

KENYA FORESTRY RESEARCH INSTITUTE



POSITION OF PRODUCTION / MECHANICAL ENGINEER

Kenya Forestry Research Institute (KEFRI) is a State Corporation established in 1986 under the Science and Technology Act (which has since been repealed by the Science, Technology and Innovation Act No.28 of 2013) to undertake research in forestry and allied natural resources and generate and promote improved technologies for sustainable development. KEFRI together with other consortium partners from Norwegian and Kenyan institutions is implementing a project titled “**Improving Framework Conditions and Skills for Private Sector Development in Biofuel Value Chain in Kenya (Biofuel4Kenya)**”. The project is being implemented in Ndhiwa Sub-County of Homa-Bay County, and working with 3 community-based biofuel enterprises in piloting commercial production of carbonized briquettes from sugarcane bagasse.

The Institute wishes to recruit a mature, dynamic, result-oriented and self-driven professional to the position of **Production / Mechanical Engineer** for a three (3) year contract who will be reporting to the Project Coordinator.

a) Purpose of this Position

To coordinate and manage the design, modeling, fabrication, installation and pilot-testing of optimized carbonized briquette production in 3 community-based enterprises in order to increase market demand.

b) Duties and Responsibilities:

- Provide leadership to production artisans for the successful and efficient day-to-day operation of the briquette production facilities in three community-based bioenterprises.
- Ensure that installed production equipment is tested and optimized for efficiency.
- Review product quality consistency, monitor scrap rates and operation expenses to determine trends and areas of improvement to reduce costs while maintaining product quality.
- Analyze operational issues and installation of new optimized briquette production equipment.
- Analyze workforce requirements for hiring and training of briquette production personnel.
- Sensitize members of the engineering and production team on workplace safety policies.
- Conduct performance appraisals and provide coaching and guidance to all operations employees of engineering partners and community-based bioenterprises.
- Develop and improve supplier relationships with production managers of community biofuel enterprises.

- Coordinate modeling and testing of improved biomass briquette production line in one community-based biofuel micro-factory with engineering partners, community-based biofuel enterprises and research teams,.
- Develop a manual of technical and engineering drawings of a complete optimized briquette production line model for patenting and replication so as to convey information such as materials, processes, dimensions and tolerances, according to AutoCAD application-specific conventions.
- Work with engineering partners and research teams to ensure systematic and programmatic planning for upgrading production capacity for 3 community-based biofuel enterprises for profitability.
- Develop and produce a training manual for engineering artisans covering fabrication, maintenance and occupational health and safety procedures.
- Work with business development and marketing teams to develop training curriculum and extension manuals for incubation of biofuel entrepreneurs.
- Ensure quality delivery of on-job technical skills training services for engineering technicians, production operators and local engineers and university or TVET instructors on biofuel production equipment fabrication, operation, maintenance and occupational health and safety.
- Support business development marketing research teams in development, registration, publication and distribution of standards, protocols and guidelines for production and use of biomass briquettes from sugarcane bagasse based on tested optimal thermal parameters (heat values, density, ash content, burning time, smoke emissions).
- Maintain security system in the production facilities and Project equipment including motorbikes, tractor and office facilities.
- Support engineering and community-based biofuel enterprises in preparation of technical reports for submission to the Project Coordinator;
- Provide Activity, Monthly, Quarterly, Bi-Annual and Annual Technical /field Work Plans;
- Perform any other duty that may be assigned from time to time.

c) Requirements for Appointment

- i) Bachelor's Degree in Mechanical/Production Engineering or other related field from a recognized institution;
- ii) Have at least three (3) years' progressive experience in a busy industrial plant or manufacturing facility;
- iii) Previous experience/ broad understanding of safety systems and enforcement of safety rules and policies.

d) Core technical competencies required for the role

- Excellent planning and organizational skills, with the ability to balance production and maintenance needs;

- Demonstrated leadership and management skills, ability to motivate people and resolve problems in an efficient manner and a desire to work in a team environment;
- Computer skills including the ability to prepare engineering drawings and use AutoCAD applications to prepare models and machine parts for fabrication, in particular, creation, modification, analysis, or optimization of a production process design;
- Computer skills including the ability to prepare spreadsheets and use Microsoft Office Products (Word, Excel, Power Point and/or Access) to analyze data and trends;
- Demonstrated understanding of the principles and applications associated with manufacturing operations, maintenance and engineering;
- Successful application of health and safety practices.

Interested applicants should forward application letters with copies of their academic and professional certificates, testimonials, up-to-date curriculum vitae and identification cards to reach the undersigned on or before **29th November, 2018, 5.00 PM**. Clearly indicate the position applied for on the envelope.

**The Director/CEO
Kenya Forestry Research Institute
P.O. BOX 20412-00200, City Square,
NAIROBI**

***NB:** KEFRI is an equal opportunity employer and only shortlisted candidates will be contacted.*

Any canvassing will lead to automatic disqualification.