



## Process Engineer

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Verne is developing innovative hydrogen technology that enables heavy-duty transportation (trucks, ships, and planes) to operate with zero emissions. Heavy-duty transportation is vital to the functioning of our global society, but is also responsible for 10% of global greenhouse gases. If vehicles switch from fossil fuels to green hydrogen, they can operate without producing any emissions. However, two challenges prohibit this transition: storing enough hydrogen onboard to power their operations, and access to this hydrogen to refuel.

Verne is bringing to market two technologies that simultaneously address these challenges. First, Verne has developed a new way to increase the density of hydrogen gas. This equipment will be installed at refueling stations, converting low density hydrogen into ultra-high-density hydrogen fuel. Second, Verne has developed a way to store this high-density hydrogen onboard vehicles. Together, these two technologies more than double the amount of hydrogen that can be stored onboard vehicles, doubling vehicle range and allowing them to carry a full payload. With Verne's technology, vehicles can maintain current operations while eliminating harmful emissions.

Verne has made significant strides toward this massive industrial transformation and is conducting demonstration programs for vehicle and equipment manufacturers. Verne has gained the support of leading technology institutions, including MIT, Caltech, and Stanford. All three co-founders were selected as fellows in the inaugural cohort of Breakthrough Energy's new fellowship program, supported by Bill Gates.

### **What you'll do:**

As a Process Engineer, you will provide critical engineering support of our hydrogen systems for heavy-duty refueling stations. These novel systems convert gaseous hydrogen into high-density hydrogen on-site. This role will provide unique exposure to Verne's innovation pipeline and technology development for demonstrations. You will work closely with other Verne engineers to accomplish company-wide objectives.

Specifically, you will support the following areas of Verne's engineering development:

- Develop and refine thermodynamic models for hydrogen compression and cryogenic cooling, and carry out energy efficiency analyses for multiple designs and use cases
- Conduct process modeling and energy efficiency analysis for multiple designs and use-cases
- Support the design of on-board storage systems through thermodynamic modelling
- Support the prototyping and testing of our first-of-kind refueling systems for first-of-kind demonstrations for OEMs and national laboratories
- Champion safety protocols and procedures for demonstrations of our early prototypes, and develop refueling best practices for early pilots

### **Key qualifications:**

- Degree in Chemical Engineering or similar
- Experience with process engineering (Pre-FEED, FEED or detailed engineering) or process safety (HAZOP, P&ID), ideally involving thermal management or pressurized systems

- Experience with computer-aided process engineering, including using Aspen HYSYS
- Excellent and fast learner, able to quickly synthesize new information and tackle new problems
- Strong team player, able to effectively communicate with others to address mission and time critical complex problems
- Interest in playing a core engineering role for a growing early-stage startup
- Passion for driving large-scale decarbonization and a desire to be at the forefront of the global efforts to combat climate change

### **Compensation and benefits:**

- Competitive salary and equity incentives
- Medical and dental insurance
- Flexible hours & paid time off
- Join a collaborative and passionate team
- The opportunity to shape the rapidly growing green hydrogen industry
- The opportunity to work closely with leading transportation decarbonization partners

### **Location**

- San Francisco
- Key vendors, suppliers, and partners in the broader Bay Area

### **About the Verne team**

At Verne we value a diversity of approaches to critical thinking. We aim to establish an environment that welcomes different perspectives, where informed discussions flourish and each individual voice is respected. The team thrives in asking questions to gain a more nuanced understanding. We all strive to provide constructive feedback and ultimately aim to make each of us a better listener, thinker, and leader. Lastly, our mission is ambitious and difficult, so we don't forget to have fun!

### **About Verne**

Verne is an Equal Opportunity Employer and does not discriminate on the basis of race, color, creed, gender, religion, marital status, registered domestic partner status, age, national origin, ancestry, physical or mental disability, medical condition, sex, genetic information, sexual orientation, military and veteran status or any other consideration made unlawful by federal, state, or local laws. It also prohibits unlawful discrimination based on the perception that anyone has any of those characteristics, or is associated with a person who has or is perceived as having any of those characteristics.

**To apply:** Please send resume and cover letter to [contact@verneh2.com](mailto:contact@verneh2.com)