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Tri-Valley San Joaquin Valley
REGIONAL RAIL AUTHORITY

NEWS RELEASE

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Contact:

Kevin Sheridan

Executive Director

Office: 925.784.2759

Email: ksheridan@valleylinkrail.com

Linde Enters Strategic Collaboration with Valley Link

Move Advances Authority's Vision to be Nation's First Passenger Rail System to Operate on Self-Produced Green Hydrogen Fuel

Livermore, CA, December 16, 2022 – On Wednesday, the Tri-Valley – San Joaquin Valley Regional Rail Authority (Authority) Board of Directors approved entering into a strategic collaboration with Linde Engineering North America (Linde) for the advancement of the proposed Valley Link green hydrogen production facility. This collaboration involves the preparation of a project development agreement to further define the configuration of a hydrogen production facility, determine the implementation strategy, and establish the partnership structure with Linde. This action is critical to support the Authority's vision of sustainability for the Valley Link rail project – to be the first passenger rail system in California to run on self-produced, green hydrogen, with a hydrogen fuel production facility able to support the clean energy goals of other transit and heavy truck operators.

Valley Link's goal to operate zero-emission hydrogen rail vehicles makes it a model of environmental and economic sustainability. "Valley Link's self-produced, green hydrogen will reduce the cost of the overall project operations for the public and offset state and federal transit subsidies," said Veronica Vargas, Chair of the Authority Board of Directors. "The project's vision also supports opportunities to create and sustain new living wage jobs in both the hydrogen fuel production and related renewable energy industries. This is good for both the economy and the environment."

The Authority's action on the strategic collaboration with Linde is based on the outcome of a request for proposals process through which the Authority solicited proposals from qualified firms to design, build, finance, operate, and maintain a hydrogen production and storage facility. The request for proposals specifically identified the Authority's pursuit of the project as a public-private partnership to leverage the expertise from the private sector hydrogen production industry while also leveraging the value and geography of 100 acres of property available for the project. Linde was recognized as being uniquely qualified to support all of the Authority's goals and objectives in the hydrogen production facility request for proposals. This includes Linde's ability to design, build, finance, operate, and maintain an electrolytic hydrogen production, storage, and distribution facility. As a company with expertise at every level in the

hydrogen fuel chain – from planning and design through building and commissioning as well as service and maintenance – Linde is recognized as a world leader in the production, processing, storage, and distribution of hydrogen, and owns and operates one of the largest hydrogen capacity and distribution systems in the United States. Linde is also able to uniquely support the resiliency of hydrogen vehicle operations through the direct supply of liquid hydrogen as Linde owns and operates the largest merchant hydrogen supply network in North America, comprised of five hydrogen liquefaction production plants, including a production facility in Ontario, California.

“Linde is pleased to work with Valley Link on this green hydrogen project to decarbonize passenger vehicle rail service in the California Bay Area. Our existing hydrogen supply infrastructure coupled with our know-how and technologies for hydrogen production, vehicle fueling, and most recently train fueling in Bremervörde, Germany have us well prepared to help ensure Valley Link’s project is successful.” said Andrew Sarantopoulos, Vice President of Marketing and Product Management for Linde. “We look forward to working closely with the local team over the next several years through the development, funding, commercialization and operation of this exciting project which is well aligned with Linde’s efforts to reduce greenhouse gas emissions.”

The 26-mile Valley Link rail project between the Dublin/Pleasanton Bay Area Rapid Transit (BART) station in Alameda County and the Mountain House station in San Joaquin County, will connect tens of thousands of Bay Area workers now commuting daily from their homes in communities in the Northern San Joaquin Valley – some of the state’s most disadvantaged communities located in one of the most polluted air basins in the United States. The Authority is leading the implementation of the Valley Link rail project as a model of environmental and economic sustainability – one that could operate on its own created renewable energy, support transit-oriented land use development around station areas, and reduce ongoing operations costs, while maximizing air quality, equity, health, and workforce benefits.

To date, the state has invested in a number of hydrogen vehicle technologies and several transit agencies in California are producing their own hydrogen fuel. The sustainability vision of the Valley Link rail project seeks to significantly expand on this concept including the opportunity to manage risk and maximize the outcomes of green hydrogen production through public-private partnership with expertise from the hydrogen production industry.

Authority Board Member and Alameda County District 1 Supervisor, David Haubert stated, “The Valley Link hydrogen production business model is intended to serve as not only a catalyst for private investment, but also for a green energy economy within the Northern California megaregion combined with workforce development to create and sustain living wage jobs.”

While the feasibility study identifies the sizing of the production facility to meet Valley Link’s initial operating segment fuel needs, the Authority recognizes that there will be the opportunity to scale up a facility to ensure that both public and private investment in a green hydrogen hub can expand the availability, and reduce the cost, of green hydrogen to other users.

“Valley Link is well-positioned to be a model of sustainability capitalizing on innovative technology and recent public and private sector investments to operate on its self-generated renewable energy,” remarked Tim Sbranti, Director of Strategic Initiatives for Innovation Tri-Valley Leadership Group.

Sbranti further commented that the City of Tracy and neighboring communities on both sides of the Altamont Pass in San Joaquin County and the Tri-Valley will reap the benefits of job creation and economic

growth, with the City of Tracy serving as the epicenter due to the location of the hydrogen fuel production facility. Even before Valley Link begins operations, the hydrogen production facility will be able to support the clean energy of other transit and heavy truck operators within the next 2 to 3 years, providing a near immediate benefit to the community.

“The Authority’s green hydrogen production facility is a bold vision to establish a megaregional green hydrogen hub integrating production and use by the transportation sector. The Authority looks forward to working with Linde along with the public and community partners to advance this vision to meet the transportation, environmental, and economic needs of the Northern California megaregion now and into the future”, said Melissa Hernandez, Vice-Chair of the Authority Board of Directors.

“The timing of the approval of the strategic collaboration with Linde is significant to other initiatives to advance the use of green hydrogen in transportation and the overall green hydrogen economy in California. We could not ask for a better private sector partner for this effort,” said Authority Executive Director/CEO Kevin Sheridan.

The passage of State Assembly Bill 209 now establishes a \$100 million Hydrogen Program under the California Energy Commission to fund hydrogen demonstration projects. The Authority is also partnering with the Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) Initiative to coordinate the development of the state application for federal funding under the \$8 billion national US Department of Energy Regional Hydrogen Hub Program. As a registered hydrogen hub collaborator with ARCHES, Linde is also positioned to immediately support the Authority in the development and submittal of a project application to the State of California’s ARCHES Initiative.

Background on Valley Link

Valley Link will ultimately close a critical gap in the statewide rail system with a 42-mile, 7 station rail connection between the Dublin/Pleasanton BART station and the North Lathrop Altamont Corridor Express (ACE) station with all day service on BART frequencies during peak periods. With 33,000 daily riders projected by 2040, Valley Link would remove tens of thousands of cars off Interstates 580 and 205 and connect nearly 500 miles of passenger rail with more than 130 stations in the Northern California Megaregion – removing up to 42,650 metrics tons of greenhouse gas emissions, creating 22,000 jobs, and supporting national goods movement by reducing heavy truck conflicts with cars on Interstates 580 and 205 that serve as life lines between the Port of Oakland and both domestic and international markets. Overall traffic on Interstate 580 is projected to increase by an estimated 60 percent by 2040 and truck traffic is expected to increase by 58 percent.

The 26-mile initial operating segment (IOS) between the Dublin/Pleasanton BART station and the Mountain House station, including the Isabel and South Front Road stations in Livermore, is targeted for construction in 2025. In addition to the use of zero emissions vehicle and green energy production technologies, the Valley Link Board-adopted Sustainability Policy identifies implementing strategies to achieve a zero emissions system through innovation station access. This includes electric autonomous shuttles, shared mobility, and support for local transit operator alternative vehicle technology.

Additional information on the Tri-Valley – San Joaquin Valley Regional Rail Authority, is available on the Regional Rail Authority’s website at www.valleylinkrail.com.



Valley Link project alignment



Valley Link Concept Hydrogen Rail Vehicle

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