FOURTH POWER

TPV Emitter Development Lead Engineer III
Middleton, MA

Decarbonizing the electricity system is within our reach. Renewables make up the bulk of new electricity generation but without cost effective, scalable ways to store that power, we will continue to rely on fossil fuels. Fourth Power is focused on making intermittent, renewable energy as predictable and reliable as fossil fuel at a lower cost.

We are an energy storage company that will be the backbone of an electricity grid run on renewables. Our batteries operate by storing heat in low-cost graphite blocks at extremely high temperatures. Liquid metal is pumped, and used to transport heat between subsystems, while thermophotovoltaics (TPV) are used to generate electrical power on demand. Not only are our batteries inherently safe, but they are 10 times cheaper than the existing type of grid scale battery. We fundamentally believe that in order to power the world on clean energy, storage needs to make our overall cost of energy cleaner, cheaper and more reliable than our existing system. For additional information on the company and how the technology works, please visit www.gofourth.com and watch the explainer video on the Technology page.

This technology was developed over the last decade in the labs of MIT and Georgia Tech, and is backed by prominent venture capital firms including DCVC and Breakthrough Energy Ventures. Fourth Power has a culture of teamwork, continuous innovation, and excitement in tackling challenging problems. We are looking for highly skilled, experienced, and motivated individuals who share our passion for mitigating climate change.

Position Summary

Fourth Power is looking for a TPV Emitter Development Lead Engineer to join the engineering team, which is responsible for designing, building and testing a first of a kind 1 MWh-e thermal battery system. This first demonstration system will become the standard building block of Fourth Power's commercial product. This position will involve working collaboratively to design and prototype high temperature optical cavities for Fourth Power's TPV power block. This position will own the hot-side of the power block, developing and innovative, scalable and cost-effective design that maximizes system efficiency and lifetime. Responsibilities will include developing a fundamental understanding of material stability at high temperatures and designing blackbody radiators to meet system requirements reflecting that fundamental understanding.

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Roles & Responsibilities

- Drive development (design and de-risking) of thermophotovoltaic emitter
- Work with Director of TPV to understand the stability of the emitter and deposition challenges within the TPV system
- Continuous improvement of chemical and physical stability of emitter
- Contribute to understanding and mitigating creep in various system components
- Working on site in Middleton, MA

Key Qualifications:

- Degree in Mech Eng. / Materials Sci. or Eng. / Physics or other relevant discipline
  - BS plus ten (10) years relevant work experience
  - MS plus seven (7) years relevant work experience
  - PhD plus two (2) years relevant work experience
- Expertise in thermofluids / thermal hydraulics
- Expertise in heat transfer
- Expertise in fluid mechanics
- Preferred experience and expertise-
  - Refractory materials
  - High temperature environments or processes
- Experience driving technical development to understand physical mechanisms and engineer solutions to challenges

Fourth Power is committed to fight climate change, and it is also committed to offer equitable compensation, stock options, and a competitive benefits package.

To apply, please email your resume and a brief cover letter to: hr@gofourth.com. You may also apply directly on our website, by visiting the Careers page at www.gofourth.com.