

EVI-SICEE-RESEARCH BRIEF-14

MAKING A CASE FOR A GENDER AND YOUTH IMPACT MEASUREMENT FRAMEWORK IN MALAWI'S CLEAN ENERGY TRANSITION

OCTOBER 2026

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BOX 1: KEY MESSAGES

- Women and youth are increasingly driving Malawi's clean energy transition, but their contributions remain inadequately measured due to the absence of a standardized national framework for assessing empowerment, inclusion, and socio-economic impact.
- Current monitoring systems focus largely on participation and output indicators, such as the number of enterprises supported or individuals trained, while failing to capture transformative outcomes such as agency, leadership, decision-making power, and economic resilience.
- Persistent gender disparities continue to limit equitable participation in the sector, with women owning only 18% of clean energy enterprises compared to 82% owned by men, highlighting the need for targeted interventions that address structural barriers.
- Existing national policies demonstrate strong commitment to gender equality, youth empowerment, and clean energy development, but lack operational indicators and coordinated monitoring systems.
- A National Gender and Youth Impact Measurement Framework would generate robust sex- and age-disaggregated data to support evidence-based policymaking, improve accountability, and guide investments toward interventions that deliver the greatest empowerment outcomes.
- Institutionalizing a comprehensive impact measurement framework would strengthen Malawi's ability to attract gender-lens investment, climate finance, and development funding.

OVERVIEW

Women and youth in Malawi are increasingly engaging in clean energy value chains such as solar energy, clean cooking technologies, mini-grids, and energy distribution in order to earn an income, generate jobs and improve the environment. According to our research study, more than 70% of women and youth derive employment benefits from working in the sector. Most youth and women also manage to access some financial opportunity, technical skill, and entrepreneurial competency. Despite making progress, however, considerable barriers persist. These include limited access to finance, insufficient business development support, gaps in skills, and unequal engagement in enterprise ownership. At present, only 18% of clean energy enterprises are owned by women, while men own 82%. The monitoring systems existing at present looks at outputs only like number of enterprises supported, number of individuals trained received, which tell nothing about whether participation can impact empowerment level, leadership level, decision-making power, economic resilience etc.

This research brief proposes the design and institutionalization of a National Gender and Youth Impact Measurement Framework to fill that critical evidence gap so that Malawi's transition to inclusive energy is strengthened. Current measurement approaches are fragmented and lack standardised indicators disaggregated by gender and age.

They are also poorly aligned with national policies and other development priorities. A comprehensive framework will enable systematic measurement of performance indicators of clean energy entrepreneurs comprising the enterprise performance, economic empowerment, leadership and social inclusion, and climate resilience of women and youth entrepreneurs. The proposed framework would strengthen evidence-based policymaking, improve accountability in public and private sectors, guide resource allocation, and attract gender-lens and climate finance.

BOX 2: METHODOLOGY AND APPROACH

This brief is part of an International Development Research Council (IDRC) funded project entitled “Evidence for Informing Scaling and Impact in Youth and Women-led Clean Energy Enterprises (EVI-SICEE) in Africa”, which is implemented by a consortium led by African Centre for Technology Studies (ACTS). In 2025, ACTS alongside Mzuzu University undertook a study to assess the state of women and youth entrepreneurship in Malawi’s clean energy sector. The study adopted both quantitative and qualitative methods with an initial scoping study that informed the subsequent development of data collection tools. Utilizing these tools, a broad survey was carried out covering 905 clean energy entrepreneurs across Malawi. Four main cities which are representative of the regional hubs were selected namely Lilongwe in the Central region, Mzuzu in the North; and Zomba and Blantyre cities in the South. A total of 79% of the respondents were men and 21% were women. Half of the respondents consisted of male youth, followed by men who are adults (29%), female youth (14%), and adults who are women (6.5%). Interestingly, most respondents were the sole owners of clean energy enterprises as co-partners were only 3%, while 24% were employees and agents at 8%. The assessment also included key informant interviews to enrich the qualitative aspect of the study. A workshop for stakeholders validated the findings. This research brief therefore combines findings from the various data sources from Malawi.

SETTING THE CONTEXT

Malawi is looking to an ambitious energy transition agenda while tackling considerable problems of energy poverty, unemployment, gender inequality, and climate vulnerability. A considerable share of women and youth constitute the country’s entrepreneurial group and are now actively engaging in clean energy value chains; solar energy, clean cooking, mini-grids, energy distribution, productive use of energy technologies, and climate-smart enterprises. Notwithstanding the increasing investments and policy attention that it has received, Malawi is yet to develop a standardised framework to systematically assess the impacts of clean energy entrepreneurship on gender equality, youth empowerment, economic inclusion and social transformation. Policymakers will not be able to assess whether or not investments into clean energy enterprises are producing equitable and transformative impacts (ENERGIA, 2019a; Campos & Gassier, 2017). A Gender Impact Measurement Framework would help monitor, evaluate and strengthen the contribution of CEE to inclusive development.

According to evidence from the EVI-SICEE project, systemic barriers prevent women and youth entrepreneurs from reaching their potential exist in Malawi. These findings underscore the need for such a framework. Barriers like the inability to access finance, weak business incubation support, lack of adequate market linkages, social norms, and restricted access to innovation ecosystems (Gad, 2025). Numerous interventions aim to tackle the existing challenges but, at present, no national level mechanism exists which measures if such interventions are enhancing women's agency, business performance, leadership opportunities, control over assets, income generation and decision making. Lacking measurable indicators means there is a risk that the interventions will focus on outputs, such as number of enterprises supported, and not transformational outcomes, such as empowerment and economic resilience.

THE NEED FOR A GENDER IMPACT MEASUREMENT FRAMEWORK AND CURRENT MEASUREMENT GAPS IN MALAWI'S CLEAN ENERGY SECTOR

Study findings demonstrate that Malawi's clean energy sector does not have a consistent gender impact measurement system. A piecemeal approach dominates instead, with organizations using general resources such as Women's Empowerment in Agriculture Index (WEAI), SEforALL gender checklists or Sustainable Livelihoods Approaches. The tools are not universally applied within clean energy programming, which limits their ability to offer comparable or sector-specific insights. Most programs assess the output of women trained, loans disbursed, businesses supported and other measures. For example, institutional actors reported training women entrepreneurs, "Forty-eight women were trained in the project," noted one. Although these figures show participation, they do not indicate to what extent training led to sustained empowerment, leadership, or business expansion.

A significant gap can be found in the property structures. Results from the survey revealed that 82% of clean energy companies are owned by males and 18% by females. This fits the overarching national patterns of structural inequality in entrepreneurship (Gad, 2025). When gender disaggregated monitoring systems are not integrated, gaps are neither tracked nor driven by policy. Policy frameworks like the National Energy Policy (2018), Gender Policy (2016), and National Youth Policy (2023) show strong commitment to inclusion. Nonetheless, there are no indicators quantifying the measures. This results in a weak alignment between policy intent and implementation in the clean energy sector (IRENA, 2024). Consequently, transition from measurement based on participation to transformative frameworks that more adequately capture enterprise performance and growth; economic empowerment outcomes; agency, power relations and structural change is paramount.

TRANSFORMATIONAL POTENTIAL OF THE FRAMEWORK

1. TRANSFORMING ENTERPRISE PERFORMANCE MEASUREMENT

A Gender Impact Measurement Framework would push Malawi from input indicators to outcome indicators. It wouldn't just register the number of enterprises that it supports; it will also measure their survival, growth, revenue and market expansion.

Research indicates that women energy entrepreneurs do better with integrated systems of finance, training and mentorship (ENERGIA, 2019a). IRENA (2024) states that energy markets for renewable energy technologies develop better when women are involved in distribution and entrepreneurship.

2. ENHANCING ECONOMIC EMPOWERMENT AND FINANCIAL INCLUSION

The framework shall measure income growth, access to finance, asset ownership, and financial resilience of women and youth entrepreneurs. According to Campos and Gassier (2017), financing models which are specifically designed for gender can enhance women's economic empowerment; this is the case when such financing models are combined with the required capacity- building efforts. As an example, the Solar Sister model showcases that clean energy companies led by women can create household income and enhancing financial independence with support through structured entrepreneurial ecosystems (Solar Sister, 2023).

3. STRENGTHENING AGENCY AND LEADERSHIP

The framework would document shifts in decision-making power, leadership engagement, and negotiation capacity. Research indicates that participation in structured empowerment programs leads to women energy entrepreneurs becoming more confident, improving their leadership skills, and influencing their households and communities (ENERGIA, 2019a).

4. PROMOTING SOCIAL INCLUSION AND NORM CHANGE

The framework would enable an assessment of shifts in gender norms, mobility and community acceptance of women and youth entrepreneurs. Evidence from East Africa suggests that women entrepreneurs counter the perception that they are inferior when it comes to technical and business skills (IRENA, 2024).

5. ACCELERATING ENERGY ACCESS AND CLIMATE RESILIENCE

The framework would measure adopting clean energy, reducing emissions, and increasing resilience. As Malawi progresses towards achieving climate goals, demands for climate finance grow to meet the increased climate-related financing needs of developing countries.

Implementing a Gender Impact Measurement Framework constitutes a strategic and transformative opportunity for Malawi. This will narrow concrete evidence gap in addition to strengthening of accountability, improvement in policy as well as increase in investment effectiveness in clean energy entrepreneurship. A key benefit will be ensuring that women and youth are more than participants in the energy transition and they become empowered drivers of inclusive economic growth, climate resilience, and social transformation (Gad, 2025).

STRENGTHENING EVIDENCE-BASED POLICYMAKING

Monitoring systems in Malawi do not generally embed gender indicators including sex-disaggregated energy data (UNDP, 2025). The effectiveness of gender-responsive interventions and accountability levels weaken. Using a transformative gender impact measurement framework will enable policymakers identify which interventions, such as financing models, incubation programs, or capacity-building initiatives, to more effectively support women and youth entrepreneurs. According to the study, the majority of clean energy enterprises are micro and small scale in nature as 77% are micro-enterprises and 2% are medium enterprises. Information from monthly turnover further indicates that a predominance of enterprises function in the low revenue bands (Figures 1 and 2), indicating a restriction in capitalisation and growth potential.

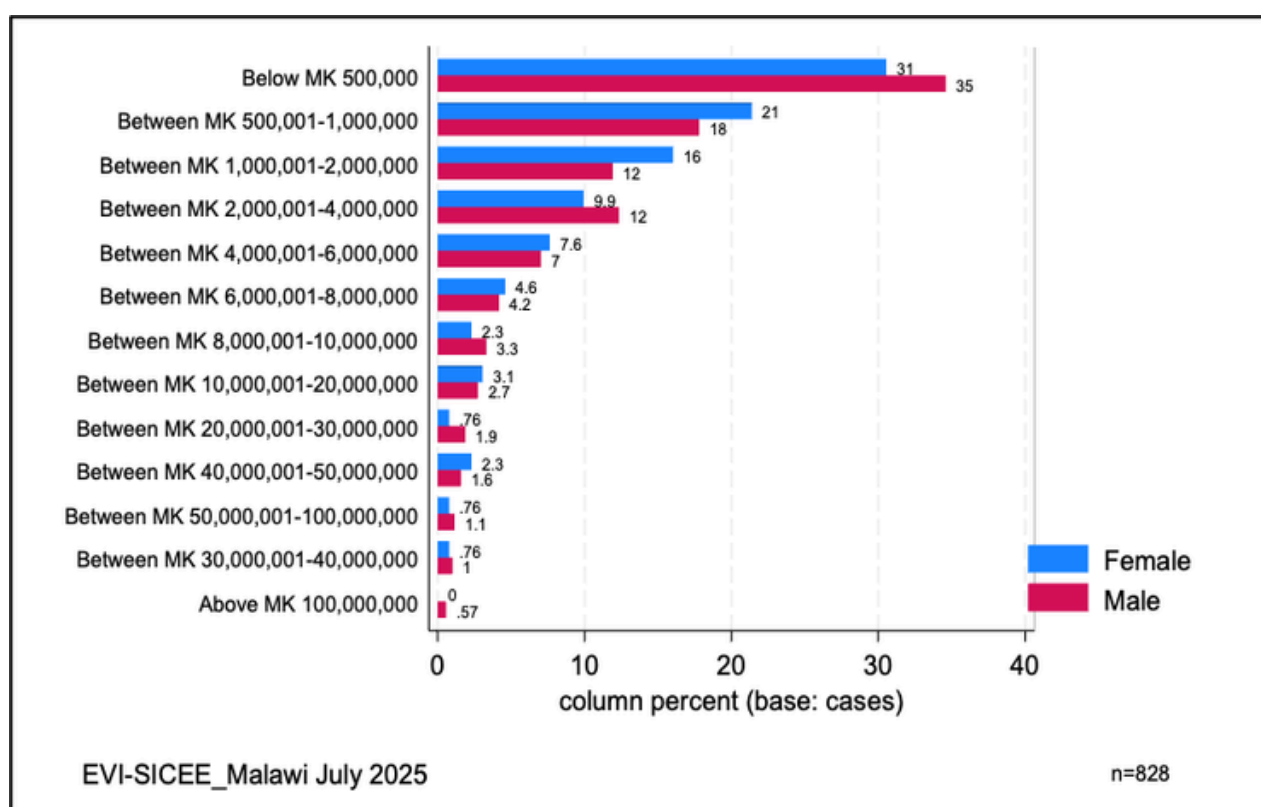


Figure 1. Monthly turnover by business owners

The monthly turnover of most enterprises is low, with limited numbers in the higher revenue groups as shown in figure 2. Most CEEs are generally small in size and low in capitalisation.

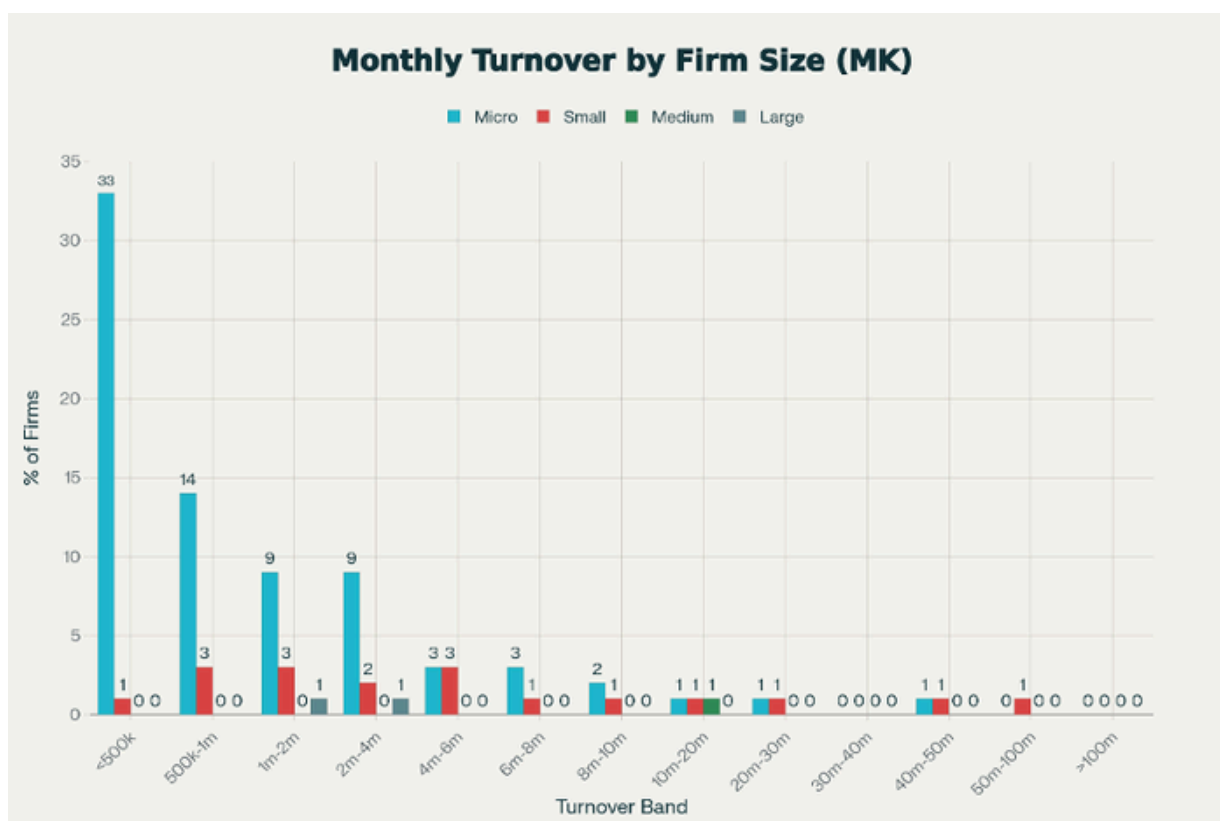


Figure 2. Monthly turnover in MK by enterprise size

There is strong potential for inclusive growth in clean energy

One institution stated, “We train technicians in solar PV installation and solar thermal technologies” (Institution 1), while another added,

“Young people are increasingly joining the sector, especially in solar installation roles” (Ministry 1).

These results show strong potential for inclusive growth but also suggest that institutional systems do not exist to measure whether the attainment of skills equals sustained economic development. The Gender Impact Measurement Framework enables policymakers to connect a coherent evidence system on training, financing and enterprise development outcomes, facilitating improved targeting and effectiveness of interventions (ENERGIA, 2019a; IRENA, 2024).

ENHANCING ACCOUNTABILITY FOR INCLUSIVE ENERGY TRANSITION

The survey findings reveal that over 70% of the respondents believe that Community Engagement increases enterprise visibility and credibility (Figure 3). It shows an emerging understanding that social embeddedness is vital and that it crucially depends on trust, participation and legitimacy.

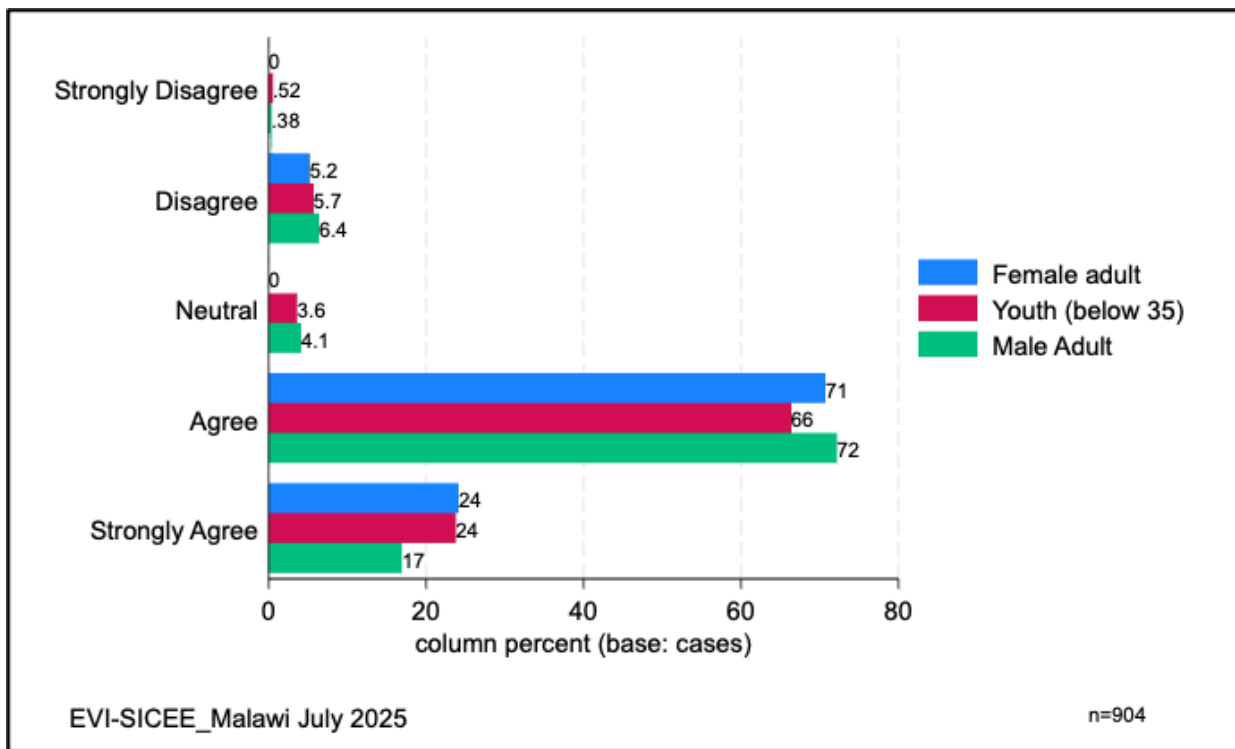


Figure 3. Respondent's perception on community engagement on enterprise visibility and credibility

Nonetheless, perceptions of discrimination are mixed. Seventy-three per cent of youth and sixty-four per cent of adults disagree that women and youth broadly face discrimination. However, a significant minority (twenty to thirty-three per cent) say that they face discrimination too (see Figure 4). This shows means of exclusion that are subtle, persistent, and yet, often not formal.

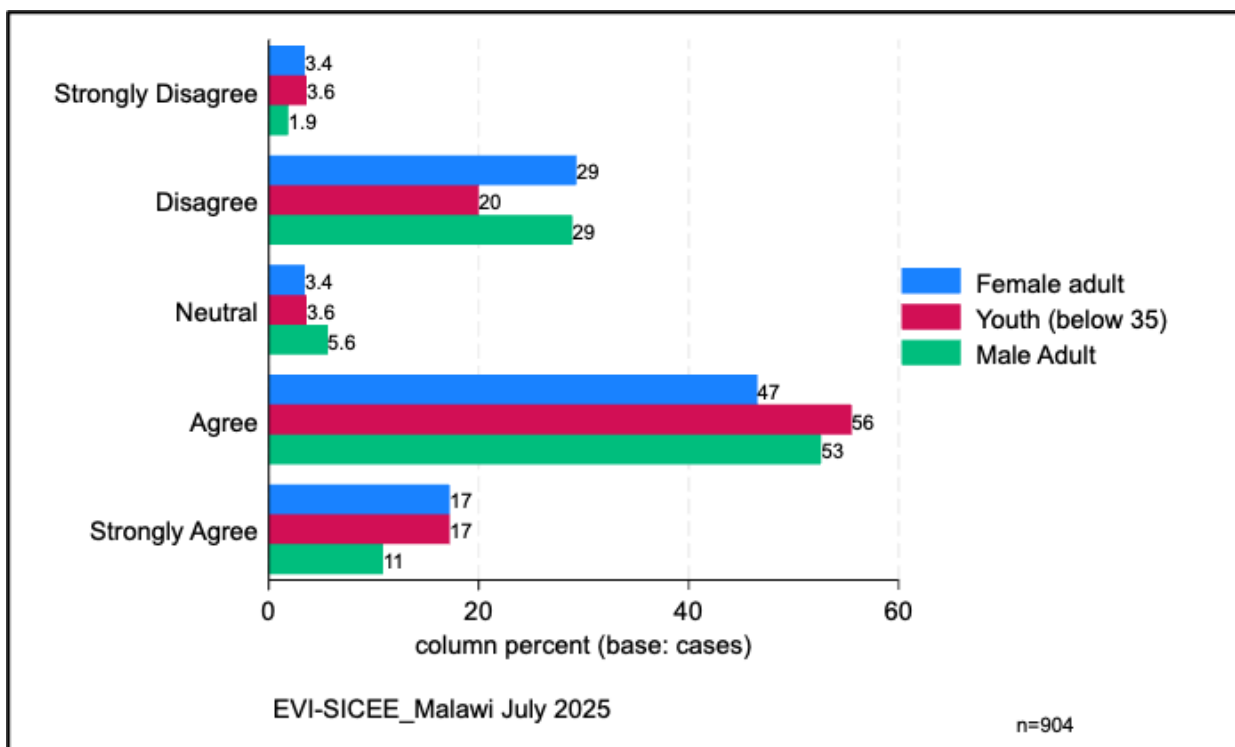


Figure 4. Respondent's perception on discrimination against women/youth clean energy entrepreneurs

Along similar lines, while many respondents disagree about the sector being male-dominated, ownership data indicates that men control over 80 percent of enterprises (Figure 5). This indicates a gap between lived realities and reported experiences. A male respondent stated, “Young men are encouraged to take risks in business, but young women are discouraged because failure is judged more harshly” (Producer 3), reflecting a different attitude towards risk.

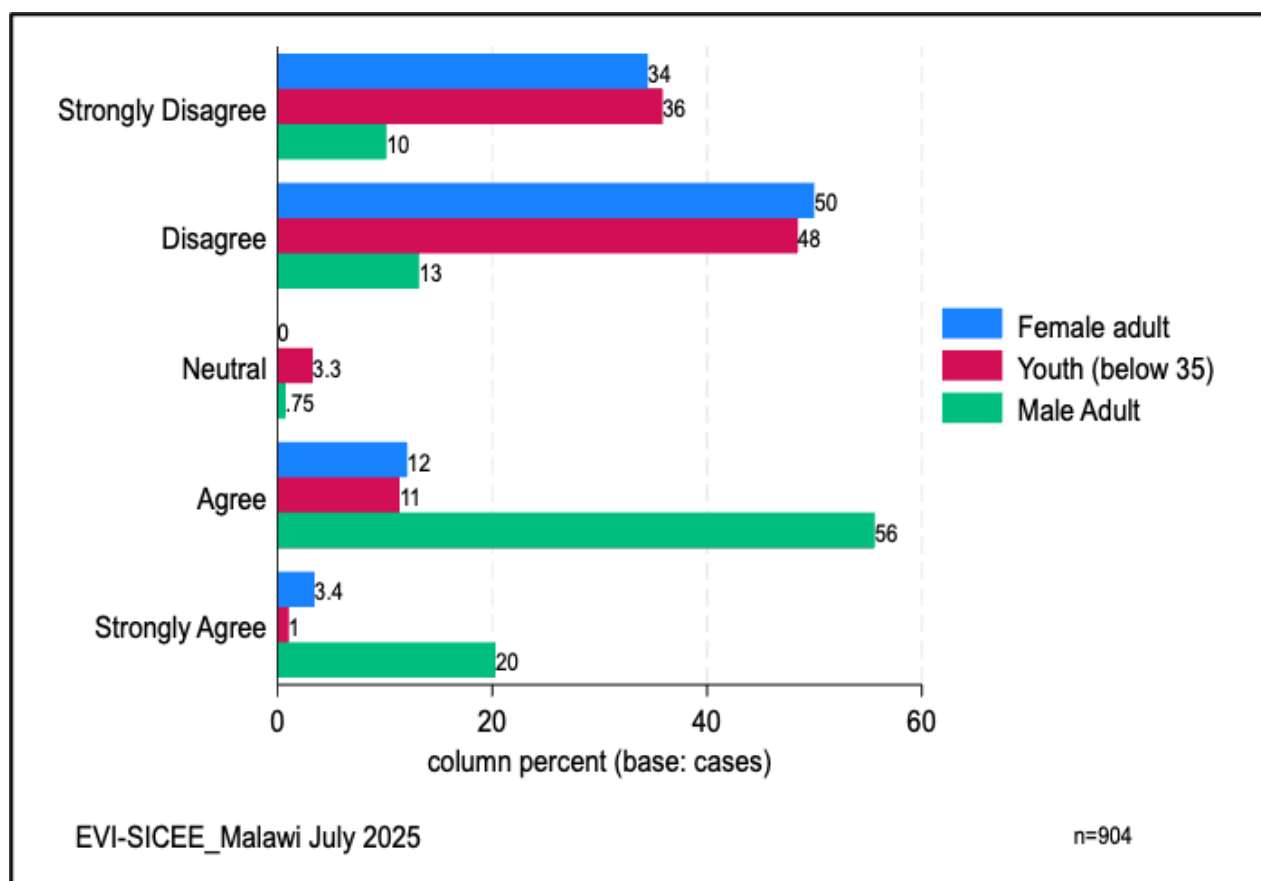


Figure 5. Perception on male dominance in the clean energy sector

A Gender Impact Measurement Framework measuring not only access and participation but also regarding discrimination, changes in norms and power relations in the sector is required as per these findings.

ATTRACTING GENDER-LENS AND CLIMATE FINANCE

The results from the survey show a lot of optimism with respect to the opportunities in the sector. Nearly 78% of female adults, 74% of youth and 72% of male adults agree that clean energy sectors offer ample opportunities for entrepreneurs to grow their businesses (Figure 6). There is confidence in the market and investment.

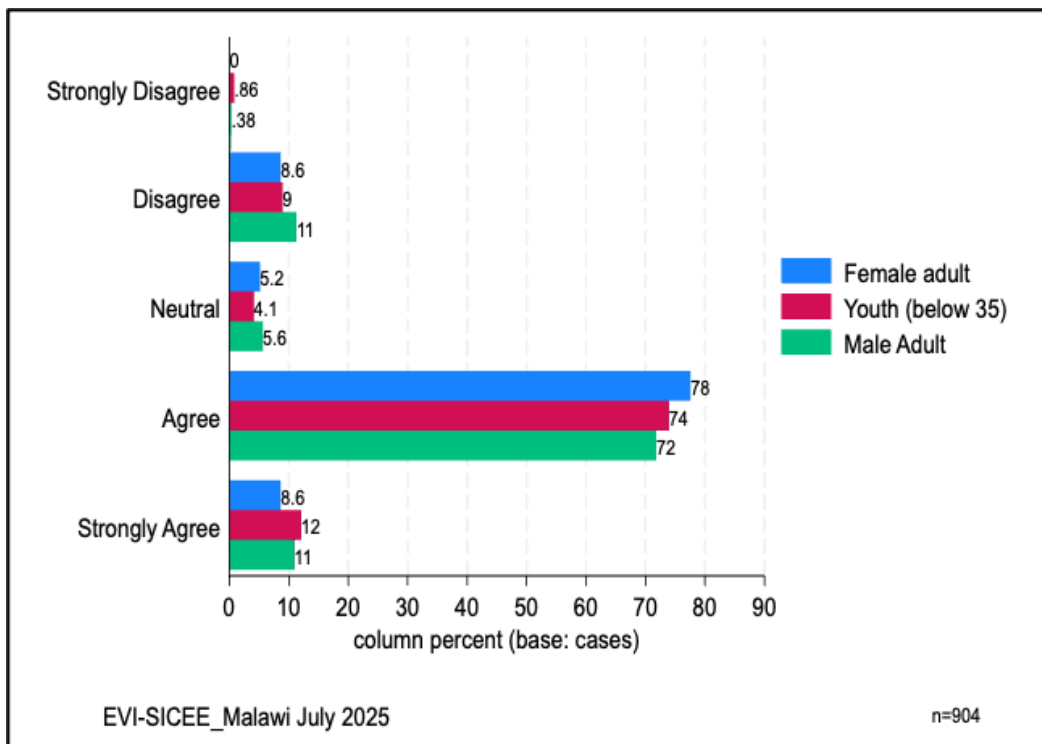


Figure 6. CEEs perception on options for expanding clean energy business opportunities for women and youth

Nevertheless, a sizable share of firms had skills gaps. More than 60% of respondents identify this as a major problem with their businesses (Figure 7).

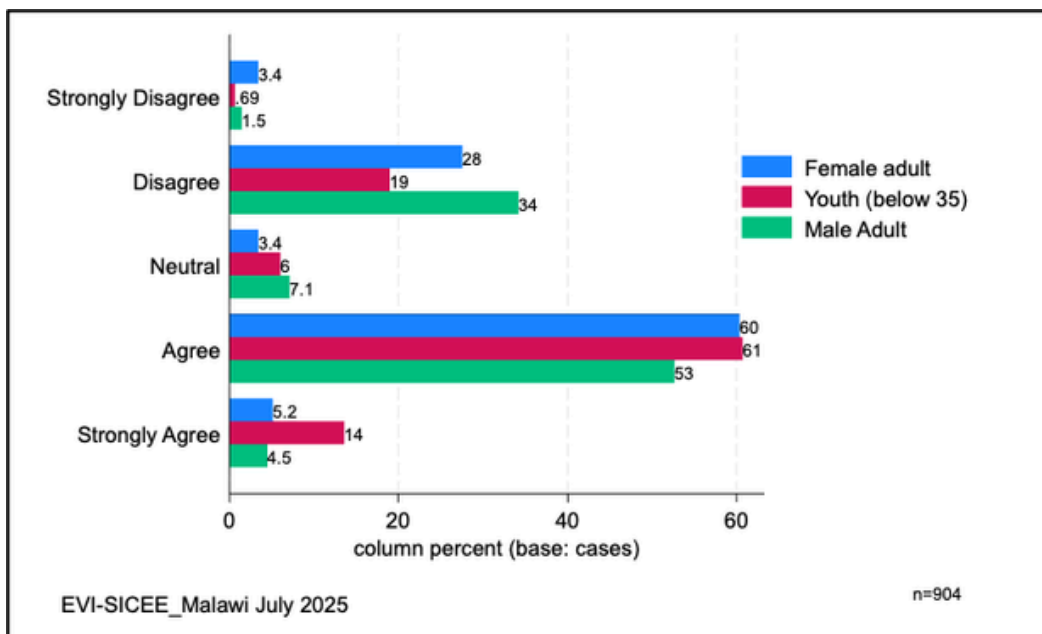


Figure 7. Respondent's perception on necessary business skills gap among women and youth

Having a standardized gender impact framework would instil confidence in the investors with measurable indicators of empowerment, profitability, and inclusion to improve access to gender-lens along with climate finance (Gad, 2025).

SUPPORTING NATIONAL AND GLOBAL DEVELOPMENT COMMITMENTS

Research findings suggest that clean energy entrepreneurship generates jobs, builds skills, and earns income, especially for women and youth. However, business constraints such as limited access to capital, inability to afford premises (66% are in rented premises), and poor business planning capacity (59% without business plans) constrain scaling. Entrepreneurs believe that proper planning, tracking of profitability, and community involvement are essential to business growth, but majority lack tools or the capacity to make it happen.

A Solar Sister program run in Nigeria, Uganda, and Tanzania, a Gender-sensitive impact measurement reshaped the program from a simple clean energy distribution program to a women-led entrepreneurial and empowerment ecosystem. Through tracking indicators such as women's income growth, business expansion, leadership progression, and household energy access in a systematic manner, the programme generated evidence of women's economic empowerment alongside energy outcomes (Solar Sister, 2023). Thus, women emerged as micro-entrepreneurs in the promising clean energy sector. Meaning that women have become more than just last mile solar product distributors but rather micro-entrepreneurs with a larger income stream and more power. The strategies of the programme were revised to strengthening pathways for women's enterprise development, enhancing opportunities for leadership and increasing investor and donor confidence based on credible gender-disaggregated evidence.

These sample projects indicate that systematic gender impact measurement in energy projects can transform a conventional capacity-building intervention into a gender-transformative energy and livelihoods programme. This was established by an ENERGIA programme implemented in Kenya, Tanzania, Rwanda, Nepal and Indonesia. The programme generated strong evidence through tracking multidimensional indicators, such as women's agency, income generation, leadership participation, and changes in social norms, that women's decision-making power, earnings and participation in community energy governance structures have considerably improved (ENERGIA, 2019b). With these insights, ENERGIA was able to advance to interventions that tackled structural barriers to empowerment, rather than just training outputs.

Thus, the programme enhanced its impact on policy while improving the targeting of support mechanisms and contributing to increased recognition of women as agents of change in the clean energy sector rather than as beneficiaries.

CONCLUSION AND RECOMMENDATIONS

Women as well as youth could participate meaningfully in higher-value segments of Malawi's clean energy value chains and not only in last-mile distribution. Thus, policy interventions are needed targeting structural barriers related to finance, skills, technology, markets, social norms and enterprise development. In light of this, and drawing insights from the Malawi study, the following recommendations are proposed.

- The government should include obligatory sex- and age-disaggregated indicators in all national energy, MSME and entrepreneurship monitoring systems to ensure accurate and comparable tracking of women's and youth participation, ownership patterns and benefits in the clean energy value chain.
- Ensure complete implementation of the provisions of national policy frameworks i.e. National Energy Policy (2018), Gender Policy (2016), National Youth Policy (2023) through clean energy sector indicators that are specific and measurable, and directly links policy commitments to gender equality, youth empowerment, and enterprise.
- The Government of Malawi should establish an inter-ministerial coordination mechanism involving the energy, gender, youth and finance institutions to facilitate coordinated planning, implementation as well as monitoring of gender-responsive clean energy entrepreneurship support.
- Donors and implementing agencies must switch from output assessment approaches to monitoring systems which assess whether clean energy programmes improve the outcomes of income control, leadership participation, business sustainability, and structural empowerment.
- Malawi may consider a national Clean Energy Enterprise Data Observatory to collect evidence for enterprises in the sector. This should involve the regular analysis of data concerning enterprise performance, gender impacts, investment flows, and growth trends on a continuous basis.
- The government and partners should implement targeted social norm change interventions, including mentorship programs, awareness campaigns, and role model initiatives, to address the discriminatory attitudes, social norms and structural barriers that limit women's and youth participation in clean energy entrepreneurship.
- Malawi should be intentional about attracting gender-lens and climate finance. It should do this by institutionalizing impact measurement systems that adhere to international standards to meet investor requirements while providing evidence of inclusive economic and environmental outcomes.
- All clean energy projects and programs should be required to embed empowerment monitoring indicators into their design and reporting, so that agency, leadership, income control and decision-making for women and youth beneficiaries can be continually tracked.

SELECTED FURTHER READING

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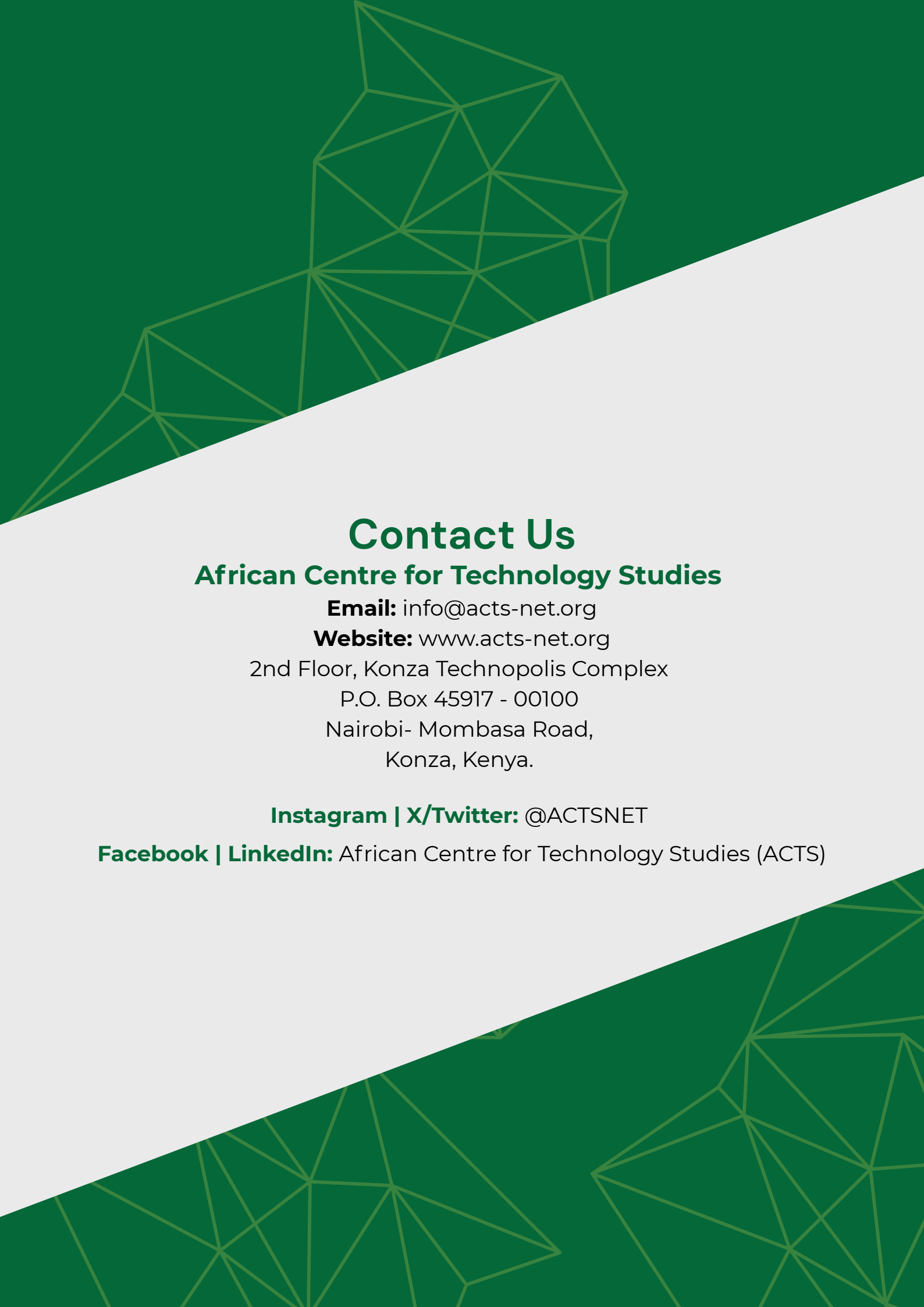
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