



PORSCHE

Requirements for the Use of Renewable Energies

Porsche-wide Specification Sheet
for the usage of Renewable Energies for services
and goods, which are not directly part of the
finished product

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1.0 Introduction

This specification describes the requirements of the Porsche AG including all its subsidiaries (mentioned in the following as “PAG”) regarding the use of green power (definition chapter 4.1) by suppliers for services and goods, which are not directly part of the finished product (non-production-material).

2.0 Scope

All non-production-material sourcing inquiries of the PAG. These specifications apply to the supply of services and goods from the first tier.

3.0 Initial Situation and Objectives

The following chapter describes the intention and objectives of the PAG in awarding contracts on tier-1 level for selected services and/or goods with CO₂-intensive processes and the associated need to obtain power from renewable energy sources. This will be a prerequisite for the nomination of a supplier. Suppliers of the PAG are requested to present a corresponding concept as part of the offer prior to nomination.

3.1 Background

As part of the strategic orientation of the PAG, there is a requirement to reduce the CO₂ emissions of products over the entire life cycle. To ensure the sustainable electrification of the PAG product portfolio in particular, CO₂ emissions must be actively optimized along the supply chain. Especially in fully and partially electrified vehicles the CO₂ impact shifts away from the use phase to the manufacturing phase with a focus on the supply chain.

3.2 Objectives

The aim of these requirements is the use of green power in the production site of the goods and/or location of performance/fulfillment of the service.

For example:

- Office buildings
- Production plants
- Consumables for production facilities (standard items), materials in the construction process (green steel, etc.)
- All further application must be provided to purchasing by the supplier and are subject to individual evaluations

It should be emphasized that the electrical energy used is 100% CO₂-free and is completely based on renewable energies. At the same time, the CO₂-free electricity used

should not have any environmental impact from radioactive waste (radionuclides), i.e. it should not come from nuclear generation.

In order to be able to verify that the amount of green energy delivered is sufficient regarding the used energy for the dedicated scope supplied to the PAG, it's necessary to present the required consumption for materials, production parts, and resources separately, where applicable. This applies to (i) power consumption and (ii) all other energy sources. Consumption is expressed in MJ per t or kWh per t of material or unit of a component based on series production processes. If necessary, consumption in series production can be calculated based on pre-series production.

3.3 Impacts

This means for the supplier:

- a) Verification obligations (see more details below 4.2ff)
 - i. If green power is purchased from third parties: Before the start of the project, the supplier is obliged to provide information regarding the energy supplier and quantities proactively.
 - ii. In the case of own generation of green power (self-produced and self-consumed energy quantities) suitable evidence or explanations must be provided.
 - iii. Any concept changes before and while delivery / performance must be communicated by the supplier in advance and have to be approved by the lead buying brand before implementation.
- b) Costs
 - i. Similar to classical energy sources, the energy costs are covered by the price of the goods and/or performance and fulfillment of the service.

4.0 Green Power

Green power from renewable energy sources shall be used to produce the goods and/or performance of the service.

4.1 Definition & Quality

Green power from "renewable energies" is 100% CO₂ free and includes power exclusively from renewable energy production:

- a) Hydropower
- b) Wind energy
- c) Solar power

Energy from biomass, including biogas, biomethane, landfill gas and sewage gas, and from the biodegradable fraction of household and industrial waste. The use of green energy for service fulfillment and goods production is a crucial simple way to significantly reduce the carbon footprint.

The most important and most widespread options for obtaining electricity from renewable sources are:

1. Electricity purchase through a green power supply contract with an energy supply company
2. Long-term direct electricity purchase from a renewable energy project by means of an acceptance contract (PPA, Power Purchase Agreement)
3. Own generation and own consumption from own generation plants for renewable energy on the company premises (on-site generation)

Possibilities for verifying the green power supply for these variants are described in the following paragraph.

4.2 Accepted Standards/Proofs

For the detection and quantification of the use of green energy to reduce the carbon footprint of the product, different options are available depending on the purchase option. The type of supply and the means of proof depend on the type of energy market in the country of production.

In addition to self-generation, proof of the type and origin of green energy usually play a central role. This proof is often provided by so-called EAC, Energy Attribute Certificates. These are mostly tradable and transferable electronic certificates that are measured in MWh (megawatt hour) energy unit.

Depending on the energy market, country and global region, the following systems can be found:

- GoO, Guarantees of Origin: in the European Union's European Energy Certificate System (EECS)
- RECS: Renewable Energy Certificate System: Detection systems widely used in USA, Japan, Canada
- I-RECS: International Renewable Energy Certificate System, an internationally applicable system hosted in the Netherlands (www.irecstandard.org)

There are also country-specific proprietary systems.

Basically, they offer a way of documenting the origin and type of renewable energy in a balance system and clearly assigning it, thereby avoiding double counting in CO₂ reportings.

1. Purchase of green energy from a green power supply contract

An industrial customer signs a power supply contract for green energy with an energy supplier (energy supply company, utility). This supplies the customer with the required electrical energy. In partially or fully liberalized markets, energy suppliers often use a special green power product for which they purchase Green Energy Certificates (EAC) and cancel them in favor of the product. This ensures that the green energy that is supplied

to the customer is correctly taken from the country's energy mix. In liberalized markets, the energy supplier also identifies the product in its own electricity labeling (fuel mix disclosure).

As a rule, the energy suppliers have their green power products certified by independent third parties or government agencies and have the appropriate product certificates.

Validation: Green Power Product / GoO Cancellation reports

The supplier provides proof of its green energy supply by specifying the green power supply contract and a corresponding certificate of attestation from its energy supplier. In some markets it is possible for the customer (here supplier) to maintain his own register accounts via GoO and to validate GoO for himself. In these cases, proof of green power supply is also possible via the cancellation reports.

2. Green energy procurement from PPA/VPPA

There is an increasing possibility to purchase green energy directly from plant parks through long-term commitments. Such purchase contracts, which are usually multi-year contracts, are called Power Purchase Agreements (PPA). In these cases, the customer often receives GoO or corresponding cancellation reports directly from the contractual partner.

Validation: GoO Cancellation Reports or equivalent evidence

Note: So-called virtual PPAs (VPPA) can be used in certain energy markets, especially if the generation and consumers are located in different network areas. This leads either to indirect electricity supply or only to the purchase of AEC. Evidence is also provided here about the cancellation of these certificates. A VPPA may only be used under such condition that a standard PPA is not supported by the market.

3. Own generation and own consumption

Companies are increasingly generating a small amount of green energy by installing renewable energy systems on the company premises. These are mostly solar and small wind turbines.

However, the claiming of the green property of this electrical energy generated in this way means that:

- it receives no subsidies
- is not fed into the upstream power grid
- it does not receive feed-in tariffs

Conversely, this means that claiming the green property is usually only possible if the electricity generated is completely consumed by the company itself (own consumption).

Validation: Declaration of self-consumption and proof of generation

4. Special note for non-liberalized markets/energy markets in transition

There are countries that do not yet have deregulated markets or are in the middle of the process of restructuring the energy market (e.g. China). None or not all of the above-mentioned instruments for accounting and marketing of renewable energy are available or fully implemented in these countries. Here, individual case assessments must be carried out between Porsche and the supplier.

<i>Validation: Individual case assessment</i>

5.0 Contractual Obligation

The requirements for the contractual performance resulting from the specification sheet “Requirements for the Use of Renewable Energies” shall be understood as contractual specifications. Failure to comply with the specification sheet shall mean a deficiency of the contractual performance.

In the event of non-compliance with the requirements regulated within the specification sheet, Porsche shall be entitled to all agreed and statutory warranty claims and, if applicable, claims for damages.

The supplier must provide evidence of compliance with the requirements described in the sustainability specification sheet with suitable documents, which shall be submitted to Porsche without prior request, but at the latest immediately upon Porsche's request.

These particularly include, but are not limited to, sustainability certificates, process flow charts with mass balance information, externally critically reviewed LCA report, PCF (Product Carbon Footprint), EPD (Environmental Product Declaration), etc.

The CO₂ information corresponding to the delivered services which is to be provided by the supplier enters the carbon footprint calculation of Porsche AG. If the supplier fails to comply with the contractually agreed obligations in accordance with the sustainability specification sheet “Requirements for the Use of Renewable Energies”, this may result in Porsche AG being unable to meet its statutory and/or (binding) voluntary obligations. Any costs arising for Porsche as a result of non-compliance or any additional expenses resulting therefrom shall be borne by the supplier.

In particular, these may be compensation payments that Porsche is required to settle, if certain parameters in the carbon footprint calculations are not met. Should the contractually agreed documentation cannot be provided by the supplier, it is assumed that the contractually agreed actions have not been implemented. The parties agree that the supplier shall bear the costs arising from the non-implementation of agreed actions to compensate for CO₂ emissions.

In order to compensate for non-conforming decarbonization actions not carried out by the supplier, Porsche shall be entitled to take actions at its own discretion at the supplier's expense.

6.0 Contact

For queries please contact:

PAG: BZB – Sustainability
sustainability-procurement@porsche.de

7.0 Confirmation

This is to confirm that we (supplier) accept the specifications described in the Specification Sheet “Requirement for the Use of Renewable Energies” and commit to fully implement described actions before “B-Freigabe” and thereafter.

(signature field)

(Date, stamp, signature supplier)

8.0 Glossary

AIB – Association of Issuing Bodies

All GoOs are issued in the EU countries by so-called issuing bodies. These units generate a GoO for each MWh of renewable energy produced and are operating the registry databases. Issuing bodies are usually national authorities or authorized companies by government. The issuing body in Germany is Umweltbundesamt, an authority that is subordinate to the Federal Environment Ministry.

EAC – Energy Attribute Certificate

An Energy Attribute Certificate (EAC) is the official documentation to prove renewable energy generation. Each EAC represents proof that 1 MWh of renewable energy has been produced and added to the grid. Global EAC standards for renewable claims are primarily Guarantees of Origin in Europe, RECs in North America and International RECs (I-RECs) in a growing number of countries in Asia, Africa, the Middle East and Latin America. EAC is compliant with the Greenhouse Gas Protocol and is a recognised tool for companies to report reduced greenhouse gas emissions and improve sustainability rating.

EECS – European Energy Certificate System

The EECS (European Energy Certificate System) is a standardization system for the European Guarantees of Origin (GO, GoO). Nations that are members of the AIB and adhere to the EECS system are easily able to trade GOs cross-border with no risk of double counting, claiming or attributing.

Electrical Grid, Power Grid

An electrical grid, electric grid or power grid, is an interconnected network for delivering electricity from producers to consumers. In electrical power business, a TSO (Transmission Grid Operator) is an operator that transmits electrical power from generation plants over the electrical grid to regional or local electricity distribution operators. Transmission grids usually are at high voltage level 110-330 kV.

Fuel Mix Disclosure

According to the European Union's Internal Market in Electricity Directive from July 1, 2004, electric power consumers must be informed about the sources from which the electricity they have purchased was generated. Additionally, consumers must be informed about the amount of carbon dioxide emitted into the Earth's atmosphere and/or the quantity of nuclear waste produced as a result of the generation of the electricity that they have purchased (environmental impact).

The exact presentation of the data provided, be that in tables or charts, and the number of types of electricity generation listed are at the discretion of the EU Member States. Fuel mix disclosure aims to allow customers to differentiate between electricity supply companies and switch supplier as part of the wider program of EU electricity liberalization.

Green Power Product

In many markets, energy supply companies have dedicated special electricity products such as green power products for certain customer groups (household customers, industrial and commercial customers). These products often have protected brand names and are certified by independent auditors. For green power products, guarantees of origins for these products are also canceled. If there are fuel mix disclosures by energy companies in the markets, these special electricity products are also listed and accounted for separately in these disclosures.

An example of a green power product is "Volkswagen Naturstrom[®]", which is used by VW Kraftwerk GmbH to supply corporate customers in Germany/ Europe.

GoO – Guarantees of Origin

A Guarantee of Origin (GO or **GoO**) is a tracking instrument defined in article 15 of the European Directive 2009/28/EC. A GO labels electricity from renewable sources to provide information to electricity customers on the source of their energy. Guarantees of origin are the only precisely defined instruments evidencing the origin of electricity generated from renewable energy sources.

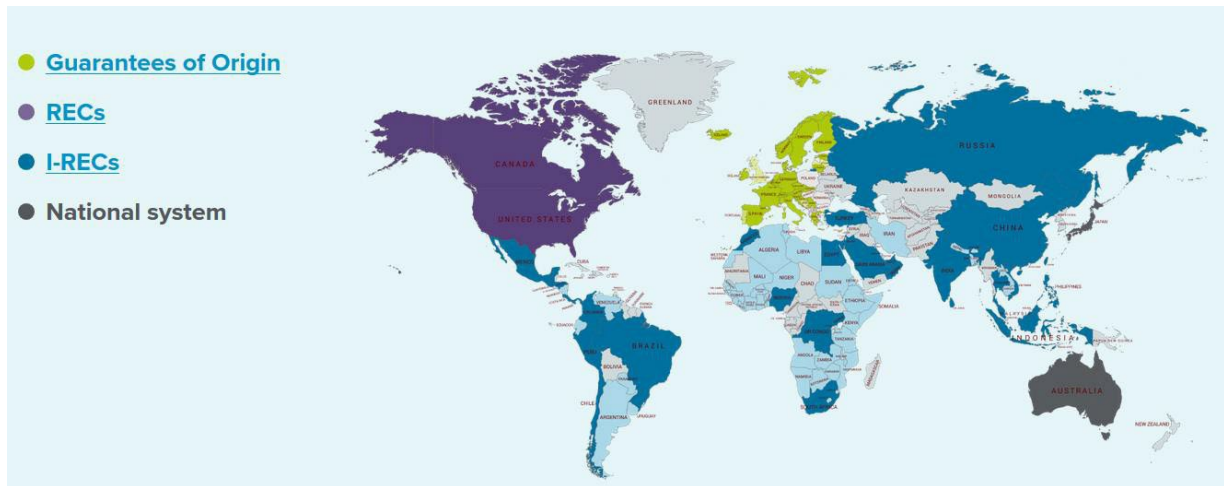
I-RECS – International Renewable Energy Certificate System

I-REC is a global standard being introduced in a growing number of countries in Asia, Africa, the Middle East and Latin America where no similar scheme exists.

I-REC builds on best practice from the North American REC market and Europe's Guarantees of Origin system, and has strong stakeholder support. I-REC is recognized by the Greenhouse Gas Protocol Scope 2 Guidance as a tool to document electricity consumption from renewable energy sources.

Similar to a REC certificate and a Guarantee of Origin, each I-REC represents proof that 1 MWh of renewable energy has been produced and includes the environmental benefits this renewable energy has generated. The I-REC registry, electronically issues I-RECs based on renewable energy generators' output.

Database and registry are operated in Netherlands at www.irecstandard.org.



Energy Attribute Systems global by ECOHZ, <https://www.ecohz.com/renewable-energy-solutions/international-recs-i-recs/>

RECS – Renewable Energy Certificate System

An instrument for documenting and proving generation of renewable energy similar to the European GoO. Commonly used in the United States of America, Japan and Canada.

PPA – Power Purchase Agreement

A Power Purchase Agreement (PPA) is a long-term contract under which a business agrees to purchase electricity directly from a renewable energy generator. A corporate PPA is where the electricity buyer is a business or company, rather than a utility or the public sector.

In a direct PPA, a contract is established between a company and a power producing facility to purchase the electricity generated by that facility. Companies with a large energy footprint in a single state or narrow geographic region are typically the best candidates for this type of PPA because the clean power is directly delivered to the account of the facility purchasing that energy. Direct PPAs can be structured in a variety of ways and may require additional parties, such as retail providers or local utilities.

VPPA - Virtual Power Purchase Agreement

In a virtual PPA, the buying organization does not take delivery of the renewable electricity being generated. Instead, the company contracts with the generating facility for the power, which then re-sells that electricity to the market for the current market price. As a result, these projects can be located anywhere in the United States, or anywhere in Europe, while the buyer still receives the financial and environmental benefits. VPPAs are swaps, may involve significant risk of loss, and may not be suitable for everyone. Companies should carefully consider whether such trading is suitable for them in light of their financial condition.

9.0 Version list of changes

Version No.	Date of changes	Reason/subject
1.0	01.06.2021	-
2.0	09.09.2022	Contracutal Obligations
3.0	13.04.2023	Update contact data
3.0	13.04.2023	NPM adjustment