

Mozambique's off-grid energy regulation:

Opportunities and challenges for the uptake of community energy projects



Executive Summary

This study assesses the opportunities and challenges for the uptake of off-grid energy projects in Mozambique. It was conducted in the context of recent regulatory reforms following the approval of a new regulation for access to energy in off-grid areas (Decree 93/2021) in December 2021.

Based on key informant interviews with energy operators, donors and implementing partners, the study aims to understand what impact the regulation will have on Mozambique's off-grid energy landscape, in general, and on community energy uptake.

The study finds that the regulation sets the foundation for off-grid energy uptake through increased confidence and investment in both the off-grid energy market and government institutions. However, challenges remain such as the transparency of roles and responsibilities of key government institutions and having appropriate resource mechanisms in place - e.g., financial incentives or human capital, to facilitate the regulation's implementation. From the perspective of community energy projects, the study finds that the regulation provides the basis to enable this to happen, but that it is too early to tell what the scale of uptake might be in practice. The key informants also expressed their views about the consultation process that led to the development of the regulation. Overall, they were supportive of the process, noting that there were opportunities to review the draft regulation and that a number of their comments had been incorporated into the final version.

Based on the findings, nine policy recommendations are presented. These include, amongst others, for the government to urgently publish the accessory instruments that complete the off-grid regulatory framework. Recommendations also touch upon financing arrangements, consultation processes and institutional coordination. Finally, it is recommended that further data collection and analysis is undertaken to be able to capture the impacts of the regulatory framework on Mozambique's off-grid energy sector into the future. This is important in the context of the Government's ambitious target of achieving universal energy access by 2030.

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1. Introduction

In recent years the energy landscape in Mozambique has witnessed dynamic changes, catalysed by the Government's ambitious commitment of achieving universal energy access by 2030. Since 2001 the electrification rate has increased from 5% to an estimated 44% at the end of 2022 (EDM, 2022). Despite these gains a lot remains to be done to achieve universal access, particularly for Mozambique's rural communities, which comprise about 67% of the population (INE, 2019:38). Less than 6% of rural dwellers have access to electricity compared to 57% of urban dwellers (INE, 2022). To attain the 2030 target, a combination of national grid expansion and off-grid electrification through mini-grids and solar home systems are planned (Government of Mozambique, 2018). The off-grid expansion is crucial for reaching rural communities which are widely distributed across the country, often in low densities making it financially and logistically difficult to install, supply and maintain electricity infrastructure.

To help increase Mozambique's energy access, regulatory reforms have been necessary to enable the private sector to supplement the energy provided by the state utility company (*Electricidade de Moçambique*, EDM). The first reforms in 2012 and 2013 approved regulation to enable Independent Power Producers (IPPs) of large (Decree 16/2012) and small (Decree 69/2013) projects to produce and supply energy to the utility company grid system. The second, in 2021, was to regulate energy access in off-grid areas for public and private entities through mini-grids up to 10MW and energy services (Decree 93/2021). The regulatory framework for off-grid energy access was further developed during 2021/22, by the National Regulatory Authority (ARENE), in partnership with BRILHO, a FCDO/Sida funded programme¹.

This study focuses on the off-grid regulation (Decree 93/2021), approved in December 2021, under the ambit of the Community Energy and the Sustainable Energy Transition in Ethiopia, Malawi and Mozambique (CESET) project².

The development of the off-grid regulation during the lifetime of the CESET project provides an opportunity to understand how this regulation is impacting Mozambique's off-grid energy landscape, in broad terms, and specifically on community energy³ uptake. This study focuses on expectations of key stakeholders working in the country's off-grid

¹ BRILHO Energy Mozambique, is a 5-year Programme (2019 - 2024), funded by the United Kingdom's Foreign, Commonwealth and Development Office (FCDO), and the Swedish Development Agency (Sida), and implemented by SNV. The aim is to provide nationwide coverage that will catalyse Mozambique's energy market of Improved cooking solutions, solar home systems and green mini-grids to provide clean and affordable energy solutions to the off-grid population and businesses.

² CESET is a collaborative multi-institutional research partnership funded by the Global Challenges Research Fund. CESET explores the potential of community energy systems to accelerate inclusive, just, and clean energy transitions in Ethiopia, Malawi, and Mozambique. For more information visit: https://cesetproject.com/ CESET is partnering with BRILHO for actions of regulatory development regarding gender equality and social inclusion and has contributed with key speakers for the regional conference held in Maputo in November 2022 to divulge and launch the new regulatory framework for access to off-grid energy.

³ Community energy systems (CESs) include a range of collective, cooperative or municipally managed systems of energy generation and distribution such as small hydro and solar projects and locally-managed micro-grids.

energy sector in terms of the opportunities, gaps and/or challenges they see in implementing the regulation. The rationale is to provide an evidence base for policy makers on any bottlenecks that may prevent implementation of the regulation, as well as evidence on the appetite for scaling up community energy projects. This is so that in the long term the regulatory landscape could lead to the proliferation of community energy projects, higher levels of innovation and enhanced energy access to millions of people.

The study's data comes from eight in-depth key informant qualitative interviews with energy operators, bilateral and multi-lateral donors and organisations working in Mozambique's off-grid energy sector. The interviews were conducted in August and September 2022 using a semi-structured interview guide. The guide was structured to gather data on the content of the regulation, the process that led to the development of the regulation and how implementation of the regulation could be monitored going forward. The interviews were transcribed and anonymized, and the data analysed using Nvivo software. Additional feedback and comments were sought from key stakeholders to ground-truth and validate the draft findings before they were finalised.

This study firstly analyses the main opportunities that key informants believe the off-grid regulation presents (Section 2). Secondly it examines the challenges envisaged (Section 3) to implement the off-grid regulation. Thirdly, (Section 4) it outlines expectations on how the regulation can supporting community energy uptake. Fourthly, (Section 5) it provides reflections on the consultation process that led to the development of the regulation and options for monitoring its implementation. The report concludes (Section 6) with a discussion of the findings and suggested policy recommendations to maximise the impact of the off-grid regulation.

2. Opportunities for off-grid energy expansion

All key informants emphasised the positive significance of having an off-grid regulation approved and in place. The regulation is seen as a key milestone for the development of the energy sector in Mozambique, and particularly for achieving universal energy access in rural and hard to reach communities.

Whilst there was acknowledgement that the regulation may not meet everyone's requirements, there was widespread agreement that simply having a regulation in place, even if not perfect, is preferential to having nothing at all. This is because the 'rules of the game' of the operating environment are now known and publicly available. This has increased private sector and investor confidence in the off-grid sector previously monopolized by the state-owned utility company's National Energy Fund (*Fundo Nacional de Energy*, FUNAE F.P.).

The interviewees stressed that the increased confidence in the business operating environment presents several opportunities. Firstly, there is an expectation that the offgrid market will develop by becoming more competitive, with the entrance of new companies and private investors particularly in relation to mini-grids. Up to now it has been very challenging for mini-grid operators to advance in the sector given the grey areas that existed around licensing, compensation arrangements and the national electrification expansion strategy, for example.

Secondly, linked with the expected off-grid market development, is the anticipation of accelerated financing. This is expected from both private sources and development

assistance providing much needed startup capital or investment guarantees. However as some respondents noted it is a challenging business environment at the moment. Local energy operators are having to cope with multiple shocks from Covid-19, the Russia-Ukraine conflict, cyclones and insurgents in the north of the country. As a result it is not guaranteed that local operators will have the capacity to take advantage of the financing available. For example they may not meet the eligibility requirements to access the funding or have the skills to apply for or absorb the investment.

Energy operators, donors and implementing partners also spoke about their increased confidence in the government and its commitment to facilitate a conducive operating environment for the off-grid sector. They reflected on the positive changes they have seen in recent years with the government taking forward legal and regulatory reforms. This extends beyond developing and approving the off-grid decree but also revisions to the electricity law and, most notably, institutional development through the creation of the energy regulatory authority, (*Autoridade Reguladora de Energia*, ARENE).

Several respondents spoke positively about the role and profile that the regulator has played in support of the off-grid sector. They spoke about the openness in which ARENE, along with the Ministry of Mineral Resources and Energy (Ministério de Recursos Minerais e Energia, MIREME), had engaged and held constructive discussions with stakeholders working in the sector. They were particularly encouraged by this in the context of ARENE being an emerging institution that is still learning and building its capacity and whose remit covers the full spectrum of the energy sector, of which offgrid is only a small component. Expectations are therefore high among those interviewed for this conducive relationship to continue. It has also led to hopes for other institutional reforms, specifically that it could pave the way to clarify the roles and responsibilities of EDM and FUNAE, in how they work together for offgrid sector development.

"From when I arrived here to where we are now, the [off-grid] sector has moved a long way. We have the off-grid regulation. We have the [new] electricity law. We now have many off-grid players moving things forward. It's great. It's not always easy but it's great."

Quote from donor representative

"We see a public sector in transition and we see a committed government which has managed to introduce several reforms in recent years. I consider this off-grid regulation as a major change that is going in the right direction." Quote from energy operator

One further opportunity identified is that having the off-grid regulation approved and in place should open the pathway for the government to approve financial incentives such as tax breaks, subsidies and tariff support to make the financial returns on investment more attractive for potential off-grid energy suppliers.

3. Challenges to implement the off-grid regulation

Despite the overall optimism and opportunities conveyed regarding the off-grid regulation, all of the respondents expressed a degree of uncertainty about how the regulation will be implemented. At the time of the interviews, and the writing of this report, a suite of accessory regulation (27 instruments in total) still needs to be finalised and/or approved and published by the government, covering a wide range of topics such

as concessions and technical and safety standards⁴. Against this backdrop, one of the main challenges expressed is that the regulation has not yet been tested in practice, and there are several areas of ambiguity, outlined below, which it is hoped will be clarified by the approval of the accessory regulatory instruments.

Firstly the off-grid regulation does not make any reference to the role of key public institutions involved in and responsible for the energy sector. Specifically the lack of reference to the roles and interaction between EDM, which in cooperation with MIREME is responsible for the national electrification strategy, and FUNAE, which is responsible for energy access projects in rural and off-grid areas, was seen as a challenge for many respondents. The opaque nature of the planning and decision making at the central level on the national electrification plans can interrupt investment in off-grid projects. This is because there is no clarity as to what happens when off-grid and on-grid energy projects interact or if grid expansion takes place in an area allocated to off-grid energy projects.

Another major challenge foreseen by respondents relates to financing and tax incentives. There was widespread anticipation that the decree would provide information about the fiscal arrangements for off-grid investments such as taxation, customs duties, tariffs, subsidies and compensation arrangements in the event the national grid extends into off-grid concession areas. However, the decree does not provide information on these issues.

As outlined in Section 2, it is a difficult business operating environment for off-grid energy projects and it is critical that operators and investors know the financial viability of their projects before they can commence operations. This was emphasised most strongly by mini-grid developers. This is due to the time and sunk costs of conducting feasibility studies, developing a workable business model within the existing tariff regime and the exposure of capex costs. Similarly, a respondent who operates a solar home system (SHS) business, explained that 45% of operating costs are related to customs duties and tax to import the SHS equipment. These costs have to be passed directly onto the consumer in the prices charged. Yet, the target consumers of SHSs in off-grid, rural areas are typically people with little or no regular income or ability to pay for goods and services. A reduction or exemption of import duties, for example, would make these systems much more affordable and would increase their uptake.

Another challenge foreseen, although not soley related to the off-grid decree, is whether there are sufficient government resources (financing and human capital) and alignment to implement the decree and the wider, ambitious universal energy access target. Respondents acknowledged that while the off-grid energy sector has gained momentum there remain skills and capacity gaps to implement and manage the new developments. With respect to ARENE it was viewed as being stretched to respond at the pace the off-grid sector needs, due to it being a new institution that is not yet operating at full staffing capacity. However, several other public institutions and line ministries also have related parts to play, such as MIREME, EDM, FUNAE and others, such as the National Institute for Standardization and Quality (*Instituto Nacional de Normalização e Qualidade*, INNOQ) which has responsibility for enforcing quality standards for off-grid energy equipment. It

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⁴ On 24 November 2022, MIREME and ARENE announced their approval of the full regulatory framework for access to off-grid energy, of which Decree 93/2021 is part. A summary detail of the regulatory framework is presented in the published "Brief status report on the new Regulatory Framework for access to energy in off-grid areas", prepared by SNV-BRILHO for ARENE in September 2022 (SNV, 2022). As of 16 February 2023 the detailed instruments have not yet been formally published by the appropriate government channels.

was felt too early at this stage to know whether these institutions are aware of their roles in relation to the off-grid decree and/or have the capacity to coordinate together for its implementation. Energy operators, donors and implementing organisations expressed concern, that if the government is too slow to act because of resource constraints, that opportunities could be missed or the sector could become outdated quickly due to the dynamic nature of the market.

Missed opportunities from a technology point of view were also noted by some energy operators, particularly those who focus on delivering small- and micro-scale systems such as SHSs. From their perspective they felt that the off-grid regulation was designed specifically to accelerate the development of mini-grids in the country, rather than for other types of off-grid technology. Whilst the regulation classifies systems into three mini-grid categories⁵, smaller scale systems are still subject to relatively large amounts of reporting requirements which has financial and operational implications for the operators. Noting again the fast-paced and innovative nature of off-grid technologies and off-grid energy markets it was felt that it was a missed opportunity for the regulation to better embrace a wider range of technology options, particularly those aimed at the low-end of the market.

Finally, an indirect challenge emerging during the discussions related to overseas development assistance. Whilst not specifically linked to the regulation itself, this does relate to the off-grid energy sector in general and was referenced in at least three interviews. Respondents spoke about the lack of coordination among donor organisations who are providing development assistance to support the off-grid energy sector. It was acknowledged that there was a vibrant community of donors working in the sector who are providing essential financing and technical support. However there was a degree of frustration that donor programmes are predominantly focusing on the same, narrow areas of support and are not always effective at collaborating. As a result the potential scale of impact of their support is not being realized. It was felt that if there was a more strategic, coordinated approach where donors supported a wider range of actions to target 'blockages' in the system, rather than just providing catalytic grants and results-based financing, for example, it could be much more impactful in driving the sector forward.

4. Potential for community energy uptake

Regarding the regulation's role in promoting community energy uptake, one respondent emphasised that the first and foremost guiding principle, stated in Article 2 of the decree, is that all projects that involve activities to supply access to energy in areas outside of the national grid are "in the public interest and of a social nature". In their view, having this definition at the outset of the regulation provides a clear signal that the intention of the regulation, at its core, is to provide social (and economic) benefits to rural communities.

⁵ Mini-grids are classified according to the following categories: Category 1 mini-grid with installed capacity between 1,001 MW – 10 MW; Category 2 mini-grid with installed capacity between 151kW – 1 MW; and Category 3 mini-grid with installed capacity up to 150 kW. Category 3 installations are exempt from obtaining establishment and operating licenses.

Other respondents expressed cautious optimism, that there is an underlying assumption that this regulation will facilitate energy access in rural areas through community energy projects. However, it was noted that this has not yet been tested in practice.

Others noted that community energy is not well highlighted in the regulation and it is not clear how communities can or will be involved or participate in offgrid projects. A key informant noted this in the context of the 'market-based' approach that seems to be dominating the off-grid energy sector. In their opinion this is often top-down from the supply side with limited community participation, or where there is community participation this is often focused on awareness raising rather than on community needs.

"Community
participation in [offgrid] energy projects is
not coming out very
clearly in this
regulation or their
involvement in
designing solutions and
advocating what works
for them or not."

Quote from implementing partner

The challenge of financial incentives, raised in Section 3, was also noted as critical in enabling the uptake of community energy projects. Unless import duties and taxes are addressed to reduce tariffs, community energy projects, especially those targeting the most vulnerable, will be very difficult to pursue. According to those interviewed, the sustainability and financial viability of many off-grid energy operators is on a knife edge as they try to recover from the economic shocks of the Covid-19 pandemic and rising inflation. In turn their ability to absorb any further shocks from the market is limited and they need a stable operating environment to survive. This was emphasised in relation to the micro-scale energy operators whose main clients are those most affected by energy poverty. The rising cost of living due to inflation, means that not only is the ability of people to pay for energy services even further reduced but, the energy operators (without any financial incentives) have to pass their rising costs onto the consumer since their financial returns on investment are already stretched to the limits. To adapt to these circumstances some energy operators reported they are trying to focus more on productive use systems, so that instead of just providing energy access, they can also help their customers to generate income through activities that might include irrigation, refrigeration or milling, as a potential win-win solution for both parties.

Reflecting on the wider implications, the likely consequence noted by the respondents is that energy operators will prioritise those communities where there is a higher ability to pay. Those communities that have potential economic development or anchor clients that can provide stable revenues, will be targeted first over more marginalized communities who will be left behind to benefit last.

5. Consultation and monitoring processes

Overall, there was widespread praise for the consultation process that led to the development of the off-grid regulation, both by those who participated in it, as well as those that observed the process indirectly.

Despite the constraints presented by the short consultation period, all respondents were pleased that there was an organized and open process to review the draft regulation.

There was an opportunity to provide substantive comments and, most notably, a number of comments and suggested amendments were taken on board in the final text.

The energy operators interviewed all spoke positively about the convening role played by the Mozambique Renewable Energy Association (*Associação Moçambicana de Energias Renováveis*, AMER) in collating and presenting views from the private sector to the government.

Overall the consultation process contributed to building confidence in the government in terms of its ambitions in the off-grid energy sector, as outlined in Section 2. All stakeholder groups expressed hope that similar consultations will continue into the future as they were mutually beneficial to all involved.

Turning to monitoring the implementation of the regulation, many noted that ARENE, as the energy regulator, is the key player mandated to do this. They expressed hope that ARENE will continue its positive trajectory, further building its institutional capacity to fulfil this role. Based on the respondents experiences of the consultation process, it is hoped that there will be ongoing opportunities for stakeholder engagement with the government. This is with the aim of learning and taking stock of the implementation progress so that any further adjustments needed to ensure the regulation is fit for purpose can be considered. This was deemed important given that the regulation, as yet remains untested in practice as well as the pace of change in the energy sector. Energy markets move quickly and the experience of those interviewed is that the government can be slow to keep up with developments in the sector. Therefore regular stakeholder engagement could avoid missed opportunities or the regulation becoming outdated very quickly.

Finally, some key informants spoke about how they could support ARENE in its monitoring mandate, It was suggested that there needs to be clearer guidelines for all stakeholders involved in the role(s) they either have direct responsibility for, or could willingly contribute to, in implementing the regulation; as well as how they can coordinate together. This extends not only to government institutions that ARENE's work is aligned with, but to donor organisations, energy operators, private sector associations such as AMER and the Confederation of Economic Associations (*Confederação das Associações Económicas*, CTA) and civil society groups.

6. Discussion and policy recommendations

Several highlights emerge from the perspectives of energy operators, donors and implementing organisations working in Mozambique's off-grid sector regarding the opportunities and challenges presented by the new off-grid regulation.

• Regulation is a key building block. The collective positive response from the key informants demonstrates how critical it is to have a regulation in existence to provide the parameters within which to work. Despite the perceived shortcomings, the respondents were sympathetic of the government trying to get something in place rather than spending extensive time trying to have a 'perfect' regulation. This view was no doubt supported by the fact that there were opportunities provided to stakeholders to comment on the draft regulation and influence the final content. The next crucial step will be the formal publication through the appropriate government channels of the 27 accessory instruments that complete the full regulatory framework.

This follows the announcement by MIREME in November 2022⁶ that the package of technical regulations complementing Decree 93/2021 has received the approval of MIREME and ARENE.

- **Importance of financing.** A topic frequently raised, hand-in-hand with having a regulatory framework, is the importance of appropriate financial incentives to underpin growth in the off-grid sector. Energy suppliers are operating under difficult economic circumstances and in a country context where all equipment for off-grid energy systems has to be imported because there is no local production capacity. Having appropriate tax breaks and other financial incentives are considered crucial. Notably, towards the end of the data collection period, in August 2022, Mozambique's President Nyusi announced a stimulus package for the acceleration of the economy (Pacote de Aceleração Económica, PAE) to respond to the country's growth needs. In addition to reducing the VAT rate from 17% to 16%, one of the measures announced a VAT exemption on imports of electrical items – was specifically targeted at promoting investment in renewable energy and expanding energy access in rural areas. As of February 2023, specific details related to this announcement, such as exactly what electrical items are covered by the exemption, are still to be disclosed. However it is the understanding of the authors that the fiscal authority (Autoridade Tributária de Moçambique, AT) and the Ministry of Economy and Finance (Ministro da Economia e Finanças, MEF) have received from MIREME and from a representation of national off-grid energy operators (BRILHO, AMER and others) a detailed proposal on the interpretation of PAE for the off-grid sector, and a list of materials and equipment for which custom tariffs and vat exemptions would be applicable on imports.
- Managing expectations. It was clear from all key informants that the regulatory reforms have created momentum and raised expectations in off-grid sector development. Firstly the expectation that the accessory instruments being developed as part of the regulatory framework will address the areas of ambiguity in the decree. This is particularly important for the roles of key institutions such as FUNAE and EDM and the arrangements should off-grid and on-grid projects meet. Secondly the expectation that there will be on-going opportunities for consultation and dialogue with the government to help shape the future form of the off-grid sector, so that it remains fit for purpose and adaptive to changing technology and socio-economic development. Thirdly expectations of institutional capacity, particularly those placed on ARENE in fulfilling its mandate to regulate the sector but also the capacity of nongovernment institutions. The off-grid sector is still nascent and the absorptive capacity of energy operators, whether they are private businesses, associations or community groups, requires time to develop. These expectations present potential risks that could undermine the sector. If, for example, there is a long delay in the accessory instruments being approved, or they do not provide the clarity hoped for then it would make it difficult for off-grid expansion to happen at scale. Similarly if there are changes in leadership in any of the key institutions, such as that seen in March 2022 when the Minister in charge of MIREME was changed, then this could affect the trajectory of the sector's development.
- **Coordination is key.** It was clear from the discussions that having a well-organised association, such as AMER that coordinated information sharing, discussions and

⁶ See here for additional information: https://brilhomoz.com/post/government-of-mozambique-approves-regulatory-framework-for-off-grid-access-to-energy, link accessed on 16 February 2023.

collation of feedback on the off-grid regulation, was effective in helping to shape and influence the content of the regulation, particularly from the perspectives of private sector organisations. Where coordination has been less effective, however, appears to be from donor organisations, whose support is vital to the sector, but tends to focus on a narrow range of areas and thereby limiting the potential scale of impact it could have. In addition there remain unanswered questions for many of those interviewed about how coordinated the different arms of government will be, moving forward, in terms of their roles and responsibilities under the regulatory framework.

• Boosting the focus on community energy. It appears from the findings that the off-grid regulation does not have a strong emphasis on community energy. Legally Article 3 of the regulation specifies that it applies to "collective entities of private and public realm", which does address community energy. In practice, implementing partners such as UNIDO in partnership with FUNAE have been training community associations on how to apply for off-grid community energy funds disbursed by BCI commercial bank (UNIDO, 2022). It will require time to monitor the number and type of community energy systems that may be established under the new regulation before an assessment can be made regarding the regulation's impact in this area.

Policy Recommendations

Based on the findings of this study, the following policy recommendations are presented:

- **1.** For relevant government institutions (e.g., Council of Ministers, MIREME, ARENE, FUNAE) to formally publish the 27 accessory instruments of the off-grid regulatory framework as soon as possible.
- 2. Once the accessory instruments have been finalised and published, for relevant government institutions (e.g. ARENE, MIREME and FUNAE) to disseminate their contents to the off-grid energy sector community (both public and private sector institutions), including but not limited to clarifications on the roles and responsibilities of different stakeholder institutions in implementing the regulatory framework.
- **3.** For relevant government institutions (e.g., MIREME, MEF and ARENE) to provide a detailed definition of the VAT exemption on the importation of electrical products for the uptake of renewal energy, as announced in the PAE, as soon as possible.
- **4.** For relevant government institutions (e.g., MIREME, MEF, ARENE, FUNAE) to consider options for additional financial incentives that can be provided to the off-grid energy sector, particularly those that may support small and micro-scale energy suppliers.
- **5.** For the relevant government institutions (e.g., MIREME, MEF, FUNAE, EDM) and donor organisations to continue to support, through financial and technical resources, the institutional capacity and skills development of ARENE to fully fulfil its mandate for the off-grid energy sector.
- **6.** For the relevant government institutions (e.g., MIREME, ARENE, FUNAE) to hold regular dialogue and consultation meetings with stakeholders working in the off-grid energy sector to monitor and learn lessons from the implementation of the off-grid regulation.
- **7.** For the private sector, through associations such as AMER, and civil society/community groups to continue creating convening spaces to discuss opportunities and barriers

- related to off-grid energy access, as a platform for engaging with and influencing government policy on the off-grid sector.
- **8.** For the donor community and the energy sector working group⁷ to develop actions on how they can better coordinate their work to maximise the scale of impact of the combined development assistance for the off-grid sector.
- **9.** For the academic and research community to undertake further data collection and analysis on the impact of the off-grid regulation on Mozambique's off-grid energy landscape, including a focus on the uptake of community energy projects.

⁷ The energy sector working group is a forum of donor representatives working in the energy sector in Mozambique.

References

EDM (2022) The status of renewable energies and the role of EDM in the energy transition. Presentation delivered by EDM representative (Directora Olga Madeira Utchavo) on 28 November 2022 at CESET Workshop held in Maputo, Mozambique.

Government of Mozambique (2012) *Boletim da Republica. Decreto n.º 16/2012, 4 Julho.* Regulamento da Lei sobre Parcerias Público-Privadas, Projectos de Grande Dimensão e Concessões Empresariais.

Government of Mozambique (2013) *Boletim da Republica. Decreto n.º 69/2013, 20 Dezembro. Regulamento de Parcerias Público-Privadas e Concessões Empresariais, de Pequena Dimensão.*

Government of Mozambique (2018) Estratégia Nacional De Electrificação 2018 – 2030.

Government of Mozambique (2021) *Boletim da Republica. Decreto n.º 93/2021, 10 Dezembro. Regulamento de Acesso à Energia nas Zonas Fora da Rede.*

Government of Mozambique (2022) *Pacote de Medidas de Aceleração Económica*. Ministry of Economy and Finance, 9 August 2022. Available here:

https://www.mef.gov.mz/index.php/publicacoes/estrategias/1642-pacote-de-medidas-de-aceleracao-economica/file, accessed on 15 December 2022.

INE (2019) Resultados Definitivos. Censo de 2017. IV Recenceamento Geral da População e Habitação, Instituto Nacional de Estatística, Cerimónia Central, Maputo, 29 April 2019.

INE (2022) IV General Census of Population and Housing 2017: Socio-Demographic Indicators, Mozambique.

SNV (2022), Brief status report on the new Regulatory Framework for access to energy in offgrid areas. Prepared by SNV-BRILHO for ARENE in September 2022.

UNIDO (2022) Towards Sustainable Energy for All Mozambique: Project Overview, Results and Lessons Learned. Presentation delivered by UNIDO representative on 24 November 2022 at the BRILHO Conference 'Off-grid energy regulatory framework: a regional perspective' held in Maputo, Mozambique.

Written by:

Lorraine Howe and Carlos Shenga, Centre for Research on Governance and Development (CPGD), Mozambique, www.cpqd.org.mz.

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Calanga photovoltaic power plant, Maputo Province, Mozambique, by Lorraine Howe.

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