

# Tanzania

## Introduction

This note was developed by GONGLA with the support of the World Bank Group Lighting Global Program, the Energy Sector Management Assistance Program (ESMAP), the Shell Foundation, USAID, Power Africa, Africa Clean Energy Technical Assistance Facility (ACE TAF), the UK Foreign Commonwealth & Development Office (FCDO) and Sustainable Energy for All (SEforAll). It is part of a series of briefing notes that provide a high-level overview of the status of countries' off-grid solar markets, as well as relevant policies and programs.<sup>1</sup>

## Key Statistics

### Demographics<sup>2</sup>

|  |            |
|--|------------|
| Total Population                       | 58,005,461 |
| Population Density per km <sup>2</sup> | 63.6       |
| GDP per Capita                         | USD 1076.5 |
| GDP Growth                             | 2%         |

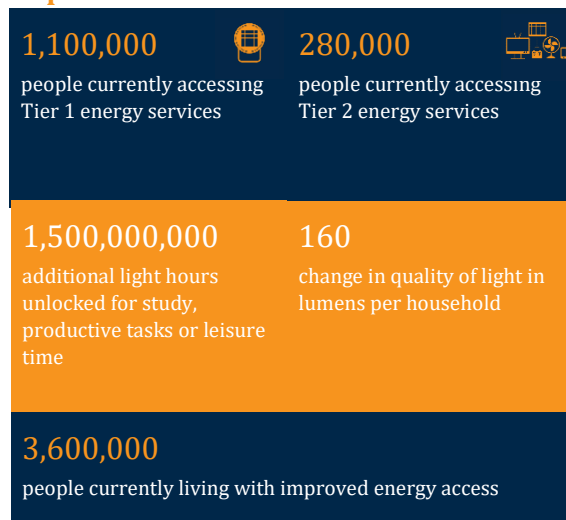
### Energy Access Deficit<sup>3</sup>

|  |                       |
|--|-----------------------|
| National Electrification Rate  | 37.7%                 |
| Urban Electrification Rate   | 73.2%                 |
| Rural Electrification Rate   | 19%                   |
| Number of people without access to electricity <sup>4</sup>  | 36,137,403            |
| % of quality-verified <sup>5</sup> (QV) vs non-QV products in the market <sup>6&amp;7</sup> (H1, 2021) | QV: 94%<br>Non-QV: 6% |

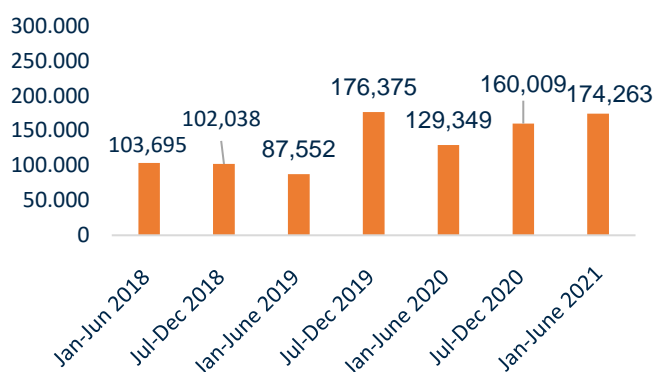
### Electrification Planning

|                         |   |
|-------------------------|---|
| Electrification Targets | 75% electrification by 2033. <sup>8</sup> |
|-------------------------|---|

## Impact<sup>9</sup>



## Sales<sup>10</sup>



Sales of Portable Lanterns, Multi-light Systems and Solar Home Systems

<sup>1</sup> The information and views expressed in this brief are GONGLA's alone and are based on our current understanding of the policy situation in this country. We welcome any updates, revisions or clarifications at [info@gogla.org](mailto:info@gogla.org).

<sup>2</sup> <https://data.worldbank.org/> (Data last updated in 2019).

<sup>3</sup> <https://data.worldbank.org/> (Data last updated in 2019).

<sup>4</sup> <https://trackingsdg7.esmap.org/>

<sup>5</sup> Quality-verified products are tested according to the IEC TS 62257-9-8. For more information please see [the Verasol quality assurance programme](#).

<sup>6</sup> Share of quality-verified (QV) and non-QV products sold by GONGLA and Lighting Global affiliates.

<sup>7</sup> Data on a specific region, country or product category is only included when it has satisfied the three-data point rule, meaning that at least three separate product manufacturers have reported data for any single data point. When we have fewer than three responses for a region, country or product category, no results are

shown to protect the proprietary interests of the companies who have supplied data in support of this industry report.

<sup>8</sup> [https://www.seforall.org/sites/default/files/TANZANIA\\_AA-Final.pdf](https://www.seforall.org/sites/default/files/TANZANIA_AA-Final.pdf)

<sup>9</sup> Impact numbers have been estimated on the basis of the [Standardized Impact Metrics for the Off-Grid Solar Energy Sector](#). The reported estimates differ from the previous edition of the country briefings due to a change in the calculation approach. Note that while the numbers shown represent the aggregate impact of key players in the off-grid solar sector, these estimates do not present the full country impact of off-grid solar lighting products sold.

<sup>10</sup> All sales data included in this briefing is derived from the "Global Off-Grid Solar Market Report Database", result of a joint primary data collection effort carried out by GONGLA in partnership with IFC Lighting Global and the Efficiency for Access Coalition. The public version of the resulting report of the effort is available [here](#).

## Current Status

Tanzania has a total population of over 58 million people, of which approximately 36 million lack access to electricity.<sup>11</sup> To address this electrification deficit, the Tanzanian government aims to achieve 75% national electrification by 2033 through both grid and off-grid connections.<sup>12</sup>

Between January and June 2021, sales volumes for off-grid solar lighting products totalled 174,000 units, which represents a 9% increase compared to the second half of 2020. Cash sales remained stable when compared to the second half of 2020 while pay-as-you-go (PAYGo) sales drove the growth with a 22% increase.<sup>13</sup>

## Policy, Regulation and Sector Planning

In 2015, the Tanzanian government launched the National Energy policy (NEP) 2015<sup>14</sup> - a policy geared towards enhancing the provision of adequate, reliable, affordable and clean modern energy services to Tanzanians.

The NEP, under its rural energy transformation strategy, recognized that major barriers towards increasing access to modern energy services in rural areas include remoteness, low population density, high distribution costs and relatively high connection charges.

In a bid to accelerate rural electrification and foster socio-economic transformation the government of Tanzania under the NEP seeks to: facilitate private sector participation including community groups and financial institutions in provision of modern energy services; facilitate local capacity building for the manufacturing, installation, maintenance and operation of rural energy systems; and strengthen institutional capacity for effective coordination, administration, implementation and monitoring of rural energy projects.

In a bid to achieve universal energy access, the government of Tanzania has formulated several plans and strategies. The Power System Master Plan 2020 (PSMP 2020) has a primary goal of increasing access to modern energy; and enhancing power supply availability, reliability and affordability in the country. The PSMP 2020 promotes increased utilization of renewable energy sources in the grid to achieve planned generation mix.

The Third Five Year National Development Plan (FYDP III 2021/22 – 2025/26) aims to improve key

productive infrastructures including roads, railways, water and air transport as well as reliable access to energy. The plan also seeks to strengthen the business and investment enabling environment through effective policies to facilitate free private sector competition.

The Tanzania Sustainable Energy for All Action Agenda (2015) seeks to ensure access to modern, preferably clean energy; improvement of energy efficiency; and increased share of renewable energy in the global mix. The Tanzanian government fully embraces the objectives including the fact that access to modern energy services is a necessary precondition for achieving development goals.

In 2021, the Tanzanian government also published the Climate Change Response Strategy 2021-26. This strategy acknowledges that the private sector has not been adequately engaged in climate change activities in Tanzania through independent activities such as in renewable energy. The Rural Energy Master Plan (REMP) is also in progress and is expected to outline targets for distributed technologies including solar home systems (SHS). Plans are also underway to draft a Rural Energy Strategy and Roadmap as well as Energy Efficiency Strategy.

Overall, as part of the global effort towards SDG 7.1 (universal electricity access), Tanzania has set a goal of 75% connectivity to electricity by 2030. The 3rd National Five-Year Development Plan 2021/22 – 2025/26 (FYDP III) sets the 2025 target to 60% of households, while the target share of the population with access to electricity at the end of the five-year period is set at 85%.

While it is clear Tanzania has made strides towards establishing policy and regulatory framework and setting targets for the sector, implementation has had shortfalls. In recent years Tanzania authorities have been focusing on grid electrification with an ambitious plan of connecting all villages to the national grid by 2021. It remains to be seen how the above outlined strategies and plans will be consistent and compatible to each other and how far the off-grid component will be enforced.

## Promoting Quality & E-Waste Management

In 2017, Tanzania adopted the pico-PV lighting global standards and established a Pico Solar Laboratory for market surveillance and product testing of solar

<sup>11</sup> <https://trackingsdg7.esmap.org/>

<sup>12</sup> [https://www.seforall.org/sites/default/files/TANZANIA\\_AA-Final.pdf](https://www.seforall.org/sites/default/files/TANZANIA_AA-Final.pdf)

<sup>13</sup> Global Off-Grid Solar Market Report H1 2021, GOGLA

<sup>14</sup> The 2015 Tanzania National Energy Policy.

lighting products.<sup>15</sup> Tanzania is currently in the process of finalizing the update of its national quality assurance framework in line with IEC standards for both pico-PV and SHS plug-and-play systems of up to 350 Wp.<sup>16</sup> Despite attaining such milestones, the market has seen influx of non-quality verified products due to limited enforcement measures for compliance with adopted standards.

Tanzania has no specific laws and regulations on e-waste. However, the Tanzanian National Information and Communication Technology Policy recognises the e-waste challenge and the need to address it through specific e-waste laws and regulations.<sup>17</sup> In 2021 Tanzania published the National Environment Policy which among others addresses e-waste management, including e-waste in the off grid solar sector.

### Taxation

Like other East African countries, specialized solar equipment such as solar PV modules and deep cycle batteries are exempted from import duty in Tanzania. However, some solar components of solar home systems and appliances such as solar pumps are subject to both VAT and import duty.<sup>18</sup> In 2021, the government of Tanzania abolished the VAT exemption on solar lights with intention to create equality for users of all kinds of energy. However, in practice, Tanzanian customs have been charging VAT on solar lights and thus removal of exemption is seen merely as a formality.

### Investments

In the past few years, the Tanzanian off-grid solar sector has faced enabling environment challenges such as the inconsistent application of tax regulations, mini-grid tariff disputes and the uncertainties caused by 2018 Microfinance Act, which have constrained investments. The private sector was, however, able to engage the government on the Microfinance Regulations which provided some clarity on the matter. However, there are still market uncertainties on the matter that have made some off-grid solar companies delay their market expansion and investment plans in Tanzania. It is imperative the industry to keep abreast of the situation and continue to work with the government for a favorable regulatory framework.

<sup>15</sup> <https://cprc-clasp.ngo/policies/tzs-19522016-grid-solar-photovoltaic-lighting-kits-requirements>

<sup>16</sup> Visit the [Tanzania Bureau of Standards](#) for more information.

<sup>17</sup> <https://www.ictc.go.tz/index.php/component/phocadownload/category/4-policies?download=48:107>

<sup>18</sup> [Strengthening the Off-Grid Solar Electrification Market through Improved Policy and Advocacy in East Africa, National Renewable Energy Associations In East Africa, 2021.](#)

### Sector Support Programs

The Green Economy Recovery Fund (GERF) is a six month US\$1.4 million Results-Based Financing (RBF) program in Tanzania, which was launched in November 2020. The program supports the growth of pico-PV and solar home system consumer markets throughout Tanzania. The program is funded by the Federal Ministry for Economic Cooperation and Development (BMZ) through Energizing Development (EnDev) and implemented by SNV Tanzania. Participating companies are eligible to receive a subsidy of up to a maximum of €400,000 in verified sales.<sup>19</sup>

The Rural Electrification Expansion Project is a US\$209 million World Bank and Strategic Climate Fund (SCF) program that seeks to increase access to electricity and scale-up the supply of renewable energy in rural areas within Tanzania while also strengthening the sector's institutional capacity. The project supports both grid and off-grid electrification. The project was launched in 2016 and is scheduled to end in 2022.<sup>20</sup> The Tanzania Rural Energy Agency (REA) established a Renewable Energy Companies Credit Line Program with US\$10 million in funding from the World Bank. The funds will be lent through TIB Development Bank to participating financial institutions to provide loans to renewable energy companies which provide renewable energy technologies delivering modern energy services in rural Tanzania.<sup>21</sup>

The USAID-funded Power Africa Off-grid Project (PAOP) provides technical assistance and targeted grant funding to support the development of Africa's off-grid SHS and mini-grid sectors in Tanzania and other African countries. Through a team of resident technical advisors, PAOP works with companies, investors, and governments to advance the role of the private sector in extending energy access while integrating gender considerations into all its work streams.<sup>22</sup>

### Industry Association

The Tanzania Renewable Energy Association (TAREA) is a non-profit organization that brings together actors in the renewable energy sector to promote the use of renewable energy in the Tanzanian mainland. TAREA is focused on primarily promoting the growth and development of the

<sup>19</sup> [https://snv.org/assets/explore/download/attachment1\\_gerf.rbf\\_op\\_guide\\_19112020.pdf](https://snv.org/assets/explore/download/attachment1_gerf.rbf_op_guide_19112020.pdf)

<sup>20</sup> <https://projects.worldbank.org/en/projects-operations/project-detail/P153781>

<sup>21</sup> <https://rea.go.tz/Resources/eLibrary/id/66>

<sup>22</sup> [https://www.usaid.gov/sites/default/files/documents/1860/Tanzania-PAOP-Fact\\_Sheet.pdf](https://www.usaid.gov/sites/default/files/documents/1860/Tanzania-PAOP-Fact_Sheet.pdf)

renewable energy industry by engaging with the public and private sector to guide advocacy, policy formulation and investment in the industry.<sup>23</sup>

## Opportunities and Barriers

The off-grid solar sector has seen uncertainties in the legal, policy and regulatory environment in Tanzania that constrained business and investment decisions. Enabling environment shocks such as the uncertainties caused by the micro-finance regulations made some off-grid solar companies delay their market expansion and investment plans in Tanzania.

In terms of barriers, rural households struggle to afford off-grid solar products and consumer financing mechanisms fall short in improving affordability. Moreover, the varied tax regime, in which VAT and import duty is being levied on some critical solar accessories and appliances is raising the cost of solar products.

While there is an availability of local and foreign currency funding in Tanzania, the problem is affordability. Financing institutions tend to perceive renewable energy financing as risky, which increases the costs for financing.

With a relatively low rural electrification rate, Tanzania is an attractive market for off-grid solutions. However, there remains a lack of a specific clear policy framework that provides an integrated electrification plan for the country and the specific roles of the stand alone and mini-grid solutions alongside the grid. As the market begins to mature, companies must refine their business models to address affordability and expand their product and service offerings to attract new market segments.

## Further Information

- [Global Off-Grid Solar Market Report H1 2021, GOGLA.](#)
- [Global Off-Grid Solar Market Report H2 2020, GOGLA.](#)
- [Stand Alone Solar Market Update: Tanzania, Africa Clean Energy Technical Assistance Facility, 2021.](#)
- [Strengthening the off-grid solar electrification market through improved policy and advocacy in East Africa, National Renewable Energy Associations in East Africa, 2021.](#)
- [The East African regional handbook on solar taxation, USEA, UNREEEA and KEREAA, 2020.](#)
- [Tanzania Fact Sheet, USAID Power Africa, 2021.](#)
- [The 2015 Tanzania National Energy Policy.](#)

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<sup>23</sup> <https://www.tarea-tz.org/>