



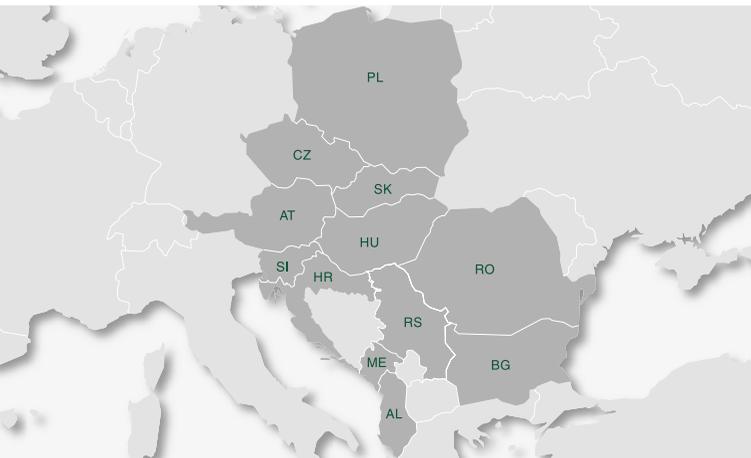
# Renewable energy – Quo vadis?

Overview of the renewable energy market  
in Central and South Eastern Europe

Selected country reports



Albania | Austria | Bulgaria | Croatia | Czech Republic | Hungary  
Montenegro | Poland | Romania | Serbia | Slovakia | Slovenia



## 12 Countries. 1 Company. The TPA Group.

### Foreword

Now more than ever climate change represents a serious concern for the whole world. There is thus an urgent need for a vision that will lead to modern, prosperous and competitive climate action.

As part of the European Green Deal, all 27 EU Member States committed to turning Europe into the first climate neutral continent by 2050. In support of this, the European Commission has tabled for adoption the “Fit-for-55 package”, a series of legislative proposals aimed at delivering the EU’s upwards-revised target of a 55% reduction in emissions by 2030. The package includes this higher target as well as new rules to support the expansion of renewables. The various legislative proposals that make up the Fit-for-55 package will have to be negotiated and agreed by the EU Member States and the European Parliament. This package of laws contains changes to over 10 pieces of European legislation, including the Renewable Energy Directive, the Energy Tax Directive, the Alternative Fuels Infrastructure Directive and the EU Emissions Trading System.

The TPA country reports are an efficient business intelligence tool for investors and analysts in the renewable energy field. This brochure provides you with a clear overview of the most important markets for renewable energy in Central and South Eastern Europe: Austria, Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Serbia and Slovakia.

The country reports, valid as of September 2021, contain the latest figures on renewable energy sources, i.e. wind, solar, hydro and biomass. In the light of various legislative changes introduced in recent years, this report provides an overview of the latest trends in the renewable energy sector, including the regulatory environment, financing sources and profitability, on the Central and South Eastern European market.

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## A. COUNTRY PROFILE

### 1. Overview and trends

The new Renewable Energy Expansion Act (EAG Act 2021) pursues ambitious goals. In 2030, 100% of Austria's electricity is to come from renewable sources. To achieve this, production must be increased by 27 TW.

The production in 2019 was structured as follows:

#### Wind energy sector:

- The installed capacity is currently 3,120MW
- In the last 3 years Austria has been installing 138 MW on average
- Over 50% of the energy produced supplies households
- 3 Million Tons of CO2 being avoided annually

#### Photovoltaic energy sector:

- The installed capacity is currently around 2.04 GW
- Five out of nine federal states are offering funding

#### Water energy sector:

- Hydro power plants produce over 55% of the electricity in Austria
- Highest capacity is gained from large hydro power plants
- Focus on small and medium-sized plants

#### Biomass energy sector:

- Biomass accounts for 43% of the energy production
- Over 52% of the renewable energy production is from biomass

### 2. Funding situation

The Renewable Expansion Act (EAG Act 2021) has been in force since 2021. In order to achieve the targeted quota of 100% renewable by 2030, among other things, 1 billion euros of funding will be made available annually for expansion until 2030.

In 2019 the following capacities were funded

- Funding for 2548 MW wind power
- Funding for 928 MW photovoltaic systems
- Funding for 368 MW Small hydro power plants
- Funding for 229 MW biomass systems
- Funding for 86 MW biogas systems
- The rest of funding was granted for waste gas and geothermal energy

Feed-in tariffs:

(more information under the bullet point Green Certificates)

#### Banks:

In 2021, banks are looking for opportunities to invest preferable in infrastructure projects. Renewable energy projects are very likely to be supported in general, also because of their high acceptance from the population.

### 3. Permits and authorizations

In Austria a cross-national law between the federal states does not exist. Every single federal state has its own regulations, which makes the situation very complex. In general the following permits are necessary:

#### Building permit (suitability)

The application documents should include in general:

- A technical report
- Planning documents
- Information about the owner of the installation

#### Austrian regional planning (type of use)

Planning schemes are prepared by the regional and local authorities and generally allow the following usages:

- Building land
- Traffic area
- Open land

The **setting-up authorization** is not necessary in every single federal state and depends on the installed output.

To summarize: Austrian law is dependent on the respective federal state and each project has to be reviewed closely on a case-by-case basis. As a consequence, wind energy for example is concentrated in 5 federal states only.

### 4. Competitiveness

Due to the positive investment environment, Austria is a very competitive country in the renewable energy field. The regulatory framework provides investors with high investment and planning security. This has led to the continuing development of the renewable energy sector in Austria.

### 5. Grid connection

The grid connection is controlled by the independent regulator Austrian Power Grid ("APG"), which is the only transmission system operator in Austria. The overall power grid has 3 layers.

The Austrian transmission power grid system

- is almost 7,000 km long
- has over 12,000 power poles and
- transports approx. 46,000 GWh per year

Due to the increasing amount of alternative energy, also the Austrian transmission system is more and more difficult to stabilize. In accordance with the "APG Masterplan 2030", the APG will enlarge their transmission system by 220km over the next years.

## Austria

### B. LEGAL FRAMEWORK

Real rights required
Under Austrian law, there are two main ways for investors to hold the specific rights required for a building permit: <ul style="list-style-type: none"> <li>■ An ownership title to the land</li> <li>■ A right of superficies to the land (not registered in the land register)</li> </ul>
Ownership right
The ownership right under Austrian law offers the owner an absolute right to: <ul style="list-style-type: none"> <li>■ use</li> <li>■ build</li> <li>■ encumber and</li> <li>■ sell</li> </ul> <p>Necessary regional permits, easements and other loads can restrict this right.</p>
Superficies right
A right of superficies consists of: <ul style="list-style-type: none"> <li>■ The right to have or to erect a building on, under or above the land owned by another person</li> <li>■ The ownership right to the building</li> <li>■ The right to use the land pertaining to the building</li> </ul> <p>The Civil Code limits the duration of a right of superficies to a maximum of 99 years, with a prolongation option.</p>
Conventional and statutory right of usage and easements
<ul style="list-style-type: none"> <li>■ During the permission-phase abutting owners have the right to raise objections against the project, if their right would be limited through it.</li> <li>■ The investor must hold rights of easement to the lands crossed by the access ways or by the cables.</li> <li>■ The right of way is incumbent upon the federal state and has to be reviewed closely on a case to case basis.</li> </ul>

### C. SUPPORT SCHEME / GREEN CERTIFICATES

Issues that might impede/delay the investment process
The following issues have to be taken into consideration when planning a renewable energy plant in order to avoid any delays or even cancellation of the project: <ul style="list-style-type: none"> <li>■ No cross-national law exists</li> <li>■ Property rights have to be suitable for the project</li> <li>■ Instatement of ownership title; prohibitions on sale</li> <li>■ Necessary regional permits</li> <li>■ Normally an energy study is required (UVP)</li> </ul>

Legal provisions
<ul style="list-style-type: none"> <li>■ Renewable Energy Expansion Act (EAG 2021)</li> <li>■ New funding scheme will be available soon</li> <li>■ "Processing centre for renewable energy" ("OeMAG") - investment grant</li> </ul>
Green certificates
Green Certificates do not exist in Austria. To support renewable energy power, the EAG Act 2021 introduces market premium and grants: <ul style="list-style-type: none"> <li>■ The market premium is paid based on a monthly reference market value for renewables</li> <li>■ OeMAG: investment grants</li> </ul>
Updates
The new funding scheme in Austria should be available until end of 2021.

### D. ISSUES AND PROFITABILITY

Tax issues
For further information, please consult our brochure, "Investing in Austria".
Profitability
Any investment expenditure analysis must account for the preparation and design costs, incurred during the initial stage of a project (the first 1 - 4 years). Currently this expenditure ranges between EUR 55,000 up to as much as EUR 70,000 per MW of capacity of the designed wind farm (which represents about 2-4 % of the investment value). These costs include, but are not limited to: <ul style="list-style-type: none"> <li>■ Developing technical design</li> <li>■ Drafting a feasibility study</li> <li>■ Erecting measuring masts and wind density measurements</li> <li>■ Performing a study on the impact of the wind farm on the natural environment and local community geological research</li> <li>■ Administrative proceedings</li> </ul> <p>Due to the decentralization of power generation, other grid solutions are necessary. Smart grids can deal better with non-stable renewable energy sources and, as a result of the better connection, power will become cheaper. A successful energy transition is only possible with smart grids. Furthermore, customers have an important part to play. They should help to make the system more effective. First "renewable energy model regions" have been installed and act as role models.</p> <p>The Austrian energy fund "KLI.EN" has started a funding programme to support the self-supply of industry and private households, by installing their own renewable energy systems.</p>

### A. COUNTRY PROFILE

#### 1. Overview and trends

##### Renewable energy sector development:

The targets for the production of energy from renewable energy sources by the year 2020 for all EU countries were set in EU Directive 2009/28/EC.

Percentage of renewable energy in the total gross consumption:

2019 - 21.6 %

2018 - 20.53%

2017 - 19.1 %

2016 - 19.2 %

2015 - 19.1 %

2014 - 18.9 %

##### Installed capacity as of December 2019:

Wind energy - 701 MW,

Photo voltaic - 1 059 MW

Water - 3211 MW

The total renewable energy capacity is around 40 % of the total capacity installed.

#### 2. Funding situation

##### EEA Grants:

EU grants for EUR 115 million for the period 2014 - 2021 provided with support from Norway, Iceland and Liechtenstein. The thematic panel "Economy" consisted of projects from 2 programmes – Green Industry Innovation and Energy Efficiency and Renewable Energy Sources.

**Banks** are also an important source of financing for wind energy and corporate finance projects. Investment projects may be subject to grant financing by the European Bank for Reconstruction and Development and the European Investment Bank in collaboration with local banks.

The Bulgarian Energy Efficiency and Renewable Sources Fund provides loans and guarantees for execution of investment projects related to using of renewable energy sources.

#### 3. Permits and authorizations

##### Building permits:

Obtaining a building permit for building a power plant generally includes drafting an investment project, drafting and coordinating a technical and an operative investment project and concluding a preliminary agreement for a grid connection.

##### Operating permission:

Constructions of first category (power plant of over 100 MW working capacity), second category (power plant with working capacity between 25 MW and 100 MW) and third category (power plant of less than 25 MW working capacity) are entered into exploitation on the basis of an operating permission, issued by the state bodies.

An exemption from the requirement for drafting an investment project and the issuing of a operating permission is prescribed for power plants of working capacity of up to 1 MW which are built on existing buildings in urban areas.

##### Licensing:

The production of electricity requires a licence issued in the name of the producer by the EWRC, unless the producer's power plant installed powers do not exceed 5 MW. The licence must be obtained prior to commencement of the production activity.

#### 4. Competitiveness

Bulgaria is competitive in terms of its natural assets, as well as due to its favourable investment environment with still relatively low salary levels and a 10 % flat tax rate on profit.

#### 5. Grid connection

Producers of renewable electric energy wishing to build an energy site for production or to enlarge an existing one submit an application to join the operator of the relevant electricity network in regions indicated by the grid operator. The application is subsequently to be approved by the EWRC.

**B. LEGAL FRAMEWORK**

<b>Real rights required</b>
According to the Energy Act, anyone applying for a licence to produce electric energy must prove the presence of a real right over the power plant producing energy.
<b>Ownership right</b>
The ownership right under Bulgarian law includes a right to use, possess, encumber and sell the owned property without limitation in time. It is usually established by way of agreement executed in notarised form for validity purposes.
<b>Superficies right</b>
The right of superficies consists of the right to erect a building on land owned by another person; the ownership right to the building; and the right to use the land pertaining to the building.
<b>Conventional and statutory right of usage and easements</b>
Easements under the Energy Act arise for entities when building power facilities. They comprise of the right of passage of people and equipment; laying power lines, technical installations as well as corresponding security restrictions.

**C. SUPPORT SCHEME / GREEN CERTIFICATES**

<b>Issues that might impede/delay the investment process</b>
Starting an investment project requires the preliminary completion of thorough and professional research of the project's compliance with the local laws as well as of any other existing or possible claims. Exemplary points regularly taken into consideration are: the existence of required ownership rights; clear property status; environmental status of the area; archeological and cultural status of the area; connectivity capacity of the corresponding grid operator.
<b>Legal provisions</b>
Bulgarian national legislation: Energy Act, Renewable Energy Sources Act, Spatial Planning Act, Environmental Protection Act, and subordinate legislation.
<b>Green certificates</b>
Green Certificates, as a trading instrument, have not yet been implemented in the Bulgarian energy market. The support scheme for the mandatory purchase of electricity produced by renewable energy sources (RES) is connected to the presence of monthly guarantees issued by the Sustainable Energy Development Agency (SEDA) per megawatt produced energy.

<b>Updates</b>
The Energy Act (EA) imposes an additional financial obligation upon all electric energy producers. The obligation consists of a 5 %-monthly installment based on the producer's aggregate net income from electricity sales on a monthly basis. The purpose of the installment is to cover costs and losses of the National Electric Company and to pay compensation premium to energy producers with total installed electricity power 500 kW and over 500 kW subject to requirements set out in the applicable legislation and after approval of the EWRC. Recent amendments in the EA also prescribe that the energy produced by newly established renewable energy power plant stations and by previously established power plants with installed capacity 500 kW and more than 500 kW shall be sold on a market price by using the services of a coordinator of a balancing group on an organized electricity market. For this purpose, the producer shall sign a contract with a licensed energy trader.

**D. ISSUES AND PROFITABILITY**

<b>Tax issues</b>
The general tax frame, as well as the special regulations which are applicable for the power production stated above, are fully applicable to electricity producers from renewable sources.
For further information please consult our "Investing in Bulgaria" brochure.
<b>Profitability</b>
Any investment expenditure analysis must account for the preparation and design costs incurred during the initial stage of a project (the first 1-4 years). Currently this expenditure ranges between EUR 55,000 up to as much as EUR 70,000 per MW of capacity of the designed wind farm (which represents about 2-4 % of the investment value). These costs include, but are not limited to: <ul style="list-style-type: none"> <li>▪ Developing the technical design;</li> <li>▪ Drafting the feasibility study;</li> <li>▪ Erecting measuring masts and wind density measurements;</li> <li>▪ Performing a study on the impact of the wind farm on the natural environment and local community;</li> <li>▪ Geological research;</li> <li>▪ Administrative proceedings.</li> </ul>
Advance grid connection fees are applicable: <ul style="list-style-type: none"> <li>▪ for Projects =&lt; 5 MW, BGN 25 000 per MW;</li> <li>▪ for Projects &gt; 5 MW, BGN 50 000 per MW</li> </ul>
The EA limits the purchase of electricity from renewable energy sources at a preferential price [only] for the quantities of electricity up to [not exceeding] the "net specific production of electricity", based upon which the preferential prices have been set in the corresponding decisions of EWRC. Quantities for "net specific production of electricity" are set in resolutions of EWRC defining different thresholds for the different types of power plants.

### A. COUNTRY PROFILE

#### 1. Overview and trends

Croatia has accepted commitments to apply European Directives in the field of renewable energy sources ("RES"), including EU Directive 2009/28/EC. From the 2020 annual report made by Croatian Energy Market Operator (HROTE), the total installed RES capacity is more than 1035 MW and is structured as follows:

- Wind power plants: 718 MW
- Solar power 53 MW
- Small hydro 6 MW
- Biomass: 86 MW
- Biogas power plants: 46 MW
- Cogeneration plants: 113 MW
- Gas power plants: 3 MW
- Geothermal power plant: 10 MW

In the Croatian Integrated Energy and Climate Plan for the period 2021-2030 emphasis is placed on the reduction of greenhouse gas emissions, increase of the renewable energy sources, increase in the energy efficiency and electricity interconnection.

The most important targets that the Croatian Integrated Energy and Climate Plan sets for 2030 are:

- reduction in greenhouse gas emissions for the ETS sector, compared to 2005 for at least 43%
- reduction in greenhouse gas emissions for non-ETS sectors, compared to 2005 for at least 7%
- target of the share of RES in gross final energy consumption of 36.4%
- target of the share of RES in final energy consumption in transport of 13.2%
- primary energy consumption (total energy consumption without non-energy consumption) at 344.38 PJ (8.23 ktoe)
- final energy consumption at 286.91 PJ (6.85 ktoe)

#### 2. Funding situation

Renewable energy is mainly supported through a feed-in tariff (Art. 33 of Act on Renewable Energy Sources and High-Efficiency Cogeneration; RES Act).

Every producer who holds the status of "qualified producer" ("povlasteni proizvođač", Art. 20 RES Act), who has been selected as the lowest bidder in a public tender and who has signed a formal agreement with the Croatian Energy Market Operator HROTE (as defined in Art. 35 RES Act) has the right to the guaranteed purchase price. The Market Operator issues a call for tenders at least once a year, if quotas for the support of certain technologies of renewable energies are available (Art. 34 § 1 and 2 RES Act).

Tenders offer guaranteed purchase prices for electricity produced in RES installations with a capacity of up to 500 kW.

#### 3. Permits and authorizations

The following are the main permits required for the construction and operation of a RES power plant:

- Energy permit;
- Construction permit;
- Use permit;
- Energy licence.

#### 4. Competitiveness

The competitiveness of the Croatian energy system is quite satisfying due to the diverse energy structure of electricity generation and relatively high share of local natural gas generation. Energy market development, country openness, risk sharing in investments, development and technological improvement, promoting larger participation of local generation and services in building and exploitation of power generation plants represent mechanisms for retaining and increasing the competitive energy system.

#### 5. Grid connection

The access of electricity from RES to the grid is regulated by the general legislation on energy and follows the principle of non-discrimination. Electricity from RES is subject to special provisions only in the case of wind power plants, which must meet special requirements and technical specifications during the connection process. The electricity transmission service within the Croatian power system is provided by the grid operator "HEP-OPS" to network users according to the agreements which they sign with the grid operator.

### B. LEGAL FRAMEWORK

#### Real rights required

Under Croatian law, one of the legal preconditions for the issuance of a construction permit is that the applicant submits sufficient evidence that he has the appropriate title to the land on which the construction is supposed to take place. Such evidence includes ownership of the land and other rights to the land recognised by the law as a legal basis for issuance of the construction permit.

**C. SUPPORT SCHEME / GREEN CERTIFICATES**

<b>Issues that might impede/delay the investment process</b>
<p>Some of the main issues that have to be taken into consideration when planning a renewable energy park in order to avoid any delays or even cancellation of the project:</p> <ul style="list-style-type: none"> <li>■ obtaining a necessary right over land;</li> <li>■ obtaining necessary permits;</li> <li>■ securing a grid connection;</li> <li>■ obtaining financing.</li> </ul>
<b>Ownership right</b>
<p>Croatian law recognises the following rights over land: ownership right (pravo vlasništvo); mortgage (hipoteka); easement right (pravo služnosti); land charge (pravo stvarnog tereta); and building right (pravo građenja). These rights are in principle established by their registration in the land registry and have legal effect not only between contractual parties but also against all third parties.</p>
<b>Superficies right</b>
<p>Superficies is a limited in rem right. It consists in the exclusion of the principle that the owner of the land owns whatever building is erected on his property. The superficies right consists of:</p> <ul style="list-style-type: none"> <li>■ the right to have or to erect a building on, under or above the land owned by another person;</li> <li>■ the ownership right to the building;</li> <li>■ the right to use the land pertaining to the building</li> </ul> <p>The superficies right allows for delimitation between the ownership of the land and the ownership of the building erected on, under or above the land owned by another person.</p>
<b>Conventional and statutory right of usage and easements</b>
<ul style="list-style-type: none"> <li>■ If the power plant is to be constructed on agricultural land, this would require the conversion of the agricultural land into construction land.</li> <li>■ The investor must hold rights of easement to land crossed by access ways or by cables.</li> <li>■ During the permit phase, abutting owners have the right to raise objections against the project, if their rights would be limited by it.</li> <li>■ The investor must hold rights of easement to the lands crossed by access ways or by cables.</li> </ul>
<b>Legal provisions</b>
<p>The Act on Renewable Energy Sources and High-Efficiency Cogeneration was adopted in 2015. Since then it has been amended 4 times. The last amendment was in December 2018. It contains the legal framework for application of the support scheme in the form of feed-in tariffs and premium tariffs. Renewable energy generation is mainly supported via a feed-in tariff for certain producers ("qualified producers"). Additionally, the Croatian Bank for Development and Reconstruction (HBOR) and the Fund for Environmental Protection and Energy Efficiency operate a loan scheme for RES-E projects.</p>

<b>Green certificates</b>
<p>Guarantee of origin is issued to the RES producer and represents a generation of 1 MWh. Such guarantees are transferable. Guarantees of origin issued in other countries are also valid in Croatia under certain conditions. Feed-in tariffs are used. GO is issued either for electricity produced from renewable energy sources power plants or from high-efficient cogeneration plants. Eligible producers who participate in the feed-in system and who are entitled to subsidised prices are not eligible to participate in the guarantees of origin system.</p>
<b>Updates</b>
<p>On February 28, 2020 the Croatian Parliament adopted Energy development strategy of the Republic of Croatia till 2030 with a look at 2050 .</p>

**D. ISSUES AND PROFITABILITY**

<b>Tax issues</b>
<p>For further information, please consult our "Investing in Croatia" brochure.</p>
<b>Profitability</b>
<p>Any investment expenditure analysis must account for the preparation, design costs and costs of obtaining the relevant permits/approvals for the project.</p> <p>These costs include, but are not limited to:</p> <ul style="list-style-type: none"> <li>■ Developing the technical design;</li> <li>■ Drafting the feasibility study;</li> <li>■ Erecting measuring masts and wind density measurements;</li> <li>■ Performing a study on the impact of the wind farm on the natural environment and local community;</li> <li>■ Administrative proceedings for obtaining relevant permits/approvals.</li> </ul>

### A. COUNTRY PROFILE

#### 1. Overview and trends

EU Directive 2018/2001 imposes a 13% renewable energy quota for the Czech Republic as a minimum by 2020 and 32% for whole Europe by 2030. According to the National Energy and Climate Plan of the Czech Republic (NECp), the share of RES in gross final consumption should be 22 % (14% in transport) by 2030. In 2020, the production of electricity from renewables amounted to 10,291 GWh, 14,42% of the brutto consumption. This level of output was stabilized in 2013 after the significant development in photovoltaic installations. In this year, Czech Republic also met its 13% renewable energy quota. In 2019 almost 30% of the RES production was produced by stated owned company CEZ, which uses mainly hydropower plants. CEZ wants to build 1,5 GWh RSE capacity until 2025 and 6 GWh RSE capacity until 2030. Renewable sources key figures:

##### Photovoltaics:

- The installed capacity as of end of 2019: 2,086.4 MW
- The NECp aims for 3,975 MW in 2030
- In 2010, there was a significant increase in installed capacity (from 464.6 MW as of end 2009 to 1,959.1 MW as of end 2010), from this point no significant change occurred.
- The share of electricity produced by photovoltaics to all electricity from RES in 2019 was 23%.

##### Wind energy:

- The installed capacity as of end of 2019: 339 MW
- The NECp aims for 970 MW in 2030
- The share of electricity produced by wind power plants to all electricity from RES in 2019 was 6,96 %.

##### Water energy:

- The installed capacity as of end of 2019: 1,093.7 MW
- The NECp aims for 1,127 MW in 2030 (pumped storage power plants are not included)
- The share of electricity produced by hydropower plants to all electricity from RES in 2019 was 19,98 %.

#### 2. Funding situation

The support scheme is based on two alternative forms of support: (i) green bonuses and (ii) feed-in tariffs.

In 2019, 1,632 million EUR was distributed as support / subsidies for renewables (supported volume 8,248 GWh). Breakdown for type of sources is as follows:

- photovoltaic: 1,121 million EUR
- wind power: 502 million EUR
- hydro power: 76 million EUR
- bioenergy: 383 million EUR

Banks are willing to re-finance existing projects. Most of them are cautious towards photovoltaic due to the negative perception of the general public. Most major banks in the EU and the Czech Republic provide their services that are conditional on achieving carbon neutrality.

In 2021, it is expected that up to 1.82 billion EUR will be allocated to support promoted energy sources (based on production volume). Total amount will be slightly higher than in the last years. Approximately 1.03 billion EUR will be financed from the state budget in a form of subsidies and the rest of the amount will be paid by consumers through their energy bills.

#### 3. Permits and authorizations

In the Czech Republic, the following permits and authorizations should usually be obtained in order to operate renewable energy sources in line with the national legislation:

- Building permit
- Licence from the Energy Regulatory Office ([www.ero.cz](http://www.ero.cz))
- Connection agreement to a distribution grid
- Specific permits and authorizations dependent upon the type and size of an installation (e.g. authorization for use of surface water)

#### 4. Competitiveness

In 2009/2010, generous subsidies and a decrease in the acquisition costs of photovoltaic panels (mainly made in China) at the same time led to an artificial development of photovoltaics. The resulting increase in the price of electricity for consumers and the increased risk of instability of the transmission system at that time had a negative impact on the perception and need of renewables by the general public. Renewables have been the subject of political debates constantly from that time. Several measures covering existing renewable projects have been introduced.

Tension escalated in 2013 when the Energy Regulatory Office with legal support stopped support payments for new energetic producers using renewable energy from 2014 onwards. This real fear led the owners of renewables installations and their creditors to become anxious as their expected profits would not materialise. At the end of December 2015, the Energy Regulatory Office published the new price decision which laid down the support payments also for those installations commissioned from 2006 to 2012. However, this was not provided for in the Energy Regulatory Office's price decision from November 2015. The new proposal of price decision for 2020 contains these support payments as well. However, new guideline of European Commission reduces support of renewable energy in Czech Republic in its recent form, and changes of whole support scheme are expected. This inconsistency has led to uncertainty amongst investors and made investment into renewables in Czech Republic considered to be unstable, unpredictable and nontransparent. According to the amendment of the Act 165/2012 (the main law for RES in the Czech Republic) which is in the legislative approval process in 2021, there probably will be higher tax and lower profit due to the lower IRR for solar power stations which were built and put into operation between 2009 and 2010.

## Czech Republic

### A. COUNTRY PROFILE

#### 5. Grid connection

CEPS is the sole Czech transmission system operator. CEPS is responsible for electricity transmission at the highest voltage level and for maintaining the balance between the production and consumption of electric power.

The system is 5,775 kms long,

- thereof length of 400 kV power lines: 3,867 km
- thereof length of 220 kV power lines: 1,824 km
- thereof length of 110 kV power lines: 84 km

The amount of electricity transferred across the transmission system was 65,058 GWh in 2020.

The electricity transmission network is deemed to be strong and reliable thanks to its robust technological infrastructure. CEPS pursues an extensive investment plan to maintain grid stability and the reliability of supplies and 1.967 billion EUR are expected to be invested until 2030.

### B. LEGAL FRAMEWORK

#### Real rights required

The following legal documents govern the renewables in the Czech Republic principally:

- Act No. 165/2012 on supported energy sources and amending certain laws
- The Energy Regulatory Office's Price Decision
- National Action Plan for renewable energy

### C. SUPPORT SCHEME / GREEN CERTIFICATES

The main regulatory body is the Energy Regulatory Office which is responsible for determining the scope and level of support for supported energy sources. The term "supported energy sources" is stated in Act No. 165/2012 on supported energy sources and amending certain laws.

There are two types of support available, namely green bonuses and purchase prices (feed-in tariffs), nevertheless green bonuses are prioritized. In 2020 reported total support paid reached 43,218 mil. CZK (1,662 mil. EUR) and supported production volume reached 8,580 GWh:

- the reported volume breakdown is as follows: (i) green bonuses 7,351 GWh (85.6 % of total) and (ii) feed-in tariff 1,229 GWh (14.4 % of total);
- the support after settlement breakdown is as follows: (i) green bonuses 1,049 million EUR (63.1 % of total) and (ii) feed-in tariff 613 million EUR (36.9 % of total).
- the number of applicants breakdown is as follow: (i) green bonuses 28 075 and (ii) feed-in-tariff 4 824

The Energy Regulatory Office determines green bonuses and the feed-in tariff separately for each type of renewable energy source on a yearly basis with possible amendments during the period.

Support scheme above is to be changed in the near future, as says the proposal of amendment to the Act 165/2012 prepared in 11/2018. Main change

is in introduction of the auction-based support for productions with energy capacity above 1MWh, and in the sole support for smaller productions in form of green bonuses. The Chamber of Deputies approved the amendment to the Act 165/2012 in April 2020 but the support scheme remains the same for next 2 years. Any future changes also depends on new EU's quotas. Ministry of Industry and Trade has its subsidies in form of Operational Programme for legal persons outside the city of Prague (OP PIK) for use of biomass, biogas and hydro power; and for public institutions in whole area of Czech Republic (OP ŽP) for use of photovoltaic rooftop and facade installations. These programmes are aimed to efficient energy management, development of renewable energy sources and support of production and distribution of renewable energy. Although commercial investments in the installation of new renewables peaked back in 2009/2010, the Czech Republic could participate on a new EU Modernization Fund ("MF"), which primarily draws funds from emission allowances. The purpose of the MF is to support lower-income EU Member States in their transition to climate neutrality by helping to modernise their energy systems and improve energy efficiency. The support is a fixed amount according to the type of new energy source/system acquired and limited to 50 % of the proven expenditure. In terms of photovoltaic systems for households, installed capacity should not exceed 10 kWp. 173 million EUR for new photovoltaic projects from Modernization Fund will be distributed in 2021 in the Czech Republic. However the MF's capacity is 5,76 billion EUR for the Czech Republic. These funds will be distributed in the next 10 years in the form of subsidies for green projects and almost 40 % of this fund should go directly on RES project.

### D. ISSUES AND PROFITABILITY

#### Tax issues

For information please consult our brochure, "Investing in the Czech Republic"

#### Profitability

Feed-in tariffs are set by the Energy Regulatory Office such that the 15-year simple return on investment is guaranteed. In the case of green bonuses, the owner of a renewable project bears the higher market risk as he/she is responsible for finding a customer for the electricity generated and for setting the conditions of such supply. However, this higher risk tends to be associated with higher revenue and hence theoretically can shorten the pay-back period and lead to higher IRR. As it was mentioned in the section about the competitiveness, the amendment of the Act 165/2012, which is in the legislative approval process in 2021, adjusts parameters for carrying out activities in the RES field. There probably will be a change in a solar tax. Solar power plants built in 2009, which has not been impact by the solar tax so far, will now taxed by 10 % in the case they use feed-in tariffs and 11 % for those who use green bonuses. Solar power plants built in 2010 will be probably taxed by 20 % in the case they use feed-in tariffs (10 % so far) and 21 % for those who use green bonuses (11 % so far). In addition, the IRR of solar power plants should not exceed 6,3 % (8,4 % so far).

Furthermore, the Czech Republic is often deemed by investors as an unstable and also unpredictable venue for their long term investment in RES. Renewable sources are subject to negative scrutiny from regulators and politicians.

### A. COUNTRY PROFILE

#### 1. Overview and trends

EU Directive 2018/2001 of the European Parliament and of the Council imposes a 13 % renewable energy quota for Hungary by 2020 as a minimum. In 2019, the production of electricity from renewables amounted to 10 % (2018: 8.3 %) of the gross consumption, including

- 37.7 % biomass
- 31.9 % solar energy
- 15.6 % wind energy
- 6.8 % bio gas
- 4.7 % water energy
- 2.9 % renewable part of municipal waste
- 0.4 % geothermal

#### Bio mass

A significant part of Hungary's renewable energy sources comes from biomass. In 2020, 3.5 tons of biomass was used for energy purposes by domestic plants, 9 percent more than in 2019.

#### Photovoltaics

In Hungary, the total capacity of power plants increased from 153 MW (2015) to 1,848 MW by the end of September 2020.

#### Wind energy

The wind energy capacity at the beginning of 2021 is 325 MW. The utilization of wind farms in Hungary is surprisingly good. Despite good production results, no new capacity has appeared in the system in the last 10 years, and since 2016 the law provides that wind farms may be installed at a minimum safety distance of 12 kilometres from the inhabited areas of the country. The rule essentially completely excludes the installation of wind parks.

#### 2. Funding situation

The most common fundings for the support of the use of renewable energies were announced by the Hungarian state and the EU.

In 2021, the framework of the EU tender supporting the renewable energy developments of companies was increased to HUF 55.6 billion (approx. 154 Million EUR). Among the renewable energy sources in Hungary, the state mostly supports energy production from solar energy and biomass.

#### 3. Permits and authorizations

The following are the main permits required for the construction and operation of a RES power plant:

- Construction permit and use permit is needed
- For power plants with a capacity of 50 MW or more an operating license, for small power plants with a capacity of 0.5 MW or more a combined small power plant license must be held

#### 4. Competitiveness

Hungary is favourable investment environment with relatively low salary levels and a 9 % flat corporate income tax rate, however might be disadvantageous for green energy investors because of the so-called "Robin Hood tax".

#### 5. Grid connection

The new power plant to be built is entitled to a grid connection fee discount if it can only be operated with the following primary renewable energy sources:

- solar energy
- wind energy
- geothermal energy
- hydro energy

## Hungary

### B. LEGAL FRAMEWORK

The power plant construction permit procedure may be initiated by the power plant licensee or the builder if they certify their right to build on the property used for the location of the power plant.

For the installation of production lines of power plants with a capacity of more than 50 MW and power plants using renewable energy sources, the authority may grant a right of way for the benefit of the builder or the licensee of the production line, provided that the use of the property is not significantly impeded.

### C. SUPPORT SCHEME

Until 31.12.2016 it was possible to submit applications in the "KÁT" fixed feed-in-tariff support scheme. In 2017 a new scheme called "METÁR" (renewable energy support scheme) was launched, which had several sub-programs since its inception.

Currently, solar PV projects can secure support through the scheme by successfully bidding in the green premium auction system (in the case of biomass and biogas projects there is a brown premium system).

Over time the conditions of the support schemes gradually shifted from a fixed feed-in tariff, which generated stable cash flows to the investors, to a competition-oriented and technology-neutral system.

With the exception of the brown premium system and the small household-scale installations, METÁR is available for renewable electricity production projects prior to the construction phase.

### D. ISSUES AND PROFITABILITY

#### Tax issues

For information, please see our brochure, "Investing in Hungary".

#### Profitability

Under current regulations the income tax of energy suppliers (a.k.a. "Robin Hood tax") is payable by renewable electricity producers, except those that participate in KÁT or METÁR funding system and have a capacity of less than 50 MW. The tax is 31 % (the tax base roughly corresponds the base of corporate income tax).

This tax burden puts future PV developments that would take place without the above subsidies in a difficult position by putting the producers concerned at a multiple disadvantage, as they do not receive state subsidies and they have to pay the special tax.

## A. COUNTRY PROFILE

### 1. Overview and trends

Latest developments in the Polish renewable energy market point to the end of a stagnation period.

- **Wind onshore** - 6.854 MW
- **Photovoltaic** - 4.700 MW
- **Hydro** - 976 MW

Total capacity of RES sector reached 13.700 MW in 4Q2020.

The share of renewable energy in gross final energy consumption in 2019 (latest official data) amounted to 12,16%. Forecasts suggest that the 15% level will be reached in 2022.

### 2. Funding situation

There are the following **support systems**:

- Auction system (feed-in-premium)
- Tradable certificates of origin (green certificates)
- Feed-in tariffs (for water and biogas installations < 500kW)

On the basis of the project of the long-term EU budget 2021-2027 it can be concluded that further development of RES will be able to expect further and significant financial support, in the spirit of the European Green Deal.

**EU and Government funds** - new funding options for RES investments to be expected. The details are yet to be revealed.

**Bank financing** - in general, higher requirements for RES projects due to regulatory instability over the last few years. The approach of the banks could change in the wake of the European Green Deal.

**Corporate PPA** - private power purchase agreements for the period of 10 to 15 years may remain a reasonable alternative in case of limited accessibility of public support.

### 3. Permits and authorizations

Requirements depend on the type and size of the power plant. Basic requirements are:

- **Building permits (for RES and grid connection)**
- **Local Zoning Plan** - an act of local law which defines the purpose and the conditions of land development.
- **Decision on environmental conditions of the permission for realisation of the project**

### 4. Competitiveness

In 2015-2018, the attractiveness of the Polish market of renewable energy sources significantly decreased. This was mainly the result of the state policy in relation to regulations governing renewable energy from wind farms.

In particular, the wind energy market struggled with the multiple increase of the taxation level of windmills (changes introduced in 2017 that were

reversed in mid 2018) and restrictions on their location at a distance of not less than 10 times its height from residential buildings or protected areas (10H rule). After a few years of stagnation new business opportunities are opening up in the light of the changing market conditions and the policy change driven by the European Green Deal. Due to the constantly rising costs of CO<sup>2</sup> with lower index instead of upper emissions and the high cost of domestic coal, energy production in Poland is becoming less and less competitive. The most beneficial alternative to fossil fuel energy production is cheap and clean renewable energy. The auction outcomes prove that in Polish conditions wind energy and photovoltaic is the cheapest on the market and that its development is a chance for cheaper energy for Poles. The largest RES auction was successfully concluded in 2020, which will translate into the construction of another 0.9 GW from onshore wind installations. However, the full unlocking of the onshore potential will only occur with the lifting of the rigid 10H rule.

### 5. Grid connection

The transmission grid, operated by PSE S.A., consists of 281 power lines of 15 316 km in length. Over 40 entities act as distribution system operators, of which the 5 biggest ones control 852 000 km of power lines and serve 17 million clients.

## B. LEGAL FRAMEWORK

### Real rights required

Under Polish law the legal title to the land must be obtained for all the infrastructure of the power plant. There are four ways to hold the legal title to the land:

- ownership right
- perpetual usufruct
- limited right in rem (usufruct, transmission easement),
- civil law contract (i.e. leasing, lease contract).

### Ownership right

Ownership right ensures the right to:

- possess
- use
- dispose

within the limits set by the:

- law
- principles of community life
- the socio-economic purpose of the right.

## B. LEGAL FRAMEWORK

### Perpetual usufruct

A perpetual usufruct consists of:

- the right to use the real estate in the manner specified in the agreement, for example, the right to erect a building and other facilities, establishing manufacturing plant,
- disposal.

The duration of a perpetual usufruct is limited by the agreement to a maximum of 99 years.

### Conventional and statutory right of usage and easements

**Usage (usufruct)** - a non-transferable limited real right which gives the user the right to use the real estate and collect profits from it

**Easement** - generally taking one of two main kinds:

- land easement
- transmission easement.

### Civil law contract

Lease contract is the most frequently used form of obtaining the legal title to the real estate for the location of renewable energy power plants such as wind or photovoltaic power stations.

### Issues that might impede/delay the investment process

Following issues have to be taken into consideration when planning a renewable energy park in order to avoid any delays or even cancellation of the project.

- potential changes of law (in particular regarding support system)
- potential difficulties associated with obtaining grid connection
- environmental requirements
- necessary permits

## C. SUPPORT SCHEME / GREEN CERTIFICATES

### Legal provisions / Support scheme

Act dated February 20, 2015, on Renewable Energy Sources (Journal of Laws of 2018, Item 2389, consolidated text) and further amendments that introduced auction system in 2016.

### Green certificates / Auction system

All RES installations that started production of electricity before 1 July 2016 had the possibility of being granted green certificates for the next 15-year period.

The price of green certificates on the stock exchange is shaped in a market manner by the demand for certificates, their supply and the substitution fee. It is defined by law, and the President of the Energy Regulatory Office announces its amount annually. The system does not provide for a minimum price.

The auction system's most important features are:

- the offer includes the amount of energy the producer undertakes to deliver over a period of 15 years and the unit price of the energy produced,
- the price in the offer can not exceed the reference price for a given type of installation,
- support is granted to projects that have declared the lowest unit price, until the volume limit determined by the President of the Energy Regulatory Office,
- for 15 years after completing the investment and introducing the energy for the first time, the producer will sell the agreed amount of energy and for the agreed price,
- the price for auction winners will be awarded for a period of 15 years and indexed each year by CPI inflation.

### Updates

2Q 2021: The Council of Ministers is proceeding with the amendment of a regulatory Act from 2015 that introduced the wind farm construction ban if the distance is less than 10-times the height of the wind turbine from housing buildings. This regulation is supposed to be replaced with a less restrictive limit. As of end of July 2021 the draft still awaits in the Parliament for further legislative steps. Adopted the draft of another amendment to the Act on Renewable Energy Sources that will enable auctions until 31 december 2027.

## D. ISSUES AND PROFITABILITY

### Tax issues

For further information please use our "Investing in Poland" brochure.

### Profitability

On average, operational costs of wind farms are relatively low (3-4 % of investment outlays annually). The amount of outlays depends on a kind of applied technology and the location of a power plant. Current outlays in the purchase and installation of turbines and construction works (including electrical works) amount to approximately PLN 5.4 million per MW. Total investment outlays reach PLN 6.7 million per MW. Investment outlays are mainly the costs of turbines, which constitute around 60% of the total value of preparing and erecting a farm on land (PLN 4.9 million per MW). Moreover, the investor bears, among others, the costs of construction works (PLN 0.5 million per MW), project preparation (PLN 1.0 million per MW), and connection to the grid (PLN 0.2 million per MW).

In June 2021 reference (maximum) auction price for onshore wind with a total installed electric power of more than 1 MW was set at PLN 250. In the auction conducted 8 June 2021, the lowest price at which the producers agreed to generate energy from wind farms for a period of 15 years amounted than PLN 179 / MWh whereas the highest rate agreed was PLN 242/MWh.

Average price of electricity (MWh) in June 2021, quoted by the Energy Regulatory Office, reached PLN 353,56 per MWh. Average green certificate price on Polish Power Exchange as in June 2021 was PLN 161,91 per MWh.

## Romania

### A. COUNTRY PROFILE

#### 1. Overview and trends

##### Renewable energy sector trends

Romania has a balanced mix of resources: hydropower, wind, photovoltaic, geothermal and biomass. Despite its potential and the European Union's efforts to stress the importance of renewable energy, most recently by proposing the "Fit for 55" package, the lack of predictability in the national legislative framework has led to a stark decrease in investment. In 2020, the reported net generating capacity of the Romanian Energy System based on renewable sources was 10,904 MW (hydropower, 6,505 MW; wind power, 2,953 MW; solar power, 1,362 MW; and biomass, 84 MW), representing 57.5% of the entire installed energy capacity. By 2030, Romania aims to add 2,302 MW of wind power and 3,692 MW of solar power, based on the figures for 2020.

**Mandatory quota of renewable energy for 2030:** 72% including hydropower (41.7% without hydropower), according to the 2020 Romanian National Plan for Energy and Climate Change.

The Romanian government estimates that, in addition to new investments, 3 GW of existing wind power capacity and 1.35 GW of existing solar power capacity will need to be repowered by the end of 2030, contributing substantially to the growth of installed capacities.

#### 2. Funding situation

##### EU Financing

The new financing programmes for the period 2021-2027 and the Romanian Recovery and Resilience Fund (RRF) are still under negotiation with the European Commission.

##### EEA Grants

A new financing period for EEA Funds (financed by Norway, Iceland and Liechtenstein) with new programmes and conditions will be launched in 2022.

#### 3. Permits and authorizations

The construction of a renewable energy plant always requires a building permit, irrespective of the installed capacity. As a rule, the building permit will be issued by the local public administration; however, in specific cases the permit will be issued by the president of the county council with the consent of the mayor of the town or commune in question. A building permit is issued within 30 days of submission of the complete documentation to the competent authority. The process for obtaining the complete documentation requires various other permits and approvals, depending on the location and specific technical documentation and the real rights over the project land.

A "setting-up authorisation", separate from the building permit, is required for energy projects with an installed capacity > 1 MW and will be issued by the ANRE within 60 days of submission of the complete documentation. Where the installed capacity falls between 500 kW and 1 MW, this authorisation is not necessary, but ANRE must be provided with data about the investment project and with regular reports on the development status. For an installed capacity < 500 kW, no such notification is necessary.

#### 4. Competitiveness

Romania's main objectives in recent years have been to improve the competitiveness of the internal electricity market, to play an active role on both regional and EU energy markets, and to develop cross-border exchanges. According to energy specialists, Romania is entering the second stage of renewable energy development.

Energy efficiency and renewable energy are one of the six pillars of the National Recovery and Resilience Plan for 2021, through which Romania has access to EUR 29.2bn of funding.

The Green Transition, one of the plan's six pillars, establishes a separate category for renewable energy and energy efficiency. If a project is mature and has advanced technical and economic documentation, it may be eligible for funding.

The full impact of wind farms on the Romanian economy is expected to be EUR 5.47 billion between 2021 and 2030. The direct effect (EUR 2.52 billion) reflects the total of all activities carried out by wind power plant suppliers and subcontractors, while the indirect effect (EUR 2.95 billion) is the sum of all activities carried out by wind power plant suppliers and subcontractors.

#### 5. Grid connection

Connection to the grid is only achieved if, following the issuing of the Technical Connection Permit (ATR), a connection agreement is signed and the connection fee paid within a certain timeframe after the ATR has been issued. It's all about timing. Before signing the connection contract, various processes (such as acquisition of building consent) need to be completed. Payment of the connection fee, which is usually quite high, implies that financing is already in place.

**B. LEGAL FRAMEWORK**

<b>Real rights required</b>
A building permit is required to build any facility for the production of energy and will only be granted if a specific <i>in rem</i> right to the land on which the facility is to be erected has been demonstrated. The <i>in rem</i> right can be demonstrated either by means of an ownership title to the land or a superficies right to the land.
<b>Ownership right</b>
An ownership right affords the owner the absolute right to use, encumber and sell the owned real property without limitation in time, including the right to build on the property any building or other type of structure, whether permanent or temporary.
<b>Superficies right</b>
A superficies right consists of: <ul style="list-style-type: none"> <li>the right to have or to erect a building on, under or above the land owned by another person</li> <li>the ownership right to the building</li> <li>the right to use the land pertaining to the building.</li> </ul> <p>The duration of a superficies right is limited to a maximum of 99 years with an option to extend.</p>
<b>Conventional and statutory right of usage and easements</b>
In order to access the energy plant during and after finalisation of the construction works or with respect to the path of electric cables crossing any third party property, the investor must hold rights of easement vis-à-vis the land in question.
<b>Issues that may impede/delay the investment process</b>
Issues to be taken into consideration: public property; restitution claims/litigations affecting the land; instatement of ownership title; interdictions to sell the land; historical monument status; archaeological status; lack of urbanism certificate.

**C. SUPPORT SCHEME / GREEN CERTIFICATES**

<b>Green certificates</b>
GCs may be traded on OPCOM's centralised green certificates market, as well as on the market for bilateral GC contracts. Producers may enter into bilateral sale-purchase agreements for GCs directly negotiated with suppliers to end consumers, similar to energy trading.
Green certificates are traded at a price that fluctuates within a range established by Government Decision. A minimum price is set in order to protect producers, and a maximum price in order to protect consumers.
In 2016, the support scheme for GCs came to an end, which means that new projects no longer have GCs. However, investors who built before December 2016 will continue to be able to trade GCs until December 2031.

**D. ISSUES AND PROFITABILITY**

<b>Tax issues</b>
For information on tax matters, please consult our "Investing in Romania" brochure. Particular levies imposed by the energy regulatory body should be assessed on a case-by-case basis.
<b>Profitability</b>
The profitability of renewable energy projects commissioned up until the end of 2016 has been based on the Green Certificates Scheme. This scheme was initially very attractive for RES investors, but this became less the case later on, leading to a dramatic fall in investor confidence due to the significant decline in the profitability of their projects.
There is currently no support scheme for newly built projects, but Romania is working on implementing a new support mechanism based on tenders, the so-called Contract for Differences (CfD) mechanism. This could become operational within two years and is aimed at eligible producers of clean energy using low-carbon technologies such as hydropower, wind power, solar PV, etc., as well as nuclear power and fossil fuels by means of storage technologies. This mechanism is based on tenders and is subject to individually negotiated Contracts for Differences. With this commercial instrument, eligible producers enter into a private contract (a CfD) with a nominated counterparty and agree on a 'strike price' (Romanian: 'pret de exercitare'). The electricity is then sold at the market price on the centralised power exchange. If the market price drops below the strike price, the counterparty reimburses the difference to the producer; where if the market price exceeds the strike price, the producer reimburses the difference to the counterparty.
Once implemented, the CfD scheme will run in parallel with the GC system, which is valid until 2031.

## A. COUNTRY PROFILE

### 1. Overview and trends

- Being a party to the Energy Community Treaty, Serbia accepted the commitment to transpose European Directives in the field of renewable energy sources (the "RES"), including EU Directive 2009/28/EC, setting the target for RES to 27% by 2020. Such a goal is also strategically set in the National Action Plan for Use of Renewable Energy Resources, valid until 2020, and in the Strategy of Development of Energy of the Republic of Serbia until 2025 with projections until 2030 (the "Strategy").
- According to the Strategy, the potential of renewable energy in Serbia is substantial and is estimated at 5.6 Mtoe per year. The potential of biomass is largest and amounts to 3.4 Mtoe per year. Hydro potential amounts to 1.7 Mtoe per year, of which 0.8 Mtoe per year has already been exploited, while the potential of wind-based energy amounts to 0.1 Mtoe per year

Currently, the total reserved installed RES capacity is as follows:

- Wind: 500 MW;
- Photovoltaic: 8.8 MW;
- Small hydro: 91.4 MW;
- Biogas: 38.9 MW.

### 2. Funding situation

The support scheme in the form of feed-in tariffs for electricity producers from RES is recognised under the Energy Law adopted in 2014 (and amended in 2018). A decree setting out the applicable feed-in tariffs from the RES has been adopted by the Government of the Republic of Serbia and its validity has been extended until the end of 2019.

According to the information available in the public domain, The Ministry of Energy is working on the draft of the new Energy Law that should introduce an auction system. However, further details about the type of the auctions that will be introduced are not publicly available as the draft law has still not been provided for public discussion. It is expected that the new Energy Law will be adopted by the end of 2019.

#### Banks:

The Energy Law improved the Serbian energy sector's regulatory framework by removing a number of obstacles contained in the previous energy law and regulated in more detail issues which were of the utmost importance to the investors, such as the setting up of the grid connection infrastructure by the power producer, application of a single PPA from the moment the investor obtains the status of a preliminary privileged power producer, the possibility to extend the status of preliminary power producers, etc. Such amendments significantly increased the bankability of the RES projects and both foreign and domestic banks are regularly seen as financiers of such projects.

### 3. Permits and authorizations

The following are the main permits required for the construction and operation of a RES power plant:

- Energy permit;
- Construction permit;
- Use permit;
- Energy license.

### 4. Competitiveness

Due to changes in the legal framework which increased the bankability of the RES projects, investors have already filled the quota set for wind and solar. We understand from market sources that some of the existing investors are now considering selling their stakes partially or entirely in a number of such projects.

### 5. Grid connection

The grid connection is controlled by the TSO "Elektromreze Srbije". The transmission system comprises of approx. 9,765 km of power lines of 400 kV, 220 kV and 110 kV and transformer stations and is interconnected with all neighbouring countries.

There are plans to further modernise and enlarge the transmission system according to the plan for development by 2024.

**B. LEGAL FRAMEWORK**

<p><b>Real rights required</b></p> <p>Under Serbian law, one of the legal preconditions for the issuance of a construction permit is that the applicant submits sufficient evidence to show he has the appropriate title to the land on which the construction is supposed to take place. Such evidence includes ownership of the land and other rights to the land recognised by the law as a legal basis for issuance of the construction permit.</p>
<p><b>Ownership right</b></p> <p>The ownership right under Serbian law offers the owner an absolute right to:</p> <ul style="list-style-type: none"> <li>▪ use</li> <li>▪ build</li> <li>▪ encumber and</li> <li>▪ sell</li> </ul> <p>Necessary permits, easements and other encumbrances on land can restrict this right.</p>
<p><b>Other rights to the land</b></p> <p>Other rights to the land recognised by the law as a legal basis for the issuance of the construction permit include easements over the land, leases or documents of consent issued by owners/users of the land.</p>
<p><b>Conventional and statutory right of usage and easements</b></p> <p>In line with the latest amendments of the Law on Planning and Construction, the power plant may be constructed on agricultural or forest land, without a need to obtain an approval by the ministry in charge of agriculture prior to the commencement of construction.</p>

**C. SUPPORT SCHEME / GREEN CERTIFICATES**

<p><b>Issues that might impede/delay the investment process</b></p> <p>Some of the main issues that have to be taken into consideration when planning a renewable energy park in order to avoid any delays or even cancellation of the project:</p> <ul style="list-style-type: none"> <li>▪ obtaining the necessary right over the land;</li> <li>▪ obtaining necessary permits;</li> <li>▪ securing a grid connection;</li> <li>▪ obtaining financing.</li> </ul>
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<p><b>Legal provisions</b></p> <p>The Serbian Energy Law contains the legal framework for the application of the support scheme in the form of feed-in tariffs. Specific regulatory framework is now set out in several decrees that were eventually adopted by the government – the decrees on the model for PPAs (“<b>Model PPA Decree</b>”), incentives relating to electricity production from renewable energy sources (“<b>Incentive Measures Decree</b>”), and on the requirements and procedure to acquire the status of a privileged power producer from renewable sources (“<b>PP Status Decree</b>”).</p>
<p><b>Green certificates</b></p> <p>A guarantee of origin is issued to the RES producer not holding a status of a (preliminary) privileged power producer and represents a generation of 1 MWh. Such guarantees are transferable. Guarantees of origin issued in other countries are also valid in Serbia, under certain conditions. On the other hand, for the RES producer holding a status of a privileged power producer, feed-in tariffs are used to support electricity production and are guaranteed for a period of 12 years..</p>
<p><b>Updates</b></p> <p>Feed-in tariffs are annually adjusted each February per inflation in the Eurozone..</p>

**D. ISSUES AND PROFITABILITY**

<p><b>Tax issues</b></p> <p>For further information, please consult our “Investing in Serbia” brochure.</p>
<p><b>Profitability</b></p> <p>Any investment expenditure analysis must account for the preparation, design costs and costs of obtaining the relevant permits/approvals for the project. These costs include, but are not limited to:</p> <ul style="list-style-type: none"> <li>▪ Developing the technical design;</li> <li>▪ Drafting the feasibility study;</li> <li>▪ Erecting measuring masts and wind density measurements;</li> <li>▪ Performing a study on the impact of the wind farm on the natural environment and local community;</li> <li>▪ Administrative proceedings for obtaining relevant permits/approvals.</li> </ul>

### A. COUNTRY PROFILE

#### 1. Overview and trends

EU Directive 2009/28/EC imposes a 14% renewable energy quota for Slovakia as a minimum in 2020, the production from electricity from renewables amounted to 14% of the gross consumption.

In 2020, the overall production of electricity in Slovakia totalled 29 TWh, of which 53% was produced by nuclear powerplants, 16% by fossil powerplants, 17% by hydro powerplants and 14% by other renewable sources of electricity. 3.8TWh had to be imported to Slovakia but this trend might be changed after new blocks of nuclear powerplant in Mochovce are completed and in full operations.

#### 2. Funding situation

The support scheme in the form of feed-in tariffs for electricity producers from RES is recognized under the Energy Law adopted in 2014 and amended in 2017 for period 2017-2021, the amendment implements decrease of feed-in tariffs for photovoltaics by 5% and for production from wind power by 30%. However, absolute feeds volume still grows with increasing number of RES producers.

##### Banks

In order to attract further interest from banks to support the RES projects, it is important that the implementing legislation adopted pursuant to the Energy Law is seen as bankable.

#### 3. Permits and authorizations

In Slovakia, the following permits and authorizations should usually be obtained in order to operate renewable energy sources in line with the national legislation:

- Building permit
- Licence from the Regulatory office for Network Industries ([www.urso.gov.sk](http://www.urso.gov.sk))
- Connection agreement to a distribution grid
- Specific permits and authorization dependent upon the type and size of an installation

#### 4. Competitiveness

In 2015, several investors in renewables were removed from a support scheme not allowing them access to the feed-in tariff system. Controversy arose as this step was taken retroactively via a new administrative obligation – a notification process – which some operators failed to fulfil.

This abrupt change might have economically endangered some operators. Covenants of financing banks providing the necessary leverage to the projects could be broken and stricter loan conditions could be imposed for the coming years, ultimately changing the return for owner. Moreover, it might have led to a deterioration of the the position of sellers in renewable projects during the sale process.

Due to the stable regulatory environment the only consequence could be a lower exit value. The development of new projects has likely been negatively affected as investors have lost confidence in the stability of the legal framework.

#### 5. Grid connection

The transmission system operator in Slovakia is the Slovenska elektrizacna prenosova sustava, a.s. company (SEPS, [www.sepsas.sk](http://www.sepsas.sk)). According to published 2020 data the transmission system lines is 2,987 km long:

- thereof length of 400 kV power lines: 2,138 km
- thereof length of 220 kV power lines: 769 km
- thereof length of 110 kV power lines: 80 km

The transmission system has more than 7,300 towers. In 2020, a total of 31,524 GWh of electricity was transmitted through the system.

## Slovakia

### B. LEGAL FRAMEWORK

The following legal documents govern renewables in Slovakia principally: Act No. 309/2009 on support of renewable energy sources and high efficiency CHP and amending certain laws, the Act amendment effective 1 January 2019 enables electricity production for private purpose and introduces auctions which are expected to tender low electricity prices and to generate 500 MW.

The Regulatory Office for Network Industries resolutions are setting conditions of the support scheme National Action Plan for renewable energy.

### C. SUPPORT SCHEME / GREEN CERTIFICATES

Regional grid operators are obliged to prioritize renewable energy installations for connection to the grid. Mandatory off-take by a regional distribution system operator for "the electricity price on loss" (stable prices for 15 years with expectation of prolongation to 20 years by the green energy legislation amendment in 2021).

The price on loss represents the arithmetic mean of electricity prices for the purpose of covering losses of all regional distribution grid operators and is calculated on the basis of the schemes determined by the Slovak Regulation Office. Feed-in tariffs are set by the Regulatory Office for Network Industries.

### D. ISSUES AND PROFITABILITY

#### Tax issues

For further information please consult our brochure, "Investing in Slovakia".

#### Profitability

In Slovakia, the profitability of the energy industry is 11.5%, based on figures of the top 70 companies published in Trend Top Raking 2014.

The trend is clearly towards biomass.

Due to the Act No. 309/2009 small plants (< 10 kWp) are excluded from entrepreneurial activities.

## TPA's integrated services for the energy industry

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### Adding value to energy projects

Regulated markets create a hermetic area, where the majority of free market economy solutions are inadequate. Our sector specific products rely on the extensive project experience of our experts, in-depth knowledge of the industry and regulatory issues.

### Transactional Advisory and Valuation

- due diligence for Alternative Energy and Energy Efficiency projects
- sell-side and buy-side advisory
- transaction support
- financial and tax due diligence
- tax structuring and tax planning
- valuation of entities, brands and intangibles
- preparation of prospectus and memorandum
- debt restructuring
- purchase price allocation advisory
- financing

### Business Advisory

- quick project review
- feasibility studies
- preparation of financial screenings and budgets
- financial analysis and project evaluation
- financial planning and optimization
- reviews of management processes
- impairment tests
- M&A advisory, obtaining investors and investment projects
- creation and implementation of financial strategies, verification and optimization of financing structure
- public offering (IPO) advisory
- post merger integration advisory
- performance improvement
- tax capital groups
- shared service centers

### Outsourcing

- bookkeeping
- administration of earnings and personnel
- reporting & compliance with stock market standards

### Investment Optimization

- tax planning of investment and modernization
- investment financing
- terminal investments realized with third parties
- application for national and/or EU funding

### Competitiveness Improvement

- tax risk management
- optimization of post-transaction processes
- optimization of taxation of real estate (standalone units, technical buildings, objects in buildings, non-structural elements of buildings, mines and recultivated grounds)
- tax optimization of green certificate's trade
- transfer pricing and tax planning of intra-group transactions
- tax optimization of intangibles
- tax planning with respect to contracts with trade unions and benefits for employees
- design of motivation systems, individual systems for remunerating
- and awarding employers and management board members

### Audit

- verifications and reviews of financial reports and consolidated financial statements
- conversion of financial statements from local GAAP to IFRS
- verification of merger plans, demerger plans and transformation plans
- reviews of accounting books with respect to arranged procedures

## List of abbreviations

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CHP	Combined heat and power
CPI	Consumer price index
EA	Energy act
EIB	European Investment Bank
GC	Green certificates
GO	Guarantees of origin
GWh	Gigawatt hour
kV	Kilovolt
kW	Kilowatt
kWp	Kilowatt peak
MW	Megawatt
MWh	Megawatt hours
MWp	Megawatt peak
NAP	National action plan
PPA	Power purchase agreements
PV	Photovoltaic
RES	Renewable energy sources
RES-E	Renewable energy sources - electricity

## Notes

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## TPA Group

In tax advisory, auditing and advisory, not only the phrase “other countries, other customs” is valid but also other markets, other legislation, other languages and much more. Therefore, we await you on-site with high-quality consultancy, know-how and an understanding for your individual situation.

Because even if everything else is different, one aspect should remain the same: your corporate success.

The TPA Group is active in twelve countries in Central and South Eastern Europe: Albania, Austria, Bulgaria, Croatia, the Czech Republic, Hungary, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia.

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