

BURN MANUFACTURING CASE STUDY:

WHERE ARE THE WOMEN IN THE ENERGY SECTOR?



WPOWER

PARTNERSHIP ON WOMEN'S
ENTREPREURSHIP IN RENEWABLES



Prioritizing women's engagement across the household clean energy value chain is critical to the success of any grassroots initiative in sub-Saharan Africa and parts of Asia. The two most important aspects of this goal remain building an evidence base of why this engagement is necessary, and how the leap from understanding women's vital roles into action can be made. The Partnership on Women's Entrepreneurship in Renewables ([wPOWER](#)) is a champion for promoting women as key change agents to achieve the [Sustainable Development Goal 7](#) (ensuring access to affordable, reliable, sustainable and modern energy for all) and works to build evidence, promote best practices, and advocate for women in clean energy entrepreneurship.

wPOWER, under this series "Where are the women in the energy sector?", has two goals; first, to share the evidence that exists that makes the business case for women's involvement across the energy value chain and second, to highlight various approaches and best practices in recruiting, retaining, and promoting women within the energy industry. The series makes a case for building on the 'why' of gender inclusiveness and the 'how' to showcase shining examples on where it's been done successfully. The tipping point for gender inclusiveness is here - we tell you why, where and how.

Gender Smart Initiatives in Cookstove Manufacturing

[BURN Manufacturing](#), a Kenya-based modern cookstoves manufacturing facility, currently employs over 100 women representing 54% of their workforce. Traditionally, the manufacturing industry has been largely male dominated, with the prejudiced notion that women are unable or unwilling to engage in physically demanding tasks. The notion seems to be corroborated by the Kenya National Bureau of Statistics, which puts the national average of women working in the manufacturing industry in Kenya at 16.6%¹ as of 2015.

This case study is an overview of the challenges, accomplishments and lessons learned in the employment of women in a production factory at BURN Manufacturing. The goal is to provide evidence to change the perception of women's capabilities in clean energy manufacturing.

What is BURN Manufacturing?

BURN Manufacturing (BURN) is an improved charcoal and firewood cookstoves enterprise based in Ruiru, Kenya (approximately 24 kilometers North-East of Nairobi). Their cookstoves are distributed in Kenya, Uganda, Tanzania, and DR Congo.

To date, BURN has shipped over 424,333 units of their two main stoves: their flagship charcoal stove (the Jikokoa™) and their newer wood burning cookstove (the Kuniokoa™). This has helped users save \$104,097,468 in fuel expenditures and 1.7 million tons in wood consumption, while creating 407 direct and indirect jobs.



The BURN stove - Jikokoa™

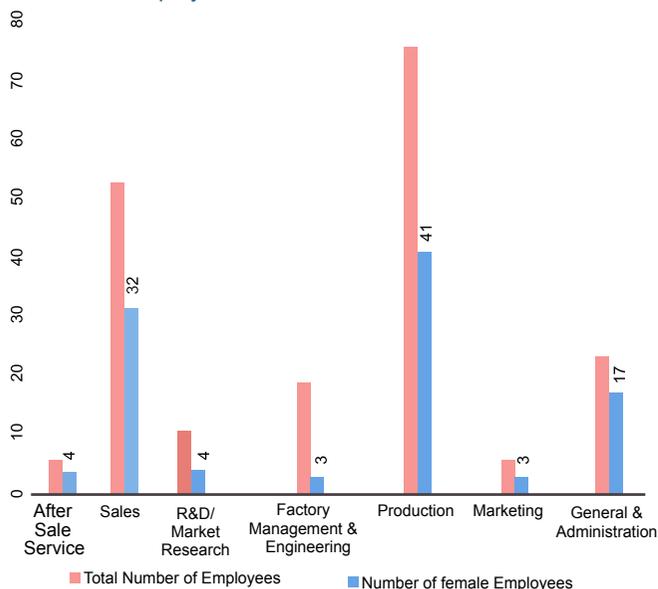
What is the Gender Approach Taken by BURN?

When BURN started stove production in Kenya in 2013, their employee gender distribution was evenly split between both genders. This was in part, due to the conscious effort to ensure gender balance in their operations. Despite their unbiased recruitment process, there has been a change in the gender distribution in their workforce. The current gender distribution at BURN shows a higher percentage of women at 54% while the

men constitute 46% of those employed.

This distribution could be attributed to increased awareness of employment opportunities offered as well as BURN's openness to engage women across their value chain. Figure 1 shows the distribution of female employees against total employees, in sales, R&D, factory management, production, marketing, and administration.

Figure 1: Distribution of female employees against total number of employees at BURN



The higher female presence is unusual and exceptional in a traditionally male-dominated sector such as manufacturing. Why is this? A key reason is the conducive working environment at BURN, which has encouraged several women to refer their female friends to join the company.

Some other factors that contribute to this conducive environment include recognition for good work (e.g. employee of the month and year)

and availability of low-interest loans for personal use. In addition, there is significant support from senior management, including informal coaching and mentorship, on-the-job learning, and flexible hours for new mothers. The management also provides line operators and material handlers with opportunities for career growth through a micro-promotion scheme. This scheme consists of five levels of career progression, with each level offering operators and handlers pay increments and additional training.

Benefits of a Gender-Inclusive Workforce

Recruiting women into the workforce has been highly beneficial to BURN due to the following reasons:

- 1. Women are quality conscious**, which is integral in reducing the number of rejected cookstoves caused by defective manufacturing or assembly.
- 2. Women are diligent.** It has been anecdotally recorded that women are more likely to embrace their job. This can be attributed to a scarcity of gender-inclusive jobs in the manufacturing industry, which pushes women to work more diligently in the jobs they find.
- 3. Retention of female employees is relatively higher** than their male counterparts. This is crucial as hiring and training new employees is more expensive than retaining good ones. Of the 51 factory workers at BURN who have been employed for longer than a year, 65% are women.



BURN Manufacturing female employee producing cookstove parts on the factory floor

However, there have been challenges faced in integrating women into the workforce at BURN. Such challenges include;

- 1. Skills gap:** There is a gap in women's employment in R&D, factory management and engineering, as seen in Figure 1. More men than women in general apply for these skilled jobs. This reflects the small percentage (2%) of female engineers in Kenya², a pattern that is also witnessed globally³.
- 2. Relatively low confidence levels:** Anecdotal evidence says that women shy away from applying for opportunities at the workplace, in general, due to relatively low self-belief in their abilities. BURN has witnessed instances where men are more forthcoming when applying for opportunities for growth. For instance, their factory leadership program received more applicants from men than women, a fact that reestablishes the notion that women do not apply to positions unless they are 100% qualified for it. This is why a culture of informal

coaching and mentorship was instituted at BURN Manufacturing, encouraging female employees to take advantage of opportunities to grow in their careers.

Women in Engineering Internship

In response to the issue of few women in technical positions, BURN has initiated a Program called the 'Women in Engineering' internship. Under this program, BURN interns a woman in its engineering department every six months, on a rotational basis. This program is facilitated in partnership with [WomEng](#), which is a social enterprise working to develop the next generation of women engineering leaders. So far, two women engineers have received mentorship and experience from BURN through this program.

Leadership Program

BURN's 1-year Leadership Program looks to seal the gap existing between line operators and factory management, by building leaders that can strengthen communication and cohesiveness between these two positions. This program aims to cultivate the leadership skills of current employees from within the organization, creating opportunities for career advancement. The program consists of business and computer classes, as well as leadership training, and rotates participants across departments. The first group of participants in this program include 1 woman and 3 men.

Key Findings

1. Policy: Providing a conducive working environment promotes women's participation in the manufacturing industry.
2. Education: Gender disparity in technical and skilled jobs needs to be addressed in order to advance the employment of women in different areas of manufacturing.
3. Support: Coaching and mentorship is vital in encouraging initiative and confidence in women employees.

Summing Up

Organizations like BURN are paving the way for future women employees in the manufacturing sector, by cultivating an inclusive work environment that promotes women's participation.

"BURN's commitment to gender parity within our workforce is especially vital in a country like Kenya where women traditionally have not enjoyed similar professional opportunities as their male counterparts. By operating Sub-Saharan Africa's only clean cookstove manufacturing facility, we've created a range of career pathways for Kenyans and have encouraged women to consider advancing their knowledge and careers within our company." Says BURN's Chief Operations Officer, Boston Nyer.

While long-held prejudices may pose as a barrier to transforming this male-dominated sector, they should not be used to justify the lack of endeavours to create gender-inclusive workspaces.

Boston adds *"women are key contributors at every level of our organization, from the factory floor to the management ranks. We see this as a win-win situation. BURN's female employees have personally fulfilling jobs that directly support their families and communities. Meanwhile, we tap into a remarkably talented workforce that helps us achieve our vision of a world where cooking saves lives and forests."*

wPOWER believes in the employment of women in all segments of the value chain, and calls for industry players and the national government to collaborate in this endeavour. Women should not be siloed exclusively into any segment of the clean energy value chain such as sales, or distribution; they must be present and active throughout, allowing their contribution to shine every step of the way.

The Women at Burn: Short Profiles

Violet Mokaya: Senior Inventory Assistant & Supervisor

Twice recognized as the employee of the year, and six times as the employee of the month, Violet Mokaya is a shining star at BURN. Violet has worked at BURN since its first year and has steadily risen from a line operator to a senior inventory assistant and supervisor.



Violet Mokaya operating the forklift in the Burn Manufacturing factory

In her current occupation, Violet receives inventory and coordinates transportation of finished cookstoves with the dispatch department. Violet is also the first woman to be able to operate a forklift machine. With this kind of initiative, it is no surprise that Violet was selected to be one of four employees taking part in the year-long Leadership Program, where she has the opportunity to train as a leader across departments, giving her in depth knowledge of the operations of every department.

She is enthusiastic about her job, and the challenges and new experiences she faces every

day. *"I take great pride in my work, and my favorite part of the day is admiring all the cookstoves I have stacked high up to the ceiling,"* she says.

Elizabeth Karinga: Quality Analyst

Elizabeth (Liz) Karinga was hired as a quality intern at BURN in 2015, and has steadily moved up the ranks to an analyst - a job she both loves and excels in. Her responsibilities include overseeing the cookstoves' production. She is also tasked with addressing issues of quality, organizing inspections, and dealing with warranty cases.



Elizabeth Karinga inspecting materials in the Burn Manufacturing factory

In the three years working at BURN, Liz has experienced career growth especially in the quality department team led by a supportive supervisor. *"I have no trouble working with men in my department, they are approachable and we discuss all the challenges we experience,"* she explains.

Liz's future plans include completing a Masters degree and working in the energy sector.

References

1. *2016 Economic Survey by the Kenya National Bureau of Statistics.*
2. *According to the Engineers Board of Kenya, of the 407 registered consulting engineers 10 are women, of the 1,755 registered professional engineers 96 are women, and of the 10,299 registered graduate engineers 945 are women.*
3. *Women make up only 28.8% of researchers on a global scale, based on available data for 2014.*



About wPOWER

The Partnership on Women's Entrepreneurship in renewables is a US-Department of State funded project, with a mission to promote the central role that women must play in clean energy entrepreneurship and in addressing climate change, and a vision to empower 8,000 women in clean energy entrepreneurship to deliver clean energy access to 3.5 million people globally by 2018.

All images are credited to wPOWER and BURN Manufacturing.

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