DRÄXLMAIER

DRÄXLMAIER Group

Requirements for the use of electricity from renewable resources

Group-wide specification sheet

Status:	Initial version
Version:	1.0
Valid from:	15.05.2024

Content

1. Introduction

Climate and environmental protection are among today's greatest challenges for all of us. As an international company, the DRÄXLMAIER Group is affected to varying degrees by climate change and its impact. We can only successfully shape the future of our company and the society in which we live if we manage to master these challenges. The DRÄXLMAIER Group is certain that sustainable corporate development, which combines economic growth with environmental goals, is the only responsible way to approach the future. This is why we have anchored climate and environmental protection as a central pillar at our company.

The DRÄXLMAIER Group wants to set a good example when it comes to securing a more sustainable present and future. We are systemically working on reducing or minimizing the environmental impact of our business activities and products. In order to make this reality, we focus on sourcing electricity from renewable resources, taking into account not only our own production sites but also the supply chain of the products we purchase.

This specification sheet describes the requirements of the DRÄXLMAIER Group regarding electricity from renewable resources.

2. Basic requirements

2.1 Double counting

In order to avoid double counting of renewable electricity attributes, there must be an auditable chain of custody guaranteeing that the link between generation and final consumption is actually established and that there is a permanent retirement / cancellation mechanism within the system. In countries where there is no chain of custody, claims on renewable electricity shall be made by transferring attributes through contracts or other means that ensure claims are unique and there is no double counting.

2.2 Market boundaries

The generation and consumption of green electricity as well as the retirement / cancellation of the purchased renewable energy certificates shall take place within the same market boundaries.

A market for renewable electricity refers to an area in which:

- The laws and regulatory framework governing the electricity sector are consistent between the areas of production and consumption.
- There is a physical interconnection between the point of generation and the point of consumption of renewable electricity. When interconnection happens across different grids, there must be a level of system-wide coordination between such grids.
- Utilities / suppliers recognize each other's energy attributes, account for them in their trade of energy and energy attributes and have a system in place to prevent double counting of claims.

If it is not possible in a country to procure renewable electricity or renewable energy certificates)within the market boundary of consumption the renewable energy (certificates) shall be procured and cancelled in neighboring countries.

2.3 Attributes of renewable energy certificates

Tracking systems typically issue certificates in megawatt-hours (MWh) and should include the following basic information about the original source of the renewable electricity:

- Type of technology[1]
- Name and location of the installation
- Year of installation
- Period of production
- Issuance date

2.4 Share of renewable electricity in standard mixes

In most cases, the electricity distributed via the grid contains renewable and non-renewable electricity (also called “grey electricity”). The share of renewable electricity in the standard mix shall not be taken into account if renewable energy certificates are purchased, and there should be a 100% “greening” of the entire electricity consumption. For example, if a country’s grid contains 30% renewable electricity and 70% grey electricity, the total consumption must still be covered by renewable electricity certificates. Otherwise, a regulatory double counting for the 30% renewable electricity takes place.

3. Renewable Energy Technologies

3.1 Eligible Technologies

The following types of energy resources are eligible to be considered as renewable electricity:

- Wind
- Solar
- Hydropower
- Geothermal
- Biomass

  Solid, liquid and gaseous forms of biomass that meet or exceed the criteria below as applicable:

  a) Wood waste, including but not limited to residues such as tops and limbs and urban wood waste is eligible if the following requirements are met:
     - The fuel does not contain paints, plastics, Formica, halogens, chlorine, or halide compounds like chromated copper arsenate-treated materials, arsenic, or contaminating treatments. Qualified wood fuels may contain marginal quantities of wood containing the above excluded contaminates. Railroad ties and utility poles are excluded from eligibility.
     - Forestry-derived fuels originate from forests that were managed in accordance with national or regional best management practices and regulations.
     - Forestry-derived fuels were removed in accordance with State or Provincial best management practices and regulations.
     - The fuel is not derived from whole trees unless at least one of the following is met:
       - The whole trees are urban wood waste (such as used Christmas trees).
       - The whole trees are thinning required for road maintenance of existing roads. Such roads are not on protected lands or wilderness.
       - The whole trees are downed naturally or killed naturally by wind, storms, fire, pests or pathogens.

  b) Agricultural crop residue that is unmerchantable as food (or animal feed)

  c) All animal and other organic waste

  d) Energy crops (e.g. poplar, willow, eucalyptus) that have a rotation less than 10 years and meet at least one of the below criteria:
     - Grown on agricultural land not in use for food production in the last two years
     - Grown on agricultural land in a way that does not displace food production

  e) Landfill gas and wastewater methane

[1] See chapter 3.1 for more details on eligible technologies.

- Ocean-based energy resources captured through tidal and wave technologies

3.2 Excluded Technologies

The following energy resources are not regarded as renewable electricity:

- Nuclear power
- Waste combustion

4. Procurement types

In the following, the procurement types for renewable electricity are listed and described. The mixed use of these procurement types is possible and the renewable electricity constellation may look different at different sites depending on the conditions at the site and in the country.

4.1 Priority 1: Self-generation

Self-generation is the use of one's own system (e.g. photovoltaic systems) to generate electricity from renewable resources. The electricity can be used directly on site (self-consumption) or alternatively fed externally into the public power grid (feed-in) and used for renewable electricity claims via the energy attribute certificates generated in the process.

4.1 Priority 2: Power Purchase Agreement (PPA)

Power purchase agreements (PPAs) are long-term contracts under which a business agrees to purchase electricity directly from a renewable energy generator. PPAs provide financial certainty to the buyer of renewable electricity and the generator. There are two forms of PPAs: physical PPAs and financial / virtual PPAs.

- **Physical PPA:**

  A physical PPA is a contract between a buyer and a generator for the supply of renewable electricity characterized by a physical delivery of the generated electricity to the site. This option involves a bundled delivery of physical electricity and the associated renewable energy attribute certificates (EACs). If EACs are not issued, buyers must have contracts that give them credible claims to support their claims on the use of renewable electricity.

- **Financial / virtual PPA:**

  A financial PPA (often called a virtual PPA – VPPA) is a purely financial transaction without a physical delivery of the generated electricity. Because it is a geographically independent agreement between a generator and a consumer, it is defined as virtual and therefore a form of unbundled procurement. A financial PPA can serve as a hedge for fluctuating electricity costs, and some buyers may realize a financial benefit from using them. Since physical flows of electricity are decoupled from the financial flows of electricity, the generator must guarantee the production of electricity from renewable energy resources with the help of corresponding EACs. If EACs are not issued, buyers must have contracts that give them credible claims to support their claims on the use of renewable electricity.

4.3 Priority 3: Green electricity tariff / green electricity product

Green electricity tariffs are contracts with an electricity supplier for the supply of electricity from renewable energy resources. Electricity and electricity attributes are bundled together in their delivery to the buyer. A green electricity tariff is often an "off-the-shelf" arrangement with an electricity supplier for the supply of renewable electricity. The buyer usually pays a per-kilowatt hour premium through an additional line item on the monthly electricity bill for renewable electricity. This contract may be advertised as "green electricity

product". The generation may be issued with EACs, that allow the buyer to claim use of renewable electricity. The supplier may transfer the EACs to the buyer or otherwise redeem, retire or cancel them on behalf of the buyer. If EACs are not issued, buyers must have contracts that give them credible claims to support their claims on the use of renewable electricity.

4.4 Priority 4: Unbundled renewable energy attribute certificates (EACs)

If the renewable electricity options mentioned above are not possible, the electricity consumed can be subsequently "greened" by purchasing unbundled energy attribute certificates (EACs). EACs can be purchased alone, separate from the underlying generation they are issued to, and separate from the buyers' procurement of electricity for their operations (unbundled). Buyers may purchase EACs to pair with their consumption of purchased grid electricity. This permits a claim to having consumed electricity with the attributes conveyed by the EACs. The EACs must be issued to generation located in the same market for electricity as the electricity supply being decarbonized by the buyer[2]. Unbundled EACs can only ever present an additional cost on op of the company's separate electricity purchases. This is a key point of distinction between long-term contracts for unbundled EACs and financial PPAs, which can sometimes realize a financial benefit.

Depending on the energy market, country and global region, different systems and tracking instruments can be found[3]. The most common ones are the following:

- Guarantee of Origin (**GO** or **GoO**): Europe
- Renewable Energy Certificate (**REC**): United States and Canada
- Renewable Energy Guarantees of Origin (**REGO**): United Kingdom of Great Britain
- Green Electricity Certificate (**GEC**): China
- **J-Credit**: Japan
- **T-REC**: Taiwan
- Large-scale generation certificates (**LGCs**): Australia
- International Renewable Energy Certificate (**I-REC**): International
- Tradable Instrument for Global Renewables (**TIGR**): International

5. Documentation / Auditing

For affected deliveries the supplier shall yearly provide proof of origin of the renewable electricity that is solely dedicated to the scope of commitment and thus to DRÄXLMAIER. Where registers allow a text for cancellation like a redemption purpose or a free text, this option shall be used to directly address the purpose for DRÄXLMAIER parts (name of the parts manufactured) like: "For manufacturing of DRÄXLMAIER (parts)". In the case that the supplier can provide evidence for procuring electricity from renewable resources for its entire electricity consumption, this cancellation requirement is not relevant. Upon request of DRÄXLMAIER, internal or external auditors shall be allowed by the supplier to verify the compliance of the supplier's and / or sub-supplier's electricity consumption for relevant DRÄXLMAIER production with these DRÄXLMAIER requirements.

[2] See chapter 2.2 for more details on market boundaries.
[3] The systems listed are not an exhaustive list of systems and tracking instruments.

The supplier shall tolerate the audits and cooperate, for example by providing information, to the extent such is necessary for the audits. DRÄXLMAIER is authorized to have the audits conducted by a qualified external company bound by confidentiality regarding third parties, unless such a company is a competitor of the supplier.

6. Glossary and abbreviations

Attribute	Data that specifies the characteristics of energy produced by a production device.
Cancel	Marking – at the request of an end-user or their representative – an EAC as having been consumed so that its attributes cannot be claimed by another end-user.
Energy Attribute Certificates (EACs)	An energy attribute certificate is a category of contractual instrument used in the electricity sector to convey information about electricity generation to other entities involved in the sale, distribution, consumption or regulation of electricity. Typically, 1 EAC is equivalent to 1 MWh of renewable electricity. EACs exist in markets with reliable tracking systems to ensure that no double counting of the attributes takes place. EACs can be sourced bundled (with physical delivery of electricity, such as under a direct PPA) or unbundled (without physical delivery of electricity).
Grid	A system of power transmission and distribution (T&D) lines under the control of a coordinating entity or “grid operator”, which transfers electrical energy generated by power plants over the electrical grid to energy users. The grid is also called “electrical grid” or “power grid” and is determined by technical, economic and regulatory-jurisdictional factors.
Guarantee of Origin (GO)	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 resources to provide information to electricity customers on the source of their energy. Each GO represents proof that 1 MWh of renewable energy has been produced and includes the environmental benefits this renewable energy has generated.
International Renewable Energy Certificate System (I-RECS)	The International Renewable Energy Certificate System is a global standard being introduced in a growing number of countries in Asia, Africa, the Middle East and Latin America where no similar schemes exists. Similar to a REC or GO certificate, each I-REC represents proof that 1 MWh of renewable energy has been produced and includes the environmental benefits this renewable energy has generated.
Issuance	The process of creating an EAC and providing it to an energy generator.
Megawatt hour (MWh)	A megawatt hour is equal to 1000 kilowatt hours (kWh).
Power Purchase Agreement (PPA)	Power purchase agreements (PPAs) are long-term contracts under which a business agrees to purchase electricity directly from a renewable energy generator. PPAs provide financial certainty to the buyer of renewable electricity and the generator.
Renewable Energy Certificate (REC)	A renewable energy certificate is an instrument for documenting and proving generation of renewable energy, similar to the European GO and commonly used in the United States of America and Canada.
Virtual Power Purchase Agreement (VPPA)	A virtual PPA is a purely financial transaction without a physical delivery of the generated electricity.

7. Version list of changes

Version number	Date of changes	Change / subject / reason
1.0	15.05.2024	Initial version