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PEOPLE-CENTRED CLEAN ENERGY TRANSITIONS:

A Laser Focus *On* Africa

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Introduction

Africa's transition to clean energy is critical for combating climate change and fostering sustainable development. Given its vast renewable resources and growing energy needs, a people-centred approach is essential. By prioritising equity, local participation, and social benefits, Africa can harness clean energy to improve livelihoods, reduce poverty, and create a more sustainable future. This paper will explore the key factors driving this transition, the challenges and opportunities, and the potential benefits of a just and equitable approach.

The problem of energy access in Sub-Saharan Africa, where large shares of the population lack a reliable supply of electricity and affordable modern cooking fuels, has multiple dimensions, such as insufficient power generation capacity, difficulties in managing energy infrastructure and attracting investments in the sector, and challenges in serving low-income users. Booming populations, urbanisation, and ambitions of economic development will all require more and more energy.

- Limited access to electricity: Africa faces significant energy challenges, with nearly 600 million people lacking access to electricity, particularly in rural areas. This energy poverty hampers socio-economic development, limiting access to essential services like healthcare, education, and economic opportunities. The continent's energy infrastructure is underdeveloped, with outdated grids and high costs making expansion difficult, especially in remote regions. Many communities still rely on traditional biomass for energy, which contributes to environmental and health issues. Additionally, political and regulatory barriers hinder progress. Addressing these challenges requires investments in modern energy solutions, supportive policies, and people-centred approaches to achieve universal electricity access and sustainable development.

- Over-reliance on traditional biomass: In Africa, a significant portion of the population relies on traditional biomass—like wood and charcoal—for cooking and heating, especially in rural areas. This dependence leads to serious health issues due to indoor air pollution, environmental problems such as deforestation and land degradation, and economic challenges by perpetuating energy poverty. The use of biomass also hinders the adoption of cleaner, more sustainable energy alternatives due to high costs, lack of awareness, and inadequate infrastructure. Addressing this challenge requires promoting clean cooking technologies, renewable energy investments, and supportive policies to improve health, environment, and economic well-being.

- Underdeveloped energy infrastructure: Africa's underdeveloped energy infrastructure is a major obstacle to economic growth and social development. The continent's electricity grid is inefficient, limited, and frequent, leaving nearly 600 million people without reliable access. The outdated facilities and inadequate transmission and distribution networks exacerbate the issue. The grid covers only a small fraction of the continent, with rural areas being the most underserved. The high costs of electricity make it unaffordable for many. Centralised energy systems are vulnerable to disruptions and fail to meet diverse populations' needs. To overcome these challenges, Africa needs substantial investments in upgrading existing systems and developing new, decentralised energy solutions. Comprehensive energy policies should prioritise infrastructure development, encourage private sector participation, and facilitate regional cooperation.

The Concept of People-Centred Clean Energy Transitions

The International Energy Agency (IEA) coined the term "people-centred clean energy transitions" to encompass all dimensions of how people experience and participate in the transformation of the global energy system. This is defined across four key thematic areas: decent jobs and worker protection; social and economic development; equality, social inclusion and fairness; and engaging people as active participants.

People-centred sustainable energy transitions are so important for building a fair and just energy future. This strategy ensures inclusion and equitable access to renewable energy for all, particularly marginalised communities, hence mitigating social and economic imbalances. It encourages community involvement and empowerment, leading to long-lasting and broadly embraced solutions. In addition to promoting social fairness and increasing resilience to a range of obstacles, people-centred transitions also foster local economic growth by fostering innovation and job creation, which supports larger sustainable development objectives.

- Relevance to Africa's socio-economic and environmental context: As of May 2022, 12 African countries, representing over 40% of the continent's total CO2 emissions, have committed to reaching net zero emissions by mid-century. These ambitions are paving the way for the global energy sector, with African countries poised to capture the technology spillovers and attract climate finance. People-centred clean energy transitions are particularly relevant to Africa due to its unique socio-economic and environmental challenges. These transitions address energy poverty, promote social equity, support economic development, enhance environmental sustainability, and empower communities. By prioritising the needs of underserved communities, these transitions ensure clean energy solutions are accessible and affordable, improving the quality of life for millions. They also promote social equity by ensuring all segments of society, especially marginalised groups, benefit from the shift to clean energy. People-centred transitions are adaptable to local conditions and responsive to the specific needs of communities, enhancing energy systems' resilience to disruptions.

Objectives of People-Centred Clean Energy Transitions

A people-centred approach recognises the importance of putting people first in planning and policy-making for clean energy transitions. These are not just words. It will require innovative, focused policy design and implementation. Real community involvement takes time, effort and skill.

Inclusivity

- Ensuring benefits for all demographic groups: The objectives of people-centred clean energy transitions focus on ensuring benefits for all demographic groups by addressing key areas of equity and inclusivity. This approach aims to guarantee that reliable, affordable, and sustainable energy access is available to marginalised and underserved communities, thereby expanding services to previously neglected areas (International Energy Agency, 2022). It promotes inclusivity by making clean energy benefits accessible to all societal segments, with a particular emphasis on vulnerable populations (World Economic Forum, 2024). Engaging diverse community groups in the planning and management of energy projects is crucial, ensuring that solutions meet their specific needs and preferences (Global Summit on People-Centred Clean Energy Transitions, n.d.). Furthermore, it seeks to enhance social justice by ensuring a fair distribution of economic and social benefits across different demographic groups (International Energy Agency, 2022) and supports local development by fostering job creation and economic growth within the clean energy sector (World Economic Forum, 2024).

- Addressing the needs of marginalised and vulnerable communities: Addressing the needs of marginalized and vulnerable communities is central to people-centred clean energy transitions. This involves expanding access to reliable and affordable clean energy through decentralized solutions, tailoring energy systems to meet specific local needs, and providing financial support to overcome economic barriers. It also includes capacity building to develop local expertise, mitigating health impacts associated with traditional energy sources, and ensuring active community participation in decision-making processes. These strategies ensure that marginalized

groups benefit equitably from the transition to clean energy and contribute to broader goals of equity and sustainability.

Economic Empowerment

- Supporting local businesses: People-centered clean energy transitions lower operational costs, increase productivity, and supply dependable, reasonably priced energy to local companies. They promote innovation and the expansion of start-ups by creating new business opportunities in the renewable energy goods and services sector. The establishment of supply chains for renewable energy components benefits the local manufacturing and service sectors, and companies that use sustainable practices can gain access to international markets and become more competitive in the market. Clean energy promotes long-term sustainability and economic growth by assisting companies in becoming more resilient to the effects of climate change.

- Creating jobs: People-centred clean energy transitions in Africa can create jobs by expanding renewable energy infrastructure, such as solar, wind, and hydropower projects, which require a workforce for construction, installation, and maintenance. The growth of off-grid solutions, energy-efficient building retrofits, and local manufacturing of energy components also drives employment. Additionally, opportunities arise in research and development, education, policy implementation, and sustainable sectors like agriculture and tourism.

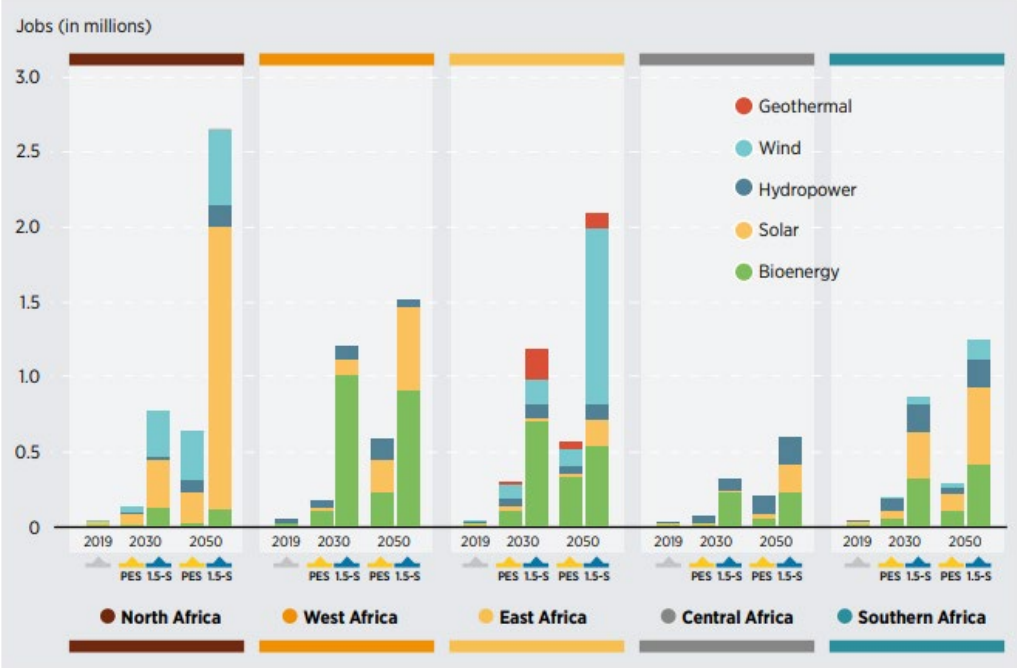

Figure 1: Evolution of renewable energy sector jobs in African regions under 1.5-S and PES, by technology, 2019-2050.

Community Engagement

- Involving communities in planning and implementation: To guarantee that renewable energy transitions are egalitarian, sustainable, and effective, communities must be included in their planning and execution. Involving the community increases the likelihood that energy solutions will be adopted and succeed over the long run by helping to customise them to local requirements and preferences. Participating in decision-making with the community helps to develop a sense of ownership and accountability, which can improve energy system management and

maintenance. Involving communities also helps to ensure that the advantages of clean energy are evenly distributed and that no group is left behind by identifying and addressing possible social and cultural barriers. Through local capacity-building opportunities, this participatory method also supports local development and resilience by equipping communities with the know-how and abilities to oversee and grow renewable energy initiatives.

- Management of clean energy projects: Renewable energy projects require thorough planning, stakeholder engagement, and strict execution. Financial planning, regulatory compliance, community energy needs assessment, strategic alliances, technology selection, quality control, and staff training are crucial. Regular monitoring, maintenance, and financial management ensure project viability and sustainability.

Key Areas of Focus

Access to Energy

- Current state of energy access in Africa: The current state of energy access in Africa is characterized by both challenges and opportunities. As of 2024, 600 million people across the continent still lack access to electricity, with rural areas being the most affected. Access to clean cooking technologies is also limited, with 970 million Africans relying on traditional biomass, leading to health and environmental issues. Despite these challenges, there is a growing focus on renewable energy sources like solar and wind, which are becoming more cost-competitive. Countries like Egypt, South Africa, and Ethiopia are leading in the development of wind and solar projects, which are expected to drive future growth in energy access. However, significant investment, estimated at around USD 25 billion annually, is needed to achieve universal energy access by 2030. The continent's abundant resources, particularly solar energy, are expected to play a major role in expanding energy access.

- Strategies for deploying decentralised renewable energy systems: Distributed renewables can help to improve energy access. These are small, decentralised, modular and flexible energy systems such as building-scale solar systems and mini-grids, located near the point of use. They generate, store and distribute power either independently of, or to enhance, the centralised national grid. Cities can demonstrate leadership in distributed renewables through pilot projects, create an enabling regulatory environment through building permits, building codes, and tax incentives, and provide incentives for renewables. Local governments can facilitate land acquisition, provide subsidies, and encourage residents and businesses to install building-scale clean energy. Cities can also support the private sector in developing innovative business models and streamlining registration processes. A people-centred approach ensures accessible, affordable, and culturally appropriate clean energy solutions, improving health outcomes and environmental sustainability.

Economic Opportunities

- The energy transition under IRENA's 1.5-S pathway, which measures the socio-economic outcomes under an energy scenario conforms with the Paris Agreement, boosts Africa's GDP throughout the entire outlook period up to 2050, compared with a planned policies scenario (PES). On average, GDP is 7.5% higher in the first decade, and 6.4% higher over the nearly three decades until 2050.

  The figure below shows relative differences between the scenarios, in percentages.

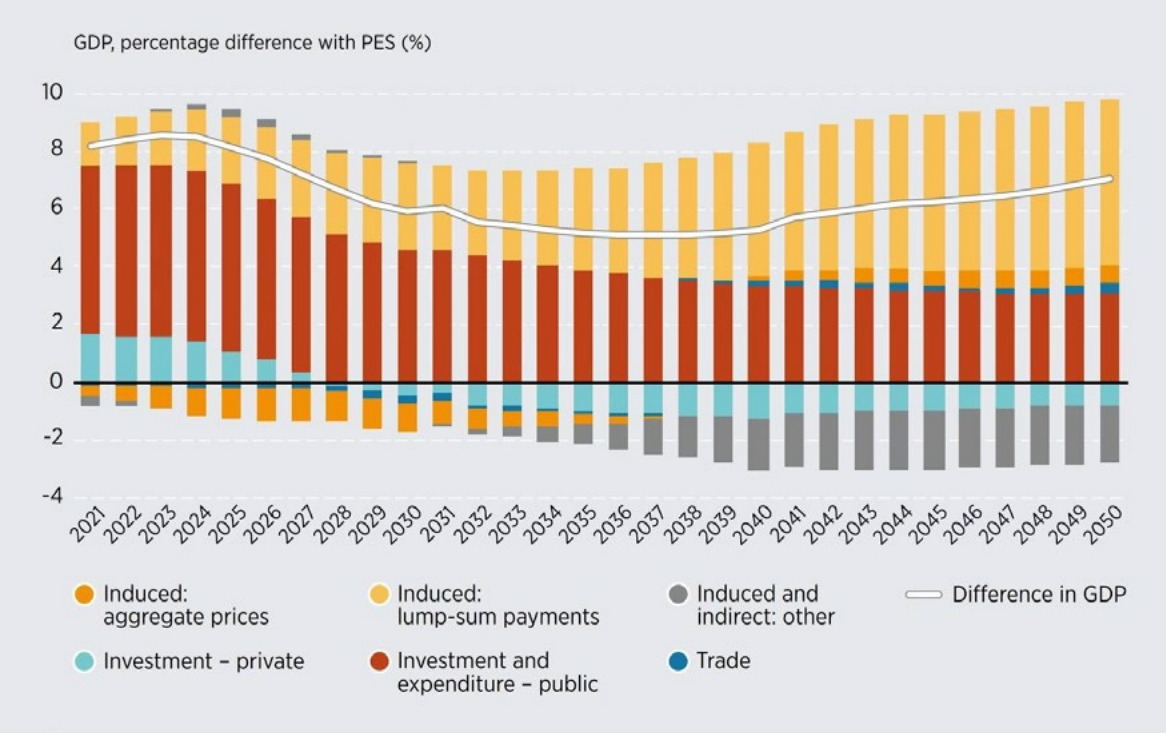

Figure 2: Difference in GDP between 1.5S and PES, with its drivers. Africa, 2021-2050

The energy transition in Africa is a significant driver of growth, boosting demand for new product ranges and services, promoting innovation in new technologies, and generating jobs. While fossil fuel industries are losing, African economies can leverage domestic strengths and address the value chain of manufacturing through domestic industrialisation. Education and training opportunities help build the basis for this development. Renewables and other energy transition-related technologies have already created 1.9 million jobs across Africa, and this number will grow substantially as countries invest further in the transition. Under the 1.5-S pathway, economywide employment on the continent is expected to be 3.8% higher in 2030 and 3.6% higher in 2050 than under the PES. The ripple effects of transition-related economic changes mean many new jobs are created across sectors and beyond energy, particularly important for the African Development Bank (AfDB) which estimates that each year more than 10 million youth enter the workforce in Africa, yet only 3 million new jobs per year are currently created.

Training and capacity-building programs

Programs for building capacity and providing training are crucial for the effective implementation and long-term viability of decentralised renewable energy systems, especially in areas like Africa. With the help of these initiatives, communities will be better equipped to manage, expand, and preserve their infrastructure for renewable energy sources. Typically, they include conferences for stakeholders and policymakers, technical training for local technicians, and educational programs to increase public understanding of the advantages of renewable energy. These initiatives strengthen local capability, promote independence, provide employment, and improve the long-term sustainability of renewable energy initiatives. Good training programs combine old knowledge with contemporary technical abilities and are frequently customised to local settings and needs.

Supporting local enterprises in the renewable energy value chain

In order to promote economic growth, job creation, and the sustainable development of the renewable energy sector in Africa, it is imperative that local firms throughout the renewable energy value chain receive support. In the value chain of renewable energy, local businesses are essential to manufacturing, distribution, installation, maintenance, and innovation. A few tactics to help these businesses are making money available to them through grants and microloans, giving them access to technical support and training to improve their knowledge and abilities, and establishing supportive legislative frameworks that promote local entrepreneurship. Furthermore, fostering collaborations among regional enterprises, global corporations, and governmental bodies can aid in the dissemination of technology and expertise, in addition to establishing local supply networks. Africa can increase its ability to meet its energy demands responsibly, strengthen local economies, and lessen its reliance on foreign sources of energy by empowering local businesses.

Health and Environmental Benefits

- Reducing indoor air pollution and associated health issues: People-centred clean Energy Transitions in Africa can significantly reduce indoor air pollution, offering major health and environmental benefits. By shifting from traditional biomass fuels like wood and charcoal to cleaner alternatives such as solar, biogas, and LPG, the prevalence of respiratory diseases, particularly among women and children, can be dramatically lowered. Environmentally, this transition helps reduce deforestation and carbon emissions, improves air quality, and contributes to climate change mitigation. A people-centred approach ensures that clean energy solutions are accessible, affordable, and culturally suitable, making the transition more sustainable and impactful for communities across Africa.

- Environmental protection through sustainable energy practices: Human-centred adoption of sustainable energy methods is one way that Clean Energy Transitions in Africa encourage environmental protection. As cleaner energy sources like solar, wind, and biogas replace conventional biomass fuels like wood and charcoal, the frequent adverse effects of biomass use—deforestation and soil degradation—are lessened. Cleaner energy methods improve air quality and mitigate climate change by lowering greenhouse gas emissions and air pollutants. Furthermore, the utilisation of renewable resources and energy efficiency techniques are common components of sustainable energy practices, which improve environmental preservation. By ensuring that these practices are customised to local requirements and settings, a people-centred approach promotes their widespread acceptance and long-term environmental benefits.

Social Equity and Gender Inclusion

- Empowering women through involvement in clean energy projects: Empowering women through clean energy projects in Africa significantly advances social equity and gender inclusion. Involving women in these initiatives—through roles in installation, maintenance, and decision-making—promotes economic independence, improves health by reducing reliance on polluting fuels, and ensures more equitable energy access. Engaging women also leads to more effective and sustainable energy solutions. Key references include UN Women's Report on Women in renewable energy (2015) UN Women, Kammen and Lew's review on energy access (2005), Kammen & Lew, Glemarec's Work on women's role in renewable energy (2012) Glemarec, and the World Bank's report on women's participation in renewable energy (2021) World Bank.

- Addressing disparities in energy access and socio-economic opportunities: By focussing on marginalised groups, promoting inclusive policies, empowering

local stakeholders, and generating income, People-Centred Clean Energy Transitions in Africa seek to resolve gaps in energy access and socioeconomic opportunity. The references Bhatia and Angelou's report on energy access (2015) World Bank Group, UNDP's gender impact analysis (2020 UNDP), Ahlborg and Hammar's comparative analysis (2014) Ahlborg & Hammar, and IRENA's socio-economic development report (2020) IRENA provide further details on how this approach fosters equitable energy access and enhances socio-economic development.

Policy and Governance

- Advocating for supportive policies and subsidies: Advocating for supportive policies and subsidies is vital for advancing People-Centred Clean Energy Transitions in Africa, according to GIZ's report on policy frameworks (2019). Effective policies, such as feed-in tariffs and regulatory frameworks, alongside financial incentives like subsidies and low-interest loans, help reduce the cost barriers to clean energy technologies and stimulate investment. Providing technical assistance and capacity building for policymakers ensures that these policies are well-designed and implemented. Engaging diverse stakeholders in the policy-making process also ensures inclusivity and addresses local needs, UNDP's insights on inclusive policies (2021).

- Promoting transparent and accountable governance structures: Encouraging responsible and transparent governance frameworks is crucial for implementing People-Centered Clean Energy Transitions in Africa. Clear rules, open engagement, accountability procedures, and capacity building guarantee that sustainable energy projects are carried out equitably, satisfy community needs, and effectively use available resources.

Case Studies

Kenya's Solar Home Systems

Off-grid energy solutions—Kenya is a great example—are essential to enabling economic success and energy access in Sub-Saharan Africa. Off-grid energy has many useful uses, particularly in the agricultural industry. Examples include solar water pumps, which have a wide range of socioeconomic effects.

This move towards off-grid electrification is essential for bringing energy to isolated rural areas and building their ability to withstand economic hardships. Wagner et al.'s studies from 2021 show a striking effect: monthly income for 36% of rural Kenyan customers who use off-grid electricity increased by $35 USD, more than half the average monthly GDP per capita.
Solibrium, a Kenyan partner of My Climate, offers affordable solar kits to rural communities, reducing energy expenditure and promoting clean energy solutions. These kits reduce CO2 emissions and contribute to UN Sustainable Development Goal 12. Solibrium's impact extends beyond clean energy access. The project fosters economic development by creating jobs. With 15 full-time and 100 part-time sales representatives, Solibrium provides much-needed income security for families and individuals.

The impact of off-grid extends to education. Schools with off-grid electricity provide students access to quality education, internet connectivity, and vital science equipment. GOGLA's 2018 report on the economic impact of off-grid solar highlights that 84% of households with children have access to solar power systems, increasing study time (Wagner et al., 2021).

Healthcare services also flourish with improved electricity access. Health centres can effectively utilise diagnostic and medical equipment, while rural communities gain the ability to store temperature-sensitive medicines, such as those for diabetes. Solar power has improved patient outcomes and helped save lives at rural Kenya clinics (Energy 4 Impact).

This energy revolution is not limited to households and schools. Off-grid solutions empower small and medium businesses. Internet cafes, mobile phone charging stations, and the integration of energy-based technologies like cold storage in restaurants – all flourish with reliable electricity. This translates to increased productivity and economic growth for these businesses.
South Africa's Renewable Energy Independent

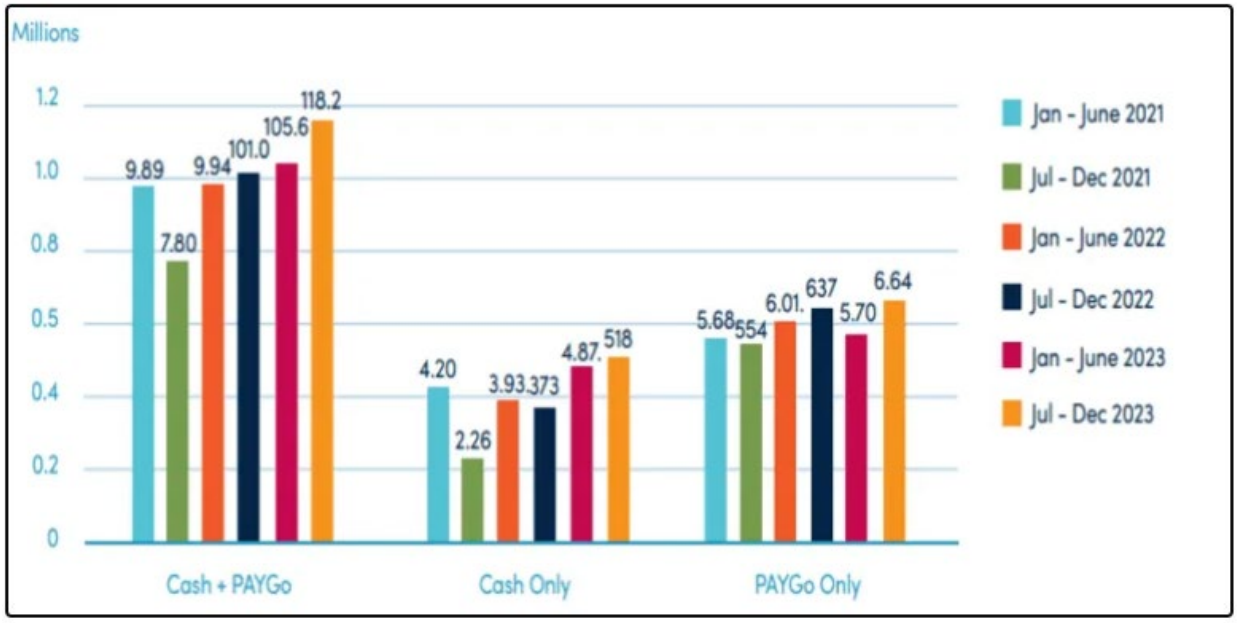

Figure 3: Semi-annual Evolution of Sales Volumes of Solar Energy Kits –Kenya.

Power Producer Procurement Program

South Africa's Renewable Energy Independent Power Producer Procurement Program (REIPPPP) is a successful initiative launched in 2011 to boost the country's renewable energy capacity. Through competitive bidding, the program has attracted significant investment in wind, solar, and biomass projects, resulting in substantial growth in renewable energy capacity. It has generated economic benefits by creating jobs, stimulating local economies, and supporting skills development. Additionally, the program has contributed to environmental sustainability by reducing reliance on coal and lowering greenhouse gas emissions.

REIPPPP's economic development requirements have been controversial, often confusing, and expensive for bidders to respond to these requirements. However, in South Africa, as in other countries, these requirements have also helped to generate political support for these programs from politicians, investors, and the general public. By increasing the role of these factors to 30 per cent of bid value, the program helped increase the visibility of economic development considerations and underscore their importance. The South African Parliament seems to have concluded that the economic development dimension of the program has been successful, based on the commitments made during the bid rounds

- **Private investment and job creation:** The REIPPPP has been highly successful in attracting significant private investment into South Africa's renewable energy sector. The program is designed as a competitive bidding process where private developers submit bids to build, own, and operate renewable energy projects. These projects include wind, solar photovoltaic (PV), concentrated solar power (CSP), biomass, small hydro, and landfill gas.

- **Scale of Investment:** As of 2023, the REIPPPP had attracted over ZAR 200 billion (approximately USD 13 billion) in private investment. This capital has been used to finance the development of over 6,000 MW of renewable energy capacity.

- **International and Local Investors:** The program has drawn investment from both international and local entities. Many large global renewable energy companies have entered the South African market, bringing with them not only capital but also expertise and technology. Local companies and consortia have also been active participants, often in partnership with international firms.

- **Financial Mechanisms:** The REIPPPP

uses a combination of debt and equity financing. South African banks, development finance institutions, and international financiers have all provided funding. The involvement of these financial institutions has been critical in ensuring the bankability of projects.

- **Economic Empowerment:** The program includes stringent requirements for local content and Black Economic Empowerment (BEE). This has ensured that a portion of the economic benefits, including ownership and employment, accrues to historically disadvantaged South Africans.

One of the major successes of the REIPPPP is its contribution to job creation, particularly in rural areas where many of the renewable energy projects are located.

- **Direct Employment:** The construction, operation, and maintenance of renewable energy projects have created thousands of direct jobs. As of the latest reports, the program had created over 50,000 job years (one job year equals one full-time job for one person for one year) across the various phases.

- **Construction vs. Operational Jobs:** Most of the jobs created have been during the construction phase of projects. However, operational jobs, though fewer in number, are long-term and provide ongoing employment opportunities.
- Skill Development: The REIPPPP has also focused on skill development, with bidders required to invest in the training of local workers. This has helped build a skilled workforce capable of supporting the renewable energy sector in the long term.

- **Community Development: T**he program mandates that a percentage of the revenue from renewable energy projects be invested in local community development initiatives. This has led to the creation of additional jobs in areas such as education, health, and infrastructure development in communities near the renewable energy sites.

- **Indirect Employment:** The REIPPPP has also generated significant indirect employment through the supply chain and associated industries. This includes jobs in manufacturing, logistics, and services related to renewable energy projects.

Ethiopia's Clean Cooking Initiative

Ethiopia's Clean Cooking Initiative represents a significant step forward in the country's efforts to address the intertwined challenges of public health, environmental sustainability, and socio-economic development. This initiative is crucial for Ethiopia, where traditional cooking practices are deeply ingrained yet contribute to severe health problems, environmental degradation, and economic inefficiencies.

The national improved cookstove program is designed to contribute to the implementation of the government of Ethiopia's improved cookstoves distribution plan by building a sustainable and vibrant market for improved cookstoves and building institutional capacity at all levels. The program approach addresses both the supply and demand side of the market, involving, among others, capacity-building support for the government and private sector operators (producers and distributors), saving and credit service providers, etc. on the one hand, and customer support (credit services), awareness creation and promotion on the other.

Energy intensity of the national economy

Energy efficiency at national level has improved over the years in Ethiopia. In 2005, energy intensity for the aggregate national economy was 1.02 MJ per USD of GDP. With the rising economic growth in the last seven years, productivity has increased resulting in the fall in energy intensity. Between 2005 and 2010 the GDP grew almost three fold while the total primary energy supply has almost remained the same.

Indicators	Unit	Year 2005/06	Year 2009/10
Exchange rate	ETB/USD	8.68	13
Population	Million	70	78.8
GDP per capita	USD	216.60	377.00
GDP	Market price (Million ETB)	131,641.0	383,364.3
Total Primary Energy Supply	Terra Joule	1,151,300	1,274,443
Energy Intensity	MJ/ETB	8.75	3.32
Energy Intensity	MJ/USD	1.01	0.26

Table 1: Ministry of Water and Energy, Energy Balance, 2011

Health improvements and environmental benefits

The project has significant social and environmental impacts. Socially, it reduces indoor air pollution, leading to improved respiratory health, particularly for women and children. It also empowers individuals economically through cost savings by using less firewood; increased productivity from quicker cooking times, providing additional hours for income-generating activities; gender empowerment, by reducing cooking time, women will have more opportunities for other activities like education and skill building; and local job creation to support the production, distribution, and maintenance of the cookstoves.

Environmentally, the project restores ecosystems and contributes to a healthier environment. It substantially reduces pressure on local forests, preserves natural resources by curbing deforestation through using more energy-efficient stoves requiring less firewood, improves air quality both indoors and outdoors by reducing pollutants, and positively affects water and soil conservation, reducing erosion and benefiting agriculture and water quality in the region.

Conclusion

A people-centred approach is crucial for inclusive, equitable, and sustainable clean energy transitions in Africa. This approach prioritises health, environmental sustainability, and economic empowerment by focusing on local communities' specific needs and circumstances. Traditional energy practices, such as biomass, have severe health implications, especially for women and children. By involving local communities in resource stewardship, clean energy technologies can improve quality of life and promote environmental sustainability.

Role in achieving sustainable development goals

A people-centred approach to clean energy transitions in Africa is crucial for advancing the Sustainable Development Goals (SDGs). This focuses on communities in energy solutions, addressing technical and environmental challenges while contributing to social and economic development. It improves public health by reducing indoor air pollution caused by traditional cooking methods. It supports affordable and clean energy for all, bridging the energy access gap. It fosters decent work and

economic growth by involving local communities in designing, producing, and distributing clean energy technologies. It also promotes gender equality by empowering women and reducing reliance on biomass fuels. This approach also contributes to climate action by promoting clean, renewable energy sources.

- **Addressing energy poverty and climate change**

  A people-centred approach to clean energy transitions in Africa is crucial in addressing energy poverty and climate change. This approach prioritises the needs and circumstances of local communities, ensuring that energy solutions are both technically effective and socially inclusive. By involving local populations in the planning and implementation of energy projects, these solutions are culturally appropriate, economically viable, and tailored to their specific needs. This approach also plays a vital role in combating climate change, as Africa is disproportionately affected by climate change. Promoting the adoption of clean and renewable energy technology reduces dependence on environmentally harmful practices and enhances community resilience. This approach empowers communities to take ownership of their energy futures, fostering sustainable development that is resilient to climate change challenges.

Call to Action

- **Need for financial support, capacity building, and Community Involvement**

  Achieving a sustainable energy transition in Africa requires immediate action in financial support, capacity building, and community involvement. Increased investment in clean energy projects, including microfinance and subsidies, is necessary to prioritise vulnerable populations. Strengthening local capacities through training programs and educational campaigns is crucial for the success of clean energy initiatives. Community involvement is vital for the long-term acceptance and sustainability of clean energy solutions. Governments, organisations, the private sector, and civil society must collaborate to provide financial support, build local capacities, and ensure meaningful community involvement in Africa's clean energy transition. This will drive development and environmental protection.

- Importance of policy integration and robust monitoring and evaluation mechanisms

  Africa needs to integrate clean energy policies across sectors and establish robust monitoring mechanisms to align initiatives with broader development goals. This includes aligning energy initiatives with health, education, agriculture, and economic devlopment, and investing in robust frameworks.

Recommendations

- Enhance Financial Support: Increase Funding for People-Centred Clean Energy Projects: To drive the adoption of clean energy solutions in Africa, it is crucial to enhance financial support to prioritise local communities' needs and circumstances. Governments should increase public sector investment in renewable energy initiatives, creating dedicated budget lines for projects targeting underserved populations. Additionally, leveraging international climate finance, such as the Green Climate Fund, will provide critical resources for these initiatives. The private sector should also be incentivised to invest in people-centred clean energy projects through policy incentives like tax breaks, subsidies, and public-private partnerships.

- Capacity Building: Implement Training Programs to Build Local Expertise: Building local expertise is essential for the sustainability of clean energy initiatives. To achieve this, comprehensive training programs should be implemented to equip local governments, NGOs, and community-based organisations with the skills needed to develop, manage, and maintain clean energy projects. These programs should focus on areas such as project management, technical operation, financial management, and proposal development. Enhancing local capacity

will not only improve the implementation and maintenance of clean energy solutions but also empower communities to take ownership of their energy futures.

- Community Involvement: Ensure Meaningful Participation in Energy Planning and Decision-Making: The success of clean energy initiatives depends on the meaningful involvement of the communities they are designed to serve. It is essential to engage local populations in all stages of energy planning and decision-making, from project design to implementation and evaluation. This can be achieved by establishing inclusive platforms for dialogue and consultation where community members can express their needs, preferences, and concerns. By incorporating local knowledge and respecting cultural practices, energy solutions are more likely to be accepted and sustained. Additionally, fostering a sense of ownership among community members will enhance the long-term viability of clean energy projects, as they will be more likely to maintain and support these initiatives.

Policy Integration: Align Clean Energy Policies with Broader Socio-Economic Development Strategies

To ensure that clean energy initiatives contribute to sustainable strategies. Governments should integrate clean energy goals into national and regional development plans, ensuring that these initiatives support objectives in health, education, agriculture, and economic growth. Creating a cohesive policy framework that connects renewable energy deployment with poverty reduction, job creation, and environmental sustainability will maximise the impact of clean energy projects.

Monitoring and Evaluation: Establish Mechanisms to Track Progress and Ensure Accountability

Effective monitoring and evaluation (M&E) systems are essential for ensuring the success and sustainability of clean energy initiatives. Establishing robust M&E mechanisms will allow stakeholders to track the progress of projects, assess their impact, and ensure accountability. These systems should be designed to collect accurate data, provide timely feedback, and facilitate adaptive management. Transparent reporting on project outcomes and financial expenditures will build trust among donors, investors, and community members, encouraging further support for people-centred energy initiatives. Additionally, M&E processes should include community feedback to ensure that projects continue to meet local needs and adapt to changing circumstances.

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