



Generating Electricity from Renewable Sources in CEE & SEE

Energy Industry Group

Austria

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Country General Information

Capital: Vienna

Location: Austria is a landlocked country in the southern part of Central Europe. It shares its borders with Germany, Czech Republic, Slovak Republic, Hungary, Slovenia, Italy, Switzerland and Liechtenstein and lies between the latitudes 46° and 49° N and longitudes 9° and 18° E.

Surface: 83,879 km²

Population: 9,104,772

Climate: Predominantly alpine climate with continental features in the eastern areas and four (4) distinct seasons.

Resources: Minerals are one of Austria's most important natural resources. They include magnesite, iron ore, lignite and non-ferrous metals. Further important resources are Austria's rich farmlands, forests, water, wind and sun. Austria has its own petroleum and natural gas resources. However, the constant growth of the industrial sector increasingly requires supplementary imports. The generation of hydroelectric power has been very strong historically and is still being expanded, which makes Austria the leader in the field of hydroelectric power within the European Union. Due to its mountainous landscape, the country is particularly strong in storage power plants including pumped storage power plants.

Electricity Grid: The total length of the Austrian electricity grid is approximately 258,907 km. The grid comprises overhead high-voltage power lines with a nominal voltage of 220 kV to 380 kV (6,728 km), a mid-voltage distribution grid with a nominal voltage between 1 kV and 110 kV (80.287 km) and a low-voltage supply grid with a nominal voltage below 1 kV (171,892 km).

Electricity Transmission, Distribution and Supply: Electricity transmission is a regulated natural monopoly and is provided by Austrian Power Grid AG. Within the electricity distribution market, there are currently 122 grid operators. The electricity supply is provided by around 150 private and state-owned providers. Electricity is also traded on the Austrian electricity and gas exchange market platforms.

Official EU Language(s): German. Other regionally recognised languages are Hungarian, Slovene and Croatian.

EU Member: since 1 January 1995.

NATO Member: no

United Nations Member: since 14 December 1955.

Currency: Euro (EUR)

Schengen: Austria is a member of the Schengen area.

Political System, Administrative Organisation and Economy: Austria is a parliamentary representative democracy with a directly elected Federal President as head of state and a Chancellor as head of the federal government. The country is divided into nine (9) federal provinces, one of which is the capital city Vienna. Austria's economy consistently ranks high in terms of GDP per capita. Next to a highly developed services and exporting industry, international tourism is one of the most important parts of the national economy.

1. Defined Terms for the Main Permits Required for RES-Electricity Generation Facilities

Authorisation Under Energy Law/Right (Concession) to Exploit Natural Resources

Provincial electricity statutes generally provide for permitting procedures for the construction and operation of power plants, including a facilitated procedure for those power plants generating electricity from RES. The exploitation of certain natural resources (e.g., hydrocarbons) requires a concession granted by the competent Federal Minister. There is, however, no Austrian legislation requiring participation in a prior tender procedure to be granted the right to exploit natural resources.

Balancing Group System

In order to generate or to supply consumers with electricity in Austria, membership in a balance group (Bilanzgruppe) is required. This membership guarantees the right to use the grid and to physically transport electricity to wholesale and retail customers. Every balance group is represented by a Balance Responsible Party (BRP; Bilanzgruppenverantwortlicher) vis-à-vis the Imbalance Settlement Responsible (*ISR*; *Bilanzgruppenkoordinator*) and the Control Area Operator (*CAO*; *Regelzonenführer*).

In order to join the Balancing Group System, there are two options: (i) getting licensed as a balance responsible party (i.e., forming a new balance group); or (ii) getting affiliated with an already existing balance group. While option (ii) is less complicated and expensive than option (i), joining an already existing balance group leads to dependence on a third-party BRP who will thereby gain insight into the business activities (procurement channels, quantities, etc.). Existing balance responsible parties are not legally required to accept new members into their balance group.

Building Permit	<p>Building permits may be required under provincial building statutes for the construction and operation of RES facilities. The permitting procedure is usually comprised of three stages: (i) issuance of a declaration declaring the relevant plot as a construction site (<i>Bauplatzerklärung</i>); (ii) issuance of a building permit prior to commencement of the construction works (<i>Baubewilligung</i>); and (iii) issuance of a usage permit upon completion of the construction works (<i>Benutzungsbewilligung</i>).</p> <p>The competent authority for the permitting procedure is the mayor of the relevant municipality or – upon a delegation act – the District Administrative Authority (<i>Bezirksverwaltungsbehörde</i>), based upon provincial statutes.</p>
Environmental Permit	<p>An Environmental Impact Assessment (EIA; <i>Umweltverträglichkeitsprüfung</i>) is required for (i) wind power projects with a total capacity of at least 30 MW or 20 wind turbines each with a nominal output of at least 0.5 MW (or, under specific circumstances, wind power projects with a total capacity of at least 15 MW, or 10 wind turbines, each with a nominal output of at least 0.5 MW); (ii) hydro power plants with a maximum capacity of at least 15 MW (or, under specific circumstances, 10 MW, or in the case of power plant chains, 2 MW); and (iii) certain facilities combining waste management with power generation. The competent authority is the respective provincial government. Even if no EIA is required, a water use permit, issued by the relevant district authority or, (under specific circumstances), the relevant provincial governor, may be necessary.</p>
E-Control	<p>E-Control is the Austrian energy market regulating authority. Its responsibilities include monitoring the compliance of market participants with all their obligations under energy law and competition supervision - in particular, regarding equal treatment by grid operators, monitoring unbundling and monitoring trade in wholesale energy products.</p>

Feed-in Tariffs	Following the expiration of the RES Support Scheme, producers of RES Electricity could apply for subsidies in the form of feed-in tariffs. These have been paid out by the Green Power Clearing and Settlement Agency (OeMAG ; <i>OeMAG Abwicklungsstelle für Ökostrom AG</i>). The tariffs themselves have been set forth in the Feed-in Tariff Ordinance (<i>Ökostrom-Einspeisetarifverordnung 2018 ÖSET-VO 2018</i>) and the actual rate depends mainly on the type of generating facility.
Grid Connection	Grid operators are obligated by provincial electricity statutes to grant grid access on the basis of the approved general terms and conditions and certain system usage fees. Priority access is provided for the transport of RES-Electricity, including electricity deriving from Combined Heat and Power (CHP) plants, for the purpose of supplying such electricity to customers but only in the event the system lacks sufficient capacity.
Liability and Responsibility for Grid Connection and/or Capacity Upgrades, Improvements or Expansion of Grid	Grid operators must provide their services to all users of the electricity grid in a transparent and non-discriminatory manner, ensuring access to the electricity grid in accordance with the law and with the grid's capacity to take over the output. The costs of the grid connection are borne by the grid user in the form of a one-off payment to the distribution grid operator. The costs of grid reinforcements, improvements, upgrades and other similar costs are borne by grid users and fixed in an ordinance issued by E-Control on an annual basis.
Market Premium	Under the current RES Support Scheme, producers of RES Electricity (for which guarantees of origin have been issued and that is fed into the grid) may receive subsidies in the form of a Market Premium (<i>Marktprämie</i>). The Market Premium compensates for the costs of the production of RES-Electricity and the average market price on the electricity exchange. Market Premiums are paid based on agreements concluded with Ökostrom AG as the responsible Renewables Support Management Entity (<i>EAG Abwicklungsstelle</i>) in accordance with the Renewable Energy Expansion Act (<i>Erneuerbaren Ausbau-Gesetz</i>) and the ordinances passed thereunder (e.g., <i>EAG Marktprämienverordnung</i>).

RES Support Scheme	<p>For certain RES-Electricity facilities recognised under the Green Electricity Act (<i>Ökostromgesetz 2012 – ÖSG 2012</i>), the purchase of RES-Electricity generated at subsidised feed-in tariffs has been guaranteed. Facilities eligible for official recognition have included (i) facilities that run exclusively on the basis of RES; (ii) specific hybrid plants; and (iii) specific mixed combustion plants.</p> <p>Under the Renewable Energy Expansion Act (<i>Erneuerbaren Ausbau-Gesetz</i>), operators of various kinds of RES-Electricity facilities connected to the Austrian grid may apply for a market premium aimed at compensating the difference between the production costs of RES-Electricity and the average market price for electricity during a certain period of time. This is granted as a subsidy for the RES-Electricity marketed and fed into the public electricity grid for which guarantees of origin have been issued. In addition, investment grants are possible for constructing/renovating certain PV, hydro power, wind power, biomass and renewable gas plants.</p> <p>Additional RES support may be available for companies and private households under relevant provincial laws or by private funders (e.g., Kommunal Kredit Austria AG).</p>
RES-Electricity	Electricity obtained from RES sources such as wind, solar, aerothermal, geothermal, hydrothermal and oceanic waves, hydraulic, biomass and biogas.
Trade License	Electricity traders who do not generate and/or transmit electricity (e.g., trading of non-self-produced electricity) require a trade license (<i>Gewerbeberechtigung</i>). In order to obtain a trade license, the respective entity must have at least a branch office in Austria and appoint a responsible individual as trade representative (<i>gewerberechtllicher Geschäftsführer</i>).

2. Envisaged Need for Investments

At the end of 2019, the Austrian Federal Government submitted to the EU Commission a comprehensive plan to achieve several climate protection targets by 2030 (**#mission2030**), as required by the new EU framework. In its plan, Austria has set itself the goal of increasing the share of energy from RES as part of gross energy consumption to 46–50% by 2030. Another ambitious goal is to cover 100% of Austria's total electricity consumption from RES by 2030.

To this end, it is expected that a number of adaptations to the Austrian legal framework will occur in the years to come, which may include:

- strengthening of financial support for the expansion of renewable energies by increasing subsidies (such as the new Renewable Energies Expansion Act, which entered into force in late July 2021),
- digitisation of the energy system, including the transport and distribution networks.

Moreover, the current geopolitical situation with Russia's aggression against the Ukraine has led to an extraordinary situation that requires comprehensive measures to permanently replace natural gas imports from Russia. This is primarily due to the current high gas prices and the highly uncertain future of natural gas supplies. Against this background, there are significant economic incentives to reduce the overall gas consumption and substitute natural gas with domestic renewable energy sources. In general, Austria intends to avoid gas supplies from Russia by 2027. However, according to the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, which is responsible for energy matters, this will require efforts on three levels:

- reduction of gas consumption in Austria;
- expansion of the domestic production of biogas and green hydrogen;
- coverage of the remaining consumption of natural gas by alternative routes.

Consequently, it is estimated that in the years to come, solar and photovoltaic capacities as well as investments in wind, biomass and other RES will increase. Furthermore, Austria is an interesting market for investors and project developers because of a guaranteed Feed-in Tariff encouraging RES project development.

3. Executive Summary – RES Market Status and Development of RES-Electricity Facilities

3.1 Market Overview – Factsheets

- Comprehensive RES Support Schemes have been available in Austria for almost twenty years and are constantly being expanded.
- Since 2001, Austrian end-customers may freely choose their electricity supplier.
- The Austrian government has set ambitious climate protection targets, which are defined by the previous government's #mission2030 plan and have been amended by the current government's plan to reach climate neutrality by 2040.
- The first big target of #mission2030 (increasing the share of energy from RES as part of gross energy consumption to 46–50% by 2030) is likely to be achieved, as 36.4% of total energy consumption (and 76.2 % of electricity consumption) was already produced from RES by 2021.
- Under the new Renewable Energies Expansion Act, operators of various kinds of RES-Electricity facilities can be eligible for subsidies and market premiums, for which the Austrian federal government will allocate EUR 1 billion until 2030.
- Since November 2023, in reaction to the conflict between Ukraine and Russia, the Market Area Manager is obligated to retain a strategic natural gas reserve. Currently, the reserve amounts to approximately 20 TWh.
- RES-Electricity certified by a guarantee of origin is traded on the markets and monitored and administrated by E Control. The operator of the grid system to which recognised RES-Electricity facilities are connected is obligated to issue a certificate of origin in relation to the quantities of RES-Electricity that have been fed into the grid, upon the request of the facility operator.
- Generation from CHP plants is an important pillar of bioenergy use in Austria. More than 6% of Austria's electricity consumption volume and around 20% of the total district heating is produced in CHP plants.

3.2 RES Market Status, Permitting, Grid Connection, Licensing of RES-Electricity Facilities

General Market Data

Overall Installed General Capacity including RES (Overall Production) In 2021, overall electricity production was 74.5 TWh.

Installed Capacity by Technology

- Biomass – 3.52 TWh;
- Wind power – 7.17 TWh;
- PV – 2.78 TWh;
- Hydro – 42.32 TWh.

RES Support Scheme

RES Support Scheme and beneficiaries

- Feed-in Tariffs (only existing subsidies but no new subsidies).
- Market premiums

Beneficiaries include operators of RES-Electricity facilities recognised under the Green Electricity Act or the Renewable Energy Expansion Act.

Priority and guaranteed off-take into the grid

- Only the expiring Support Scheme of the Green Electricity Act provides for a guaranteed off-take of electricity generated in officially recognised RES-Electricity facilities by OeMAG.

- In contrast, due to the current RES Support Scheme under the Renewable Energy Expansion Act, RES Electricity must be sold on the electricity market by the producers themselves. However, operators of RES Electricity generation installations who (i) can prove that three electricity traders authorised to carry out this activity in Austria have refused to conclude an off-take agreement for RES-Electricity from an installation subsidised under the Renewable Energy Expansion Act on normal market terms, or (ii) operate an RES Electricity generation installation with a bottleneck capacity of less than 500 kW, may claim the right to be assigned an electricity trader for this installation from E-Control.
- Priority access to the grid is provided for the transport of RES-Electricity, including CHP plants for the purpose of supplying such electricity to customers, *but only in cases of insufficient system capacity.*

Other Incentives

- Federal provinces may enact individual incentive mechanisms within their legislative competence. Such investment incentives usually relate to the construction of photovoltaic and biogas facilities operated at a private level.
- Investment allowances are available for constructing/renovating certain hydro power plants and CHP plants, amounting to a certain percentage of the investment costs.

Other Conditions

- Facilities eligible for official recognition regarding Feed-in Tariffs are (i) power generating facilities that are run exclusively on the basis of RES; (ii) specific hybrid plants; and (iii) specific mixed combustion plants.
- The guaranteed Feed-in Tariffs for RES-Electricity from recognised facilities depend on the prices at the time of application and the type of facility.

- Allowances for recognised RES-Electricity facilities are based on the electricity produced and fed into the public electricity grid system and the type of facility.
- Market Premiums are only paid if the production costs of RES-Electricity are higher than the average market price. They are granted as subsidies for marketed renewable electricity that is actually fed into the grid, and for which guarantees of origin have been issued.

Grid Connection Specifics

Approvals

Grid operators are obligated by provincial electricity statutes to grant grid access on the basis of the approved general terms and conditions and certain system usage fees.

Permitting

Connection works to the grid may fall within the licensing requirements as set out below.

Timing:
Mainly Depending
on Licensing Procedure
(see below).

Licensing

Procedure

- EIA required for wind power, hydro power plants reaching certain thresholds as well as for certain facilities combining waste management with power generation.
- Possibly required building permissions may include (i) issuance of a declaration proclaiming the relevant plot as a construction site (*Bauplatzerklärung*); (ii) issuance of a building permit prior to commencement of the construction works (*Baubewilligung*); and (iii) issuance of a usage permit upon completion of the construction works (*Benutzungsbewilligung*).

- Wind turbines and photovoltaic systems located on greenfield areas may only be constructed on areas expressly designated for this purpose in the spatial planning regulations of the Austrian Federal States, and in the zoning plans of the municipalities.
- Provincial electricity statutes generally provide for permitting procedures for the construction and operation of power plants, including a facilitated procedure for power plants generating RES-Electricity.
- RES-Electricity producers must be part of the Balancing Group System.
- Electricity traders who do not generate and/or transmit electricity (e.g., trading of non-self-produced electricity) require a Trade License.

Duration of Administrative Procedure

Generally, authorities must issue a decision within six (6) months after the submission of a full and complete application. However, provincial electricity statutes may stipulate a facilitated administrative procedure to grant permission for the construction and operation of RES-Electricity facilities as a statutory privilege. Said facilitated procedure usually grants the authority a period of three (3) months for a decision on the application. Other – and much longer – time frames may apply according to specific procedural rules (e.g., in the EIA procedures).

Licence's Validity

The above-mentioned permits do not have a specific expiry date. However, it may be required to obtain new permits when changes reaching a certain threshold have been made to the RES facility.

If specific permits regarding water usage are required, those may be limited in time under the Federal Water Act.

4. RES Support Scheme since 2022

With #mission2030, the Austrian government goes one step beyond EU targets and is aiming for 100% of Austria's total electricity consumption to come from RES. The most recent Coalition Agreement of the new Austrian Federal Government, formed by the People's Party and the Green Party, confirmed the goal set by the Austrian climate and energy strategy #mission2030. As one of the main milestones in that regard, the Renewable Energies Expansion Act was officially published and entered into force in late July 2021. Since October 2022, Market Premiums can be granted for operators of various kinds of RES Electricity installations, in accordance with the Market Premium Ordinance (*Marktprämienverordnung*).

4.1 Market Premium Scheme for RES-Electricity

4.1.1 General Remarks

In contrast to the former support scheme under the Green Energy Act, there are no longer fixed feed-in tariffs for RES-Electricity fed into the grid (defined by the Federal Green Electricity Feed-in Tariff Ordinance – *Ökostrom-Einspeisetarifverordnung*), but only Market Premiums.

The amount of the Market Premium is to be determined in cents per kWh. The Market Premium is calculated based on the difference between the value to be applied in cent/kWh, determined by way of a RES-Electricity auction (*anzulegender Wert*), and the respective reference market value (*Referenzmarktpreis*) in cent/kWh. The amount of the applied value is limited by the Market Premium Ordinance which sets a ceiling price that producers are allowed to offer in the renewable energy auctions. Further, a correction factor is applied to the bid value for RES installations to reflect the different electricity yields of an installation due to its location. The correction factors are also determined by the Market Premium Ordinance and provide for additional premiums or discounts on the bid value.

The reference market value is in turn determined by the result for the hourly price of the uniform day-ahead market coupling. If no result of the uniform day-ahead market coupling is available, the reference market value will be calculated based on the day-ahead hourly prices published as a substitute by the nominated electricity market operator with the highest trading volume (EPEX Spot). For each hour of a

month, the hourly price of the uniform day-ahead market coupling will be multiplied by the quantity of electricity generated in that hour. The sum of these calculations will then be divided by the amount of electricity generated in the whole month. At the beginning of each month, E-Control calculates and publishes the reference market value of the previous month for each technology (i.e. hydro power, wind power and photovoltaic etc.).

If the hourly price on the relevant reference market is negative for at least six consecutive hours, the Market Premium for the entire period in which the hourly price is negative will be reduced to zero. This rule does not apply if a uniform Austrian intraday price index is positive in at least those six consecutive hours, which were negative in the previous day's uniform day-ahead trading.

In summary, under the new support regime of the Renewable Energy Expansion Act, producers of RES-Electricity must sell their electricity on the market, (e.g. via PPAs), and may receive a subsidy in the form of a Market Premium if the applied value (bid price) is higher than the price on the reference market. This means in turn that if the price of the reference market is higher than the applied value (bid price), no market premium will be paid

4.1.2 Repayment Obligations

If the calculated Market premium is less than zero, which is the case when the reference market value becomes higher than the producer's bid value, operators of (i) wind power plants with a bottleneck capacity of 20 MW or more, (ii) hydropower plants with a bottleneck capacity of 20 MW or more and (iii) photovoltaic plants with a bottleneck capacity of 5 MW or more are obligated to partially pay back Market Premiums that were previously received. Specifically, operators must refund previous premiums to OeMAG, if the reference market value exceeds the bid value by more than 40%. The refund obligation is however limited to 66% of the excess amount. According to the FAQs on the Market Premium Scheme provided by the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology and the General Funding Conditions provided by OeMAG, the refund quota of 66% refers to the total excess, (i.e. 66% of the amount exceeding the bid value).

In contrast, if the calculation of the market premium results in a value less than zero for any other wind power plant, hydropower plant or photovoltaic plant, the Market Premium will be set at zero. This means that these plants are not subject to any

repayment obligations and are thus allowed to keep those profits generated as a result of higher prices on the reference market

4.2 Subsidies for RES-Electricity

The possible subsidies for each of the RES-Electricity plants under the Renewable Energies Expansion Act can briefly be summarized as follows:

RES-Production	Subsidy Scheme
Hydropower	<p>Newly constructed and expanded hydropower plants with a bottleneck capacity (after expansion) of up to 25 MW, or the first 25 MW of plants with a bottleneck capacity exceeding 25 MW, are eligible for a market premium.</p> <p>Constructions and revitalisations of hydropower plants with a bottleneck capacity of up to 1 MW are eligible for an investment grant.</p> <p>Projects in high-value watercourses or that affect the preservation status of protected resources are not eligible for subsidies.</p> <p>The tender volume is at least 90 MW per year for Market Premiums and at least EUR 5 million per year for investment grants.</p>
Wind Power:	<ul style="list-style-type: none"> ○ Newly constructed and expanded wind power plants are eligible for a market premium. ○ Constructions of small wind power plants (i.e. with a bottleneck capacity of 20 KW to 1 MW) are eligible for an investment grant. ○ The tender volume is at least 390 MW per year for Market Premiums and at least EUR 1 million per year for investment grants

- All newly constructed photovoltaic plants over 10 KW_{peak} and expansions of photovoltaic plants over 10 KW_{peak} are eligible for a market premium. For photovoltaic plants on areas of agricultural use or grassland, the premium amount will be reduced by 25%. This reduction will not apply, in full or in part, if the photovoltaic plant is constructed on (i) land which is zoned for both agricultural use and for the construction of photovoltaic plants ("Agri-PV-Fläche"), where the agricultural use is only slightly affected, (ii) a building or another construction, (iii) a water body, (iv) a landfill or a contaminated site, (v) a mining or infrastructure site or (vi) military areas.
- Constructions and expansions of photovoltaic plants with a bottleneck capacity of up to 1,000 KW_{peak} are eligible for an investment grant. The reduction for plants on areas for agricultural use or grassland applies here as well. For innovative photovoltaic plants, a top-up of up to 30% may be granted.
- The tender volume is at least 700 MW_{peak} per year for Market Premiums and at least EUR 60 million per year for investment grants.

Biomass

- Newly constructed and repowered biomass-based plants with a bottleneck capacity of up to 5 MW_{el}, and newly constructed and repowered biomass-based plants with a bottleneck capacity of more than 5 MW_{el}, are eligible for a subsidy on their first 5 MW_{el}.
 - Subsidies may also be granted to existing biomass-based plants after the expiry of the subsidy period provided for under the ÖSG 2012.
 - Constructions of biomass-based plants with a bottleneck capacity of up to 50 KW_{el} are eligible for an investment grant.
 - The tender volume is at least 7500 KW per year for Market Premiums and at least EUR 4 million per year for investment grants.
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Biogas	<ul style="list-style-type: none">○ New plants with a bottleneck capacity of up to 250 KWeI are eligible for a market premium.○ Existing plants are also eligible for subsidies after the expiry of the subsidy period provided for under the ÖSG 2012.○ Constructions or modernisations of existing biogas plants for the production and processing of renewable gas are also eligible for an investment grant.○ The tender volume is at least 7,500 KW per year for Market Premiums. Investment grants for the modernisation of existing biogas plants are available up to EUR 15 million per year.
Hydrogen	<ul style="list-style-type: none">○ Construction of plants for the conversion of electricity into hydrogen or synthetic gas with a minimum capacity of 1 MW are eligible for an investment grant if the plants are used exclusively to produce renewable gases and if they only use renewable electricity.○ Investment grants are awarded up to EUR 40 million per year.

To that end, the Austrian federal government will allocate EUR 1 billion until 2030.

4.3 Support scheme for cogeneration

The CHP Act (*KWK-Gesetz*) provides for a support scheme specifically for the operation and modernisation of existing CHP-plants. Furthermore, the Green Electricity Act provides for investment allowances granted to the operators of CHP-plants based on waste to energy under certain conditions. The operators of existing and modernised CHP-plants are compensated for the costs arising from the maintenance of the on-going operation of CHP-plants.

The generation from CHP plants is an important pillar of bioenergy use in Austria. More than 6% of Austria's electricity consumption volume is produced in close to 160 power plants and CHP plants based on solid biomass, in close to 270 biogas plants, as well as in the paper industry's lye combustion CHP plants. Almost half of biomass district heating generation comes from CHP plants. In total, biomass CHP plants provide approximately 20% of district heating generated in Austria.

5. Power Purchase Agreements (PPA)

Power Purchase Agreements ("PPAs") are agreements for the purchase of electricity entered into between a producer (seller) and a customer ("purchaser"). There are different types of PPAs depending on how the contract is structured:

- **Green PPA:** Green PPAs involve electricity generated from renewable energy sources.
- **Corporate PPAs:** PPAs that are concluded directly between the producer and the purchasing company,
- **Merchant PPA:** If the electricity generated is sold to an electricity trader, the PPA is a merchant PPA.
- **Physical PPA:** A physical PPA means that a physical supply of electricity is owed.
- **On-site PPA:** The electricity generated is not fed into the public grid by the producer but is supplied directly to the consuming company. In this case, the electricity generation installation is usually located in the immediate vicinity of the purchaser.
- **Off-site PPA:** In this case, the purchase of a physical quantity of electricity is agreed to, but this is purchased via the public grid. The purchase takes place via balance groups.
- **Sleeved PPA:** This is an off-site PPA in which an intermediate energy company is involved. It enables producers to market their energy without having to comply with the complex balance group regulations and the obligations associated with them.

The pricing structure plays a crucial role in PPAs and depends primarily on the individual situation of the parties. In principle, a distinction can be made between fixed prices, variable prices, and intermediate solutions. If fixed prices are agreed to, (e.g., x c/kWh or y €/MWh), the PPA reflects the current subsidy system for renewable energies. If variable prices are agreed to, (e.g., market prices), the PPA loses part of its hedging function, which is why this type of arrangement is quite unusual. Besides the pricing mechanisms for the purchase of electricity, it is also important to agree on the cost allocation, in other words who bears the costs for balancing energy, grid costs, levies, fees, taxes, and costs for balance group management.

In addition to the pricing, the PPAs must also include provisions on production and purchase quantities. In practice, so-called "as-produced" clauses (i.e., the obligation to supply the generated electricity to the purchaser) and "take-or-pay" obligations (i.e., the purchaser does not have to take certain quantities, but must pay for them in any case) are common.

Finally, the duration of the PPA must be agreed. In Austria, there is currently a tendency to conclude PPAs with shorter terms (e.g., five years).

6. Electricity Storage and Hybrid Projects

RES-Electricity facilities are usually fluctuating generation plants, (i.e., they do not generate electricity consistently). As a consequence, Austrian grids must become more flexible, so that more RES-Electricity can flow through them. In this regard, storage facilities for electrical energy are considered to be one of the key technologies for the transformation of the energy system, as required by the new EU framework and the Austrian #mission2030.

Storage facilities enable a temporal decoupling of supply and demand and thus contribute to the further integration of RES like wind and solar power. So called "hybrid projects" combine multiple RES and storage technologies to increase efficiency and ensure greater stability in energy supply. In Austria, hybrid projects are often aimed at combining wind and solar power as well as energy storage solutions in the most efficient and grid-protecting way.

However, the construction of large-scale storage facilities is associated with uncertainties and possible risks. In addition, storage facilities are always associated with conversion losses and therefore, are an expensive option for integrating RES-Electricity facilities. Hence, the economic operation of new storage facilities is currently only possible to a limited extent.

In principle, four technologies are available for electricity storage: mechanical, electrochemical (e.g., batteries), electrical, and chemical storage. The actual demand for (specific types of) storage facilities in the Austrian electricity system is hard to predict and depends on many other factors. However, the greatest demand in the future is expected to be in the area of long-term storage.

Apart from long-term storage, battery storage systems have long been used internationally to stabilise electricity grids and are often used to stabilise electricity systems in individual households. While there are mainly two technologies available for batterie storage (lead and lithium-ion), improved technical properties combined with a sharp drop in manufacturing costs have led to lithium-ion cells being considered for many applications today. For such battery types, analysts forecast a very strong global growth in the coming years. This is expected to be also true for Austria. The risks related to this technology arise in the various life cycle phases (provision of raw materials, recycling and disposal, etc.). To this end, Austrian research institutions and companies have already built-up significant know-how in these fields.

7. Green Hydrogen

The Austrian government's strategy on green hydrogen is aimed at supporting #mission2030, the 2040 climate neutrality target. Hydrogen shall be produced with climate-neutral methods and primarily be used in sectors which would, otherwise, be difficult to decarbonise (e.g., chemical industry, steel industry, aviation, and shipping). In addition, hydrogen also shall be used for balancing peak loads within the Austrian energy grid.

Current hydrogen-related targets include:

- substitution of fossil hydrogen with green hydrogen in the energy-intensive industry sectors to the greatest possible extent;
- establishment of a support scheme for the production of green hydrogen;
- capacity of at least 1 GW for electrolysis of green hydrogen by 2023; and
- green hydrogen production as an integral part of the Austrian energy system.

The transmission of hydrogen will be handled by transforming parts of the current natural gas infrastructure into a hydrogen transmission system. While the national production of green hydrogen will likely increase, it is expected that it will not suffice to reach the 2040 target. Therefore, import of green hydrogen will gain importance, which shall be accomplished by coordinating hydrogen systems throughout the EU.

8. Foreign Direct Investment control

Under the Austrian Investment Control Act (Investitionskontrollgesetz), certain acquisitions in relevant industry sectors – including energy infrastructure and supply – are subject to approval by the Austrian Minister of Labour and Economics (Bundesminister für Arbeit und Wirtschaft).

Relevant types of acquisitions are the direct or indirect acquisition by one or more foreign persons of

- an Austrian undertaking;
- voting rights in an Austrian undertaking (reaching certain thresholds);
- a dominant influence on an Austrian undertaking; or
- an essential part of the assets of an Austrian undertaking.

For that purpose, "foreign persons" are defined as any individual who is not an EU/EEA/Swiss citizen and any legal entity having its registered seat or main administrative offices outside the EU/EEA/Switzerland.

The minimum thresholds of voting rights which trigger approval obligation are 25% and 50%. For certain particularly sensitive sectors – such as the operation of critical energy infrastructure –, an additional 10% threshold applies.

Transactions subject to the approval requirement are deemed concluded under a statutory condition precedent until such approval is granted. Implementing a transaction without prior approval is punishable under criminal law.

9. Up-Coming Legislation

9.1 New Electricity Industry Act

On 12 January 2024, a draft of the new Electricity Industry Act (*Elektrizitätswirtschaftsgesetz - EIWG*), which will replace the outdated Austrian Electricity Act (*Elektrizitätswirtschafts- und -organisationsgesetz 2010 – EIWOG 2010*) was submitted for review and will provide the following rules especially relevant for the sale of RES-Electricity:

The draft Electricity Industry Act will introduce a new form of trading as peer-to-peer trading. That means contracts will be entered into between self-suppliers and end users for the sale of self-generated RES-Electricity. Peer to peer trading will make it feasible to sell RES-Electricity that is not self-consumed on the electricity market, at a profit, without becoming a supplier (e.g., long-term PPA for surplus electricity generated by a large ground-mounted PV plant of a commercial enterprise). However, it should be noted that peer-to-peer trading will only be permitted for self-suppliers. Furthermore, peer-to-peer contracts may only be concluded in addition to a regular supply contract, as the statutory required balance group membership is ensured by means of regular supply contracts.

Furthermore, under the new Electricity Industry Act it shall be possible for RES-Electricity to be transported from the electricity generation installation via a direct line (i.e., a line that connects an individual RES-Electricity producer with an individual customer, or a line that connects a producer and supplier for the direct supply of electricity with its own operating sites) to a customer or a consumption installation, allowing surplus electricity to be fed into the public power system from there, provided that necessary measures are taken to prevent loop flows. Thus, the operator of the generation installation can market the surplus electricity itself by concluding corresponding purchase agreements and will be able use the grid connection and grid access of the contractual partner for this purpose. In this context it should be highlighted that according to the new Electricity Industry Act, it will be permissible to use the metering point of a third party to inject electricity into the public power grid. Under the current Electricity Act, feed-in via the metering point of a third party is only possible via arrangements under civil law. A third party cannot currently feed in due to the lack of its own grid connection, and an indirect connection via an existing grid connection as this would undermine the connection monopoly of the distribution system operator.

Attention will have to be paid in the future to the fact that operators of distribution systems will have the possibility to limit access to their grid in the event of a shortage of grid capacity. Electricity suppliers will therefore have the option of connecting to the grid ahead of time but will have to accept temporary power restrictions imposed by the grid operator, which specifies the maximum grid capacity statically or dynamically. The limited grid effective capacity for photovoltaic and wind energy installations, including power plant parks connected to grid levels 4 to 7, may not fall below the following values:

- photovoltaic systems below 80% of the maximum capacity and
- wind energy installations below 90 % of the maximum capacity.

However, this restriction only applies so long as grid access cannot be granted in full for the requested grid active power. Depending on the grid level, the following periods apply from the conclusion of the contract:

- grid level 3 18 months;
- grid levels 4 and 5 12 months;
- grid levels 6 and 7 6 months.

Provided that the review period does not delay the enactment of the law significantly, the draft provides for the provisions to come into force on 1 July 2024.

9.2 Renewable Gas Act

Since February 2024, the Austrian National Council began debating the Renewable Gas Act. This law requires that from 1 January 2024, suppliers who supply end consumers in Austria against payment must substitute at least the following proportions of the fossil gas volumes they sold to end consumers in Austria with nationally produced renewable gases:

Year	2024	2025	2026	2027	2028	2029	2030
	0,35%	0,95%	1,70%	3,05%	4,84%	7,10%	9,75% At least 7,5 TWh

Suppliers will have to provide E-Control with evidence of the quantities of gas they have substituted in the previous year, exclusively by means of guarantees of origin with a green gas label or green certificates with a green gas label, by the last day of March each year. If the substitution obligation is not fulfilled in any given year, the shortfall must be substituted by December 31 of the following year with corresponding additional quantities of gas.

Operators of plants that produce and process renewable gases to natural gas quality that feed into the public natural gas grid will have the right to guaranteed off-take of the quantities of gas produced (including the associated guarantees of origin) by OeMAG for one year if they prove: (i) the existence of an offtake agreement with a term of at least five years and a contract start date before December 31, 2028; and (ii) that at least three suppliers who are permitted to carry out this activity in Austria have refused to conclude an offtake agreement.

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