

## Sr. Design Engineer

New Delhi

### ABOUT SMART JOULES

- Smart Joules is a leader in energy efficiency services with a unique business model that delivers assured savings to its customers
- It is an early stage agile, fast-growing company funded by some of the large investors like **Asian Development Bank, TATA Capital, Sangam Ventures, Max Industries, Intelleventures, Mr. Saket Burman (Dabur Family), Mr. Nadir Godrej and 5 angel investors**
- Smart Joules has achieved
  - **35%** reduction on total energy consumption across all its clients till date, equivalent to the annual consumption of more than **15 Lakh** avg. Indian households
  - **1,13,254+ metric tons** of annual CO<sub>2</sub>-eq. emissions reduction from existing projects
  - Saved more than **INR 133 Crore** of energy
- Some of its clients includes renowned companies like Apollo, Fortis, CARE, KIMS, Aster, Amneal and LMW
- It has presence across **25+ cities throughout India & 1 international partnership in Indonesia**
- Some Recognitions include: **Champion of Change recognition from the Prime Minister's Office & Niti Aayog, 10+ National Awards from Ministry of Power & CII, International Award from German Energy Ministry, Multiple international grants and fellowships, 35+ media coverages**
- Business Offerings
  - JoulePAYS: Pay-as-you-save model offering guaranteed energy savings with 0 CapEx and 0 risk for existing buildings and factories

- JouleCOOL: Cooling-as-a-service (build-own-operate-maintain-analyse-optimize) model offering sustainable, convenient, quality and economical cooling for new buildings
- DeJoule: IoT platform technology with hardware and software to continuously identify and automatically eliminate operational energy wastage
- For more details, see:
  - This recent [5-minute pitch](#) about the business
  - [This interview](#) with Govind explaining our business
  - [This podcast](#) with Forbes discussing our business and growth plans
  - This video calling out to the type of people we are looking for and this one relating to our mission
  - Our [website](#) and [LinkedIn page](#) have additional information

## WHY SHOULD YOU BE A PART OF SMART JOULES?

### 1. 4X Individual Growth:

Very ambitious and goal driven management and team which targets to grow 318 times in next 7-8 years. If you are part of such a team, you will have to grow 4 times.

### 2. Market Leaders:

The market leader in their business segment in India and soon in the world

### 3. Contribute to Environment:

You contribute to the environment and society as a whole by being a part of journey to prevent 29 million tons of CO<sub>2</sub>e emissions before 2030 by making energy saving simple, substantial and profitable for large buildings and factories

### 4. Develop Entrepreneurial Skills:

Empowers Each Team Member with a Sense of Ownership, Build a Positive Team and Family Spirit, Get Shit Done, Maintain a High Level of Transparency and Honesty, Be Passionate, Determined and Bold, Pursue Growth and Learning, Be Adventurous, Creative and Open-minded

### 5. Develop Cross Functional Skills:

You work across multidisciplinary teams and hence, develop your skills across various domains

### 6. Stable Business:

Although fast growing, Smart Joules is stable with revenue locked in for 7-10 years with highly credit-worthy clients for whom we create disproportionate ongoing value.

### 7. Profitable:

Company is profitable and more than doubled in last year. Moreover, in the COVID times also it gave increments to its employees.

## *About the Role: Sr. Design Engineer*

### **Role Summary**

1. Responsible for leading the Central Design team to identify, assess, select and formulate ECMs that can deliver min 20% savings at each JoulePAYS client site. The work includes maintaining an ECM Book for each site, designing ECM Notes, Design Qualifications, Techno-Commercial comparisons, and Monthly Savings. Projections for each selected ECM, and continuously identifying, assessing, and innovating new ways of saving energy.

2. Reporting to: Design Lead - HVAC
3. Individual contributor

### Responsibilities

Responsibility Head	Responsibilities
<b>JoulePAYS Project (Brown Field)</b>	<ul style="list-style-type: none"> <li>● To identify, assess and innovate new ways of saving energy</li> <li>● To guide Field Engineering Team to carry out the detailed audit of the facility with tailor-made data collection formats and checklists as per the facility requirement.</li> <li>● Develop and maintain an ECM Book for each client site summarizing the techno-commercial potential and go/no-go decision with respect to each of Smart Joules' standard ECMs based on collected data, as well as new ECMs based on particular site observations.</li> <li>● Finalize ECMs delivering minimum 20% energy savings and maximum 20- month SJPL payback period for every site, including preparation of techno-commercial comparison for major selected equipment (i.e., Chiller, HVAC Pumps, Cooling Towers, 2-way valves, VFDs, etc.), vendor negotiations, etc.</li> <li>● Prepare ECM Notes, Design Qualifications, Monthly Saving Projections, and Detailed BOQ along with the projected cost for each of the finalized ECMs.</li> <li>● Researched the latest energy savings technologies, and global trends and conduct a competitive analysis in order to identify white space opportunities</li> <li>● Discuss and review design intent logic with the BMS Design and Commissioning Team to</li> <li>● finalize the scope of BMS deployment.</li> <li>● Preparing Award applications for the client to recognize their effort towards energy savings and environmental sustainability.</li> </ul>
<b>JouleCOOL (Green Field Projects)</b>	<ul style="list-style-type: none"> <li>● Performing Heat load calculation (Air conditioning &amp; Ventilation) using E20 sheet or HAP.</li> </ul>

	<ul style="list-style-type: none"> <li>• Design of Central Air Conditioning Plants including High side and Low side, DX Systems, VRF, etc.</li> <li>• Design &amp; selection of HVAC equipment (Chiller, HVAC Pumps, Cooling Towers, Air Handling Units, Fan Coil Units, Ventilation, Ducting, Piping, etc)</li> <li>• Work closely with the Business Development team to propose “value engineering ideas” to the client’s existing design to make Smart Joules’ offer stand out from other competitors.</li> <li>• Work closely with draftsman for preparing High Side and Low Side Drawings (Concept Drawings, P&amp;ID, and GFC)</li> </ul>
<b>Documentation</b>	<ul style="list-style-type: none"> <li>• Own the following: Energy Audit Data, ECM Book, ECM Notes, Design Qualifications, Monthly Savings Projections, Design Budgets, and Value Engineering Ideas for Green Field Projects.</li> <li>• Regularly document and share best practices and success stories from all sites with all teams in Smart Joules.</li> <li>• Keep the Central Documentation folder updated site-wise with all relevant information.</li> </ul>

### Skills & Experience Required

Skill & Behavior /Experience Required	Requirement Detail
<b>Experience</b>	<ul style="list-style-type: none"> <li>• Completed studies in mechanical engineering, energy technology or comparable training/qualification</li> <li>• Advantage: experience in the field of HVAC systems (control, regulation measurement, protection, and communication systems)</li> <li>• 6+ years of experience covering a mix of, project design, energy management, project planning, and project execution.</li> <li>• Extremely strong in mass balance and energy balance.</li> <li>• Should be good at doing calculations of a) Building Heat Load (Cooling and Heating both) b) Head Calculation for Pumps</li> </ul>

	<ul style="list-style-type: none"> <li>• Strong knowledge and experience with the design and execution of central air conditioning systems, including working experience with building energy management systems.</li> <li>• Strong computer skills (Web Search, Email, Word, Excel, PowerPoint).</li> <li>• Knowledge of energy modeling software would be an advantage.</li> <li>• Knowledgeable about products, services, companies, and people eliminating energy waste in India.</li> <li>• Knowledgeable about leading quality standards (ISO, ISHRAE, BEE) and certifications (LEED,</li> <li>• NABH)</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>• Bachelor's Degree or Higher in Mechanical Engineering / Energy Engineering / Electrical Engineering.</li> </ul>
<b>Travel</b>	Not Required
<b>Skills</b>	<ul style="list-style-type: none"> <li>• <b>Fitment to SJPL Core Values</b></li> <li>• Communication: Must communicate effectively with variety of Stakeholders and Team</li> <li>• Courage to roll with the punches and keep going at it</li> <li>• Strong computer skills (Web Search, Email, Word, Excel, PowerPoint).</li> <li>• Pays major attention to minor details</li> <li>• Tenacity, reliability, perseverance, pursuit of quality. Be able to prioritize their own work, and focus on executing a particular task/project to completion under the pressure</li> <li>• Ability to multitask - Quickly understand the requirements of diverse stakeholders</li> <li>• Must be able to make effective presentations to a variety of audiences.</li> </ul>

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