

Principal Engineer – Hydrogen Heat and Power

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| Hiring Manager: | Alex Fridlyand | Department/Overhead: | Research & Tech Dev |
| Last Revision Date: | 07/21/2022 | Grade Level: | P3 |
| FLSA Status: | Exempt | Approved By: | Kristine Wiley |

General Summary

GTI Energy, the nation's leading research and development and training organization serving energy markets, has an opportunity for a Principal Engineer in our Hydrogen Technology Center, with a focus on heating and power production. The qualified candidate will perform R&D functions, with supervision from senior technical staff, focused on low-carbon energy systems.

Why GTI Energy?

We are proud of what we do because our work matters. GTI Energy is working toward solving global energy challenges in transitioning to a low-carbon economy. We have a proven track record in producing innovative ideas and commercializing solutions to deliver clean and reliable energy. At GTI Energy, we deliver innovative technology solutions for safe, efficient, and responsible energy.

So, what does that mean for you? You will work in a positive and respectful work culture that fosters growth, collaboration, and opportunity while enjoying purposeful work that drives improvement of delivering clean energy to the world. GTI Energy offers generous benefits, competitive salaries, career advancement, and the opportunity to work in a professional R&D environment. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Primary Responsibilities

Working with Technicians and Project Engineers, the Principal Engineer will be expected to be responsible for the design, setup, and execution of experimental test programs, lead analytical and simulation-based studies of low-carbon energy systems, and maintain strong communication with Project Managers, internal stakeholders, and project partners and sponsors. The Principal Engineer is expected to take a systematic approach to handle multiple projects, understand individual project goals and develop new competency areas as required to succeed in each project cycle. In this role, you will also:

- Lead the design, build, and commissioning of experimental apparatuses intended to investigate the impacts and optimized use of low-carbon fuels, including hydrogen.
- Effectively direct and collaborate with technician and project engineering staff, including the development and maintenance of experimental documentation, including: mechanical and electrical drawings, software flow diagrams, standard operating procedures, and job safety analyses.
- Oversee and implement experimental programs based on an understanding of current research and industry standards/test methods, simulating as-installed performance of low-carbon energy systems. Execute experimental investigations of low-carbon energy or renewable energy systems, at bench-scale or full system-scale.
- Be responsible for the specification installation, and calibration of instrumentation, in addition to the installation and programming of data acquisition systems.
- Perform basic thermodynamic, fluid dynamic, and heat transfer calculations.
- Analyze data and prepare project reporting for internal and external use.
- Track and maintain project budgets at overall and task levels
- Potential for travel for industry events, field site visits, or pilot implementations
- Execute other duties as assigned

You must have legal authorization to work for GTI Energy on your date of hire with no further action required by GTI Energy. GTI Energy is an Equal Employment Opportunity employer, minority/female/disability/veteran/sexual orientation.

YOU MUST HAVE

- An advanced degree in Mechanical, Chemical, Electrical, or related Engineering discipline; Relevant Industry Certifications are a plus (Licensed Professional Engineer, LEED AP, CEM, etc.)
- A minimum of 5 years relevant work experience (Building, Industrial energy, and power generation systems are preferred).
- Demonstrated hands-on experience designing and executing experimental investigations.
- Your past professional experience in these areas is highly valued, but so are your personal abilities and willingness to learn. All candidates with the appropriate skill sets will be considered

WE VALUE

- Deep Interest in learning new skills and energy technology topics
- Prior research experience in a laboratory setting
- Fundamental understanding of heat transfer, combustion and energy conversions, power generation systems including fuel cells, material impacts of low-carbon resources
- Experience with instrumentation, data acquisition and control systems specifications (e.g., National Instruments hardware and software), programming experience is a plus
- Familiarity with common laboratory tools, construction materials, general plumbing and electrical
- Clear and concise communication skills
- Individuals who are self-motivated and able to work independently with direction
- Excellent computer literacy
- Familiar with PCB component operation, such as relays, AC/DC transformers, and counters.

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