

Key Purchasing Considerations for Renewable Energy anywhere in the world using RECs

Canonical: <https://northmoregordon.com/articles/key-purchasing-considerations-for-renewable-energy-anywhere-in-the-world-using-recs/>

Details:

Home > Articles > Key Purchasing Considerations for Renewable Energy anywhere in the world using RECs

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Published: March 22, 2024.

RECs represent the environmental attributes of renewable energy generation and provide companies with a means to support clean energy initiatives as part of their transition towards a sustainable and greener future. Companies purchase RECs to make renewable-electricity claims, support market-based Scope 2 accounting, or demonstrate alignment with voluntary commitments like RE100. RECs are tradeable instruments that allow organizations to purchase renewable attributes separately from physical electricity, enabling flexible procurement strategies without requiring changes to existing electricity supply contracts.

Publication context: This article reflects its publication date. Market prices, program rules, reporting duties and deadlines may have changed. Confirm current official guidance before making a decision.

As the world transitions towards a sustainable and greener future, companies are increasingly turning to renewable energy sources to power their operations. One of the simplest avenues for achieving this commitment is through Renewable Energy Certificates (RECs). These certificates represent the environmental attributes of renewable energy generation and provide companies with a means to support clean energy initiatives.

To achieve best practices, align the investment with sustainability goals and remove the risk of any claims of greenwashing, companies need to consider a number of criteria when purchasing.

These criteria include the technology generating the energy, the period (vintage) when it was generated, quantity required, location of generation, alignment with global programs or best practices, and risks associated with the registry (the authority issuing the certificates) or issuing country. The latest advance in RECs now includes timestamping the generation period to match load profiles.

RECs globally go by several different names:

International RECs (IRECs)

New Zealand (NZECs - Energy Certificates)

Australia (LGCs - Large Generations Certificates, and in future Guarantee of Origin - GO)

Tradable Instrument for Global Renewables (TIGR) a Registry for RECs

RECs Criteria:

Technology The technology employed in renewable energy projects significantly impacts the overall environmental benefits. Whether it's solar, wind, hydro, or other clean energy sources, understanding the technology behind the generation process helps companies assess the long-term sustainability and effectiveness of the RECs they are purchasing. For example, Under RE100 Hydrogen is not recognized because hydrogen is not an energy resource. Rather, it is an energy carrier that is manufactured and has an underlying energy resource as an input. Hydrogen is therefore only renewable if the energy resource used in its manufacture is renewable. Hence it is critical to be aware of the technical criteria of the framework your business is committed to or adhering to GHG Protocol Corporate Standard is considered an excellent benchmark.

Vintage The vintage of RECs is a crucial factor, indicating the year in which the associated renewable energy was generated. Companies should consider aligning the vintage of RECs with their reporting year to ensure accurate representation of their commitment to renewable energy in specific timeframes. For instance, recent years have seen significant improvements in the efficiency of solar panels and wind turbines, leading to increased energy output. As technology advances, procuring recent vintages helps businesses make sure their procurement adheres to the latest regulatory changes and demonstrates commitment. For example, the March 2024 source described a RE100 requirement favouring electricity from plants built or recommissioned in the previous 15 years, with a 15% exemption. This is historical guidance; check RE100's current criteria for the relevant reporting period.

Quantity Assessing the quantity of RECs needed involves understanding a company's energy consumption and sustainability goals. Careful calculations of your scopes will help determine the number of RECs required to offset a specific percentage of the company's energy usage or achieve a certain level of renewable energy consumption. Tailoring to energy consumption patterns helps businesses match the right type of RECs. For example, a manufacturing facility with intensive production processes may have distinct energy needs compared to a technology company with extensive data centre operations running 24/7. In this case, the data centre may benefit from procuring new time-stamped RECs or '24/7 RECs' as defined by RE100 Guidelines to match their constant usage.

Location The geographical location of renewable energy projects is significant in determining the impact of RECs. Supporting projects in regions with abundant renewable resources not only enhances the environmental impact but may also contribute to local economic development. Companies should consider aligning their RECs with regions that complement their sustainability objectives. Market boundaries are often defined by the framework you are adhering to or as a rule of thumb it is an advisable practice to procure RECs within the country where the emissions took place.

RE100 Alignment For companies committed to 100% renewable energy consumption (RE100), ensuring that purchased RECs align with this goal is paramount. RE100-aligned RECs contribute directly to a company's renewable energy targets, demonstrating a clear commitment to transitioning away from conventional energy sources. Here RE100 Members have another option to procure green power directly from the supplier supported by retirement of EACs corresponding to it.

Registry Preference Selecting RECs from reputable registries adds credibility to a company's commitment to renewable energy. Registries like the Green-e Energy Certification or the International REC Standard ensure that the purchased RECs meet stringent environmental and social standards, providing transparency and accountability in the renewable energy market. Some examples of registries are Evident(I-RECs) , TIGR , Certified energy New Zealand , Clean energy regulator , M-RETS etc.

Sovereign Risk Companies operating internationally should consider the sovereign risk associated with the countries where their chosen renewable energy projects are located. Assessing political stability, regulatory frameworks, and potential risks related to changes in government policies can mitigate potential challenges and uncertainties in the long-term viability of RECs. For example, Under recent changes in RE100 guidelines 8 countries have been excluded from the single-market boundary of

Europe supporting the Guarantee of Origins RECs.

Major Operational Changes in the Past Year Companies should investigate whether there have been any significant operational changes in the renewable energy projects associated with the RECs over the past year. Changes in ownership, technology upgrades, or expansions can impact the overall effectiveness and reliability of the certificates. For example, Unbundled EACs cannot be used to decarbonize electricity from a non-renewable project. (e.g., a CHP system) under RE100 Framework when the project is owned by the company (therefore, the emissions from it are in scope 1), or when the project is on-site or when there is a direct line to the project (therefore, the electricity is not sourced from the grid).

As companies strive to integrate sustainability into their operations, the careful selection of Renewable Energy Certificates becomes imperative. This strategic approach not only enhances a company's environmental credentials but also supports the global transition to a cleaner and more sustainable energy future. Although PPAs (Power Purchase Agreements) and VPPAs are feasible alternatives, most organizations prefer EACs due to their inherent flexibility and accessibility when navigating the intricate world of renewable energy procurement.

Scheme and certificate context

Before using a certificate or grant figure, confirm the current scheme method, eligible activity, effective date, evidence requirements, price date and registration or application process.

Related guidance

Certificate services

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What are Renewable Energy Certificates (RECs) and why do companies purchase them?

RECs represent the environmental attributes of renewable energy generation and provide companies with a means to support clean energy initiatives as part of their transition towards a sustainable and greener future. Companies purchase RECs to make renewable-electricity claims, support market-based Scope 2 accounting, or demonstrate alignment with voluntary commitments like RE100. RECs are tradeable instruments that allow organizations to purchase renewable attributes separately from physical electricity, enabling flexible procurement strategies without requiring changes to existing electricity supply contracts.

What key criteria should companies consider when purchasing RECs, according to Northmore Gordon?

Companies should evaluate the technology generating the energy, vintage (generation period), quantity required, generation location, alignment with frameworks like RE100, registry selection, and sovereign risk of the issuing country. Additionally, assess any major operational changes at the associated project in the past year. We recommend documenting the organization, consumption period, electricity volumes, site locations, and reporting framework before selecting instruments. Avoid selecting instruments solely on price before acceptance criteria are clear, and ensure the chosen pathway supports your intended claim.

What different names do RECs go by around the world, and how do they differ?

RECs globally include International RECs (I-RECs), New Zealand Energy Certificates (NZECs), Australia's Large Generation Certificates (LGCs) and Renewable Electricity Guarantee of Origin

(REGOs), and the Tradable Instrument for Global Renewables (TIGR). Each operates under different schemes with distinct eligibility, creation, and use rules. For example, Australia's Renewable Energy Target ends in 2030, while REGOs continue beyond that date. A renewable certificate belongs to its own programme with specific registry, scheme, issuance record, and retirement requirements that must be verified before purchasing.

Why does the technology used to generate renewable energy matter when purchasing RECs?

Technology type—solar, wind, hydro, or other sources—significantly impacts environmental benefits and aligns with specific framework requirements. Under RE100, hydrogen is not recognized as renewable because it is an energy carrier rather than a resource, making technical criteria essential to your procurement decision. Technology eligibility also determines which schemes a project participates in; for example, solar PV systems and battery systems are eligible for Small-scale Technology Certificates in Australia, while other technologies have different pathways. Understanding technology ensures your REC purchase supports your stated environmental claim.

What is the significance of REC 'vintage' in purchasing decisions?

Vintage indicates the year renewable energy was generated and should align with your reporting year for accurate representation. Under RE100 guidelines effective January 1, 2024, members require renewable electricity or Guarantees of Origin from plants constructed or recommissioned within the last 15 years, with a 15% exemption allowable. Consistent handling of generation, consumption, and the period represented by an instrument is critical for credible renewable-electricity claims. Document your reporting period and ensure certificate vintage supports your applicable accounting framework and any public statements about your renewable energy use.

How should companies determine the quantity of RECs to purchase?

Assess quantity by understanding your energy consumption, sustainability goals, and scope boundaries to calculate how many RECs are needed to offset a specific percentage of usage. Document your site consumption, market, and reporting-period boundaries as part of your procurement evidence checklist. Consider operational patterns; for example, data centres with 24/7 operations may benefit from time-stamped or '24/7 RECs' as defined by RE100, unlike facilities with variable loads. Separate forecast assumptions from verified operating data, and avoid relying on unconfirmed proceeds in your investment case.

Why does the generation location of RECs matter for purchasing decisions?

The geographical location affects environmental impact and supports local economic development in resource-abundant regions. Market boundaries are often defined by your applicable reporting framework; it is generally advisable to procure RECs within the country where emissions occurred to align with Scope 2 accounting principles. Recent RE100 guideline changes excluded eight countries from Europe's single-market boundary for Guarantee of Origin RECs, illustrating how sovereign risk and policy changes affect location eligibility. Document the generation location as part of your instrument type, ownership, and retirement evidence requirements.

What is sovereign risk in REC purchasing, and how should companies assess it?

Sovereign risk refers to political stability, regulatory frameworks, and policy changes in countries hosting renewable projects. Companies operating internationally should evaluate this risk to protect long-term REC portfolios. Recent RE100 guideline changes excluding eight European countries from the GO single-market boundary demonstrate how policy shifts affect instrument eligibility and value. We recommend documenting prior funding or certificate arrangements and assessing the integrity and validity of purchased attributes through environmental-attribute due diligence before procurement and retirement, which includes evaluating registry stability and country-level policy environments.

What role do reputable registries play in REC credibility and governance?

Selecting RECs from reputable registries such as Green-e Energy Certification or the International REC Standard ensures purchased instruments meet stringent environmental and social standards, providing transparency and accountability. Examples of recognized registries include Evident (I-RECs), TIGR, Certified Energy New Zealand, the Clean Energy Regulator, and M-RETS. Your procurement evidence checklist should identify the registry, transfer, and retirement or cancellation evidence for each certificate. Registry credibility directly affects whether your renewable-electricity claim will be recognized under applicable frameworks and whether certificate proceeds can be reliably forecasted.

Are PPAs and VPPAs alternatives to RECs, and which approach should organizations prioritize?

Power Purchase Agreements (PPAs) and Virtual PPAs (VPPAs) are feasible alternatives to RECs, but most organizations prefer Energy Attribute Certificates (RECs) due to their flexibility and accessibility in navigating renewable energy procurement. RECs allow certificate procurement without replacing existing electricity supply contracts, enabling multi-site coverage and procurement flexibility. Our moREnewable100 service demonstrates how organizations can procure renewable certificates while retaining current electricity arrangements, providing technology and due-diligence support. Before selecting your approach, confirm the commercial and accounting arrangements for your actual portfolio and the applicable framework requirements.