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WORKSHOP

Seeking Optimism in the Off-Grid Renewable Energy Sector – What Key Stakeholders Say

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The off-grid renewable energy sector plays a key role for environmentally sustainable energy poverty alleviation – a pressing challenge for many developing countries. The International Energy Agency has recognized the sector's role in bridging the current energy access gap, especially in rural areas where grid expansion is not currently possible or financially feasible. The off-grid renewable sector has grown considerably over the last decade and now reaches financially constrained households with innovative payment mechanisms.

The Covid-19 pandemic has imposed new challenges for the sector and intensified existing ones. At the same time, it has also provided opportunities by highlighting the importance of electrification during crises and demonstrating the resilience of the sector.

As part of our two-day Research and Policy Workshop COVID 19: RISKS AND OPPORTUNITIES FOR THE ENERGY TRANSITION organized jointly by the Investigating the Systemic Impacts of the Global Energy Transition Research Group at IASS Potsdam, HEDERA Sustainable Solutions and the Impact-Driven & Action-Based Research Project (IMPACT-R), we invited stakeholders from the off-grid renewable energy sector to discuss these impacts in more detail and propose policy solutions. In this 2,5-hour event, 15 decision-makers, policy researchers, industry representatives and academics active in different countries of sub-Saharan Africa shared their diverse experiences and opinions. During this workshop, we mapped the main challenges and opportunities faced by the sector,

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focusing especially on energy finance. Participants discussed the interrelations between them and identified appropriate policy responses.

While the policy recommendations from the workshop will be expanded upon in a separate publication, two broad conclusions were evident from the discussions that took place.

(Unless otherwise indicated, the statements reported below are based on participants' observations)

1 The challenges caused by the Covid-19 pandemic need to be viewed together with the sector's pre-existing challenges, and addressed holistically

Discussions on pandemic responses often focus primarily or exclusively on the challenges caused by the pandemic without incorporating pre-existing challenges. This constitutes an important omission for a sector described by workshop participants as a “high-risk business” with “difficulties to survive” even before the pandemic.

a. Participants broadly reported that the pandemic increased the perception of risk, the cost of capital, and the difficulty of the investment climate. They also highlighted that some forms of financing (in particular, equity financing) decreased significantly. While these negative effects pose severe restrictions on the long-term growth of the sector, **insufficient financing** and low private sector investment were reported as major challenges even prior to the pandemic. This observation is backed up by GOGLA's investment database – which shows that although investments in the sector grew considerably over the first half of the previous decade, they have plateaued since 2016.

Participants pointed out that decentralized renewable energy projects are often small-scale which further limits returns on investment. The lack of innovative finance mechanisms, effective policy frameworks, de-risking instruments, grant funding for Small Medium Enterprises, and subsidy provisions were also listed as negative impacting factors on the investment climate. The limited market intelligence and lack of transparency in the sector, which often leave companies unprepared and unaware of existing financing opportunities, were also discussed as significant issues.

b. Participants also noted that the restriction of movement and disruption of supply chains and communications during the pandemic led to production shortages, labor shortages, a lack of availability of spare parts, and an overall reduction in installations. Moreover, lockdown constraints led to reduced technical support and decreasing service quality. At the same time, it was observed that the pandemic reduced household income and tightened household spending, which led to an overall drop in sales, a decreasing customer base, and customer payment disruptions and defaults. As a result, many companies experienced liquidity problems – in extreme cases impeding their ability to finance inventories, payroll, and loan servicing.

Workshop participants noted that **consumer affordability** and **system quality issues** have been long-standing issues for the sector. Reduced household income in target demographics, the lack of affordable credit and high prices (especially high upfront costs) barred many potential customers from adopting an off-grid system.

The participants highlighted that previous solutions to address affordability create challenges of their own for the off-grid sector. For instance, while the Pay-As-You-Go model made off-grid solar systems an affordable possibility for a large number of low-income households – it also transferred risk from credit institutions to off-grid companies themselves and made revenue schedules less predictable.

Even for consumers able to afford products, participants noted a sense of mistrust which reduced their willingness to purchase and pay for off-grid products. This mistrust was caused by poor system quality – reportedly due to the lack of quality standards, limited technical capacity, and the absence of local markets for repairs.

c. Finally, another limitation reported was the insufficiency of government responses and sector support during the pandemic – partly due to the government prioritizing healthcare and more immediate pandemic concerns. On the other hand, participants emphasized the pre-existing **policy and regulatory constraints** that harmed the sector. It was reported that high and fluctuating tariff prices, unclear grid extension plans, complicated licensing procedures and lack of clarity concerning tax exemptions led to uncertainty and instability in the sector and contributed to customer mistrust. In addition, off-grid companies did not have sufficient access to government subsidies and de-risking mechanisms.

2 Opportunities exist – but must be capitalized on

Despite this bleak presentation of post- and pre-pandemic challenges, the discussions also highlighted a number of opportunities made possible by the pandemic. Participants reported that the crisis accentuated the importance of energy access during the pandemic for sustaining the economy, maintaining a functioning health sector, and enabling important societal functions like education. Accordingly, a number of governments declared the off-grid renewable energy sector an essential service, and several grants were funded to support the electrification of health facilities. In addition, it was reported that the pandemic inspired emergency and finance relief for the off-grid sector in some countries. In fact, GOGLA's investment database shows a strong increase (350%) in overall grant investments for 2020. However, some participants raised concerns about the long-term sustainability of interventions (such as immediate financial relief and financing for electrification and health projects).

Finally, participants noted that the short-term difficulties the sector experienced also forced the sector to adapt. The crisis reportedly helped speed up the process of digitalization and encouraged off-grid companies to develop new revenue streams (for example, by developing business-to-business sales).



Overall, a number of participants remarked that the sector has survived remarkably well for a supposedly high-risk market, considering the circumstances. This might underscore the sector's resilience and help correct overinflated perceptions of risk.

The way forward: The opportunities highlighted here are encouraging. At the same time, the array of pre- and post-pandemic challenges reported during the discussions, concerns about the long-term sustainability of interventions, and the available evidence of a financing gap to address universal energy access and a decline of off-grid energy access during the pandemic underscore that a systematic effort from the policy community is needed to take advantage of these opportunities and transform the sector.

In light of COP26, it is important to emphasize the importance of the sector to achieve sustainable development and to make support for it a priority for policymakers. Policy responses should utilize a long-term perspective and address the problems the sector is facing holistically.