**To,**

**CDM - Executive Board**
**UNFCCC**
**Bonn, Germany**

***Subject: Inputs on additionality demonstration for grid connected electricity generation activities and revision of approved "ACM0002: Grid connected electricity generation from renewable sources"***

We appreciate opportunity to comment on additionality demonstration for grid connected electricity generation activities and possible revision of methodology ACM 0002. Renewable energy projects in developing countries, particularly India, are critical for achieving energy transition goals and the generation of carbon credits plays a pivotal role by providing additional revenue streams. The ability to generate and sell carbon credits offers a significant financial incentive for the development and implementation of such projects. This submission aims to highlight the current challenges faced by renewable energy projects and offer recommendations to make these project financially viable through securing additional revenue stream through carbon financing.

**Challenges of Renewable Energy Projects**

**Policy Framework Issues:** Recent shifts towards reverse bidding auctions[1] and the imposition of taxes and duties have reduced the threshold return and profitability of renewable energy investments. There is continuous decrease in good wind resources and high yielding project sites. Delays in payments for electricity sold to distribution companies increase financial difficulties faced by these projects.

**Good wind resource site availability:** Carbon financing presents a compelling solution amidst the dwindling availability of high wind resource sites in India. With many of the prime wind energy locations already utilized, the industry faces the challenge of tapping into sites with lower wind resources. This situation inherently places additional pressure on project returns due to decreased energy output.

**Wind Anomaly/ Declining wind speed trend in India:** Wind power generation in India has been experiencing a decline in recent years, especially in spring and summer. In 2020, wind energy generation was 24% lower from June to September than in 2019, with a 29% decline in the western region and a 17% decline in the southern region. A snapshot of Independent third-party evaluation report has been provided in annexure.

**Rising Wind Turbine Costs:** Since January 2021, there has been continuous increase in costs of crucial raw materials of wind energy projects. For instance, the cost of steel has escalated by 180% compared to pre-pandemic levels, with global iron and copper prices also witnessing approximately a 50% rise in 2021.

**Import Restrictions:** As of April 1, 2024, the Government of India has reinstated the Approved List of Models and Manufacturers (ALMM) mandate. Despite the decline in the price of solar modules, India has not directly experienced the associated cost reduction due to import restrictions. Instead, any cost savings are absorbed by the end consumer, driven by intense competition under eRA (e-Reverse Auctions). This results in tariff reductions without a corresponding increase in returns.

[1] https://www.cnbctv18.com/business/india-reverts-to-old-method-of-reverse-auctions-to-auction-wind-power-capacity-to-energy-companies-19218181.htm

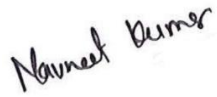
**Recommendations**
To address these challenges and ensure the sustainable growth of renewable energy projects in developing countries, the following recommendations are proposed:

**Revision of additionality requirements of ACM 0002:** Clean Development Mechanism (CDM) Executive Board is requested to revise the "ACM0002: Grid-connected electricity generation from renewable sources" to include specific criteria that recognize the additionality of such projects struggling to obtain financing due to current economic and policy barriers.

**Registration and Retroactive Crediting:** It is also recommended to allow registration of such renewable energy projects under Article 6 of the Paris Agreement. Renewable energy projects should be eligible to receive carbon credits at least up to two years before registration subject to installation and commissioning. Retroactive carbon crediting period would help stabilize the renewable energy projects by providing financial support to projects currently underway or completed within the last two years.

We look forward to engaging for further stakeholders discussions regarding above recommendations.

Sincerely,



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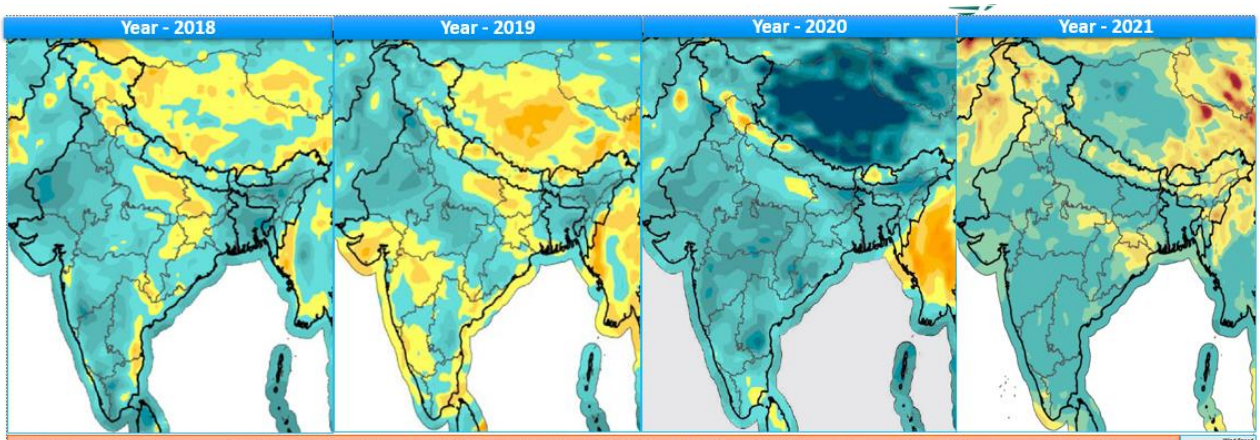
# Annexure: Wind Anomaly/ Declining wind speed trend in India




This index represents the average wind anomaly (expressed as a percent deviation in mean speed from the 1988-2014 baseline (till 2020 and 1995-2019 for 2021) the corresponding calendar period)
Source:- https://aws-dewi.ul.com/knowledge-center/wind -trends-bulletins/

| Year | Jan | Feb | Mar | Q1 | Apr | May | Jun | Q2 | Jul | Aug | Sep | Q3 | Oct | Nov | Dec | Q4 | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2018 | -15.5 | -1.0 | -2.6 | -7.0 | -7.4 | -17.9 | 1.8 | -7.5 | 4.1 | 8.9 | -3.5 | 3.7 | -15.5 | -6.8 | -7.9 | -10.4 | -8.0 |
| 2019 | -4.1 | 5.7 | 0.3 | 0.3 | -1.5 | -9.0 | -5.4 | -5.5 | 1.5 | 2.5 | 2.2 | 1.8 | -12.5 | -3.0 | 4.6 | -3.6 | -1.7 |
| 2020 | -5.5 | 6.6 | -3.4 | -1.1 | -7.9 | -14.0 | -13.8 | -12.0 | -20.3 | -2.0 | -14.3 | -12.3 | 1.0 | 2.4 | 1.5 | 1.6 | -6.9 |
| 2021 | -0.9 | -3.9 | 0.7 | -1.6 | -7.7 | -6.9 | -8.2 | -7.8 | -2.6 | -7.0 | -3.3 | -2.8 | -4.4 | 4.6 | -4.4 | -1.6 | -3.8 |