



APPLIANCES FOR ALL:

**Assessing the Inclusivity of the Solar Lighting
& Appliances Sector**

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EFFICIENCY FOR ACCESS COALITION



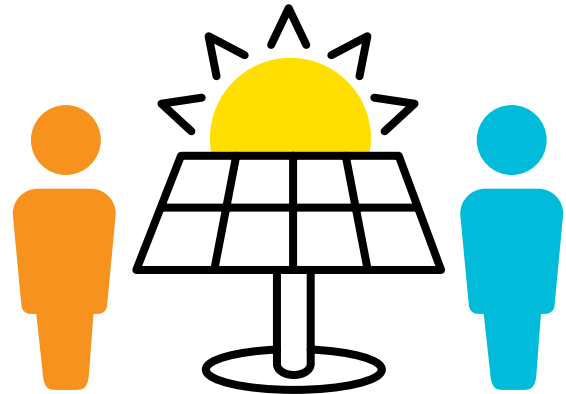
Photo Credit: SunCulture

Executive Summary

How Inclusive is the Solar Lighting and Appliances Sector?

This analysis assesses how well solar appliances are reaching key populations, as well as inclusion across solar company employment practices and product offerings.

Off-grid appropriate solar lighting products and appliances are reaching more people across the Global South. However, this meta-analysis of 19 household surveys and two surveys of private sector companies finds more can be done to reach marginalised groups and ensure the benefits of energy access are experienced equitably.



Survey data suggest that the solar lighting and appliances sector is serving a homogeneous demographic. The typical solar product user is:



A man in his early forties



Connected to the grid



In sub-Saharan Africa



Living in a rural or peri-urban area



With 4-5 members in his household



Employed, with at least a secondary education



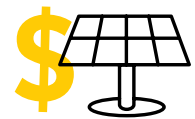
Above the poverty line of USD \$3.20 per day



Does not have a disability



Included in the formal financial sector



Able to leverage financing to purchase their appliance

Is the solar sector reaching marginalised groups?

Survey data for women, people with disabilities, and bottom-of-the-pyramid households is limited, suggesting the sector may not be doing enough to meet their needs.



Women comprised less than 40% of our sample. This may suggest access barriers to solar lighting and appliances across sales, ownership, and use. Female voices may be underrepresented in surveys that use random sampling methodology from existing company contact databases. Likewise, household surveys that interview the household head in patriarchal societies may also collect perspectives and usage data about solar products that are biased towards men.

70% of our sample was not asked to report whether they had a disability. Of the 30% who were asked, 12% reported living with at least one, lower than the global average of 15%. Missing observations and inconsistent definitions limit concrete conclusions.



Roughly 40% of our sample earn less than USD \$3.20 per day, compared to over 65% people in sub-Saharan Africa and over 60% of people in India. This suggests the majority of solar product users are more affluent than their peers.

How Gender-Inclusive is the Private Sector?

A growing number of solar lighting and appliance companies are making an effort to hire employees from diverse backgrounds and design products that respond to diverse customer needs. However, more can be done to level the playing field for marginalised groups.

23%

Women make up 23% of the workforce in solar lighting and appliance companies, indicating the field is heavily male-dominated. This trend mirrors the broader energy sector where women make up just 22% of the total workforce.

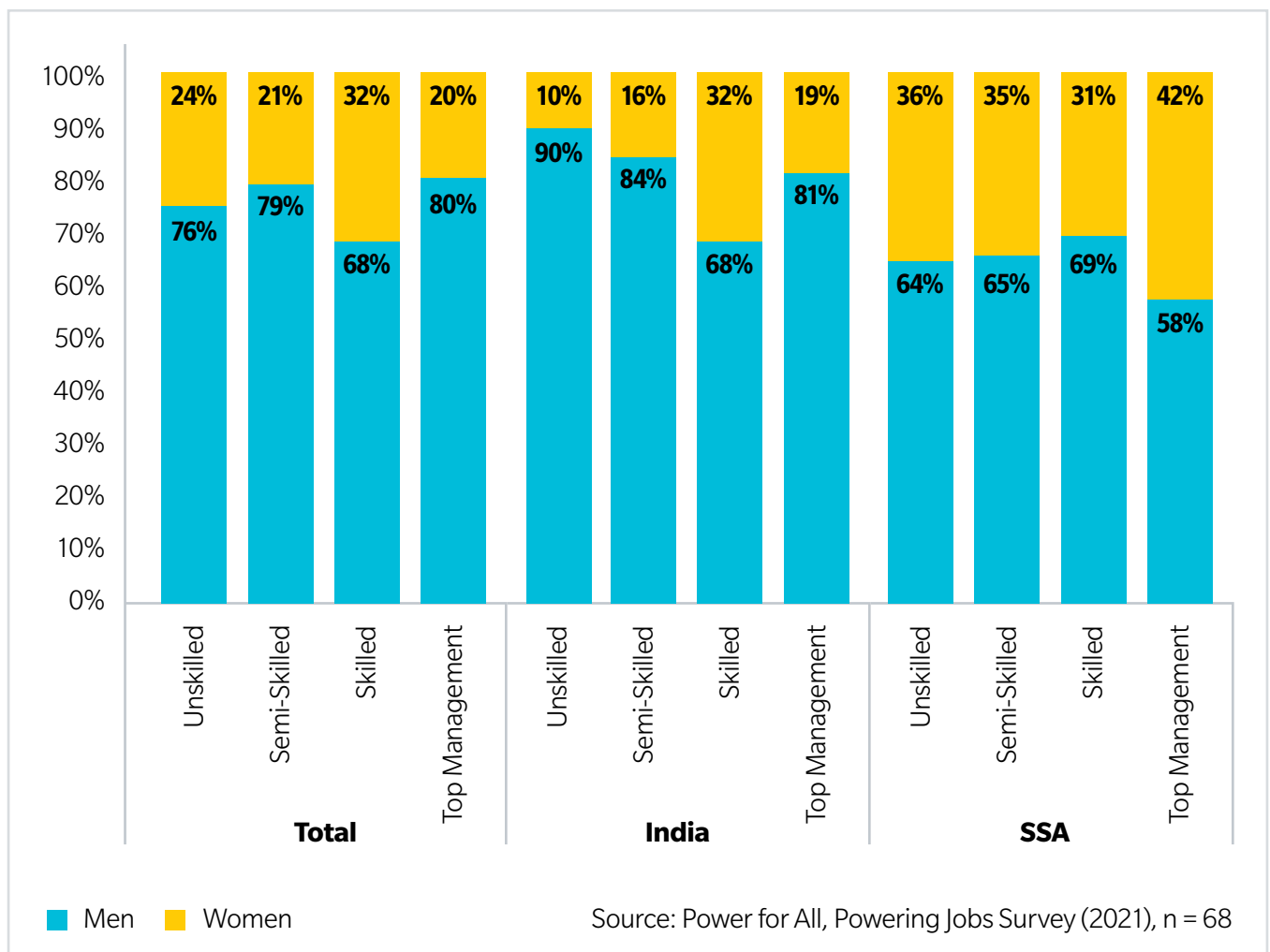
84%

84% of companies did not report gender-disaggregated employment data. Even fewer (4%) reported gender-disaggregated pay data. Better data and more inclusive company policies are vital to closing gender gaps in hiring and compensation.

72%

Many companies specialise in (72%) and/or distribute (25%) appliances and productive use equipment. However, only 5% of surveyed distributors carry the niche or nascent appliances traditionally perceived to benefit women.

The graph below shows self-reported gender-disaggregated employment data by employee skill level for 68 solar lighting and appliance companies.



Recommendations

The following recommendations should be implemented by sector stakeholders to empower marginalised groups, mainstream inclusivity best practices, and scale the gains achieved so far.



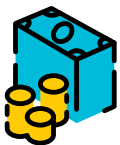
Leave No One Behind

While the sector has made great strides in delivering energy access, it may still be leaving some key populations behind. Companies, donors, NGOs, and programme implementers must all work together to ensure women, people with disabilities, bottom of the pyramid households, and other marginalised groups have equal access to solar products. Expecting a company to become sustainable while serving these communities is a difficult task that can rarely be achieved without subsidies or concessional financing. Relevant stakeholders must develop and fund interventions to level the playing field accordingly.



Set Targets, Manage Progress

To ensure principles of inclusivity are deeply ingrained within the sector, donors, market development programmes, businesses, investors and others should develop holistic and harmonised targets, indicators, and tracking mechanisms. There remains a dearth of gender, disability, and income-disaggregated data within the sector. When this data is collected, it is often not done in a uniform way. Efforts to get the sector “on the same page” about what it means to be inclusive and how or how often data will be collected and assessed is a critical first step towards establishing a baseline to measure progress against.



Address Affordability

Most solar product users do not live in poverty, suggesting these products may be out of reach for many. Companies should continue to work to drive product prices down without compromising quality. In the meantime, investors and donors should prioritise flexible loan terms and low-interest rates. End-user subsidies, results-based financing programmes like [the Global LEAP Awards Results-Based Financing Programme](#), and incentives for companies to operate where customers may not have traditional purchasing power or product awareness can help make solar lighting and appliances more accessible and lower first-cost barriers.



Design Products For and With Marginalised Groups

Businesses should assess the demand, growth and impact potential for products used by marginalised groups and work with those communities to ensure all product designs are appropriate to their needs. Successful implementation will require support from multiple actors. For example, applying a disability lens to all stages of product design, marketing, and sales may require difficult to source population statistics from public agencies, user feedback from distributors, and funding support for R&D from donors and market development programmes.



Make Inclusivity a Core Company Value

Communicating diversity as a core value signals to employees, investors, and customers that a company has a vested interest in addressing and dismantling barriers for historically marginalised groups. From there, it is critical that companies follow up with meaningful programmes and policy changes. This may include creating fair and equitable employee compensation and promotion procedures and developing targeted initiatives to improve the recruitment and retention of marginalised groups. Companies should track progress in these endeavors by collecting and analysing diversity data regularly. This data should be used to inform the direction of future diversity initiatives.