Employment Opportunity:

Cookstove Research and Testing Manager

# BURN Design Lab

***Mission***

BURN Design Lab is a nonprofit organization whose mission is to save lives and forests in the developing world through the design and dissemination of clean burning cookstoves. Burn Design Lab and our partner Burn Manufacturing are launching a factory to build 3 million stoves in east Africa over the next 10 years. We are looking for a self-motivated individual to manage and conducts tests at our test lab.

***The Global Challenge***

Nearly 3 billion people rely on biomass fuels such as wood and charcoal for cooking and heating. The burning of biomass in inefficient cookstoves and open fires produces life-threatening smoke**. Tragically, nearly 2 million people ̶ ­mostly women and children ̶ die every year from respiratory diseases related to indoor cooking smoke.** This is more than double the number of deaths caused by malaria.

Harvesting fuelwood also diminishes tropical forests. In Kenya, for example, wood gathering has contributed to the destruction of 94% of the original native forest. In parts of rural sub-Saharan Africa, many women carry as much as 20 kg of wood for five kilometers each day. Families can spend over 35% of their annual income on wood or charcoal. The burning of biomass for cooking is also a primary source of black carbon in the atmosphere, which accounts for 20% of global warming.

***The Response***

The international community believes that the solution to these challenges lies in the distribution of clean-burning cookstoves.Improved cookstoves burn biomass with less smoke, cook more quickly, and require less fuel than traditional cooking methods.The number of stoves needed to meet this demand is enormous. National organizations such as the **Indian National Stove Program** and international programs like the **UN Global Alliance for Clean Cookstoves** have committed to delivering 200 million improved cookstoves to the developing world over the next 10 years.

The question is *how* to provide 200 million clean-burning cookstoves to the world’s poorest citizens. Two approaches have been tried, both with limited success. The most common strategy has been to encourage artisan production of low-cost cookstoves. Experience in the field has shown that this approach is not scalable and often produces stoves of uneven quality and performance. A second, more recent approach has been to manufacture cookstoves in large quantities in offshore factories, mainly in China. These stoves are generally not customized to local cooking needs. Moreover, offshore production incurs high transport costs and does not support local industry.

***Our Approach***

BURN Design Lab’s award-winning approach combines the best of both artisan *and* offshore methods of stove production. We create high quality stoves specifically designed for local use and manufacture. BURN’siterative design process utilizes modeling, lab testing, and field research to develop stoves that meet the unique needs of local cooks.

# Position

BURN Design Lab is searching for a candidate to fill the Cookstove Research and Testing Manager position. This position will:

1. **Manage Testing** – Develop experiments and facilitate their execution. Manage, train and recruit volunteer testers.
2. **Conduct Lab-Based Testing** – Conduct performance, emission and durability testing of BURN’s biomass cookstove designs. Tests include WBTs (Water Boiling Tests), CCTs (Controlled Cooking Tests), emissions tests (CO, CO2 and PM), and accelerated life cycle tests.
3. **Develop Testing Methodologies** – Refine and develop BURN’s testing protocols.
4. **Collaborate with Design Team** –Analyze and document testing results. Regularly present results to the designand manufacturing team.
5. **Conduct Statistical Analysis** – Analyze testing results using standard practices.

# Desired Experience

* Project management
* Proficient in statistical analysis and programming (R, S+ or SASS)
* Bachelors or greater in math, engineering or other related natural science
* Experience with standard research methods
* Familiarity with database development and management
* Experience working with clean burning cookstoves
* Preference will be given to candidates with a background in metal fabrication, engineering, SolidWorks, CFD (ANSYS, Phoenix, Open Foam, etc.), and/or FEA

# Personal Qualities

* Highly committed to BURN’s mission
* Comfortable managing people within a project
* High level of autonomy at work, yet with proven team-spirit
* Adaptive, patient, resilient and flexible
* Ability to work under pressure

# Dates

# Applications due – 3/9/2012

* Position Start date – 4/1/2012

# Compensation

Salary commensurate with experience.

# Apply

Interested applications should email their CV and cover letter to Boston Nyer (Boston@burndesignlab.org).