

Job Vacancy Description:
Solar PV and Mini-grid Engineer
Reference: 20/14

1. The company

Trama TecnoAmbiental (TTA), with headquarters in Barcelona (Spain), is an international engineering and consulting firm in business since 1986 in the field of renewable energies and specialized in distributed generation and energy access for development. TTA's multidisciplinary team has comprehensive experience at both technical and management levels and has been exposed to many international projects all over the world.

With its more than 30 years of experience, **TTA offers a full range of cross-cutting engineering & consulting services** for all kinds of renewable energy and energy access projects, such as:

- *Consultancy in energy access and renewable energy projects (off-grid and on-grid).* Project identification and evaluation; Technical and Economic feasibility studies; Assessment of renewable energy sources, Engineering studies; Social and environmental impact assessments; Owners Engineering services; Preparation of technical specifications and bidding documents; Support during procurement; Construction supervision; Monitoring services; Operation and Management services; Project promotion and dissemination.
- *Engineering Procurement & Construction (EPC) of micro-grids.* Design, supply, installation and commissioning of micro-grid projects.
- *Energy efficiency and green buildings.* Evaluation, design and monitoring of energy efficiency projects; Energy auditing; Integration of renewable energies into buildings and green building practices.
- *Institutional, Policy and Regulatory Support.* Design of rural electrification policies, programmes, strategies and action plans; Policy development and planning; Development of business models and tariff schemes; Market potential assessments.
- *Capacity Building.* Capacity building and specialized trainings.
- *R&D.* Publication of articles, documents, guidelines, case studies, and presentations at international conferences.

TTA is a **pioneer firm in renewable energy-based generation and solar PV Hybrid mini-grids**. At the forefront, TTA was the driving force for the implementation of the first micro-grid projects in Spain in the early 1990s, and later on applying its expertise in Latin America, Africa and the Mediterranean. TTA has implemented mini-grids as EPC contractor in Ghana, Chad, Cape Verde, Ecuador, Palestine, Morocco, etc. some of which have been operated and maintained by TTA. Having collaborated in various tasks of the International Energy Agency (IEA), TTA was awarded with the EUREC Technology Prize 2001 "for developing excellent system technology for rural electrification based on renewable energy sources, combined with an innovative, user-oriented approach for its implementation". Furthermore, in September 2015, TTA was awarded with the Prize "Off-Grid Experts Awards" by the company Phaesun together with ARE (Alliance of Rural Electrification), for excellence in the performance in the field of Off-Grid power supply, in the Category A "product" for TTA's "Electricity Dispenser", an advanced meter for mini-grids.

In terms of **publications**, TTA has been the main contributor of the IRENA's Innovation Outlook: Renewable Mini-grids (2016) and is author of the World Bank's ESMAP Benchmarking study of Solar PV mini grids investment costs (2017 & 2018). TTA's first hand field experience in the Operations and Maintenance of Mini-grids has been used by IRENA's Policy Toolkit. These are just some of the latest references in which TTA has participated.

Another significant milestone in the sector is TTA's lead organization of the **International Conference on Solar Technologies & Hybrid Mini Grids to improve energy access**, a relevant sector event conducted on October 2018 in Mallorca (Spain) and which was supported by renowned organizations such as the ESMAP, World Bank, EnDev, the GIZ or SNV.

TTA's track record in the field of Renewable Energy and Rural Electrification is demonstrated by the extensive list of projects carried out around the globe for project developers, contractors, power utilities, governments as well as all major International Organizations such as the World Bank, IFC, UNDP, UNOPS, UNIDO, UNICEF, GEF, UNESCO, IDB, OAS, European Commission, AECID, GIZ, KfW, and other cooperation and development agencies, NGOs, local communities and individuals.



Figure 1. Countries of experience

TTA is also a member of and collaborates with the following organizations and Groups. TTA is a founding member of the **Alliance for Rural Electrification (ARE)**.



Further detailed information at: www.tta.com.es/en

2. Job description

TTA is seeking a Solar PV and Mini-grid Engineer to join the Africa Unit at TTA. Under the supervision of the Africa Unit Team Leaders, as well as working with the Technical Director from the Technical department, the Solar PV and Mini-grid Engineer will carry out various technical tasks for grid-connected and stand-alone renewable energy electrification projects in Africa.

The job within the team will particularly focus on design, simulations, technical standards, bill of quantities and supervision of solar hybrid plants from kW-scale up to the MW range. Some work on electrical distribution networks is also envisioned (LV and MV).

3. Responsibilities

The **Solar PV and Mini-grid Engineer** will work in the following areas, listed according to priority:

1. **Power plant design, optimization and simulation:** carry out technical tasks, sometimes on individual basis and sometimes in a team. Component sizing, power plant design and dimensioning, electrical calculations, bill of quantities, schematics and drawings (some degree of AutoCAD or similar is expected) in grid-connected plants and stand-alone power plants. This includes but not limited to RE mini-grid plants, solar PV power plants, energy storage, control and monitoring systems, distribution of electricity
2. **Owner's engineering:** Advisory services to Institutional and private Clients on project development, operation, and tender preparation and construction. Review and evaluation of technical and financial proposals by contractors including provision of support in the negotiations with winning bidders, coordination of grant disbursements and provision of technical assistance to the winning bidders.
3. **Construction management:** Planning of plant construction and supervision, including eventual field work with the supervision of subcontractors for electrical, civil, mechanical work. Tight control of quality and timeline.
4. **Project proposal preparation:** Support to the Business Development department in preparing proposals, preparing technical methodologies, bill of materials, budgets and technical drawings for proposals.

4. Profile

The ideal candidate for this position will have the following competences:

1. **Educational Background.** An engineering degree or similar, a Masters in engineering is a plus. Specific education in renewable energies, sustainable energy and/or energy access will be an advantage.
2. **Previous Work Experience.** Minimum 5 years of experience in electrical engineering is required. Minimum 3 years of experience in solar PV and other sustainable energy sources is required. Experience in MW range clean-energy generation and low and medium voltage distribution lines is required. **Previous experience as owner's engineer is highly desirable.**

3. **International Experience.** Experience in developing countries is not required but desirable.
4. **Languages.** Fluency in English is required. Fluency in French, Spanish and/or Portuguese will be an added value.
5. **Computer Skills.** Excellent command in Microsoft Word, Excel and AutoCAD are required. Experience with simulation software i.e. HOMER, PV SYST is desirable.
6. **Interests.** Passionate about sustainable energy; Motivation to travel internationally; Interest in development.
7. **Skills.**
 - Ability to work with minimum supervision.
 - Ability to work on multiple projects simultaneously.
 - Analytical skills, efficient designing and implementing of processes.
 - Methodical and well organized.
 - Ability and proven experience to think creatively, learn quickly and develop innovative solutions involving electrical and mechanical challenges.
 - Cross-cultural communication and interpersonal skills.

5. Conditions

- **Salary and benefits:** From 30,000 to 35,000 €/year gross salary depending on qualifications of candidate. Corporate international travel and health insurance included.
- **Starting date:** Immediate.
- **Position based in:** Barcelona, Spain or Nairobi, Kenya.

Apply >> If you are interested in applying for this position, please click on the following link where you will find the procedure to follow (upload CV and fill-in form): <https://goo.gl/forms/i05SOg847G7bsybE3>

Only shortlisted candidates will be contacted