

RENEWABLE ELECTRICITY

SCOPE 2 LOCATION-BASED AND MARKET-BASED ACCOUNTING

Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling that a company consumes in its direct operations. In line with the [GHG Protocol Scope 2 Guidance](#), companies are required to do dual reporting of Scope 2 emissions based on two different methodologies for Scope 2 accounting: location-based and market-based.

When a company sources renewable electricity that meets the criteria outlined in the “Criteria for making renewable electricity claims” of this document, it can lower the Scope 2 market-based GHG emissions and make progress towards the company’s Science-Based Targets.

The definition of each Scope 2 accounting method is as follows:

- **Location-based method:** A method to quantify scope 2 GHG emissions based on average energy generation emission factors for defined locations, including local or national boundaries. Location-based reporting uses [average grid emissions](#) and is dependent on government policy and other organizations taking the initiative to decarbonize electricity supply, and as such is largely outside of a company’s direct control.
- **Market-based method:** A method to quantify scope 2 GHG emissions based on GHG emissions emitted by the generators from which the reporter purchases electricity from [qualifying contractual instruments](#) (e.g., Power Purchased Agreements, Green Tariffs, Energy Attribute Certificates such as RECs, GOs, iRECs, etc.). Market-based reporting allows companies to capture the benefit of contracting for and consuming renewable electricity. For the electricity that the company does not have any such contracts, the company should use the emission factor of the residual grid mix.

For SBTs, companies need to choose a consistent scope 2 accounting method to set a baseline and demonstrate performance against their climate goal. Most companies choose the market-based scope 2 method (i.e., for both their baseline year and performance tracking), as that allows for the accounting of renewable electricity that a company purchases.

CRITERIA FOR MAKING RENEWABLE ELECTRICITY CLAIMS

RE100 TECHNICAL CRITERIA

PepsiCo refers to RE100’s [technical criteria](#) as guidance for the procurement of renewable electricity and making claims on its use. These technical criteria are mostly an interpretation of [the GHG Protocol Corporate Standard market-based scope 2](#) accounting guidance. We expect our value chain to follow the same guidance and contact the PepsiCo team (spa-sustainabilityaction@pepsico.com) if you have any questions or concerns with following this industry guidance.

RECOGNIZED PROCUREMENT TYPES FOR RENEWABLE ELECTRICITY

All companies, including PepsiCo and our value chain, need to have Energy Attribute Certificates (EACs) to make any claim regarding renewable electricity use. EACs (e.g., Renewable Energy Certificates or RECs in North America, Guarantees of Origin or GOs in Europe, and international Renewable Energy Certificates or iRECs in international markets) are standardized, tradable instruments issued to a unit of electricity generation that are used to aggregate and track energy attributes. These market-based instruments give a corporate buyer who is making a claim of using renewable electricity the property rights to the renewable electricity attributes (also referred to as “environmental attributes”).

There are types of contractual arrangements that convey the EACs to corporate buyers:

Contractual Instrument	Definition
Self-generation	Self-generation from facilities owned by the company (e.g., solar panels).
Power Purchase Agreements (PPAs)	Direct procurement (contracts with generators), i.e., physical power purchase agreement (physical/direct PPA, either on-site, direct-line or offsite) or financial power purchase agreement (financial/virtual PPA).
Bundled Certificates	Retail supply contract with your electricity supplier where the environmental attributes are considered “bundled” with the renewable electricity electrons because you are buying the environmental attributes from your same local electricity supplier. These are often referred to as “green tariffs” with your local electricity supplier.
Capacity expansion premium with electricity suppliers	Project-specific supply contract with electricity supplier to build additional renewable electricity capacity.
Unbundled Certificates	Unbundled procurement of energy attribute certificates (EACs), i.e., the renewable electricity electrons and the environmental attributes are decoupled – you buy the unbundled environmental attributes from a third party that is not your local electricity supplier.
Passive procurement	Default delivered renewable electricity from the grid, supported by EACs or from the grid in a market with at least a 95% renewable generation mix and where there is no mechanism for specifically allocating renewable electricity.

Note that EACs need to be cancelled or retired on behalf of the energy buyer (e.g., your company’s name) in order to claim the renewable electricity, use and the associated emissions reduction under the market-based method for scope 2 accounting. Cancelling or retiring means that the EACs were used by one company for their scope 2 market-based accounting and cannot be used for another company’s scope 2 market-based accounting (avoiding double-counting).

For your renewable electricity use to be recognized by PepsiCo, you need to have the EACs to support your renewable electricity claim and the EACs need to be retired correctly. We understand that the average grid renewable electricity still counts towards your scope 2 location-based accounting, but for our renewable electricity ask we are interested in your action beyond average grid decarbonization.

Renewable electricity sourcing is a journey. Suppliers can start with “Unbundled Certificates” as this option is often less expensive and may be the only option available in a location, but over time we encourage our value chain to move to instruments with more impact, such as self-generation, PPAs, and capacity expansion premium with electricity suppliers as those instruments more clearly add new renewable electricity generation capacity.

QUALITY REQUIREMENTS FOR RENEWABLE ELECTRICITY

The following additional requirements for procurement have been set by the [RE100](#) organization to ensure the credibility of the claims and to improve the impact of the procurement of renewable electricity:

- **Renewable energy resources:** electricity generated from wind, solar, geothermal, sustainably sourced biomass (e.g., biomethane from dairy manure) and sustainable hydropower are considered renewable. Note that nuclear is considered non-renewable – however, we recognize that nuclear is a low-carbon technology type. Therefore, if your company uses nuclear as part of your decarbonization strategy, please communicate it in the relevant survey (either supplier survey or third-party manufacturing survey) and we will have further discussion with you;
- **Geographic market limitation:** individual countries are distinct markets for renewable electricity except for the single market between the US and Canada, and in the European Union (AIB member countries). E.g., if your factories are located in the US, you can buy EACs from anywhere in the US or Canada. For additional guidance on geographic market limitation (also referred to as “market boundary”), please review the [CDP Technical Note: Accounting of Scope 2 emissions](#).
- **Limit on vintage (i.e. year of generation) of the EAC:** 21-month vintage eligibility window i.e., 6 months prior and 3 months following. This means you can source EACs that are within this 21-month window of your actual electricity use (e.g., if you want to buy EACs for your electricity use of calendar year 2026, you can buy EACs that have a time stamp of between July 1st, 2025 and March 31st, 2027).
- **Limit on commissioning date (i.e., date of first commercial operation) of the energy generation facility:** a 15-year commissioning date limit has been established by RE100 starting in 2024. This means if you have a project such as hydropower that has been in operation for more than 15 years, then the EACs from such a project are not accepted starting in 2024.

PEPSICO RESOURCES FOR VALUE CHAIN

pep+ REnew

We understand that many in our value chain are new to procuring renewable electricity. That is why, through a first-of-its-kind food and beverage industry partnership, PepsiCo has created pep+ REnew with Schneider Electric, an independent advisor on renewable energy purchasing. The program is designed to do two things: (1) Educate PepsiCo’s value chain about your renewable electricity choices and (2) Speed up the transition to renewable electricity through aggregate power purchase agreements (PPAs) and other options.

Register [here](#) PepsiCo to access recordings of previous educational sessions as well as upcoming live sessions that will help you understand the renewable electricity criteria above and receive further guidance on how to transition to renewable electricity.

For any additional questions, please do not hesitate to contact the PepsiCo team (spa-sustainabilityaction@pepsico.com)