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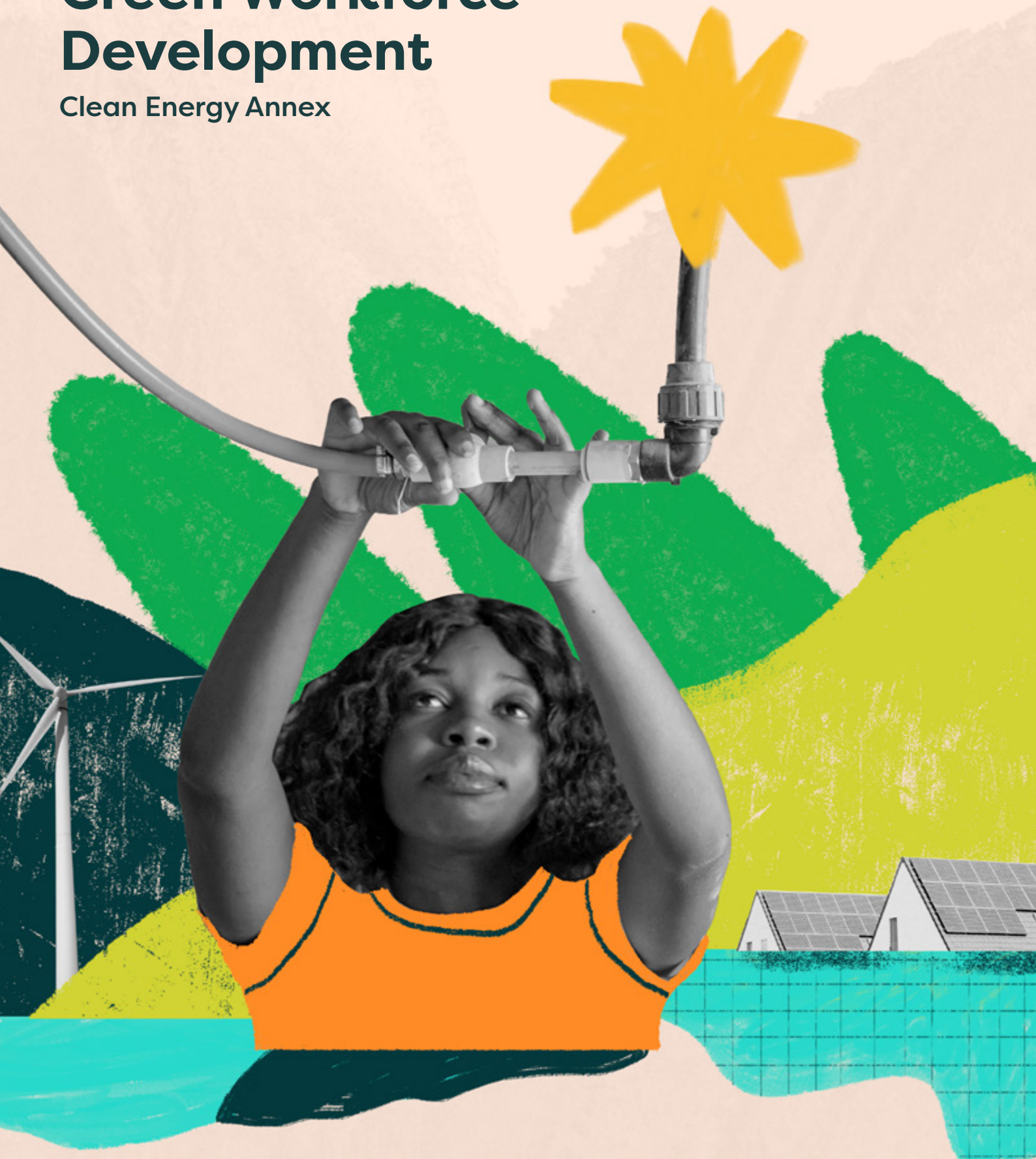
Centering Youth in Green Workforce Development

Clean Energy Annex



Acknowledgments

This annex builds on the on the initial findings of the Centering Youth in Green Workforce Development: An Action Guide (2022) authored by Anna Pettee and Christina Kwauk from Unbounded Associates in collaboration with Chemonics International.

This annex includes technical inputs from Edward Hoyt, Branden A. Ryan, Phoebe Diehl, Malia Wilson, and Katie Burke from Chemonics International. The insights of Cynthia Kpozuxe, Fabian Lievano, Ameer Mubaslat, Jane Nakasamu, and Dr. Ibrahim Togola were instrumental in the writing of this document. This annex is accompanied by two case studies focusing on Togo and Sri Lanka. We owe thanks to Dr. Yao Azoumah of KYA Energy Group and Sylvie Shikpe of KYA Foundation for their insights on supporting youth education in STEM fields to enter into the clean energy workforce in Togo, and Achini Wijesinghe of Chemonics International and the research assistance of Lasini Wickramasinghe for their support to map learning-to-earning pathways for youth in Sri Lanka's clean energy transition.

We thank LoBueno Colectivo for creating the visual identity of the original Action Guide and this annex and its case studies. This annex was published in June 2024.

Cover Photo: Jane Nakasamu, Chief Executive Officer/ Co-Founder, Greenbelt Energy

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Key Terms

Renewable/clean/green energy

Energy sourced from replenishable natural resources, such as sun, wind, and water, and produces much less greenhouse gas emissions than the burning of fossil fuels (UNICEF, 2022). Biomass, the use of organic matter, such as trees or other plant species, is a debated source of renewable energy given the greenhouse gases that are released upon burning it for fuel (R. Speare-Cole, 2021). In this Clean Energy Annex, the terms "renewable energy," "clean energy," and "green energy" are used interchangeably.

Renewable/clean/green energy transition

The economic, environmental, and social transitions required to transform the global energy sector from fossil fuel-based forms of energy to renewable forms of energy. Beyond the development and adoption of renewable energy technologies, this transition also encompasses a wide range of changes related to the use of energy, including radical improvements in the energy efficiency of buildings, industry, and transportation; the expanded use of electricity for energy consumption traditionally based on liquid/solid/gaseous fossil fuels, commonly referred to as "electrification"; and the increased digitization of power sectors to facilitate the management of various renewable energy resources, battery, and other forms of electricity storage, including in decentralized power systems. While nuclear and natural gas energy supplies are often included in discussions of the energy transition as "bridges" to a future based on wind and solar, this paper is explicitly not considering them as part of the clean energy transition. A renewable/clean/green energy transition does not inherently consider human rights, economic inclusion, or social justice, and for that reason intentional choices must be made to actively prioritize these principles in the transition. See "Just energy transition" below.

Just energy transition

The need to safeguard the rights of young people, Indigenous Peoples, local communities, girls and women, and all vulnerable populations in the transition to renewable energy-based economies. This includes equity for communities where new, clean energy technologies are sourced, manufactured, and deployed, and equity for the communities that have depended on fossil fuel-based energy production for their livelihoods in the past. The costs and benefits of transitioning must be shared equitably among all actors today and between present and future generations (UNICEF, 2022).

About the Clean Energy Annex

Introduction

This Clean Energy Annex explores opportunities and barriers for engaging young people (ages 15–29) in the clean energy sector to advance just, green transitions taking place around the world. The Annex provides an overview of recent literature that discusses current and future job projections for the clean energy sector and current challenges in employing youth in the sector. To complement this desk research, five young professionals working in renewable energy today in South America, Sub-Saharan Africa, Europe, and the Middle East were interviewed to gain their perspectives on both the challenges and opportunities in providing decent, green jobs to youth in the clean energy sector. The Clean Energy Annex provides a snapshot of the current state of youth green workforce development within the clean energy sector, offering recommendations for creating more enabling environments for youth to engage in the sector.

The Clean Energy Annex should be read in conjunction with the publication Centering Youth in Green Workforce Development: An Action Guide (2022) and accompanying resources, also authored by Unbounded Associates with support from Chemonics International. Taken together, the Action Guide and Clean Energy Annex provide readers with a cross-sectoral perspective on youth workforce development in the clean energy transition.

Intended Audience

This Clean Energy Annex is intended for international development organizations, program implementers, policymakers, and experts from the public and private energy sector to strengthen the enabling environments for youth engagement in the clean energy sector. Experts from across sectors can also benefit from this publication, as lessons from the clean energy sector can be applied to other sectors undergoing green (or blue) transitions.

Summary: Five Recommendations for Engaging Youth in the Clean Energy Sector

1 Equip youth with a breadth of green skills to succeed in the clean energy sector

Young people need more green learning opportunities for obtaining both generic and specific skills to fill jobs across renewable energy value chains. This ranges from technical roles in solar panel construction and installation to, for example, interpersonal roles in sales and marketing. Across all roles, socioemotional skills, such as collaboration, communication, leadership, and compassion, are needed to foster healthy and effective workplaces.

2 Strengthen coordination across and within the public and private sector to improve training and employment opportunities

To ensure that young people have clear learning-to-earning pathways in the renewable energy sector, education and training institutions, governments, the private sector, as well as international development organizations must work together to provide aligned and complementary opportunities that position youth for success as they enter the workforce.

3 Create channels to financially support youth entrepreneurs in the clean energy sector

Young people are at the forefront of creating innovative solutions to local and global sustainable energy challenges, but their ambitions are often stifled by a lack of funding. Public and private resources should be more readily mobilized to support young innovators in the clean energy sector.

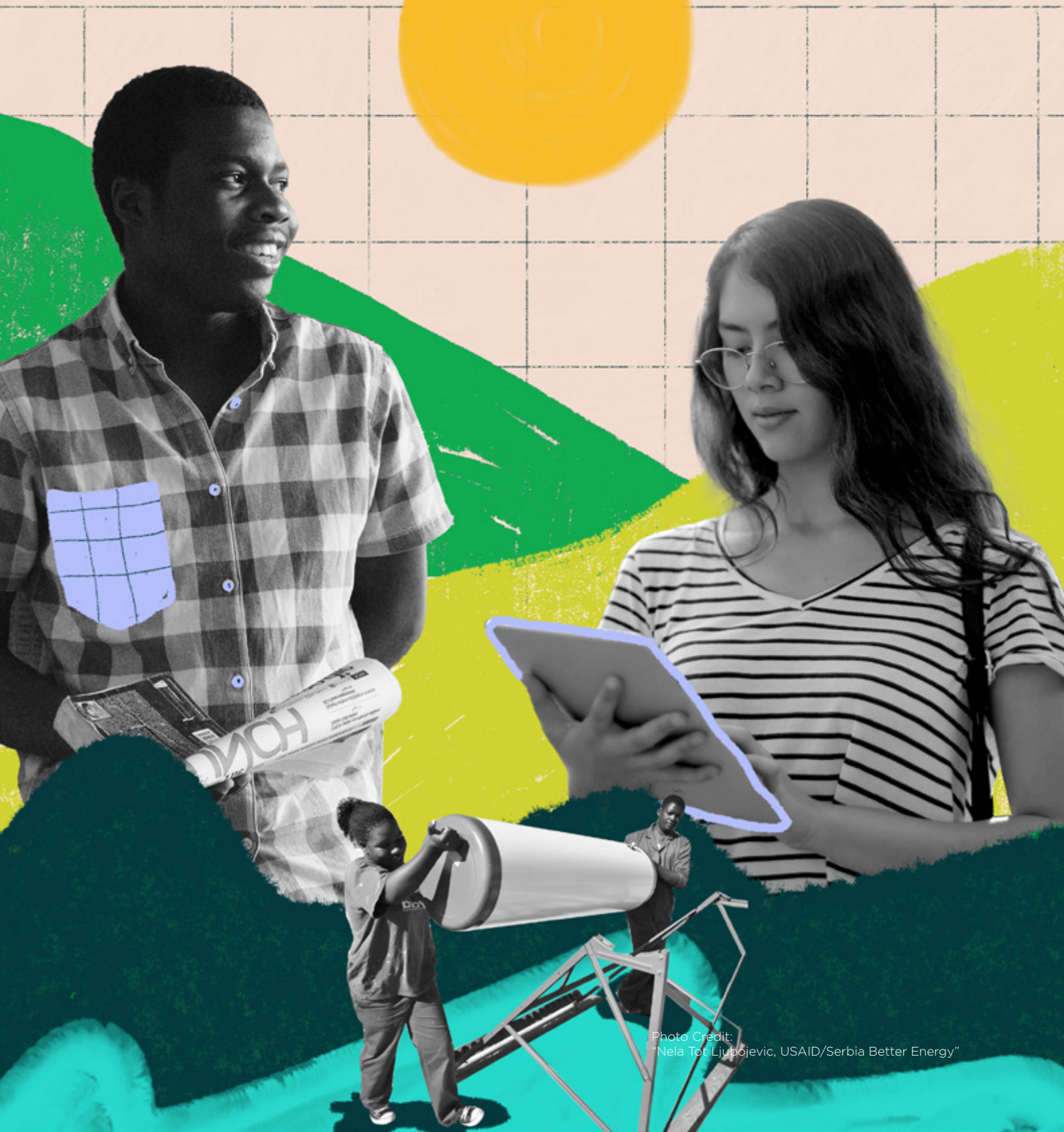
4 Establish government policies that promote green job creation in the clean energy sector

The renewable energy sector cannot develop without policies that support clean energy infrastructure and industries. Governments play a critical role in creating enabling policy environments to stimulate sector growth and job creation for young people.

5 Adopt gender responsive practices to attract and retain women in the clean energy sector

To achieve a just and inclusive clean energy transition, gender inequity—as well as the marginalization and/or exploitation of other historically underrepresented social groups in the energy sector—must be addressed. Young women have the potential to contribute greatly to the sector if policies and practices are in place to promote meaningful gender equality and social inclusion by addressing access and participation constraints in traditionally male-dominated industries.

Trends in the Clean Energy Sector and Implications for Engaging Youth



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"Nela Tot Ljupojevic, USAID/Serbia Better Energy"

1

Trends in the Clean Energy Sector and Implications for Engaging Youth

Current and Projected Jobs in the Clean Energy Sector

Addressing the global climate crisis requires transitioning from fossil fuel-based energy economies to renewable energy systems.

Given that 80% of the global primary energy supply is still based on fossil fuels (ILO, 2022), this necessary transition inevitably entails the restructuring of labor markets and the creation and transformation of jobs in the energy sector. Already, clean energy transitions are taking place worldwide, creating millions of new jobs and paving the way for millions more jobs to emerge in the coming decades. While divestment from non-renewable sources of energy could lead to job losses in fossil fuel industries, more optimistic projections of renewable energy jobs suggest that a commitment to achieving the Paris Agreement's goal of restricting global average temperature rise to below 1.5 degrees Celsius will create enough jobs in the clean energy sector to more than offset these losses (ILO, 2022) when paired with appropriate reskilling and upskilling initiatives. However, recent outcomes from COP28 (28th Conference of the Parties of the United Nations Framework Convention on Climate Change [UNFCCC]) suggest that this point of inflection in clean energy job creation may take longer to achieve than initially hoped (UNFCCC, 2023).

BOX 1

Clean Energy Job Projections at a Glance

Current state of clean energy jobs worldwide.

13.1 million direct and indirect jobs were created in the renewable energy sector in 2022 (IRENA, 2023). This included:

4.9 Million
Solar photovoltaic (PV) jobs

2.5 Million
Hydropower jobs

2.5 Million
Biofuel jobs

1.4 Million
Wind power jobs

Clean energy job projections

IRENA estimates that new jobs in the renewable energy sector could reach 43 million by 2050 (ILO, 2022)

When accounting for a 100% clean energy transition by 2050, the projected number of direct renewable energy jobs created jumps to nearly 100 million by the middle of the century (Ram et al., 2022)

The largest amount of direct job growth is projected to take place in Sub-Saharan Africa (a projected 10 million new jobs created between 2020 and 2050) (Ram et al., 2022).

A note on clean energy job classifications

The clean energy transition offers many opportunities for youth to gain access to green jobs that provide sustainable livelihoods and support the ongoing development of the renewable energy sector. Job creation related to the clean energy sector can be categorized into three types of employment: direct, indirect, and induced. **Direct employment** refers to jobs that are directly associated with activities within renewable energy value chains, such as production, manufacturing, construction, and operations and maintenance (Rutovitz et al., 2015, Ram et al., 2022). **Indirect employment** refers to jobs that are created in upstream, downstream, or auxiliary industries that supply renewable energy industries with raw materials or secondary services, such as the production of steel or plastics for use within value chains, or the provision of financial, transportation, or accommodation services (Rutovitz et al., 2015; SEJP, 2024).[1] Finally, **induced employment** entails jobs that are created when those employed directly or indirectly in the sector spend their wages and stimulate economic and job growth in other sectors.

Most renewable energy job projections, including those shared above, account for either only direct, or direct and indirect jobs being created. It is still valuable to be aware of the induced employment classification as a reminder that job creation in the clean energy sector has implications for economic and employment growth in other sectors.

Clean energy job projections highlight a range of professions across renewable energy value chains. This includes direct employment, for example, in the design and construction of wind turbines and hydropower plants and the sales and marketing of solar home systems and solar cookstoves (EEP Africa, 2019). Within the solar power value chain, job opportunities range from technology acquisition and manufacturing to sales and product distribution, installation, customer support, and post-sale services (GFSE, 2022). Decentralized energy projects also create jobs in adjacent fields, such as agro-processing, communications, commerce, and education. Within the horticulture

1 — It is worth noting that operations in upstream, downstream, or auxiliary industries, such as the mining of raw materials (upstream) or the production of plastics for use within renewable energy value chains (auxiliary), often have environmental impacts and are not inherently renewable themselves even when contributing to renewable energy production. See "Environmental Impact of Renewable Energy—A Value Chain Approach" for an example.

value chain, for example, it is estimated that solar water pump technology alone could create 130,000 new jobs from sales to processing, helping to meet irrigation needs across the African continent and employ the region's growing youth population (EEP Africa, 2019). Adopting clean energy innovations in electromobility and digitalization can also increase productivity across sectors like agriculture and transportation, as well as spur entrepreneurship (GFSE, 2022). Research and development (R&D) to refine and commercialize emerging renewable energy technologies is a potential area for job growth that could benefit young people when appropriate education and training pathways to access these jobs are made available and accessible. However, additional research is needed to identify strategies to open pathways for young people in clean energy R&D as most current literature on youth engagement in the clean energy sector focuses jobs occurring downstream of R&D.

The range of professions in which clean energy jobs are being created provides opportunities for youth with a diversity of educational and professional backgrounds to find employment. For instance, the International Labour Organization (ILO) estimates that nearly two-thirds of the jobs (16 million out of 25 million) created by 2030 in a global energy transition will fall into the medium-skill category, creating an influx of middle-class jobs that, with targeted upskilling and training opportunities, youth can readily fill (ILO, 2022). Moreover, youth living in areas less commonly connected to public utility grids, especially rural areas as well as marginalized peri-urban communities, can benefit from the estimated 4.5 million jobs that will be created by 2030 in the off-grid renewable value chain alone (EEP Africa, 2019). In India, for example, small-scale "pico"-solar appliances and solar home systems accounted for almost all (97%) of the country's direct, formal decentralized renewable energy employment between 2017 and 2018 (GFSE, 2022).

In countries like India where youth populations are large and expected to grow (25% of the working age population in India are youth), the creation of jobs in the renewable energy sector has the dual benefit of helping to address youth unemployment while enabling a clean energy transition to take place as long as youth are given the skills and opportunities to access these opportunities (Power for All, 2019).

Ensuring that youth from all backgrounds can access job opportunities in the clean energy sector will help diversify the clean energy workforce and is one prerequisite for achieving a just green energy transition. Enabling environments that hold public and private employers in the sector accountable for providing decent employment (see the Key Terms of the Action Guide for a definition of "decent jobs") to all workers is essential, especially for youth, women, Indigenous Peoples, and other traditionally underrepresented groups that may have less agency, autonomy, or ability to advocate for and access improved employment opportunities. As described in Box 2 below, a green transition in the energy sector is not the same as a just transition, and human rights, economic inclusion, and social justice must be intentionally centered in the clean energy sector for a just, green transition to truly take place. While policies and actions to achieve a clean energy transition may not ensure a just transition on their own, with the right implementation and intentional incorporation of gender, inclusion, education, and social justice components, a clean energy transition can also deliver a just energy transition.

BOX 2

Accountability and intentionality in the clean energy sector toward a just energy transition

Clean energy does not automatically guarantee "clean" business practices. In the past 10 years, more than 200 allegations of abuse have been made within the renewable energy industry, with 44% of allegations being linked to the wind and solar sectors. Abuses included land and water grabs, violation of the rights of Indigenous Peoples, and the denial of workers' rights to decent work and a living wage (BHRRC, 2021).

CONTINUES ON NEXT PAGE

BOX 2 Accountability and intentionality in the clean energy sector toward a just energy transition

In 2023, the Business and Human Rights Resource Centre (BHRRC) evaluated 28 of the most powerful players in renewable energy using globally endorsed, international standards, such as the United Nations Guiding Principles on Business and Human Rights and the Office of the United Nations High Commissioner for Human Rights Guidance on Business and Human Rights in Challenging Contexts. Their assessment found that, while strides are being made to ensure the prioritization and protection of human rights across renewable energy value chains, grave omissions in policy and gaps between policy and practice still exist.

For example, the assessment found that only two out of the 28 companies evaluated mention Indigenous Peoples' rights in their policies at all, and only two companies have commitments to respect land rights.

Even then, evidence of how these two companies will identify legitimate tenure holders is not provided. The infringement of Indigenous People's rights is the most common source of serious allegations against renewable energy projects, and much more must be done to safeguard this population in future renewable energy development. In addition, no company evaluated publicly discloses its full supply chain, and this lack of transparency makes it challenging to ensure that companies are respecting human rights throughout their operations. Finally, gaps between policy and practice were found across companies, where commitments to respect human rights on paper were not demonstrated in action. For example, EDF Renewables includes policy language around the rights of Indigenous Peoples and human rights defenders but has been associated with attacks against defenders and allegations of abuse of Indigenous rights in Mexico (BHRRC, 2023).

Findings from this assessment are alarming and point to the need for accountability and transparency at all levels of the clean energy sector, not just among the largest companies. While this Annex focuses on the opportunity for engaging youth in the clean energy sector and the benefits that this engagement can have on both young people and on the advancement of just, green transitions, it is also necessary to acknowledge that the clean energy sector, like all sectors experiencing green transitions, is emerging from a system that has been historically dominated by extractive, exploitative practices that prioritize profit over people. Given this, intentional and transformational changes must be made to develop the clean energy sector in ways that recognize and respect the rights of youth, women, Indigenous Peoples, and other traditionally underrepresented or exploited groups and hold companies that abuse human rights accountable for malpractices.

One example of transformational change is adopting shared prosperity project models, such as co-ownership and benefit-sharing, especially with Indigenous Peoples. Ørsted, one of the companies included in the BHRRC 2023 assessment, was identified as a leader in this area for making commitments to community co-ownership of an offshore project in Scotland (BHRRC, 2023). Another company, Solar Sister, provides an innovative approach to promoting energy equity and justice[2] through equipping women in "last mile" communities with the skills and resources to become renewable energy entrepreneurs, bringing clean energy to their communities and developing sustainable livelihoods in the process. The renewable energy sector should uplift and learn from those actors that are paving new paths in renewable energy and modeling what a just, green transition can look like for all, including youth, women, Indigenous Peoples, and individuals of intersectional identities who might face compounding discriminations in certain contexts, such as Indigenous, rural youth. While the recommendations in this report focus on engaging youth in the clean energy sector, it is important to remember that **youth are not a monolith**, nor are they the only social group that should be protected and uplifted in a just and inclusive green transition.

2 — Energy equity is the concept that the benefits of a clean energy transition should be made accessible to everyone, and intentional actions must be taken to reach those who are disproportionately left out or historically marginalized. Energy justice is the concept that systemic barriers preventing some people from accessing the benefits of a clean energy transition should be directly addressed and dismantled to promote energy equity for all. See the Initiative for Energy Justice for more information.

Current State of Youth Participation in the Clean Energy Sector

A clean energy transition can help provide jobs for young people entering the labor market, those who have been in the labor market for some time already, and those who are struggling to find work today. Around the world, the youth unemployment rate is on average three times higher than that of adults, even in countries where overall youth unemployment is low (S4YE, 2023). In regions where youth populations are already large and expected to grow, the need to make quality employment opportunities accessible to youth is especially great. In Sub-Saharan Africa, the youth population is expected to double between now and 2050 to 840 million young people. Each year, 13 million youth in the region look for work, but less than a quarter (3 million) find jobs (Power for All, 2019). This is partly due to a dearth of available jobs to meet the needs of the millions of young Africans who enter the job market annually (an estimated 10-12 million per year), and partly due to limitations in existing education systems to prepare young people to fill jobs that already exist (EEP Africa, 2019).

BOX 3

Mismatches between job requirements and number of qualified candidates, example from South Africa

Recent data from South Africa's Renewable Energy Independent Power Producer Procurement Programme shows that more than half (60%) of all jobs created in the renewable energy sector in South Africa are related to construction, and nearly all (90%) of these construction jobs require a vocational or university-level education (EEP Africa, 2019).

According to the Organisation for Economic Co-operation and Development (OECD), half of 25–34-year-olds in South Africa have not attained an upper secondary qualification, and only 5% of 15–19-year-olds in the country are enrolled in tertiary programs (OECD, 2023). In a country where nearly one-third of the population is between the ages of 18 and 34, ensuring that youth can access the education and training needed to qualify for jobs being created in the clean energy sector should be a priority (Stat South Africa, 2019).

To realize a clean energy transition, the jobs created in the sector must be filled by qualified candidates. While the range of renewable energy jobs projected to emerge in the coming decades provides opportunities for youth to find work in specialized and more general fields, all jobs will require minimum levels of competency and skills.[3] Around the world, 69% of youth do not have secondary education-level skills and in low-income countries, 69% of school-aged children do not even have basic primary-level skills (World Skills Clock, 2024; The Education Commission, 2016). There is a clear need to provide education and training for young people that equips them with foundational skills to succeed in any sector, as well as a breadth of green skills to flourish in the growing clean energy sector. Within the clean energy sector, there is a need to expand access to clean energy workforce development so youth can meet the requirements of existing and emerging jobs in the sector, as well as provide enabling policy and regulatory environments to create more clean energy jobs for young people, including promoting entrepreneurship.

Vital to these efforts is ensuring that job opportunities in the clean energy sector are accessible to all youth, especially young women. Promoting gender equity, along with youth inclusion and a respect for human rights, is a prerequisite for achieving a just, green energy transition (see Box 2). Across the African continent, young women experience higher rates of unemployment than young men (35% versus 20%, respectively) (EEP Africa, 2019). While the proportion of women employed full time is greater

3 — Research suggests that the fastest growing green jobs over the next decade will require higher levels of education and skills, reaffirming the urgent need to address the learning crisis and green skills gap (Kwauk, et al., 2023).

within the renewable energy sector (32% women) compared to oil and gas sectors (22% women), there is still much more that the clean energy sector can do to achieve higher levels of gender equity in its workforce (See Box 4) (IRENA, 2019).

Rather than develop the clean energy sector according to the economic paradigm perpetuated by the fossil fuel industry—and still advocated for by industrialized nations and many developing nations as well—of "energy additions without energy transitions," renewable energy economies can and should be developed in opposition to historical hiring practices that have rendered the sector at present to be male-dominated (Bell et al., 2020). This includes the elimination of gender discrimination, sexual harassment, and exclusionary policies, practices, and facilities in the workplace and the transformation of harmful gender and social norms and stereotypes that discourage young women from considering energy jobs in the first place. By offering inclusive and equitable working conditions, the clean energy sector can change the status quo of hiring practices and company cultures that have led to gender inequities in the workforce thus far and attract the best and brightest people of all genders.

BOX 4

At a Glance: Women in renewable energy

Around the world, women are underrepresented in the energy sector. In oil and gas sectors, women account for only 22% of full-time employees, compared with 32% in the renewable energy sector (IRENA, 2019).

As the renewable energy sector continues to develop, it has the potential to set a new precedent of gender parity in energy industries but has a long way to go. While numbers vary between regions, in Sub-Sahara Africa (SSA), Latin America and the Caribbean (LAC), and Southeast Asia (SEA), women make up a smaller portion of the clean energy workforce compared to men and are often least represented in fields that require science, technology, engineering, and math (STEM) degrees.

In renewable energy companies in SSA, women's participation tends to be concentrated in administrative and non-STEM roles. The departments with the **highest proportion of women** are:

- 38% Administration
- 34% Communications
- 31% Sales Deparments

Of the positions that require STEM degrees, women account for only 13% of that workforce. Women are also **less represented in leadership roles**, making up:

- 27% LESS THAN ONE-THIRD OF Boards of directors
- 30% Chief Executive Officers
- 16% Vice presidents and directors
- 26% Middle and lower managers

BOX 4 At a Glance: Women in renewable energy

at renewable energy companies in the region (IFC, 2022). In terms of gender equity in policy frameworks, a review of energy policy frameworks from SSA found that almost three-quarters of them referred to women as stakeholders, beneficiaries, or agents of change and provided avenues for women to engage in the energy sector through collaborations between ministries (Power for All, 2019). This is a promising finding that depends on the implementation of those policies in practice to see real progress toward gender equity in the region.

In renewable energy companies in LAC, the proportion of women in STEM roles is higher than in SSA, though still not equal to men. In a survey of 102 renewable energy companies in LAC, women comprised:

36%
STEM employees

39%
Non-STEM employees

48%
Non-qualified employees.

Similar to SSA, wide gender gaps exist in executive and management positions in LAC, where the proportion of women in the boardroom and in management roles for renewable energy companies is 24% and 22%, respectively. It was also found that more than half (68%) of surveyed companies in LAC did not have a gender policy in place (IDB, 2022).

While data is less readily available regarding women's participation in the renewable energy workforce in SEA, a 2018 report from IRENA found that women make up only 28% of the renewable energy workforce in the region (Access, 2023). Moreover, **women's enrollment in STEM programs at the tertiary level was found to be much lower than men's enrollment across nine countries in SEA**, including Malaysia (34% men's tertiary enrollment in STEM compared to 15% women's), the Philippines (28% men's tertiary enrollment in STEM compared to 8% women's), and Vietnam (27% men's tertiary enrollment in STEM compared to 12% women's) (USAID, 2023).

Opportunities for Employing Youth in the Clean Energy Sector

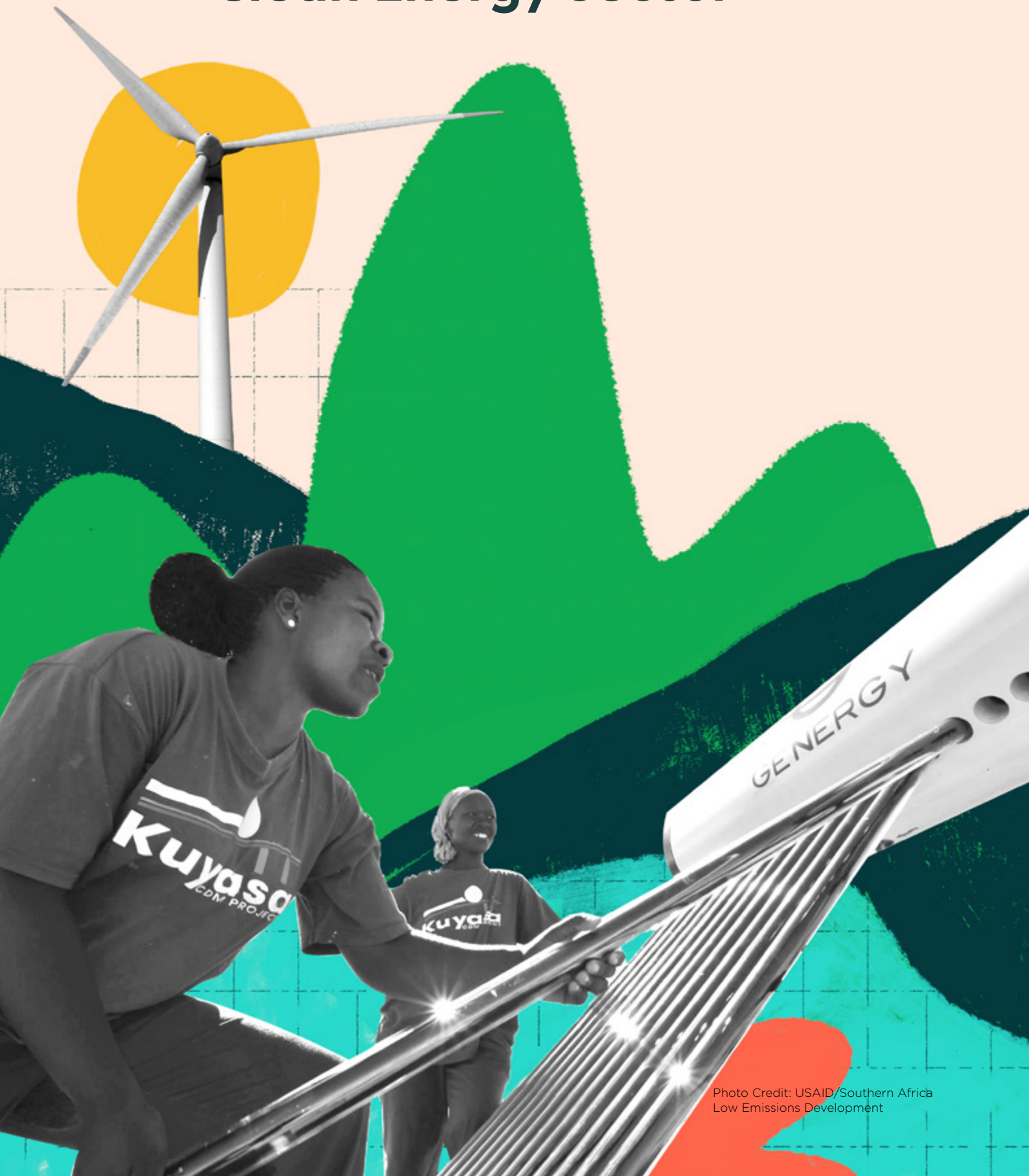


Photo Credit: USAID/Southern Africa Low Emissions Development

2

Opportunities for Employing Youth in the Clean Energy Sector

A clean energy transition that promotes both social and planetary justice must include young people. In developing this Clean Energy Annex, the perspectives of five young professionals working in renewable energy around the world were captured to describe the barriers and opportunities youth experience when trying to engage in the clean energy sector.

The five individuals consulted represent a diversity of geographic locations and professional backgrounds, providing a sample of the array of experiences in the renewable energy sector across countries and value chains. Among these experiences are examples of barriers and opportunities related to education and training, coordination, entrepreneurship, policy and government, and access, aligning with those barriers and opportunities identified in the Action Guide. The insights from these five individuals are presented below in the form of five opportunities for international development organizations, program implementers, policymakers, and those working within and outside the energy sector to address the above-mentioned barriers and create more enabling environments and clear pathways to decent work for youth in the clean energy sector.

Top Five Recommendations for Engaging Youth in the Clean Energy Sector

1

Equip youth with a breadth of green skills to succeed in the clean energy sector

Young people need more green learning opportunities for obtaining both generic and specific skills to fill jobs across renewable energy value chains. This ranges from technical roles in solar panel construction and installation to, for example, interpersonal roles in sales and marketing. Across all roles, socioemotional skills such as collaboration, communication, leadership, and compassion, are needed to foster healthy and effective workplaces.

2

Strengthen coordination across and within the public and private sector to improve training and employment opportunities

To ensure that young people have clear learning-to-earning pathways in the renewable energy sector, education and training institutions, governments, the private sector, as well as international development organizations must work together to provide aligned and complementary opportunities that position youth for success as they enter the workforce.

3

Create channels to financially support youth entrepreneurs in the clean energy sector

Young people are at the forefront of creating innovative solutions to local and global sustainable energy challenges, but their ambitions are often stifled by a lack of funding. Public and private resources should be more readily mobilized to support young innovators in the clean energy sector.

4

Establish government policies that promote green job creation in the clean energy sector

The renewable energy sector cannot develop without policies that support clean energy infrastructure and industries. Governments play a critical role in creating enabling policy environments to stimulate sector growth and job creation for young people.

5

Adopt gender responsive practices to attract and retain women in the clean energy sector

To achieve a just, clean energy transition, gender inequity—as well as the marginalization and/or exploitation of other historically vulnerable groups—must be addressed. Young women have the potential to contribute greatly to the sector, if policies and practices are in place to promote gender equity and inclusion.

Centering Youth Voices and Perspectives

Ameer Mubaslat

Jordan, Age 27. Vice President of International Youth Ambassadors Foundation

Ameer Mubaslat is a business and sustainability expert who works in the humanitarian development and business consulting fields, with more than eight years of experience in business advisory, project management consulting, sustainability consulting, and environmental, social, and governance (ESG) criteria. He holds a mechanical engineering degree from Jordan University of Science and Technology and is a Certified Environmental Practitioner and a Certified Energy Manager.

Cynthia Kpozuxe

Netherlands, Age 29

Foundation Rural Energy Sector (FRES) Business Advisor and Community Manager

Cynthia Kpozuxe joined FRES as Business Advisor and Community Manager in 2021. Cynthia has a broad experience in sustainable business development and stakeholder management in Sub-Saharan Africa and has a passion for building bridges between people and organizations.

Fabian Lievano

Colombia, Age 26. Renewable Energy Engineer and Carbon Market Specialist, Ongresso Energy

Fabian Lievano, an accomplished environmental engineer, holds a master's degree in renewable energy. Currently serving as a Renewable Energy Engineer and Carbon Market Specialist at Ongresso Energy, Fabian combines technical expertise with a keen understanding of environmental markets. Ongresso Energy's commitment to driving clean energy initiatives and navigating the intricacies of carbon markets showcases a multifaceted approach to sustainability. Driven by a desire to make a meaningful impact, Fabian continues to shape the future of renewable energy, embodying a unique blend of academic insight and industry innovation.

Jane Nakasamu

Zambia, Age 28. Greenbelt Energy, Chief Executive Officer (CEO)

Jane Nakasamu is a dedicated professional with a passion for environmental sustainability and a proven track record in spearheading climate initiatives. As the CEO of Greenbelt Energy Limited, she pioneered low-emission climate innovations, successfully developing an award-winning smart biogas stove and establishing sustainable public-private partnerships. With a background in project management and a commitment to trust-based investments in youth-led solutions, Jane Nakasamu is poised to make a significant impact in advancing green initiatives and fostering positive change.

Dr. Ibrahim Togola

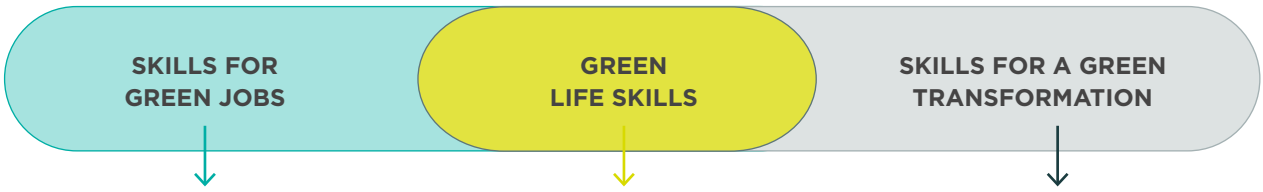
Mali, Co-founder of Mali Folkecenter Netaa and CEO of ACCESS.SA

Dr. Ibrahim Togola co-founded the Mali Folkecenter Nyetaa in 1999, an NGO dedicated to empowering rural populations through renewable energy and environmental protection. He is also the CEO of ACCESS.SA, a company dedicated to rural electrification using hybrid solar systems. Ibrahim is an engineer and economist, and holds the positions of the Vice President of the Global Wind Energy Association and Vice President of the Malian Federation of Renewable Energies. He also holds the esteemed title of Knight of the National Order of Mali and is the proud recipient of the prestigious Einstein SolarWorld Award, being the first African to achieve this honor. Ibrahim's journey is marked by a profound commitment to sustainable development and renewable energy, making him a trailblazer and a notable figure in the global energy landscape.

RECOMMENDATION 1

Equip youth with a breadth of green skills to succeed in the clean energy sector

Given the wide range of jobs being created across the clean energy sector, young people will need to be prepared with a wide range of skills that can help them succeed in any profession, from renewable energy engineers to sales associates and program managers. Youth will need a *breadth of green skills*, including technical capacities for specific jobs, transferable generic capacities for succeeding in any profession, and transformative capacities for further promoting equity and inclusion in a green transition. Such a framework for thinking about green skills for the clean energy sector is introduced in the Action Guide (page 31) and illustrated below for reference.



Skills aimed at fulfilling the requirements of green jobs and supporting the transition to a low-carbon green economy.

Cross-cutting skills that serve both technical, instrumental, and adaptive, transformative ends.

Adaptive skills aimed at transforming unjust social and economic structures

SPECIFIC CAPACITIES

- Business skills
- Data analysis
- Engineering
- Entrepreneurship
- Environmental and ecosystem management
- Enviromental knowledge and awareness
- Finance skills
- ICT skills
- Innovation skills
- Marketing skills
- Sales skills
- Technological skills
- Gender empowerment skills

GENERIC CAPACITIES

- Adaptability
- Collaboration
- Collaborative thinking
- Communication
- Coping with emotions
- Coping with uncertainty
- Creativity
- Critical thinking and reasoning
- Decisionmaking
- Empaty
- Flexibility
- Growth mindset
- Higher order thinking skills
- Interpersonal competence
- Leadership
- Negotiation
- Networking
- Open-mindedness
- Participatory skills
- Problem-solving
- Resilience
- Strategic thinking
- Teamwork

TRANSFORMATIVE CAPACITIES

- Ability to analyze unequal systems of power
- Coalition building
- Collective action
- Disruptive vs. normative thinking
- Environmental stewardship
- Future and anticipatory thinking
- Integrative thinking
- Interdisciplinary and multidisciplinary thinking
- Political agency, activism
- Reflexivity
- Respecting diverse viewpoints
- Solidarity
- System thinking
- Trans-cultural, trans-spatial, trans-temporal mindsets
- Valuing traditional and indigenous knowledge
- Working within complexity

INSTRUMENTAL → **TRANSFORMATIVE**

Ameer Mubaslat and Cynthia Kpozuxe both identified the need for youth to better develop their transferable generic capacities (or green life skills) which is a barrier for many youths in their contexts.

Ameer discussed how research skills are needed by young people to succeed not only in the energy sector, but any sector, and identified a "gap between higher education and the market with regards to basic skills."

Cynthia also told us how, even when young people graduate from school with the technical (i.e., specific) skills needed to qualify for field positions at the Foundation Rural Energy Services (FRES), these candidates often need to build their interpersonal skillsets through continuous training to better conduct people-to-people aspects of their job, such as sales.

Beyond green life skills, the need for youth to develop specific capacities (or skills for green jobs) was also discussed. Preparing youth for employment in the clean energy sector requires ensuring they receive quality education to obtain generic skills that are needed across technical fields, as well as creating opportunities for them to gain specific skills that are needed for particular roles. Cynthia described how specific capacities for roles in the renewable energy sector, such as those related to designing, supervising, and sourcing, tend to vary from region to region and are unique to their application. She also discussed how FRES's unique approach to solar electricity through an energy-as-a-service model requires that they "train people in our specific model." One way for youth to apply their generic skills in practice while also building more specific skills is through internships, apprenticeships, and on-the-job or incumbent worker training at clean energy companies (ICF, 2023; Cornell University, 2023). According to Dr. Ibrahim Togala, ACCESS.SA often receives candidates from Malian universities who do not have hands-on work experience, and they fill this gap by providing training in-house. Ibrahim described a common situation he encounters at his organization, where young graduates come with strong theoretical backgrounds but little practical experience, requiring his organization to upskill them on-the-job.

"We have someone come from school who has been mainly doing theoretical work, and we have to train them in practical work and practical decision-making. This takes a lot of time... for example, with electrification, you need smart metering, but we don't have any schools providing education on energy and digitalization combined, so we have to train people."

Dr. Ibrahim Togola

Photo Credit: USAID/Serbia Better Energy

Providing more green learning opportunities for youth to gain hands-on work experience in the clean energy sector will help them develop the specific skills they need to fill the clean energy jobs that are available in their area. This kind of practical training, when combined with high quality general education, will help equip young people with a breadth of green skills. For example, the **Working for Energy (W4E)** Program implemented in South Africa by the Western Cape's Provincial Department of Environmental Affairs and Development Planning includes both theoretical and practical components, the latter engaging youth in the actual fitting of solar geysers (water heaters), panels, and physical plumbing in government-built housing. Soft skills and small business training are also included in the

18-month long program, which participants said advanced their skills and studies in the program, though they felt the program duration was too short and the number of practical training sites too few. Participants recommended partnering with local businesses for the practical component, emphasizing the need for governments and education and training institutions to coordinate with industry partners to set up longer-term internships and apprenticeships (Dladla, 2020). To accomplish this, better coordination between education institutions and employers is needed to bridge the skills that youth learn in school and the skills they can learn in internships, apprenticeships, and other kinds of on-the-job training. The opportunity to improve coordination between public and private sector stakeholders is discussed in the following recommendation.

RECOMMENDATION 2

Strengthen coordination across and within the public and private sector to improve training and employment opportunities

To better prepare young people to enter the clean energy sector upon leaving school, education and training institutions can coordinate with one another, and with employers in the sector to support the transition from school to work.

On the supply side, this includes education and training institutions co-designing modules that focus on specific technical skills that are in high demand in the clean energy sector (EEP Africa, 2019) or training programs and certification providers coordinating to establish best practices and minimum standards for quality assurance across green learning opportunities. For example, the National Institute of Solar Energy in India established the Solar Energy Training Network to better align the content and approaches used in solar training programs across the country, ensuring a minimum number of key materials are covered (IRENA, 2022).

Given that education institutions in some contexts might not have the resources or momentum necessary to quickly adapt to changing qualification and skill needs within the clean energy sector, it is increasingly important to support the efforts of the private and not-for-profit sector in skilling and upskilling job candidates once they leave school. For example, the KYA Foundation in Togo, created in 2022 by the KYA Energy Group, provides practical trainings on solar panel installation and maintenance for those without a technical or energy-related education background **(read more about the KYA Foundation in the case study attached to this Energy Annex)**. Additionally, ACCESS.SA in Mali is currently exploring a government partnership to assist a professional training school in Mali to create a training model specifically for energy sector value chains. Both organizations offer great examples of the invaluable role that foundations and companies play in creating learning-to-earning pathways, especially where education systems are slow to respond to changing workforce needs.

Awareness about the range of professions available in the clean energy sector should also be raised among young people, and energy organizations and companies can partner with education institutions to increase the visibility of the field. This was a point raised by energy entrepreneur Jane Nakasamu, who identified a knowledge gap among youth in her country regarding what jobs in renewable energy entail.

"For young people, there's a gap in knowledge in energy, especially renewable energy, these fields appear to be only for engineers... I got interested in this space not coming from an engineering background and realized you can be in this space even if you're not an engineer, there are so many other pathways for young people. But there is slow awareness for young people."

Jane Nakasamu

On the demand side, companies can engage directly with education institutions as well as local renewable energy associations or industry associations, such as the Africa Minigrid Developers Association (AMDA) and the Global Off-Grid Lighting Association (GOGLA), to generate interest in the field and attract qualified candidates (EEP Africa, 2019). Cynthia described how FRES often looks to energy associations when hiring and spoke to the value of these associations in connecting employers with job candidates.

"If I'm a startup working in the energy space, one thing you can do for me is link me up with a corporate company that could be my client. I can provide them with my renewable energy products and innovative solutions, and then I'm dealing with the issue at a bigger level. Big businesses need to be greener."

Jane Nakasamu

The additional ways that clean energy youth entrepreneurs can be supported, primarily through better access to finance, is discussed in the next recommendation.

BOX 5

Engaging schools and youth in clean energy development projects: Lessons from the USAID South Africa Low Emissions Development (SA-LED) program

The USAID South Africa Low Emissions Development (SA-LED) program, implemented by Chemonics International, partnered with the South African government to expand low emissions development (LED) to meet the country's emissions reduction targets.

By identifying municipal projects that had lost momentum in the project pipeline and providing training and support to move them toward implementation, SA-LED created opportunities for practical learning, using real project challenges to build municipal capacity. This included one community-led pilot project that installed micro-biogas digesters in three schools in Mpumalanga province, allowing these school communities to convert food and yard waste into methane biogas that can be used for cooking school meals, and fertilizer that can be used for school gardens.

Following the success of this pilot, SA-LED worked with the Eastern Cape Department of Economic Development, Environmental Affairs, and Tourism to support the identification of 33 additional schools to receive biogas systems with food gardens and rainwater harvesting systems. As part of this project scale-up, SA-LED trained seven youths in implementing and managing micro-digesters and learning about the broader biogas field so they can support maintenance requests at schools in the future. SA-LED also trained 32 staff from three schools, including garden staff, kitchen feeding scheme staff, and teachers on how to operate and maintain micro-digesters. This project, one of the 31 total LED projects implemented under SA-LED, is an example of the potential for renewable energy initiatives to engage schools, students, and communities to raise awareness on, promote adoption of, and build capacity in clean energy technologies and techniques (USAID, Chemonics International, 2020).

Additional results from the broader SA-LED initiative:

28 institutions
with improved capacity to address LED issues

793 individuals
Trained in LED (six times the target of 130 individuals)

CONTINUES ON NEXT PAGE

BOX 5 Engaging schools and youth in clean energy development projects: Lessons from the USAID South Africa Low Emissions Development (SA-LED) program

232 individuals
Trained in LED who later applied the new knowledge and skills gained through the trainings

102 individuals
Trained in greenhouse gas monitoring, reporting, and verification specifically

Reduced 858,000 metric tons
of carbon dioxide equivalent by 2030 through program interventions (eight times the target of 100,000 metric tons)

12.95 megawatts
Developed of clean energy generation capacity

RECOMMENDATION 3

Create channels to financially support youth entrepreneurs in the clean energy sector

While clean energy jobs are expected to increase in the coming decades, youth populations are also expected to grow at a rate that outpaces increases in green jobs, not only in the energy sector but across sectors.[4]

This makes supporting young entrepreneurs who are creating their own professions and making jobs for others in the process very important. Readers can learn more about the challenges that youth green entrepreneurs face in the Action Guide (page 26), including barriers to accessing land and equipment, a lack of incentivizing government policies, a lack of social capital and access to networks, and, most important of all, an unmet need for financial support.

The need for financial support to help youth entrepreneurs advance their green enterprises was a message reiterated by the clean energy entrepreneurs consulted for this Clean Energy Annex. Both Ibrahim and Jane discussed the challenges they faced in establishing financial bases for their clean energy startups. For Ibrahim, the financial system in Mali does not enable startups to grow long-term, and he described the challenges young businesses can face when trying to grow early on with limited access to capital.

"A long-term loan here is one year, with the interest rate going up to 15% percent. You don't have money to make investments if you want to pay for meters or add more capacity to your system to pay back in three to four years, it's not possible. No bank will give you this type of loan. Only 12-month loans, that's the maximum you can get. You can have a lot of ambition, see a lot of possibility, but capital restrictions impact the local economy, jobs, and the possibility of growth."

Dr. Ibrahim Togola

4 — The youth population is expected to grow by 200 million by 2050, from 1.2 billion youth today to 1.4 billion youth three decades from now, according to the Population Reference Bureau.

In addition to restrictive banking policies, Jane described how the practice of providing grant funding, as well as incubation or accelerator support, to youth start-ups, is helpful but not always sustainable in the context of running and growing a business.

She discussed the time-consuming nature of competing for grants, and pointed out how grantmaking processes are often limited in their reach, leaving out young people who might not have the access or ability to apply for them.

"Our organization Greenbelt, my startup, faces challenges in trying to access different financial instruments. Because of our level... pretty much just grants are within our scope, but grants are very competitive. Say you dedicate six months to a program and training, and then there's a competition. There's a chance you may or may not get the grant, so that's not good if you're trying to run a business. Time is very limited; what I struggled with this year was time and how to balance different accelerator programs while running a business. If you get the grant, great, but you still lost time. Winning grants is great, but they're very competitive, usually with just one to two winners but everyone else is left behind. Not a lot of people from rural communities can access grant opportunities, it is usually people from urban areas with higher education."

Jane Nakasamu

To better support young entrepreneurs to access the financial capital they need to advance their clean energy enterprises, international development organizations can work with local financial institutions, as well as the public and private sector, to provide more accessible options for youth entrepreneurs. For example, the Education Development Center (EDC) works with a diverse array of partners to help leverage public and private resources in support of youth, and especially young women, engaging in the green economy. This includes their support of two Rwandan financial institutions in creating innovative youth-friendly financial products, the establishment of over 450 youth-led savings groups around the world to help young entrepreneurs start their own businesses, and the expansion of e-wallets to out-of-school youth entrepreneurs in the Philippines to help them establish mobile credit scores, in partnership with two financial institutions within the country (EDC, 2023).

Government initiatives—such as the Rwanda Green Fund, the largest of its kind in Africa—also have the potential to support youth green energy entrepreneurs, but only if specific targets and provisions for youth are in place. In Zambia, the government recently set up the Ministry of Green Economy, which has helped draw attention to green sectors but has yet to provide funding for green projects. While Jane recognizes the important role the new Ministry is playing in building advocacy and awareness around the green economy in Zambia, she would like to see the Ministry take a more deliberate approach to support young people, such as "focusing more on actually having a Green Fund that young people can access." The role of government, and importance of enabling policy environments to promote advancements in the clean energy sector, is discussed below.

BOX 6

What should be done by international development organizations, governments, local companies, etc. to support young people to learn about and access green skills and green jobs in the clean energy sector?

"**Internship programs** would be amazing; real internship programs. Not just making copies and giving coffee, but **training programs** where you can **learn real things** such as when companies go to high schools and tell students, 'If you want to work for us, you need to study engineering, renewable energy…' these kinds of things. Companies know what they want."

Fabian Lievano

"When you have **training institutions**, they are doing great. An example of best practice is when they are set up with the **private sector and can provide internships**. Governments and international development organizations must do a better job. Programs need to be **long term**. We [FRES] don't always have fixed contracts, but always have the prospect of employees being able to continue to grow in our organization, which is attractive to young people, to anyone. But intermediary institutions could really help to train and bring young people to a higher level. The responsibility shouldn't be only with training institutions or private companies to train young people. Institutions like governments or NGOs can play a role in **placing and helping to train people** while giving them **practical support**."

Cynthia Kpozuxe

"We need more **deliberate and long-term approaches** to engaging young people in different spaces. Young people are not just entrepreneurs. There's a few of us, but there's also young people who are students, researchers, young people who don't really know who they are. We need to create a deliberate engagement strategy on how to support young people and **build networks of young people** who can work together on green projects. Right now, there's a lot of different actions going on in different places that are a bit scattered. This work needs to be holistic."

Jane Nakasamu

RECOMMENDATION 4

Establish government policies that promote green job creation in the clean energy sector

To promote the growth of the renewable energy sector and to create more jobs for young people, governments need to adopt policies that support industry development and innovation in their countries.

This is already taking place in many contexts, such as India, the United States, and the European Union, where initiatives are being adopted to promote integrated solar PV manufacturing. In these places, governments are establishing local content requirements, creating public research and development funds and regional innovation clusters, promoting infrastructure upgrading, and providing manufacturing tax credits, free or low-cost land, subsidies, grants, and preferential loans and loan guarantees (ILO, 2022). These kinds of policies can remove financial and legal barriers that renewable energy companies face when starting out, and facilitate faster and broader green energy transitions, creating jobs in the process.the financial system in Mali does not enable startups to grow long-term, and he described the challenges young businesses can face when trying to grow early on with limited access to capital.

In the Philippines, the Renewable Energy Act of 2008 provides fiscal incentives for renewable energy companies, including income tax holidays, low-income tax rates, duty-free importation of renewable energy machinery, equipment, and materials, and tax rebates for the purchase of renewable energy components (IEA, 2017). The Philippines also adopted a Green Jobs Act in 2016 that mandates the identification of skills and development of training programs to prepare workers for jobs in green industries (IEA, 2023). Tax holidays, decreases in land and building taxes, and import facilities are also being established in Indonesia's East Kalimantan region, where the provincial government is phasing out coal production and diversifying the local economy (EDC, 2023).

Policies and legislation such as those described above can help stimulate national and local economies and enable the development of countries' renewable energy sectors, creating jobs in the process. This is especially important as more youth enter the labor market in the coming decades. Fabian Lievano describes that young Colombian graduates with degrees in energy are often unable to find jobs in the clean energy sector because of a scarcity of positions, noting the role that governments can play in helping new graduates find jobs.

"We are producing a lot of professionals here, because university is cheaper here, and have a lot of professionals who are uncertain of what's next when they finish. We need governmental policies to make sure that people, when they graduate, can find jobs."

Fabian Lievano

Ameer also discussed the impact that restrictive policies can have on the renewable energy sector, highlighting the role that governments can play in hampering growth in the clean energy sector, and the need for these types of restrictions to be removed. He remarked how new regulations in Jordan since 2019 have limited the number of permits available for renewable energy projects with a capacity greater than one megawatt, and how *"energy work in Jordan boomed between 2014 and 2018/19, but after, it has become more stagnant, mostly due to different regulations enacted in the country."*

In addition to incentivizing the development of the renewable energy industry and removing restrictive policies that prevent growth, governments can also play a critical role in setting national agendas for achieving gender equity in the clean energy sector. The next, and final, recommendation addresses the importance of prioritizing access for women to opportunities in renewable energy.

RECOMMENDATION 5

Adopt gender responsive practices to attract and retain women in the clean energy sector

Women in all their diversity are underrepresented across the energy sector and this trend risks being perpetuated within the renewable energy sector without intentional practices to attract and retain young women in clean energy professions.

The challenges underlying the gender inequalities currently observed in the clean energy sector (only 32% of full-time positions in renewable energy are filled by women according to IRENA) are myriad, and include barriers that prevent women from entering clean energy workforce pathways, such as gender stereotypes and gender disparities in education, barriers that prevent them from being hired into clean energy positions, including gender (and age) biases in recruitment and hiring practices, and barriers in workplace environments that make the clean energy sector unattractive and unsupportive to women (Shortlist, 2023).

In addition, barriers to women entering or staying in the clean energy sector are often difficult to disentangle from cultural norms and practices. For example, in Mali, one of the countries where FRES works, Cynthia described how FRES struggles to retain their women employees due to cultural norms that lead women to leave the organization after they are married. As a young woman entrepreneur in the clean energy sector, Jane also described the prevalence of gender-based cultural biases that can discourage women from entering the field.

"There are so many cultural biases to say okay you can't do this, don't have qualifications, experiences, can't go into the field, because this is a male-dominated space."

Jane Nakasamu

Moreover, in India it was found that women's low participation in the clean energy sector was related to cultural perceptions regarding the traditional role of women in the workplace, combined with stereotypical perceptions of work in the industry being labor intensive and potentially dangerous (Power for All, 2019). While work in some renewable energy professions, such as construction or installation, does come with safety risks, interviews with employees of renewable energy companies based in Sub-Saharan Africa found that the notion of "safety" was often conflated with femininity, leading to biases in hiring women in only office-based, administrative, and support functions (IFC, 2022). Therefore, perceptions of what constitutes both safe and dangerous positions within the clean energy sector should be interrogated for any underlying gender biases at play, ensuring that women are not left out of certain lines of work due to stereotypes that do not hold true in practice.

To address both the institutional and cultural barriers that women face in accessing and staying in clean energy jobs, public and private ecosystem actors must implement proactive, targeted approaches to overcome systematic equity gaps in relevant energy sectors. This includes top-down approaches that start with national policy agendas to prioritize women in clean energy transitions spanning education, employment, and entrepreneurship. In focus group discussions with industry leaders, financiers, training institutes, and policymakers in the energy sector from India, Kenya, and Nigeria, Power for All—a global campaign to advance the deployment of distributed/decentralized renewable energy—found that national energy policy frameworks were considered some of the most effective tools in promoting greater representation of women in the decentralized renewable energy workforce. Governments and education institutions can also encourage more women to enter the clean energy pipeline by offering scholarships and internships to women pursuing degrees in STEM fields **(see the KYA Energy case study for an example)**. It can also entail establishing gender equitable hiring practices, such as conducting unconscious bias trainings for employees involved in the hiring process and reviewing job descriptions to make them more competency-based, limiting the number of mandatory qualifications and removing mandatory years of experience needed to apply (IFC, 2022).

Bottom-up approaches are also needed to reach women candidates, such as engaging women themselves as recruiting agents. Cynthia describes how FRES works with women at the local level to help with recruitment, seeing them as agents of change who can advocate for the further engagement of women in the sector.

"We notice that to employ women, [women] need to be approached by women who are change agents. If there's a woman working in a local energy association and has a say in the village, we reach out to them to access target groups."

Cynthia Kpozuxe

Once women enter the renewable energy workforce, more efforts can be made to retain them by providing explicit opportunities to gain more experience and take on leadership positions, instituting policies that address bullying and sexual harassment in the workplace, ensuring transparent and equal pay structures, and fostering a workplace culture that balances work and personal life, for example, by providing parental leave for both parents, offering company-sponsored childcare, and having flexible work hours and locations.

Beyond these general best practices, retaining women in the clean energy workforce also requires culturally relevant and context-specific policies that acknowledge and work around existing gender inequalities, while still striving to address systemic societal and cultural norms that produce these inequalities. For example, the social enterprise Baobab +, which distributes solar home systems in off-grid areas in Côte d'Ivoire, Madagascar, Mali, and Senegal, provides financial support to women field officers to cover their transportation costs because cultural norms in the region impose mobility restrictions on women who are often prevented from driving on their own (IFC, 2022).

In addition to working around existing gender inequalities, companies must also contribute to working against gender inequalities to not just accommodate women in the renewable energy workforce, but also to strive for a future in the sector, and across sectors, where people of all genders have equal rights, autonomy, and agency. To achieve a just clean energy transition, the impact of development in the renewable energy sector on women and other historically marginalized groups, such as people living with disabilities, or those who have been displaced or forced to leave their homes due to climate change,[5] must be considered and efforts must be taken to minimize harm as much as possible. This would constitute a "feminist energy transition," one that is rooted in reorganizing systems of power to center those who have been exploited and abused by traditional energy systems. As Bell et. al. (2020) contends, regarding a feminist energy transition: "renewable energy 'fixes' that ignore the systematic subordination of marked social groups do not constitute feminist energy solutions." Rather than viewing the clean energy transition as a "fix," it must be approached as a transformation that has the potential to reshape the energy economy to provide decent, equitable, and sustainable job opportunities for youth, women, and other groups historically left behind or exploited by traditional energy systems.

5 — See forthcoming UNICEF Report: Skills for the Green Transition: Solutions for Youth on the Move.

Conclusion

Findings from this Clean Energy Annex and the original Action Guide show that green transitions taking place around the world and across sectors can provide employment opportunities for growing populations of young people. These green transitions have the potential to also be just transitions, if intentional policies and practices are put in place to protect, prioritize, and uplift historically marginalized and left-behind groups. Within the energy sector specifically, findings from the literature indicate that clean energy jobs are on the rise, and that regions where youth populations are expected to grow the most, such as Sub-Saharan Africa, are also expected to experience the biggest increases in renewable energy jobs. Moreover, consultations with young professionals working in renewable energy confirm that the opportunity for youth to benefit greatly from a clean energy transition exists, but risks being squandered without targeted interventions that address the specific barriers youth face in access clean energy skills and jobs.

Promoting access to training and employment opportunities for all young people in the renewable energy sector is a critical step to achieve a just and inclusive energy transition. International development organizations, program implementers, policymakers, and those working within and outside the energy sector play important roles in centering youth in clean energy workforce development. Ecosystem actors supporting energy transitions must center the voices and perspectives of youth as the emerging leaders of clean energy industries and promote equitable and inclusive access to opportunities for youth in all their diversity. This includes making green learning opportunities relevant to the clean energy sector more accessible and supportive through policies and financial mechanisms, strengthening public and private sector coordination to strengthen learning-to-earning pathways, supporting youth green entrepreneurs with sustained access to financial capital, creating enabling regulatory and policy environments for renewable energy industry development, and increasing access to opportunities for women and other traditionally underrepresented groups in the clean energy sector.

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Centering Youth in Green Workforce Development

Clean Energy Annex

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