

**JOB DESCRIPTION: Energy Systems Engineer Intern (Supply-Side) for  
CCREEE IRRP Programme**

**INTERNSHIP PERIOD: 11 months**



**BACKGROUND**

The Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE) is a specialized institution of the Caribbean Community (CARICOM). Established in the framework of the Global Network of Regional Sustainable Energy Centres (GN-SEC), The CCREEE is the implementation hub for sustainable energy activities and projects within the CARICOM region.

The CCREEE, under the CARICOM Secretariat Energy Unit's Regional Energy Apprenticeship Programme (REAP), is pleased to recruit a qualified and motivated **Energy Systems Engineer Intern** to join its Integrated Resource and Resilience (IRRP) team. The team, under CCREEE's climate resilience strategic programme, is undertaking the development of IRRPs for several CARICOM Member States. The IRRP is an electric sector planning methodology which facilitates countries in meeting their future electricity needs with an optimal and resilient mix of available resources.

The purpose of the REAP is to provide a framework through which recent graduates and university students from diverse academic backgrounds may be assigned to respective regional institutions in the sustainable energy sector to enhance their educational experience through practical work assignments. It allows the selected candidates to gain insight into the work of the institutions and provides assistance and training in professional fields that are either related to or can directly support the promotion and deployment of sustainable energy technologies and applications within CARICOM.

**SUMMARY**

The intern will work on supply-side analyses under the guidance of CCREEE's IRRP team. Supply-side activities include characterization of energy resources in member states, techno-economic analyses of existing and potential supply assets and resource optimization within IRRP planning scenarios.

**RESPONSIBILITIES**

Under the guidance of the CCREEE technical team, the intern will

- Familiarise him/herself with the framework of the IRRPs being undertaken by the CCREEE;
- Familiarise him/herself with the relevant country datasets provided and support relevant data analysis activities. Data will include, but may not be limited to, conventional and renewable energy resource data and generation technology and asset data;
- Liaise with team members conducting demand-side and power systems analyses to understand the integration between supply, demand and adequate and reliable grid connectivity;
- Support the power systems analysis component of the IRRPs, by ensuring that supply-side data is formatted as required for input into the power systems analysis software, DigSILENT Powerfactory;

- Support in reviewing and updating the PLEXOS and HOMER Pro models of the country which will be used for modelling, simulation and optimization of resource portfolios;
- Support in the development of IRRP knowledge products and tools;
- Perform other tasks related to IRRP analyses and management as required.



#### **INTERN WILL:**

- Learn about the dynamics of the energy sector throughout the Caribbean and gain a greater understanding of the unique energy and resilience challenges faced by member states;
- Gain expertise in the techno-economic characterization and analysis of generation infrastructure, with a focus on the Caribbean context;
- Gain exposure to the IRRP methodology and the benefits of applying structured, analytical and holistic planning methodologies to the sector;
- Gain exposure to a number of industry-leading software tools;
- Gain work experience in a fast-paced and specialized regional institution dedicated to energy matters in the Caribbean;

#### **REAP REQUIREMENTS**

Candidates for the REAP will be selected on a competitive basis and is open to university students, recent graduates and young professionals (born after January 1, 1990). The following eligibility criteria has therefore been established.

- Candidates enrolled in a post graduate programme may apply. Candidates also in the advanced stages of their undergraduate programme (i.e. final year students) will be considered and therefore may apply;
- Recent university graduates and young professionals who have completed either a postgraduate or undergraduate programme may also apply. Provided that the start date of the assignment is less than two (2) years following completion of studies;
- Special consideration will be given to applicants who are currently enrolled or have completed their studies at any regional universities which are part of the Regional Universities Network (RUN) or exist across the CARICOM member states;
- Applicants must be proficient in English. However, knowledge of another language (i.e. Dutch, French or Spanish) would be an asset;
- Applicants must be a national of a CARICOM member state.

#### **CCREEE REQUIREMENTS**

- Student or recent graduate in a relevant engineering discipline;
- Special consideration will be given to applicants who demonstrate specific coursework in energy topics, power systems, or related areas;
- Strong understanding of fundamental engineering theory and concepts related to energy;

- General understanding of the energy sector;
- Strong computer skills, with keen interest in learning relevant software applications (MS Excel, MS Project, PLEXOS, DigSILENT Powerfactory, HOMER Pro, QGIS). Experience with listed software or modelling in general would be an asset;
- Good analytical and communication skills;
- Strong organizational and time management skills.

