

AlphaStruxure, Montgomery County, MD Announce Nation's Largest Renewable Energy Powered Transit Depot and First on the East Coast to Feature On-Site Green Hydrogen Production



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- ***Project and County leadership applauded by Governor Moore, Lt. Governor Miller, U.S. Senator Van Hollen and U.S. Representative Raskin.***
- ***The first transit bus depot on the East Coast to feature green hydrogen production is coming to Montgomery County, MD's Equipment Maintenance & Transit Operation Center (EMTOC), with an on-site electrolyzer, powered by solar and battery energy storage.***
- ***This project will become the largest self-sustaining bus depot in the nation, powered by renewable energy and an Energy as a Service microgrid. The 7MW microgrid will feature a 5+ MW solar array, electric bus chargers, battery energy storage, and existing backup generation, allowing it to operate indefinitely in "island mode."***

ROCKVILLE, Md., May 18, 2023 /PRNewswire/ -- Today, [AlphaStruxure](#), a leader in Energy as a Service (EaaS) microgrid solutions, and Montgomery County, Maryland (County), announced an integrated microgrid infrastructure project, featuring electric bus charging and on-site green hydrogen production powered by solar and battery energy storage, for Montgomery County.∞

Maryland's Equipment Maintenance and Transit Operation Center (EMTOC). This is one of three transit bus depots in Ride-On Montgomery's network and the fifth largest County owned energy consumer. By 2035, the site is projected to accommodate over 200 mixed-fleet vehicles. This project is expected to begin construction in Q4 2023 and be in operation by Q1 2025. The announcement of this innovative project follows the launch of the Brookville Smart Energy Bus Depot, the County's first fully constructed microgrid-powered bus depot, in October of last year, which was also led by AlphaStruxure.

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


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The first transit bus depot on the East Coast to feature green hydrogen production is coming to Montgomery County, MD's Equipment Maintenance & Transit Operation Center (EMTOC), with an on-site electrolyzer, powered by solar and battery energy storage. This project will become the largest self-sustaining bus depot in the nation, powered by renewable energy and an Energy as a Service microgrid.

Comprising 5 MW_{DC} of rooftop and canopy solar generation, 2 MW/7.35 MWh battery energy storage, existing backup generation, and up to 4.5 MW of charging capacity, the EMTOC microgrid will provide sustainable, resilient power to a mixed fleet of battery electric and fuel 

cell electric buses (FCEB) as well as EMTOC's five existing buildings. The microgrid will be interconnected to the Pepco utility and is engineered to operate in island mode indefinitely, ensuring uninterrupted service for the County's constituents during extended grid or power outages and emergency situations. The microgrid's solar generation will also provide power for the on-site production of green hydrogen, a resilient power source to FCEBs that have a greater range over battery electric buses, necessary for longer bus routes. A FCEB is a zero-emissions vehicle, powered by hydrogen and oxygen, and emits only water. By embracing hydrogen fuel technology, Montgomery County can further enhance its equitable Bus Rapid Transit (BRT) network and create new career and training opportunities for underserved communities.

By fueling the County's initial 13 FCEBs with green hydrogen produced by the microgrid's solar, this solution not only advances the County's goal to achieve net zero carbon emissions by 2035 but also reduces their Scope 1 and 2 emissions by 4,000 metric tons of CO₂ per year, equivalent to approximately 780 homes' electricity use for one year.

AlphaStruxure, a joint venture of Schneider Electric™ and Carlyle, will finance the project through the Energy as a Service (EaaS) business model, while also delivering all aspects of design, construction, and long-term operations and maintenance. By bringing together Carlyle's comprehensive financial capabilities and Schneider Electric's leading microgrid technology, software, and services, AlphaStruxure will serve as a trusted partner for the County, enabling them to achieve their long-term electrification, sustainability, and resilience goals.

The microgrid is delivered without capital expenditures to the County through an EaaS contract, a long-term agreement ensuring predictable operating expenses and guaranteed performance without upfront capital expenditures.

"Once built, the EMTOC microgrid will be the gold standard for resilient, sustainable public transit. This project also further establishes Montgomery County, MD as the nation's leading municipality when it comes to embracing the transit infrastructure of tomorrow," **said Juan Macias, CEO of AlphaStruxure.** "We are thrilled to be the County's long-term partner on holistic infrastructure that delivers improved, cleaner services to constituents. Our Energy as a Service approach enables us to deliver an integrated bus fleet solution that is bolstered by a resilient

energy supply, all without imposing any upfront costs or financial, construction, or operating risks on the County. We are excited to be part of this innovative and transformative initiative that will shape the future of public transit for years to come."

"Through our long-term partnership with AlphaStruxure, we're excited to launch one of the most advanced bus depots in the country," said **Marc Elrich, County Executive for Montgomery County**. "This project represents a significant milestone in our ongoing efforts to achieve our ambitious climate action, which aims to reduce all carbon emissions by 2035 while substantially enhancing the resilience of our transit services. Of particular excitement is the integration of green hydrogen production, powered by the microgrid, highlighting our commitment to pioneering cutting-edge renewable solutions and leading by example when it comes to sustainable, resilient transportation."

"I've been clear since the beginning that solidifying Maryland's clean energy future is a major priority of mine, and the work that's taking place in Montgomery County is what is going to make that a reality," said **Governor of Maryland Wes Moore**. "This newly announced clean energy bus depot sets a model for communities across the state and the nation. Our administration is so glad to see this work being done, and we will continue to advocate for projects like this all across Maryland."

"As a former transportation engineer, I know that comprehensive transportation projects are those that are equitable, accessible, and help us meet our climate goals," said **Lieutenant Governor of Maryland Aruna Miller**. "The clean energy bus depot in Montgomery County checks all those boxes and will bolster the work of the Moore-Miller administration to make Maryland a leader in transportation access and clean energy technology."

"Zero-emission buses running on clean, renewable power: this is what the future of public transit looks like," said **U.S. Senator Chris Van Hollen**. "I was glad to help secure federal funding to enable the County to expand its zero-emission bus fleet, which together with this depot will propel Montgomery County forward in its efforts to reduce its carbon footprint while making its transit system more reliable and cost-effective."

"Montgomery County's newly announced electric bus depot is a great model for communities and local governments across the country working to address the climate crisis," **U.S.**



Representative Jamie Raskin said. "Montgomery County is a pioneering leader in making an effective transition to sustainable energy at the local level. I'm thrilled to support the county's efforts, and I'll keep advocating for major federal climate investments for Montgomery County and the rest of our nation."

"Once again, AlphaStruxure and Montgomery County are redefining the benchmarks for sustainable and resilient transit infrastructure," said **Annette Clayton, CEO of Schneider Electric North America.** "Electrification, digitization, and decarbonization are crucial to address our energy challenges, and microgrids play a pivotal role in achieving these objectives. Schneider Electric is proud to contribute to this innovative project, and we commend County leaders for their forward-thinking approach in better serving local residents. Once completed, this groundbreaking microgrid will stand unparalleled across the nation, representing the County's commitment to innovation and progress."

"Through our investment, we are not only accelerating energy transformation but also driving the financial viability of these transformative solutions." said **Pooja Goyal, Partner and Chief Investment Officer, Carlyle Global Infrastructure.** "This strategic investment in the EMTOC microgrid project marks a major milestone for the industry and demonstrates a sustainable path for others to follow investing in the energy transition. We applaud Montgomery County's leadership in forging a more sustainable future."

With an intelligent microgrid in place, the bus depot will work toward eliminating power disruptions while maximizing distributed energy resources for resilience. The technology that makes this intelligence possible includes software tools and IoT-connected hardware. The system's performance is managed by AlphaStruxure's Integrate™, a cyber-secure digital platform that monitors and optimizes on-site energy and charging infrastructure. The Integrate digital platform provides perspectives and reporting across multi-site environments to model, monitor, execute, analyze, and improve operations. 24/7 operators predict and respond to the system in real-time through the AlphaStruxure Network Operations Center.

Montgomery County's commitment to infrastructure that's resilient to climate change became a higher priority after the 2012 derecho when many residents lost power. Statewide, Maryland is working towards a 50 percent zero-emission bus fleet by 2030. Montgomery County's Department of General Services, the Department of Transportation, and the Office of Energy

and Sustainability are spearheading this ambitious drive towards achieving net zero emissions by leading the transition of the county's transit fleet and depot infrastructure. The EMTOC project is aligned with the County's priorities to reduce emissions from public transportation while enhancing the resilience of the community and infrastructure assets.

About AlphaStruxure

AlphaStruxure is a leading Energy as a Service (EaaS) provider that designs, builds, owns, operates, and maintains tailored energy infrastructure, including microgrids. Unlike other EaaS providers, AlphaStruxure owns its clients' systems for their lifecycle, making it fully accountable for long-term outcomes on resilience, reliability, greenhouse gas reduction, and cost stability – without the CapEx or complexity. AlphaStruxure's unique joint-venture model combines Carlyle's capital backing with Schneider Electric's 185+ year legacy and its track record as the #1 microgrid technology provider, with over 350 successful projects across North America. As a steadfast innovator in the new energy landscape, AlphaStruxure unlocks ambitious transformations for energy-intensive private and public sector organizations. AlphaStruxure is based in Boston, MA and operates across North America while leveraging global capabilities.

More information at alphastruxure.com. Follow AlphaStruxure at linkedin.com/company/AlphaStruxure

About Carlyle

Carlyle (NASDAQ: CG) is a global investment firm with deep industry expertise that deploys private capital across three business segments: Global Private Equity, Global Credit and Global Investment Solutions. With \$381 billion of assets under management as of March 31, 2023, Carlyle's purpose is to invest wisely and create value on behalf of its investors, portfolio companies and the communities in which we live and invest. Carlyle employs more than 2,200 people in 29 offices across five continents. Further information is available at www.carlyle.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, endpoint 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.

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