



Corporate

Nikola Corporation—designer and builder of hydrogen-electric vehicles, electric drivetrains and components, energy storage systems and hydrogen stations—is locating its Nikola Motor Company hydrogen-electric semi-truck manufacturing headquarters facility in Arizona, citing the state’s pro-business environment, top engineering schools, educated workforce and geographic location with direct access to major markets. The company’s one-million-square-foot facility is expected to bring \$1 billion in capital investment to the region by 2024.

They first had their eye on a Buckeye site, but have settled on a 400-acre location at Inland Port Arizona in Coolidge (a project of Saint Holdings LLC of Scottsdale), southeast of metro Phoenix in Pinal County, becoming the core of an anticipated broad vehicle manufacturing hub.

“When we set out to build a factory, part of my vision was to help an entire community,” says Nikola CEO Trevor Milton. “We can now begin to realize that dream. Imagine what it will do for property values, schools, parks and other city improvements. Bringing 2,000 jobs and thousands more from other suppliers will be a huge benefit to Coolidge and the surrounding areas for decades to come.”

Nikola (pronounced neek, not nick) recently celebrated their arrival with Nikola World 2019, a comprehensive presentation to shareholders, prospective buyers and the general public, at WestWorld in Scottsdale, showcasing five zero-emission products, including Nikola Two, the first purpose-built hydrogen fuel cell Class 8 truck for long haul driving with an optimum powertrain layout; a first glimpse of Nikola Tre, a hydrogen fuel cell semi-truck for European markets; the reveal of Nikola WAV electric personal watercraft; live demonstrations of the military-grade Nikola Reckless and civilian-grade Nikola Nzt OHVs; and live demonstrations and walk-throughs of the Nikola Two.

Over 2,000 people attended the first night’s unveilings, and over 3,000 attended the following Demo Day, with almost 50 nations represented.

Powersports

Silence is golden in the outdoors—and in the military—and Nikola has branched out beyond semi trucks into the booming powersports market. “We want to transform everything about the transportation industry,” says CEO Trevor Milton. “With Nikola’s vision, the world will be cleaner, safer and healthier.”

NIKOLA RECKLESS: The first product unveiled at Nikola World 2019—driven on stage via remote control—was the autonomous-capable Nikola Reckless, an all-terrain vehicle that addresses the special needs of military missions. “With virtually no sound and no heat signature, the Reckless provides new meaning to stealth and is defying all standards,” said Andrew Christian, Nikola Powersports VP of business development and defense. “We believe all military vehicles will transform to battery electric and hydrogen fuel cells in the future.”

NIKOLA NZT: If you’re thinking about EV range for outdoor recreation, two things: if the military isn’t concerned about it (they are very good at planning), you needn’t be, either (planning is good for everyone, in any powertrain); and EV range exceeds the typical recreational outing, anyway. The Nikola NZT off-highway vehicle (OHV), with 590 hp and 775 lb-ft of torque via four independent waterproof motors, can hit 60 mph in four seconds and has up to 150 miles of range. Technology ranges from Fox shocks with 18 inches of travel to 7” cluster and 13” infotainment screens. Attendees were able to take a test spin in the NZT on a closed course at WestWorld during Demo Day.

NIKOLA WAV: If there’s one place quiet, clean powertrains are literally in demand, it’s watersports. Meet the Nikola Water Adventure Vehicle (WAV) and say goodbye to “no gasoline engines” rules. Still in concept stage, the craft’s “wakeboard” architecture is another world-first. “You can feel the rush of power and acceleration in your chest, with the sound of the water and breeze in your ears. It’s zero impact and pure fun,” says VP of Powersports Jordan Darling.

Semi-trucks

Nikola’s core vision is the manufacture of the world’s first purpose-built fuel cell Class 8 truck (18-wheeler semi), a comprehensive mission comprising increased hydrogen storage, optimized placement of the powertrain and a fully-implemented 70MPa hydrogen fueling network. They recently opened their first hydrogen station at their new Arizona headquarters and are working with industry and other OEMs to develop hydrogen standards that safely enable fueling in under 15 minutes, interoperable and able to fuel any hydrogen trucks.

The opening night of Nikola World 2019 began with Nikola CEO Trevor Milton arriving on stage behind a team of the famous Budweiser Clydesdale horses, in honor of a significant initial customer (see below). He then unveiled the **NIKOLA TWO**, calling it “the most advanced commercial truck the world has ever seen,” with up to 1,000 horsepower and 2,000 lb-ft of torque. There are currently more than 13,000 Nikola trucks on order. Nikola Two demonstration drives were set up on a track at WestWorld on the second day of the event.

Nikola Two includes a clever styling touch—the angled rear of its side windows marks where the windshield would just be starting on a conventional diesel semi with its huge engine up front. These efficiencies also provide room for spacious premium seating in the cab, a stylish “digital cockpit” with functions concentrated in 13-inch instrument cluster and 17-inch infotainment screens (including integrated onboard diagnostics), and a sleeping compartment with full-size mattress.

Power is delivered to either two wheels or four through a single-speed direct drive unit with low-noise gears. Steering is electric-hydraulic. The truck features independent suspension front and rear, and aerodynamics get a boost from an aggressive (and again stylish) rear spoiler. Lighting is all high-performance LED.

Nikola also recently announced a battery-electric truck option, utilizing the same steel and aluminum platform build and electric drive

motors, but replacing the hydrogen-electric truck’s type IV carbon fiber compressed hydrogen tank with additional battery capacity—pure EV power for the shorter-range short-haul urban trucking market.

ANHEUSER-BUSCH has placed an order for up to 800 zero-emission hydrogen-electric powered Nikola semi-trucks—with a range of 500 to 1,200 miles and refillable in 20 minutes, reducing idle time—to join their fleet starting in 2020. A **NIKOLA TWO** truck in Anheuser-Busch livery was a popular attraction at Nikola World, including cab walk-throughs (above). The brewer aims to convert its entire long-haul fleet to renewable powered trucks by 2025. Their *2025 Sustainability Goals* include reducing CO2 emissions by 25 percent across its value chain. Once in operation, the carbon reductions gained from these first 800 Nikola semi-trucks will reduce the brewer’s carbon emissions from logistics by more than 18 percent, equivalent to taking more than 13 thousand passenger vehicles off the road annually. AB also welcomes improved road safety through Nikola’s advanced surround viewing system.

For the European market, CEO Milton and president Mark Russell unveiled the never-before-seen **NIKOLA TRE** (photo at top right). “With a range between 500 and 750 miles depending upon load, this gorgeous vehicle will have fast hydrogen fueling in under 15 minutes, even in Europe,” said Russell. “Think about Europe with no more diesel trucks,” says Milton. “The roads will be clean, quiet and beautiful.”

Though tens of thousands of professional truck drivers are itching to get behind the wheel of a Nikola, all their products can accommodate a self-driving future, built with autonomous driving hardware in place.

“By 2028, we anticipate having over 700 hydrogen stations across the USA and Canada,” says Nikola CEO Trevor Milton. “With nearly 9 billion dollars in pre-order reservations, we are building to order, not speculation, and are very excited for what’s to come.”

Nikola is partnering with Ryder System Inc., with over 800 North American locations to provide nationwide shop, mobile and on-site maintenance coverage. ■