner ecosystem to intelligently integrate electric vehicles into the power grid, including electric vehicle charger manufacturers, 1,000+ installation partners, 80+ energy suppliers, and automotive manufacturers ranging from Audi to Tesla. The intelligent Charging and Energy Management system ChargePilot and underlying EV Aggregation Platform enable customers and partners to integrate electric vehicles into the grid for optimized and future proof operations. The Mobility House's unique vendor-neutral and interoperable technology approach to smart charging and energy management has

been successful at over 800 commercial installations around the world. The Mobility House has more than 250 employees across its operations in Munich, Zurich and Belmont, Calif. For more information visit mobilityhouse.com.

About CTE

The Center for Transportation and the Environment is a 501(c)(3) nonprofit organization with a mission to improve the health of our climate and communities by bringing people together to develop and commercialize clean, efficient, and sustainable transportation technologies. CTE collaborates with federal, state, and local governments, fleets, and vehicle technology manufacturers to complete our mission. Learn more at www.cte.tv.

About NFI

Leveraging 450 years of combined experience, NFI is leading the electrification of mass mobility around the world. With zero-emission buses and coaches, infrastructure, and technology, NFI meets today's urban demands for scalable smart mobility solutions. Together, NFI is enabling more livable cities through connected, clean, and sustainable transportation.

With 7,500 team members in nine countries, NFI is a leading global bus manufacturer of mass mobility solutions under the brands New Flyer® (heavy-duty transit buses), MCI® (motor coaches), Alexander Dennis Limited (single and double-deck buses), Plaxton (motor coaches), ARBOC® (low-floor cutaway and medium-duty buses), and NFI Parts™. NFI currently offers the widest range of sustainable drive systems available, including zero-emission electric (trolley, battery, and fuel cell), natural gas, electric hybrid, and clean diesel. In total, NFI supports its installed base of over 105,000 buses and coaches around the world. NFI's common shares trade on the Toronto Stock Exchange ("TSX") under the symbol NFI and its convertible unsecured debentures trade on the TSX under the symbol NFI.DB. News and information is available at www.nfigroup.com.

About New Flyer

New Flyer is North America's heavy-duty transit bus leader and offers the most advanced product line under the Xcelsior® and Xcelsior CHARGE® brands. It also offers infrastructure development through NFI Infrastructure Solutions™, a service dedicated to providing safe, sustainable, and reliable charging and mobility solutions. New Flyer actively supports over 35,000 heavy-duty transit buses (New Flyer, NABI, and Orion) currently in service, of which 8,600 are powered by electric motors and battery propulsion and 1,900 are zero-emission. Further information is available at www.newflyer.com.

About Schneider Electric

Schneider's purpose is to empower all to make the most of our energy and resources, bridging progress and sustainability for all. We call this Life Is On. Our mission is to be your digital partner for Sustainability and Efficiency. We drive digital transformation by integrating world-leading process and energy technologies, end-point to cloud connecting products, controls, software and services, across the entire lifecycle, enabling integrated company management, for homes, buildings, data centers, infrastructure and industries. We are the most local of global companies. We are advocates of open standards and partnership ecosystems that are passionate about our shared Meaningful Purpose, Inclusive and Empowered values.

About the California Energy Commission

The California Energy Commission is leading the state to a 100 percent clean energy future. It has [seven core responsibilities](#): developing renewable energy, transforming transportation, increasing energy efficiency, investing in energy innovation, advancing state energy policy, certifying thermal power plants, and preparing for energy emergencies.

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