



## Sustainable Building / Energy Efficiency Engineer

Location: Shanghai – Jing’An District

Starting Date: September 2023

Duration: Long term employment

### Our Company

Headquartered in Paris, TERAO is a global consulting and engineering company which has been involved in energy efficiency and green building engineering for 25 years. Created in 1993, TERAO is one of the pioneers of energy-saving and sustainable buildings. With a 50+ team of multidisciplinary engineers, TERAO is a leading independent French green building engineering company active in China (since 2008) and worldwide (South-East Asia, Africa, Latin America).

Terao operates on the whole building life cycle, from design (green building specifications, energy efficiency design and calculation, etc.) to operation and maintenance (energy audits, certifications in operation, ...).

TERAO capabilities include the following:

- Sustainable Design Solutions for new constructions and renovations
- Environmental Certification Management for new construction and existing buildings (LEED, China GBDL/GBL, BREEAM, HQE, WELL, etc.)
- Low-carbon design (LCA, sustainable materials)
- Building Simulations (Thermal Modeling, Daylight Simulations, CFD, Wind Modeling, etc.)
- Energy Audits
- Specific Studies (Carbon Footprint Study, Life Cycle Assessment, etc.)
- Operation Optimization (ISO 50 001, Energy Management & Reporting, etc.)

### Job Responsibility:

Under the responsibility of the China Operations Manager, the Sustainable Building / Energy Efficiency Engineer participates to TERAO projects in China and South-East Asia, with a focus on industrial facilities and covers the following main tasks:

### Building Simulations and Technical Studies

- Prepare building simulations through the use of professional software tools (DesignBuilder, IES-VE, OneClick LCA, etc.), including preliminary and detailed building energy models, daylight

analyses, dynamic thermal simulation, computational fluid dynamics (CFD) simulations, LCA carbon footprint calculations, and data analytics in support of several types of technical studies:

- Building envelope and MEP systems evaluation for new building projects or campus-scale development with specific building environmental performance and construction budget goals;
- Thermal studies to assess indoor operating conditions for occupant health, safety, and comfort, and the durability of stored goods or operated equipment;
- Indoor lighting and daylighting studies to assess visual comfort and use of natural daylight to reduce artificial lighting usage;
- Energy audit services requiring performance impact estimates of proposed energy efficiency measures in existing buildings using spreadsheet calculations and software tools;
- Monitoring-based commissioning services requiring data visualization to spot faulty operations in HVAC operational trends;
- Low carbon consultancy services combining operational and embodied carbon footprint evaluation, and associated environmental impact lowering measures and remedies;
- Third-party sustainability certification submissions (e.g. LEED, BREEAM, HQE, etc.) requiring energy model and associated documentation;

### Project Reports and Communication

- Review plans, documentation, and contractor submittals for compliance with requirements
- Complete construction field visits to review progress, verify compliance with goals, and solve field issues; Perform on-site energy audits for existing facilities
- Administer green certification program processes (LEED, BREEAM, HQE, WELL, etc.)
- Identify, present and discuss performance improvement options meetings with clients
- Prepare logically organized, technically accurate, and clearly presented emails, memos and reports
- Learn best-practice fundamentals and implementation strategies for high-performance building enclosures, mechanical and plumbing systems, zero energy features, low carbon materials, etc.
- Grow into a project management role, acting as main point of contact for clients, tracking schedules and deliverables, producing or delegating as needed to get the work done, and integrating a diverse array of knowledge to provide insightful information to clients

## Requirements

### Academic Background and Professional Experience

- Master of Engineering (M.Eng.) / Master of Science (M.S.) or equivalent education in Mechanical, Electrical, Civil Engineering or related majors (previous coursework in HVAC and building simulation preferred)



- Minimum 3 years of energy efficiency or related mechanical engineering professional experience (previous building simulation, energy auditing, commissioning and industrial facilities experience preferred)

#### Skills and Abilities

- Solid knowledge of mechanical and electrical systems and principles; including HVAC, lighting, motors, thermodynamics, fluids, and heat transfer
- Hands-on experience with mechanical, electrical, and control systems
- Familiarity with ASHRAE Level-1 / Level-2 energy audits (Level-3 experience is a plus)
- Technical aptitude with ability to quickly learn and integrate new concepts and tools
- English Fluency is required. Chinese knowledge is a plus
- Strong writing, verbal communication, interpersonal, training, and analytical skills;
- Strong judgment and critical thinking to challenge assumptions and solve problems
- Strong organizational and project management skills

#### Software

- Proven proficiency in Energy Modeling software (DesignBuilder, IES-VE, etc.)
- Proficient with Microsoft Office Suite (including Word and Excel)
- Experience with OneClick LCA is a plus

Please find below the link to apply :

<https://mon-vie-via.businessfrance.fr/offres/recherche?query=TERAO>

You can also send your resume to: [arouchette@teraoasia.com](mailto:arouchette@teraoasia.com)