

Renewable energy's contribution to social development

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GLOBALLY, RENEWABLE energy is changing the way countries think about energy, economic growth and development. Solar, wind, hydrogen, geothermal and biogas are increasingly becoming part of national energy strategies as countries seek cleaner, more reliable and sustainable ways of meeting growing energy demands. What was once largely viewed as an alternative to conventional energy is now becoming an important part of economic planning, with investment in renewable energy infrastructure, technology, skills and new industries. The transition is also about more than reducing emissions; it is increasingly linked to energy security, job creation, economic diversification, technological innovation and improved access to essential services.

This global transition presents Africa with both an opportunity and a challenge. The continent has significant renewable energy potential, particularly in solar energy, yet investment, infrastructure, technology and skills remain important to unlocking that potential. For countries such as Botswana, the opportunity lies in using renewable energy not only to strengthen energy security, but also to support livelihoods, create employment, develop skills and improve essential services. This brings the conversation home to Botswana, a country with considerable potential for solar energy and emerging opportunities in areas such as wind and biogas. As Botswana increasingly develops its renewable energy resources, an important question arises: what does renewable energy mean for the ordinary Motswana, and how can it contribute to social development?

In addressing this question, it is important to consider renewable energy not only as an energy or infrastructure issue, but also through the lens of social development. Social development is broadly concerned with improving the well-being of individuals and communities and creating conditions that enable people to reach their full potential. It



involves reducing poverty and inequality, promoting equitable access to opportunities, healthcare, education and basic services, while strengthening human dignity and quality of life. From this perspective, renewable energy is not simply about generating electricity. It can become an important enabler of social and economic development across Botswana.

One of its most important contributions is improving access to reliable and affordable energy. This is relevant to both rural and urban Botswana. Solar energy, for example, can supplement electricity from the national grid and provide alternative energy solutions for households, businesses, schools and public institutions. In urban areas, renewable energy can contribute to energy security and help households and businesses manage their energy needs, while in rural and remote communities, decentralised renewable energy solutions can provide opportunities where conventional infrastructure may be more difficult or costly to extend. Reliable electricity provides a foundation for people to study, work, operate businesses and access essential services, allowing them to participate more fully in social and economic life.

The expansion of renewable energy can also contribute to employment, green jobs and skills development. Renewable energy projects require skills in electrical installation,

engineering, construction, project management, environmental management, operations and maintenance. As the sector grows, Botswana has an opportunity to ensure that local people, particularly young people, are equipped to participate in these emerging opportunities. Training in solar installation, electrical systems, energy efficiency and maintenance can create pathways into employment and entrepreneurship. The social development benefit therefore extends beyond the energy produced; it includes building a skilled workforce capable of participating in Botswana's emerging green economy.

Renewable energy is also closely connected to education and human development. Reliable electricity enables schools and training institutions to make greater use of computers, internet connectivity, digital learning platforms and other educational technologies. It can also improve lighting and the overall learning environment. For learners in both urban and rural areas, dependable energy can create better conditions for accessing information and developing skills. At the same time, the renewable energy sector can provide opportunities for technical and vocational education, helping young Botswana develop practical skills relevant to the country's future energy needs. Renewable energy can therefore contribute

to both improved educational opportunities and the development of human capital.

Another significant contribution is to livelihoods and economic opportunities. In urban areas, businesses depend on reliable electricity to operate efficiently. Renewable energy can provide additional energy security and help businesses manage operating costs. For small businesses in particular, reliable energy can support productivity and income generation. In rural communities, renewable energy can support agriculture, irrigation, water pumping, refrigeration and other productive activities. These applications demonstrate that energy can become an input into economic activity rather than simply something consumed by households. By enabling people to produce, trade and generate income, renewable energy can contribute to stronger and more sustainable livelihoods.

The benefits also extend to healthcare and essential public services. Health facilities require dependable electricity for lighting, refrigeration of medicines and vaccines, communication systems and medical equipment. Renewable energy solutions can help strengthen energy reliability and support the continued delivery of these essential services. Similarly, renewable energy can support water systems, public buildings and community facilities. Reliable

energy can therefore contribute to better healthcare, improved access to services and stronger community well-being. Its social value is consequently broader than the energy sector itself, as its impact can be felt across services that directly influence people's quality of life.

For renewable energy to deliver these benefits equitably, social inclusion must remain central to Botswana's energy transition. Renewable energy projects can have environmental, economic and social implications for communities, and these need to be properly considered from the planning stage. Communities should have meaningful opportunities to participate in consultation and decision-making, while local people should benefit from employment, skills development, procurement and other economic opportunities associated with projects. Particular attention should also be given to vulnerable and marginalised groups so that the transition does not reproduce or deepen existing inequalities.

Botswana therefore has an opportunity to position renewable energy as part of a broader social development agenda. The success of the transition should not only be measured by the amount of renewable electricity generated or the number of projects developed. It should also be assessed by its contribution to people's lives and opportunities: whether households and businesses have more reliable energy, whether young people gain relevant skills and employment, whether schools have improved access to technology, whether health facilities can provide more reliable services, and whether communities can use energy to strengthen their livelihoods.

As Botswana moves further into the renewable energy transition, the opportunity is therefore much bigger than simply producing cleaner electricity. It is an opportunity to build a more inclusive economy, strengthen communities and improve the quality of life of Botswana. The success of this transition should be reflected not only in the energy generated, but also in the positive difference it makes in the lives of people and communities across the country.