

24 March 2022 Position Announcement

Energy Modeler and Project Engineer – New York

Transsolar KlimaEngineering is an international climate engineering firm advising architects and clients on energy and climate design for construction projects of all scales all over the world. We are involved in projects ranging from small schools in developing countries to stadia or entire cities. This diverse work shares a common focus on creating exceptional, highly comfortable indoor and outdoor spaces with a positive environmental impact.

For more information about Transsolar and our international portfolio of high-impact projects, please visit our website at www.transsolar.com

We are seeking a talented, highly motivated engineer for our New York office with experience in advanced building performance simulation and whole-building energy modeling to support both our project simulation work and development of internal tools.

What are we looking for?

We're looking for a team member with these qualifications and experience – but we don't expect you'll have all of them. Qualified graduating students and experienced professionals are encouraged to apply.

- Engineering or applied science education related to building energy flows and building science: heat transfer, thermodynamics, fluid mechanics, indoor and outdoor human comfort, etc.. An M.S. is preferred
- previous experience in a professional or academic environment performing advanced simulation requiring full understanding of the underlying engineering physics. Prior experience with TRNSYS is not required, but welcome.
- Experience with conventional whole-building energy simulation and ASHRAE 90.1 baseline modeling
- Previous experience in a professional or academic environment with contemporary scripting or programming languages (Python, Javascript, C#)
- Ability to develop and articulate engineering problems beginning with fundamental physics and use both analytical and computational methods to analyze unique and complex building physics and building systems
- Passion and creative energy required to collaborate with world-class architectural design teams
- Experience collaborating and communicating in the early stages of an architectural design process with both technical and non-technical audiences
- Excellent oral and written communication skills
- Education/professional experience with current and advanced architectural technologies (e.g. building envelope)
- Experience with physical testing of engineering systems: system construction, instrumentation and measurement, etc.

Responsibilities at Transsolar

We work as teams in an engineering studio environment. Daily work is diverse, and your responsibilities will vary and grow according to your interest and experience (and from project to project), but are expected to include:

Primary Responsibilities

- Testing, validation, and optimization of concepts, including comfort and energy analysis via dynamic thermal simulation (TRNSYS), computational fluid dynamics, and daylight analysis tools

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- whole-building energy simulation and ASHRAE 90.1 baseline modeling
 - Tool/workflow development using contemporary scripting tools (such Python, Javascript, and Grasshopper)
 - Engineering analysis via hand calculation, spreadsheet analysis, and other analytical engineering analysis methods
 - Internal coordination with other team members, synthesis, and communication of overall analysis results and design recommendations
 - Graphical representation of complex engineering analysis

Additional Responsibilities

- Development of climate and energy concepts in response to local climate, site, architectural, and programmatic requirements, including key performance requirements for design concepts
- Graphical representation of climate concepts
- Review of project design documentation, especially architectural and mechanical drawings and specifications, to ensure successful realization of the climate concepts
- Writing reports and correspondence
- Participation in meetings and design charrettes
- Collaboration with German Transsolar offices
- Domestic and international travel to project meetings and sites
- Public speaking and development of your professional network to broaden Transsolar's reach

The base annual salary range for this position is \$55,000 - \$85,000 depending on the experience and background of the applicant. Transsolar offers annual bonuses, dependent on company performance, which are a meaningful portion of our total compensation package.

How to apply

Interested applicants may submit their resume and cover letter via email to jobs@transsolar.com.

In your cover letter please answer (maximum 150 words each):

- Why are you interested in Transsolar and the right fit for this position? Be specific.
- What is the most challenging energy model you've been involved in? How did you help address the challenge?
- What is your potential start date?
- Whether you will now or in the future require visa sponsorship for employment at Transsolar.