

SUBCRITICAL SYSTEMS · JOB OPPORTUNITY

Head / VP of Engineering



Department Engineering

Posted

September 29th, 2026

Location Austin, TX

Employment

Full-Time

ABOUT SUBCRITICAL SYSTEMS

Subcritical Systems, Inc. is a venture-backed startup in Austin, Texas building the accelerator driven systems and the only US commercial manufacturer of accelerator cavities. What Space X did for rockets, we plan to do for accelerator cavities and commercialize across applications of power production, medical isotopes, semiconductors and waste transmutation.

We are in the process of building the Energy Amplifier — a novel nuclear fission system in which a particle accelerator drives a subcritical core, making meltdown physically impossible for clean power production. Due to its inherent safety, our system has a more streamlined licensing process. Our founding team includes successful entrepreneurs with a track record of building several multibillion dollar companies in deep-tech, and scientists who were leading U.S. National labs with deep experience in accelerator & nuclear technologies.

We are actively hiring to expand our team as we work toward licensing, regulatory submissions, and construction of our first energy amplifier. More information is available at subcritical.com.

ABOUT THE ROLE

The Head/VP of Engineering will build and lead Subcritical Systems' engineering execution organization. You will sit at the center of execution, translating architecture into buildable systems, forcing clarity at subsystem boundaries, and driving the program to physical hardware and validated data.

The VP of Engineering works from system specifications and design basis inputs produced by the CTO's design team and is accountable for turning those inputs into complete, fabrication-ready engineering designs. This leader also owns the systems engineering framework: Subcritical Systems has a high-level SE framework in place, and the Head/VP of Engineering will be responsible for building it out into a fully operational process that governs requirements traceability, interface management, configuration control, and design reviews across the program.

The right candidate is a hands-on engineering leader who has built teams that deliver detailed design packages for complex hardware, has grown a systems engineering process in a working program, and is energized by standing something up from scratch in a startup environment.

KEY RESPONSIBILITIES

Build & Lead the Engineering Team

- Recruit, hire, and develop a multidisciplinary team of engineers and CAD designers; establish team structure, roles, and design standards.
- Assess the existing engineering toolset, CAD platform, PDM/PLM, and supporting tools, and evolve it as the team and program scale, ensuring it remains fit for an advanced energy system and program.
- Set engineering culture: rigorous documentation standards, clear design ownership, and a fabrication-first mindset.

Execute Engineering Designs

- Translate the architecture-team specifications into detailed designs across technical subsystems, supporting a strong design-build-test environment.
- Work closely with SMEs to deliver engineering designs meeting functional specifications and established requirements.
- Produce fabrication-ready deliverables: fully dimensioned 3D CAD models, GD&T-compliant drawing packages, material and weld specifications, and assembly documentation.
- Chair design reviews. Own interface control documents, design basis decisions, and engineering change orders, kept consistent with CTO-issued freeze points.
- Maintain the Design Matrix and Systems Design Descriptions as live programme documents not as one-time deliverables.
- Manage Interface Control Documents between subsystems and at the boundary with Architecture-owned system definitions; raise constructability and manufacturing concerns early.

Build Out & Own the Systems Engineering Framework

- Take Subcritical Systems' existing high-level SE framework and develop it into a fully operational process: requirements allocation and traceability, interface control documentation, configuration management, and design review governance.
- Maintain requirements-to-design traceability across all subsystems; surface gaps or conflicts to the CTO and design team for timely resolution.
- Ensure all engineering deliverables meet the documentation and traceability standards required by the program's quality assurance plan.

Program Execution

- Own the engineering schedule and resource plan; report status, risks, and variances to the CTO and leadership on a regular cadence.
- Drive design-to-fabrication readiness; identify vendors with specialized capability and ensure design packages support external procurement.

Vendor and Regulatory Integration

- Lead technical evaluation of major procurements.
- Support RFP technical content and vendor selection processes for first-of-kind hardware where commercial precedent is limited, and delivery schedules are dramatically compressed.
- Own engineering deliverables for NRC pre-application engagement. Work with the Head of Regulatory, ensuring design basis and licensing artifacts are produced inside the pod sprint cadence.

IMPACT

The success or failure of the program will be strongly coupled to the quality and speed of engineering execution in this role.

Qualifications

Required

- Demonstrated experience delivering complex, hardware-heavy systems under real schedule pressure. Years of experience matter less than evidence of execution; we expect roughly 8–10 years for most candidates, with at least 3 in senior technical leadership.
- Track record of delivering first-of-kind or low-precedent hardware in accelerators, nuclear, defense, aerospace, or an adjacent deep-tech domain.
- You make decisions with incomplete information and adjust quickly and have operated in environments where failure had real cost, time, capital, or credibility.
- Comfortable between an architecturally-strong CTO and an operationally-strong COO. You hold technical authority on integration and build, and are not threatened by sharing the engineering org with a system architect upstream.
- Direct, high-bandwidth communicator. You translate technical complexity for executives, investors, and regulators without losing precision.

Preferred

- Deep technical fluency in at least one of: accelerator systems, nuclear fission systems, or complex mechanical/cryogenic systems, enough to lead design reviews with authority.
- Direct experience with accelerator-driven systems, spallation targets, SRF linacs, or subcritical reactor concepts.
- Familiarity with NRC Part 70 / Part 30 or equivalent non-reactor nuclear licensing pathways.
- Experience running a compressed programme at an early-stage deep-tech company where headcount, budget, and schedule were all genuinely constrained.

BENEFITS

Benefits: We offer health, dental, and vision insurance.

LOCATION & WORK POLICY

This role is fully in person in Austin, Texas. Our facility is located next to Austin Airport.

HOW TO APPLY

Apply on LinkedIn or submit your resume and a brief cover letter to careers@subcritical.com with the subject line "Head / VP of Engineering - Application". Applications are reviewed on a rolling basis.