
Job Vacancy Description:
Sustainable Energy Economist and Financial Analyst
Reference: 20/012

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 extensive 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.
- *Product development.* Development of products specific for renewable energy and rural electrification projects.
- *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 Off-Grid Phaesus 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 Energies 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)** and TTA’s Director served as Board member for three years until 2015.



Further detailed information on the work of TTA can be found at: www.tta.com.es/en.

Please see some of our Microgrids projects: <https://youtu.be/Z21tenW9YXE>, <https://youtu.be/NibFpRHk8YU>

2. Job description

TTA is seeking a **Sustainable Energy Economist and Financial Analyst** to join the **Africa Unit of TTA**. Under the supervision of the Africa Team Leaders, the Economist and Financial Analyst will coordinate economic and financial analysis and models, develop innovative custom-consultancy services adapted to the project and Client needs and improve the organization's market position. The nature of projects will be related to sustainable energy, including renewable energy, energy efficiency and energy access.

The Sustainable Energy Economist and Financial Analyst will report to the Africa Team Leaders.

3. Responsibilities

The Sustainable Energy Economist and Financial Analyst will work in the following areas:

1. Economic and Financial due diligence of projects

- Project financial feasibility studies. Lead the preparation of economic project feasibility assessments and financial project evaluations such as cost-benefit analyses.
 - o Prepare financial models with cost estimates for projects, identifying capital costs (CAPEX) and operation costs (OPEX) and including sensitivity and risks analyses, and detailed scenario analyses.
 - o Assess commonly used indicators such as Analyses of Economic Internal Rate of Return (EIRR), Financial Internal Rate of Return (FIRR), and Weighted Average Cost of Capital (WACC), Levelized Cost of Electricity (LCOE), or Financial Cost of final electricity delivered in USD/kWh

2. Tariffs

- Tariff definition.
 - o Cost reflective tariffs versus non cost reflective tariffs
 - o Determine most appropriate tariff scheme: flat tariff, power-based tariff, energy-based tariff, binomial tariff, service-based tariff. Define tariff structure required to secure the financial sustainability of the project.
- Subsidies. Identify subsidy needs and detail subsidization approach. Experience with the building block approach will be an advantage
- Regulatory framework. Assess the regulatory framework for power tariffs.
- Social studies. Undertake socio-economic characterization of beneficiaries' local context. Lead Ability to Pay (ATP) and Willingness to Pay (WTP) assessments.

3. Business Models for mini-grid projects and solar home systems

- Public, Private and Hybrid models.
- Mechanisms of Ownership and Operation. Support the definition of the project's ownership structure: Utility Model, Private Model, Community Model or Public-Private Partnership (PPP). Determine the roles of each stakeholder.
- Mechanisms of Financial Backing. Consider project financial resources such as subsidies and grants, concessional Loans, loan guarantees, corporate or project finance. Identify funders: governments, donors or private investors.

- Methods of Cost Recovery. Define revenue sources, identify potential and support productive uses of energy.
- 4. Public Private Partnerships (PPP).**
 - PPP model. Define PPP strategy: BOT, BOOT, BLT, DBO, Concessions, etc.
 - Transaction advisory. Support preparation of regulations and model transaction documents for private sector participation, such as request for proposals (RFP) or power purchase agreements (PPA) for independent power producers (IPP).

Furthermore, the Economic and financial analyst will also support on the following activities in relation with his/her fields of expertise:

5. **Knowledge Management.** Become TTA's focal point on the knowledge areas related to this position.
 6. **Trainings.** Participate in workshops, trainings and capacity building activities.
- Publications.** Support the preparation of specialized publications.

4. Profile

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

1. **Educational Background.** A Master's degree in economics, finance or similar is required. Specific education in renewable energies, energy efficiency and management, sustainable energy and/or energy access will be an advantage.
2. **Previous Work Experience.** Minimum 8 years of experience in energy is required. Minimum 5 years of experience in sustainable energy is required. Experience in clean-energy mini-grids is desirable. Previous experience in consultancy and project management in sustainable energy is required.
3. **International Experience.** Experience in Africa is required. Experience with multilateral or bilateral development agencies is highly desirable.
4. **Languages.** Fluency in English or French is required. Other languages will be an advantage
5. **Computer Skills.** Excellent command in Microsoft Word, Power Point and Excel are required. Experience with simulation software i.e. HOMER, RETScreen.
6. **Interests.** Passionate about sustainable energy; Motivation to travel internationally; Interest in development.
7. **Skills.**
 - Ability to work with minimum supervision
 - Ability to manage multiple projects simultaneously
 - Problem-solver, pro-active and results-oriented
 - 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 35,000 to 40,000 EUR/year gross salary depending on qualifications of candidate.
- **Starting date:** Immediate.
- **Position based in:** Barcelona, Spain. Other locations could be considered for outstanding candidates. Travels to project sites (10 to 40%).

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.