



Renewable Electricity Quality and Portfolio Definition

Status: April 2021

Purpose of this Document: This document outlines quality criteria and sets the framework for Bayer's renewable electricity portfolio, maximizing the numerous co-benefits associated with renewables while minimizing the negative impacts.

Objective: Reduce Bayer's emission attributed to purchased electricity (part of scope 2) to 0 till 2029 by switching 100% of Bayer's purchased electricity to renewable electricity. The fundamental principles for our renewable electricity purchase are proximity, additionality and traceability. We have defined certain KPIs to track our progress and transparently disclose our activities as well as the electricity portfolio.

Set the Scene: The industrial and commercial sectors consume two-thirds of all electricity produced worldwide. Businesses are an essential part in enabling the structural shift to a sustainable future. Bayer aims to become carbon neutral in its own operations by 2030. Therefore, we have joined the Science Based Target initiative to limit global warming to 1.5°C (scope 1 and 2). This is in line with the Sustainable Development Goals and the Paris Climate Agreement. To achieve this, Bayer will reduce its emissions by 42 percent by 2029. The remaining in-house emissions are to be offset. As a signatory to the Business Ambition for 1.5°C initiative, we want to attain net zero emissions in our entire value chain by 2050. As part of our commitments, we aim to switch 100% of our current purchased electricity to renewable electricity. Therefore, all sites in all countries will switch to renewable electricity. This will decrease our CO₂-footprint from purchased electricity to 0.

2019: Bayer purchased approximately **3 Mio megawatt hours electricity** (MWh) emitting **1Mt CO₂** emissions (33% of Bayer total CO₂ equivalent emissions).

Renewable Electricity: As a manufacturer and a leading life science company, Bayer consumes electricity in all sites. Switching to renewables is a smart business decision, providing greater control over energy costs, while helping companies to deliver on emission reduction goals. Next to energy reductions, renewable electricity is very important to fulfill our sustainability commitments and drive the change. The underlying objective of Bayer renewable strategy is to support energy producing companies to scale up renewable electricity capacity. The fundamental principles for our renewable electricity purchase are **proximity, additionality and traceability**, wherever possible, as outlined below. We want to know exactly from which source (e.g., company, location, plant), what technology (e.g., input factors, efficiency) and with which potential impacts we consume electricity. Furthermore, Bayer seeks to receive additional external commitment and/or certification for our renewable electricity quality definition, portfolio and different initiatives. The switch to purchase 100% renewable electricity comes with various challenges regarding the absence of a harmonized global system, various country specific requirements, various stakeholder expectations as well as different technologies to produce electricity. Bayer has outlined various criteria for our renewable electricity portfolio, based on ecological and social aspects. Bayer aims to fulfil the highest criteria as outlined below, balancing and accounting for an impact-cost-effort assessment. Adherence to these criteria are non-negotiable. The set of criteria and its status is measured by different KPIs.



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Criteria 1 – Proximity / Location of Generation / Certification (aim for regional generation / grid-connected): Bayer aims for physical proximity to generate impact and support developments where business activities take place. Therefore, we have designed hierarchical sequence/attributes going from most preferable to least preferable, outlined as followed.

- a) Behind the meter
- b) Regional, grid connected, same state
- c) Regional, grid connected, neighbor state
- d) Regional, grid connected, same country
- e) Regional, grid connected, neighbor country
- f) Regional, same country
- g) Neighbor country/ international certificate, I-REC

In case physical proximity is limited, individual **Power Purchase Agreements (PPA)** have to be signed wherever possible. These are agreements between the energy producer and Bayer as off-taker are set for a period-of-time, thus providing long-term security to the project investors. PPAs have direct impact, and when signed for new projects, they increase the renewable capacity on the grid. As such the PPA will contain the Energy Attribute Certificates (EACs) with specific attributes of the renewable electricity.

Criteria 2 - Additionality: With the switch to renewable electricity we aim to increase the renewable capacity. Bayer aims to support new, expand, or develop renewable generation sources, as opposed to buying into what is already available. We prefer this direct sourcing strategy that enables a new renewable electricity asset, or part of it, through a contractual commitment from the sourcing entity, being able to state additionality emphasizes a company's commitment to advancing carbon reductions beyond business as usual. Additionality also implements the extension of the lifetime of older renewable electricity assets as well as the repowering to increase efficiency and generation increase.

Criteria 3 – Electricity Source: The electricity source is of key importance. Currently, Bayer primarily uses wind and photovoltaic electricity, but we do not exclude any other renewable electricity sources. Nevertheless, hydro is limited to 20% of our total electricity purchase.

Criteria 4 – Traceability / Certification: To ensure the electricity source and adhere to our traceability requirements, Bayer requires a certification of renewable electricity as part of the PPA. As a standard, we require EACs plant sharp. The most common types of EACs are GO, REC and I-REC. In exceptional cases if no other option is available, international accepted supplier product certifications are enough. In case of doubts, Bayer will review and potentially audit the certification scheme.

Criteria 5 – Volume-Equal Supply: Purchasing, transparency, validation, retiring, reporting and auditing of PPAs and EACs for renewable energy should be calendar year specific. EACs should be generated in the same calendar year as the energy has been used, retirement will be finalized based on country specific regulation and legislation (mostly end of April of the following calendar year). This rule should be independent from the solution (PPA with EAC, PPA with supplier certification or EAC only).



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Monitoring and Performance Indicators: To monitor and track Bayer's activities, progress and compliance to criteria different PIs have been defined as outlined below:

Leading target: % of renewable electricity purchased: target 100% by 2029 (Overall)

- % of renewable electricity with grid connection: target 50% (Criteria 1 – Proximity)
- % of renewable electricity coming from investments younger than 15 years upon conclusion of the contract: target 50% (Criteria 2 – Additionality)
- % of renewable electricity coming from investments younger than six years upon conclusion of the contract: target 33% (Criteria 2 – Additionality)
- % of renewable electricity coming from wind and photovoltaic: target 70% (Criteria 3 – Electricity Source)
- % of renewable electricity coming from hydro: target below 20% (Criteria 3 – Electricity Source)

Performance indicators are tracked and reviewed over time and should be met by 2029 at the latest.

Barriers and Exceptions: Bayer will be transparent about challenging markets where our organization faces barriers. This is an ongoing process. To overcome potential barriers, we will engage into a wider stakeholder dialogue. In markets with limited renewable electricity sourcing options, Bayer engages with utilities and policymakers to encourage greater access to renewable electricity supply options as well as support future development of renewable capacity. In case it is not possible to comply with the outlined criteria, location-based certificates should be purchased. Nevertheless, the aim, is to decrease these exceptions step by step.

Timeframe to Switch: The objective is to switch 100% to renewable purchased electricity till 2029.

Reporting of Emissions of Purchasing Electricity: Transparency is key for renewable electricity purchasing. Therefore, Bayer commits to transparently report commitments, activities and progress regarding the switch to renewable electricity, the energy consumption as well as resulting emissions.

Compliance to Bayer Standards and Policies: Next to the outlined requirements for purchasing renewable electricity, energy suppliers must adhere to all Bayer policies and commitments, e.g., Bayer Supplier Code of Conduct.