

CALL TO ACTION

UNLOCKING CARBON FINANCE FOR ENERGY ACCESS THROUGH DECENTRALISED RENEWABLE ENERGY: A DATA-DRIVEN APPROACH TO ISSUING HIGH INTEGRITY CARBON CREDITS

685 million people are still living without modern electricity.¹ Energy poor households are commonly rural, low-income and amongst those most vulnerable to climate change. The distributed renewable energy (DRE) industry has developed to provide electricity to these ‘hardest to reach’ populations. DRE technologies, including standalone solar light, power, irrigation, and cooling systems, minigrids, micro-hydro and micro-wind, provide the most viable route to power 50% of people who are currently unelectrified.² In doing so, they can rapidly displace the use of traditional alternatives, including polluting kerosene lamps and diesel/petrol generators.

Yet, despite this, the majority of those without electricity today are living under the poverty line.³ One way to enable DRE companies to reach more customers is to increase the level of finance from the voluntary carbon market (VCM), helping to catalyse greater commercial investment into the industry. To date, the DRE sector is only receiving a seventh of the annual financing it needs to help end energy poverty.

CONTEXT AND CHALLENGES

While there is a distinct opportunity to gain carbon credits from emissions reductions created by the DRE industry, the sector has only been marginally assisted by carbon markets to date. The key challenge is that the requirements of existing carbon standards are not cost effective or relevant for many DRE companies to engage with. With limited funding and capacity, DRE companies are serving thousands, if not millions, of individual homes, farms and businesses often spanning multiple countries and regions. It requires significant time and resources to certify and perform the monitoring of a carbon project under the VCM, making it extremely expensive for projects that operate across wide regions. The DRE sector also lacks industry-wide consensus and benchmarks for science-based, conservative baselines and approaches to assessing the CO₂e reduction impacts of DRE technologies, which mean these need to be recreated for each project developed.

However, there is a compelling opportunity to use some of the standardised infrastructure and data-led technologies that are now commonplace across the DRE industry to streamline engagement with the VCM. We believe that exploring this opportunity is particularly timely following the launch of the Africa Carbon Market Initiative (ACMI) which has a mandate to harness carbon markets to enhance Africa’s development, and the announcement of several national programmes and interventions to drive electricity access which hope to engage with carbon finance.⁴ For those whose lives are limited daily by a lack of access to clean, modern electricity, there is no time to wait.

¹ IEA, IRENA, UNSD, World Bank, WHO. 2024. Tracking SDG 7: The Energy Progress Report. World Bank, Washington DC.

² Ibid

³ SEforALL 2021. Energizing Finance: Understanding the Landscape 2021

⁴ IEA, IRENA, UNSD, World Bank, WHO. 2024. Tracking SDG 7: The Energy Progress Report. World Bank, Washington DC

CALL TO ACTION: We call on the actors within the carbon market ecosystem to work with us to rapidly explore how processes can be enhanced to better enable the DRE industry to engage with the VCM. In doing so, we profile three areas for action:

ACTION AREA 1 – DEVELOPMENT AND IMPLEMENTATION OF EFFICIENCIES IN THE CARBON REGISTRATION AND CERTIFICATION PROCESS

Challenge: In the current carbon market, registering and certifying a project to a standard on the VCM takes between two to three years, and costs the project developer in excess of USD 200,000 in various fees and consultancy services. At the same time, the quickly evolving regulatory landscape introduces a strong uncertainty regarding the price of the carbon credits, on top of the simple legality of marketing them. This represents a major hurdle for our organisations operating with low margins to reach communities living below the poverty line. It is reflected in the market by the only rare participation of the industry in existing VCM registries.

Opportunity: To streamline the processes for registering and certifying carbon projects, they could be adjusted to better align with DRE project cycles and the industry's existing certifications and quality standards. This would help DRE companies to access carbon markets more rapidly and with lower transaction costs, whilst guaranteeing the issuance of high-integrity credits. Harmonisation within the certification process would also help to provide a clear approach to confirming the additionality of DRE projects, and for demonstrating that they meet high standards on social and environmental practices. For example, demonstration of safeguarding within the certification process could be shown via the company's adoption of the GOGLA Consumer Protection Code and the sale of products that meet IEC/Verasol Quality Standards, while a common approach for showcasing additionality could be developed.

ACTION AREA 2 – EXPLORATION OF A SCALABLE MODEL FOR THE QUANTIFICATION OF EMISSION REDUCTIONS AND THE ISSUANCE OF HIGH-INTEGRITY CREDITS

Challenge: In the current carbon market, project development and implementation usually requires the application of existing carbon methodologies (e.g. UN-CDM methodologies) to a Project Design Document (PDD), which becomes the basis of the project. In this regard, the PDD tends to set restrictive boundaries for the geographical scope of the project. Usually, PDDs are limited to a single, or a few specific geographies, for which an extensive baseline study is conducted. This approach severely restricts the ability of the DRE sector to develop carbon projects, as many of the companies in our industry operate in various countries, with DRE assets deployed in each one.

Opportunity: We fundamentally believe that ensuring high-integrity carbon credits is critical for the success of the VCM. To support this integrity, we call for the exploration of common, science-based and independently derived industry baseline approaches. Whilst avoiding oversimplification, such an effort could help to increase consistency across the industry and forestall any concerns about a) the quantification of emissions reduced by our activities and b) the strong sustainable development co-benefits- of our sector. Standardised approaches to science-based baselines would also help to ensure the additionality of carbon financing and the permanence of emission reductions.

ACTION AREA 3 – UNLOCKING DATA-DRIVEN PROCEDURES FOR THE MONITORING, REPORTING AND VERIFICATION OF CARBON PROJECTS

Challenge: In the current carbon market, Monitoring, Reporting and Verification (MRV) within the DRE industry is largely an analogue process that requires a direct interaction with the customers who use DRE technologies (e.g., via phone calls or field visits). DRE customers often live in remote and unconnected areas, which can pose significant challenges for implementation of MRV processes. Having to put in place yearly intricate on-the-ground verification procedures can also be extremely expensive and, in many cases, means that it is not financially viable for DRE companies to engage with the VCM.

Opportunity: The DRE industry already benefits from powerful digital data monitoring systems that can remove the need for some physical forms of verification. Whether through pay-as-you go models (PAYGo), or equipment monitoring through smart meters or inverter cloud solutions, many companies in the DRE sector collect an enormous volume of data on users and customers, including payments and/or the technical performance of the systems. Leveraging this available data will have significant impacts: it will save time, reduce costs, and enhance the integrity of the MRV process by replacing lengthy manual verifications. A data-driven approach can complement the integrity of a carbon registry, improve the transparency on the credited mitigation activities, and bolster the robustness of independent third-party validation and verification of the credits.

KEY RECOMMENDATION

UPDATE STANDARDS TO ENHANCE SDG7 COMPATIBILITY

Despite its potential for supporting the poorest and most climate vulnerable communities to access clean, renewable electricity, the current VCM infrastructure is inadvertently excluding many companies within the DRE industry from the carbon market. We are therefore calling for relevant standards to be adapted or developed to increase their compatibility with the SDG7 goal of universal electrification to help increase the flow of carbon finance to DRE companies that are reducing emissions and improving access to electricity. This would entail streamlining certification processes, exploring harmonised, science-based baselines, and enabling MRV processes to benefit from the extensive digital infrastructure available in the DRE sector.

To achieve this goal, we call on organisations working within the carbon markets ecosystem, and those mandated with the promotion of the SDG7 agenda, to engage with us and support activities to:

- i. Streamline the process for the registration and certification process of DRE carbon projects,
- ii. Support the scalability of projects by exploring standardisation in baseline assumptions used to quantify emission reductions and on project emission factors,
- iii. Develop digital carbon protocols that are open and public digital blueprints for applying D-MRV, and
- iv. Allow the issuance of credits onto an independent carbon registry, where there are certified and automated data flows.⁵

⁵ With the possibility to enforce security interests.

Commitment by the DRE Industry

To support such efforts, the signatories of this paper will contribute their knowledge and time to support activities that aim to enhance or develop carbon standards to help accelerate access to electricity.

In addition, we propose to align on robust and responsible approaches to engaging with carbon markets, including the acceptance of a quantitative consensus on the legitimate and science-based emissions reductions potential of DRE electricity sources.

Signatories also commit to adhering to relevant best practices and principles on DRE quality and consumer protection.

Signatories further commit to the principle that any standard appropriate for energy access must ultimately be aligned with international best practice, such as the Core Carbon Principles (CCP) accreditation label defined by the Integrity Council on the Voluntary Carbon Market (ICVCM).

Signatories to this Call to Action



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