Press release

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Bosch announces investment of more than $200 million to produce fuel cell stacks in Anderson, S.C.

New programs expected to create at least 350 new jobs

- Bosch continues growth to support hydrogen economy with its first production of fuel cell technology in the United States
- Stack is the heart of a fuel cell power module that will propel Class 8 trucks
- Anderson facility will expand on its expertise in electronics and sensors with new production supporting fuel cell
- Bosch proficiency in commercializing technology will make mass production of fuel cell stack possible
- Start of production planned for 2026

Anderson, S.C. – The long-anticipated possibilities presented by fuel cell technologies continue to become a reality globally and in the United States. Mobile fuel cell technology presents a viable option for climate-neutral transportation of goods in Class 8 vehicles where battery electric alone still presents challenges due to battery size and weight. Fuel cells make all-electric operation of large vehicles for long trips a reality. Bosch, a longtime leader in powertrain and propulsion technologies, announced today that it will also produce fuel cell stacks in its Anderson, South Carolina, facility as part of a more than $200 million investment expected to create at least 350 new jobs by the start of production in 2026.

As part of Bosch's local for local manufacturing strategy, the fuel cell stacks produced in Anderson will drive hydrogen-powered trucks coming to the roads of the U.S. in the next few years. A fuel cell operates by using hydrogen to generate electrical energy. As the hydrogen ions pass over the fuel cell plates, they combine with oxygen to create electricity. The only by-product is water, allowing the vehicle to run with zero local carbon emissions. When hydrogen is produced using renewable energy, also called green hydrogen, fuel cells enable vehicles to be operated nearly CO2-free. Especially for large, heavy vehicles, fuel cells have a better carbon footprint than exclusively battery-electric when the CO2 emissions for production, operation and disposal are added together according to research conducted by Bosch.

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“The hydrogen economy holds great promise and at Bosch we are all in,” said Mike Mansuetti, president of Bosch in North America. “This is a significant milestone as we announce the first fuel-cell related production for Bosch in the U.S. to support the growing demand from our local customers as part of a diverse approach to powertrain technology.”

Bosch expands its deep manufacturing presence in South Carolina

The development of the new production process in Anderson was supported locally with assistance from the state of South Carolina as well as Anderson County.

“Helping Bosch to be among the first to commercialize fuel cell stack production in the U.S. speaks to the strength of our manufacturing industry and workforce. We are grateful for Bosch’s commitment to our state and look forward to strengthening our partnership,” said South Carolina Governor Henry McMaster.

The Bosch Anderson facility has already begun work on the expansion to support fuel cell technology. Capital upgrades to the Anderson campus include an estimated 147,000 square feet of floorspace to be developed to manufacture the fuel cell stack as well as supporting clean room and climate-controlled environments required for quality-critical processes.

“Fuel cells have been a promising technology for many years, and it is fitting that this technology is coming to South Carolina where our manufacturing strength has helped many companies bring new innovations to the market,” said South Carolina Secretary of Commerce Harry M. Lightsey III. “Congratulations to Bosch for another successful expansion in Anderson County!”

Bosch has a long presence in Anderson, where it started producing fuel rails in 1985. Its operations have expanded to multiple products within the Bosch Mobility Solutions business sector, including sensors and electronic control units for the powertrain.

“The investment and jobs provided by this new technology are significant for Anderson County and for our long-standing collaboration with Bosch as one of the largest local employers,” said Chairman of the Anderson County Council Tommy Dunn.

Complex technology requires local commercialization expertise

Multiple manufacturers have announced plans for hydrogen-powered vehicles in the U.S. market. For example, Nikola Corporation has been pilot testing prototype Class 8 fuel cell electric vehicles (FCEV) featuring Bosch technology. The company recently completed a program highlighting its Tre FCEV Alpha Pilot with Anheuser-Busch in California. These prototype trucks logged over 12,000 miles and hauled 2 million pounds of freight. Nikola also has active pilot testing of prototype FCEV vehicles with Total Transportation Services Inc.

“As our success in acquiring e-mobility business here in the region continues, it’s critical that we have local production capabilities to support our local customers,” said Mansuetti, who previously served as technical plant manager for Bosch in Anderson earlier in his career. “For years, the Anderson associates have developed expertise in producing electronics and sensors, competencies that are very applicable to the fuel cell stack.”

Fuel cell stack production is highly complex. One stack consists of 3,200 individual parts assembled, more than 400 layers and more than 100 unique components. Fuel cell stack production in Anderson will expand on Bosch’s existing global production for fuel cell stacks, including critical sub-components.

“In order to successfully bring fuel cell technology to market in mass scale, it requires a combination of extensive experience in research and development, systems integration and complex manufacturing process,” Mansuetti said. “Bosch is unique in its ability in all these areas. The work we have already done in commercializing fuel cell technology builds on our extensive experience in developing and manufacturing products for the internal combustion engine at scale.”

Bosch will be one of the first to market with large-scale production to support hydrogen-powered commercial vehicles. The company recently announced it would invest more than $1 billion USD globally to develop mobile fuel cell technologies by 2024. The company previously announced a collaboration with Powercell to develop the fuel cell stack. The goal has been a high-performance solution that can be manufactured at high volume and a market-competitive cost.

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About Bosch
Having established a regional presence in 1906 in North America, the Bosch Group employs nearly 35,500 associates in more than 100 locations, as of December 31, 2021. In 2021, Bosch generated consolidated sales of $13.5 billion in the U.S., Canada and Mexico. For more information, visit www.bosch.us, www.bosch.ca and *www.bosch.mx.*

The Bosch Group is a leading global supplier of technology and services. It employs roughly 402,600 associates worldwide (as of December 31, 2021). The company generated sales of $93.1 billion in 2021. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first quarter of 2020. The basis for the company's future growth is its innovative strength. At 128 locations across the globe, Bosch employs some 76,100 associates in research and development, of which more than 38,000 are software engineers.

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