

Safety Analyst

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TERRESTRIAL ENERGY USA

Job Summary

Vacancy :
Deadline : Aug 18, 2024
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Employment Status : Hybrid
Experience : Any
Salary :
Gender : Any
Career Level : Any
Qualification :

Job Description

Interested in helping us transform thermal and electric energy?

Become a part of the leading Generation-IV nuclear plant development team.

Terrestrial Energy is developing for near-term commercial operation, a zero-emissions cogeneration plant for global industry using its proprietary Integral Molten Salt Reactor (IMSR) fission technology in an innovative, small and modular plant design. The IMSR is a non-Light Water Reactor of the Generation IV class that operates at the high temperature required for broad industrial relevance with transformative economic potential. The IMSR plant is capable of grid-based electric power generation and industrial cogeneration in many energy-intensive industries, including petrochemical and chemical synthesis for hydrogen and ammonia production. The IMSR plant offers a near 50 percent improvement in efficiency of electric power generation compared to Light Water Reactor nuclear plants. Its industrial cogeneration capability delivers to today's markets industrial competitiveness, security of energy, and zero-emissions industrial production. The IMSR plant's use of existing industrial materials, components, and fuels supports its near-term deployment, setting the stage for a rapid global decarbonization of the primary energy system. To execute this plan, we are now looking to add talented people to the team, each of whom will:

- improve our team by adding diverse perspectives and innovative ways of problem solving
- have demonstrated exceptional results in engineering projects
- be a team player with the ability to collaborate closely and interact with other groups
- be flexible and adaptable to change
- have skillset and experience that relate to the **following role**:

The Safety Analyst, under the direction of Safety Manager, is primarily responsible for nuclear Safety Analysis simulations, model development and assessment of model predictions with focus on establishing the risk profile for the IMSR nuclear power plant. Other responsibilities include:

- Perform Safety Analysis; in addition, execute sensitivity and uncertainty analysis studies
- Develop user defined codes in programming/scripting language to support simulations
- Develop analytical models to support accident scenarios
- Perform post-processing of the simulation results and prepare assessment reports
- Conduct the design assist for design and safety enhancement
- Present the simulation results to inter-disciplinary design team and management to support Safety decision making
- Perform verification and validation for the Safety Analysis code
- Support planning, development, and implementation of IMSR Safety Basis, including mechanistic source term
- Support development of regulatory deliverables, including safety analysis reports, and license applications
- Support resolution of key strategic issues associated with the safety and licensing basis
- Coordinate closely with other disciplines such as physics, thermal-hydraulics and mechanical to support Safety related studies
- Review assessment documents and provide comments

Core Competencies

- Heat Transfer
- Fluid Dynamics
- Component and structure integrity
- Simulation experience (with integral or higher fidelity codes)
- Communication
- Critical Thinking
- Decision Making
- Planning and Organizing
- Problem Solving
- Results Orientation
- Team player with the ability to collaborate and interact with other groups
- Flexible and adaptable to change

Requirements

- Master or Ph.D. degree in mechanical engineering or other engineering disciplines related to thermal fluid sciences
- Sound fundamental knowledge of conjugate heat transfer, fluid dynamics, and nuclear fuel
- Extensive working knowledge of any programming/scripting language such as C#, C++, Python, Fortran or Matlab
- Skills and ability to learn new analysis tools
- Strong analytical skillsets
- Strong problem identification and problem resolution skills
- Flexibility to adjust to shifting priorities and deadlines
- Exceptional interpersonal and communication (both written and verbal) skills
- Skilled at developing and maintaining strong relationships across all levels of the organization and with external customers and vendors

Assets

- Education / experience in the nuclear field
- Work experience of 3-5 years in a related field
- Eligible for PE Certification
- Knowledge of molten salt nuclear reactor working principles
- Knowledge of CSA N286.7-16 standard

Benefits

- Extended Healthcare Plan (Medical, Disability, Dental & Vision)
- Paid Vacation Days plus 5 additional paid days
- EAP Programs available to you and your family
- Hybrid work model (2 days in office per week)
- \$500 Wellness Subsidy
- Annual Performance Review
- Paid United Way Volunteer Days – A chance to give back!
- Career development opportunities

Please submit a Resume and Cover Letter

TEI Values diversity in its workforce and encourages applications from all qualified individuals. TEI is an equal opportunity employer.

If you require accommodation during the application or interview process, please advise us as soon as possible so appropriate arrangements can be made. If you require technical support in a format that is accessible to you, please contact AODA@terrestrialenergy.com.

Education & Experience

Must Have

Educational Requirements

Compensation & Other Benefits
