



## **Senior Mechanical Engineer**

### **Energy Innovations**

#### **San Diego, California**

#### **The Company:**

Energy Innovations, based in San Diego, CA has pioneered the development of Highly Concentrated Photovoltaic (HCPV) systems that use concentration to substantially reduce the cost of solar energy. EI's mission is to leverage the benefits of concentrated solar to achieve economic parity with fossil fuel generated power alternatives, making EI the first choice for alternative energy.

EI's breakthrough Sunflower system uses Fresnel lenses to concentrate the sun 1,200:1 onto ultra high efficiency solar cells adapted from the satellite industry. Our module operates at twice the efficiency of traditional crystalline silicon PV panels and when coupled with our revolutionary low cost 2-axis tracker, generates 30% more energy than current generation PV panels.

EI is seeking a Senior Mechanical Engineer to lead the development of key elements of our Sunflower module. Our module is effectively a precision optical system that focuses the sun's light energy onto PV cells, converts 30% of that energy into electricity and then efficiently discards the remaining heat energy into the environment. The success of our product is in large part determined by the precision and cost effectiveness of this mechanical assembly. The successful candidate will possess the necessary skills to design a high volume, ultra low cost and highly manufacturable solution that meets the precision needs of our optical systems.

Energy Innovations is an operating company of Idealab, a prolific creator and operator of technology businesses. More information can be found at:

[www.EnergyInnovations.com](http://www.EnergyInnovations.com)

[www.Idealab.com](http://www.Idealab.com)

---

## **Position Purpose:**

This position will lead the development of key elements of the module design and will be the lead technical systems engineer for certain elements of the module design.

---

## **Accountabilities:**

This position will report to the VP of Engineering and will have the following responsibilities: The creation of design specifications, the mechanical design and validation testing of the design, product reliability, manufacturability and achievement of cost targets. In addition, this position is also responsible for the documentation of all analysis and assumptions related to key design decisions.

Due to the high volume, low cost nature of this product, it is essential that this position closely collaborate with our supply chain organization, our vendors and our manufacturing organization to ensure first and foremost that cost targets are met. In addition, this position must provide for the producibility of the parts and the manufacturability of the assembly in a highly automated, six sigma environment.

This position is also responsible for the creation of and intellectual property portfolio which protects the novel elements of the design.

---

## **Requirements/Qualities**

- B.S. or MS in mechanical or aerospace engineering and a minimum of 5 years professional experience in a high volume, low cost setting.
- Demonstrated knowledge of a broad range of sheet metal fabrication and assembly processes as well as vendor requirements for low cost fabrication.
- Working knowledge of six sigma principles as it relates to the fabrication of quality parts from vendors and our internal manufacturing processes.
- Proven understanding of statistical tolerance analysis techniques.
- Proficient at solid modeling, preferably with SolidWorks and PDMWorks.
- GD&T training and demonstrated ability to create high quality drawing packages using ASME Y14.5 standard.
- Experience with finite element analysis, preferably Abaqus.
- Knowledge of heat transfer mechanisms a plus.
- Experience with electronics packaging a plus.
- Creative and independent thinker, able to operate in a start up environment.
- Excellent communicator, innovative leader with collaborative design skills.
- Established reputation for high standards of professional ethics.