Interreg Danube Region

Co-funded by the European Union

NRGCOM

Project NRGCOM:
Creating appropriate operational conditions for renewable energy communities in the Danube Region

Activity 3.6:
Main Output 3.3:

White Paper on the successful creation and more sustainable functioning of renewable energy communities

Partners input template

Activities in progress in the 4th period

PP12-NEK, Slovak Republic

This project is supported by the Interreg Danube Region Programme, co-financed by the European Union and the Ministry of Investments, Regional Development and Informatization of the Slovak Republic

Part B: National Compendium of REC Status and Implementation (Country-Specific Document)

Content: Standardized template for country-specific profiles (Austria, Germany, Slovenia, Slovakia, Czechia, Hungary, Romania, Bulgaria, Croatia, Serbia, Montenegro, Moldova) to ensure data comparability and the derivation of nationally tailored recommendations.

C. [Country Code]: [Country Name] – Pathway to Community Energy

Starting Position and Regulatory Foundation

This report presents the main information that PP12-NEK developed and implemented in Slovakia in its activities within the framework of activity A.T.3.6 during the 4th period of the NRGCOM project implementation and which will be addressed in detail in the next – 5th period.

The results for the 4th period were also compiled by PP12-NEK into a separate summary document: "Synopsis Report of the PP12-NEK project for the 4rd period of activity A.T.3.6", where, in accordance with the assignment of the content of the activity from the joint workplan of the project, the connections with the results obtained from the interconnected activities A.T.3.2, A.T.3.4 and A.T.3.5 are also presented.

Various pilot tests of the methodology for establishing energy communities, the assessment of their parameters and the functioning of their operations and the completion of inputs for the creation of a catalogue and a comprehensive database of best practices of energy communities in the Danube region were carried out here.

Note: This task has already been completed and will be part of the documentation in period 5 of A.T.3.6.

National Energy Profile

Contents: National energy balance, share of renewable energies, and import dependency.

Trends on the market and industry: modern solutions of energetic industrial productions based on RES are connected to the application of one, or a combination of various RES, mainly biomass, geothermal energy and thermal, water and sea energy, solar and photovoltaic power, concentrated solar and thermal power, solar heating and cooling, wind power.

As a matter of fact, there are no existing (except some experimental solutions for small customer sites) functional energetic economies based only on RES, but those are in all cases an advisable combination of those sources with the conventional sources of energies (CES) such as electric power plant/heating plant running on gas, coal, atom and oil products – fossil fuels, which are still essential for the stability and security of electric power supply and heat mostly in the industrially developed countries and whose exceptionally high consumption cannot be today covered by RES and even in long-term perspective with a significant (more than 50%) volume).

This is a key outcome and knowledge for conception of any meaningful RES solution and application. Until 2030 will the orientation trajectory achieve at least the planned contribution of a membership country.

Specification of RES in the conditions of the Slovak Republic's industry

In November 2014, the Government of the Slovak Republic approved the Energy Policy (EP SR), which set the goals and priorities of the energy sector until 2035 with a view to 2050. The strategic goal of the EP SR is to achieve a competitive low-carbon energy sector ensuring a safe, reliable and efficient supply of all forms of energy at affordable prices, taking into account consumer protection and sustainable development. In 2019, the Slovak Republic committed to achieving carbon neutrality by 2050. The Slovak Republic has a balanced share of nuclear fuel and fossil fuels in gross domestic consumption. The development of the Slovak Republic's energy sector is focused on optimizing the energy mix so that greenhouse gas and pollutant emissions are reduced as much as possible while maintaining or increasing energy security and the affordability of individual types of energy. The Slovak Republic proposes a target of 19.2% in 2030, which is an increase of 5.2% compared to the target for 2020.

Based on the requirement of Article 4(2) of the Regulation, the reference points of the indicative trajectory for the years 2022, 2025 and 2027 for the 19.2% target are set at 14.94%, 16.24% and 17.38%. Specifically, the indicative RES trajectory for Slovakia starts with a value of 14% already in 2020. Table 1 describes the estimated RES trajectories in our country until 2030.

The concrete orientation RES trajectory for Slovakia starts with a 14% value already in 2020. Tab 1 describes the estimated RES trajectories in our country until 2030.

Tab 1: Estimated RES trajectories

Years 20....	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
% RES – production of heat and coolness	13,0	14,3	14,6	15,2	16,1	16,7	17,5	18,1	18,5	19,0
% RES – production of electricity	22,4	23,4	23,9	24,4	24,8	25,9	26,4	26,7	27,0	27,3
% RES – transportation and distribution including multiplication	8,3	8,5	8,6	8,7	9,0	9,5	10,1	10,9	12,6	14,2
% Aggregated RES ratio	**14,0**	**15,0**	**15,4**	**15,8**	**16,4**	**17,1**	**17,8**	**18,2**	**18,7**	**19,2**

The first control year 2022 appeared to be problematic from the start, when a significant increase was planned compared to the assumptions for 2020 and 2021. There was also a risk for 2020 that the binding target of 15% would not be met. In the area of RES, preliminary long-term analyses show that the total investment intensity in achieving the RES targets will be 4.3 billion Euros for 19.2%. The RES Directive also sets an indicative target in the form of an indicative value of 1.3 percentage points as an annual average for the period 2021 to 2025 and 2026 to 2030. This indicative value is reduced to 1.1 percentage points if waste heat and cold are not used.

The indicative values reach an annual average level of 1.3% and 1.4% in the long term.
We consider achieving higher growth or calculating the total heat consumption in technological processes in industry to be very problematic from the perspective of the annual installation and replacement of equipment using RES.

Legal Framework

Content: Adoption of EU definitions, detailed description of permitted legal forms (e.g., cooperative, association) and national restrictions.

The above agenda and description of the current situation were elaborated in detail by PP12-NELK in activity A.T.1.2 in the documentation

The results of this requirement have already been published in the Synopsis report to A.T.1.1 for PP12-NEK with a brief summary:

Energy Community (SE) and Energy Association (SME)

The definition of both terms is contained in the new § 11a, which transposed two directives into national legislation at once, namely Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity (the term 'Energy Community') and Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (the term 'renewable energy community').The very concept of Energy Community and a renewable Energy Association is understood by Slovak legislation as (source SIEA):

The Energy Community shall be a legal entity

(a) which is established for the purpose of generating electricity, supplying electricity, sharing electricity, storing electricity, aggregating activities, distributing electricity, operating a recharging station or performing other activities or providing other services related to meeting the energy needs of its members or associates (hereinafter referred to as "Member") with a view to realising environmental, economic or social community benefits;

(b) which does not carry out the activities referred to in subparagraph (a) for profit,

(c) which may be joined, acquired or other way become a member, and from which participation may be withdrawn, terminated or the membership can be cancelled by decision of a member; and

(d) members, who alone or jointly with other members may exercise control in an energy community, are only individuals, small enterprises and higher territorial units or municipalities in the territorial self-administration district in which the Energy Community has its settlement.

It follows that the Energy Community ('the Community') will be arisen as soon as the abovementioned mandatory conditions have been fulfilled. The formation of a community entitles it to exercise the rights and obligations laid down in § 35a, i.e. to procure, produce, store and supply or share electricity to its members, to carry out aggregation activities for its members or to operate a charging station.

However, the Community may not carry on with the business for making profit; it must be express the services it provides to its members. Members of the community can be individual persons, small enterprises, municipalities or self-governing regions in the territorial district of the self-governing region in which the community has its seat. A community producing energy from renewable energy sources is also

considered a community within the meaning of § 11a par. 3 of the Energy Act of the Slovak Republic.

A renewable energy association is a legal entity:

(a) which is based for the purpose of producing electricity from renewable energy sources or biomethane, and which may at the same time be established for the purpose of supplying electricity or gas, sharing electricity from renewable energy sources or biomethane, storing electricity from renewable energy sources, aggregation, electricity distribution, operating a recharging point or performing other activities or providing other services related to meeting the energy needs of its members, in order to with a view to realising environmental, economic or social community benefits;

(b) which does not carry out the activities referred to in subparagraph for profit,

(c) which may be joined, acquired or otherwise become a member, and from which participation may be withdrawn, terminated or membership by decision of a member;

(d) whose members are only natural persons, small and medium-sized enterprises;28(b) higher territorial units or municipalities in the territorial self-administration district in which the renewable energy community is located; and

(e) whose members allowed, individually or jointly with other members, to exercise control in a renewable energy community, reside or have their permanent residence or seat in the territorial area in which the renewable energy installation or biomethane installation owned by the renewable energy community, or most of such installations, is located; if a renewable energy community If a superior territorial unit cannot be determined according to the previous sentence, it shall be determined by the location of the renewable energy community.

Thus, a renewable energy Association is based on the production of electricity from renewable energy sources and the production of biomethane, and at the same time can be established for the purpose of supplying, sharing or storing electricity or gas, aggregation, distribution or operation of a charging station. Like the Energy Community, the Energy Community cannot conduct business for profit.

Unlike the Community, members of an Association can be not only small but also medium-sized enterprises (as defined in Article 2(1) of Annex I to Regulation No 651/2014). At the same time, the same applies as for a community, i.e. that the

formation of a community entitles it to exercise the rights and obligations laid down in Section 70a of the Energy Act.

The essential thing is that members of the Energy Community can only be members who have permanent residence or registered office in the territory of the regional area in which the electricity or biomethane production facility is located.

An energy community producing energy from renewable sources is a legal entity,

a) which is established for the purpose of producing electricity from renewable energy sources or biomethane and which may also be established for the purpose of supplying electricity or gas, sharing electricity from renewable energy sources or biomethane, storing electricity from renewable energy sources, carrying out aggregation activities, distributing electricity, operating a charging station or performing other activities or providing other services related to ensuring the energy needs of its members with the aim of realizing environmental, economic or social community benefits,

b) which does not carry out activities pursuant to letter for the purpose of making a profit,

c) which can be joined, acquired a share or otherwise become a member, and from which it is possible to withdraw, terminate participation or membership based on a member's decision,

d) whose members are only natural persons, small and medium-sized enterprises, higher territorial units or municipalities in the territorial district of the higher territorial unit in which the community producing energy from renewable energy is located resources, and

e) whose members entitled individually or jointly with other members to exercise control in the renewable energy community have their permanent residence or registered office in the territory of the higher territorial unit in which the renewable energy electricity generation facility or the biomethane production facility owned by the renewable energy community is located, or the majority of such facilities, if the renewable energy community produces electricity or gas in several such facilities; if the higher territorial unit cannot be determined according to the previous sentence, it shall be determined according to the seat of the renewable energy community.

A renewable energy community is therefore established for the production of electricity from renewable energy sources and the production of biomethane and may at the same time be established for the purpose of supplying, sharing or storing

electricity or gas, carrying out aggregation, distribution or operating a charging station.

Like an Energy Community, an Energy Community cannot carry out business activities for the purpose of making a profit.

Unlike a community, members of a community can be not only small but also medium-sized enterprises (as defined in Article 2(1) of Annex I to Regulation No. 651/2014). At the same time, the same applies as for a community, i.e. the establishment of a community entitles it to exercise the rights and obligations set out in Section 70a of the Energy Act.

The essential point here is that members of an Energy Community can only be those members who have a permanent residence or registered office in the territory of the regional area in which the electricity or biomethane production facility is located.

Among the crucial supporting regulations in the field of energy with regard to energy communities are the following:

1. Act No. 251/2012 Coll. of 31 July 2012 on Energy and on Amendments to Certain Acts.

This law regulates:
(a) conditions for doing business in the energy sector,
(b)market access, rights and obligations of energy market participants;
(c) measures aimed at ensuring security of electricity and gas supply and the functioning of the internal electricity and gas markets;
(d) the rights and obligations of persons whose rights and obligations may be affected by energy market participants;
e) performance of state administration in the energy sector,
f) performance of state supervision and control over energy business.
The definition of the two concepts of Energy Community and Energy Community examined is contained here in the new § 11a, which transposed into national legislation simultaneously two directives, namely Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity (the term 'energy community') and Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (the term 'Renewable Energy Community').

1. Act No. 251/2012 Coll. of 31 July 2012 Act on Energy and on Amendments to Additions to Certain Acts.

This law regulates:
(a) the conditions for doing business in the energy sector,
(b) market access, rights and obligations of market participants in the energy sector ,
(c) measures to ensure security of electricity and gas supply and the functioning of the internal electricity and the internal market for gas,
(d) the rights and obligations of persons whose rights and obligations may be affected by energy market participants;
e) performance of state administration in the energy sector,
f) exercising state supervision and control over business in the energy sector.

The definition of the two terms under review here, Energy Community and Energy Community is contained in the new § 11a, which transposes two directives into national legislation at the same time, namely Directive (EU) 2019/944 of the European Parliament and the Council of 5 June 2019 concerning common rules for the internal market in electricity (the term "Energy Community") and Directive (EU) 2018/2001 of the European Parliament and the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (the term "Renewable Energy Producing Community").

2. Act No. 276/2001 Coll. on Regulation in Network Industries and on Amendments to Certain Acts, as amended (including Act No. 107/2007 Coll.)

This amended Regulation Act regulates:
- the subject, scope, conditions and manner of regulation in network industries,
- establishment, status and competence of the Regulatory Office for Network Industries,
- defines the functions of the President and Vice-President of the Office
- establishes a Regulatory Board
- lays down the terms of the price procedure,

- conditions for the exercise of regulated activities and rights and obligations of regulated entities,
- rules on the functioning of the electricity and gas markets,
- proceedings in cases under this Act,
- administrative offences for breach of the obligations laid down by this Law.

Act No. 657/2004 Coll. of 26 October 2004 on thermal energy

This law regulates:
(a) conditions for doing business in the thermal energy sector,
(b) rights and obligations of heat market participants;
(c) the economics of operation of the thermal installation system;
(d) restrictive measures related to the thermal energy emergency;
e) competence of state administration bodies and municipalities and performance of state supervision in thermal energy,
e) competence of state administration bodies and municipalities and performance of state supervision in thermal energy,
(f) the rights and obligations of natural and legal persons whose rights, legally protected interests or obligations may be affected by the exercise of the rights and obligations of heat market participants;
(g) rights and obligations of natural and legal persons in the production of heat in a decentralised heat source.

Act No. 657/2004 Coll. of 26 October 2004 on thermal energy

This law regulates:
(a) conditions for doing business in the thermal energy sector/business conditions in the thermal energy sector
(b) rights and obligations of heat market participants;
(c) the economics of operation of the thermal installation system;
(d) restrictive measures related to the state of emergency in the thermal energy sector;
e) the competence of state administration bodies and municipalities and the exercise of state supervision in the thermal energy sector,
(f) the rights and obligations of natural and legal persons whose rights, legally protected interests or obligations may be affected by the exercise of the rights and obligations of heat market participants;
(g) the rights and obligations of natural and legal persons when producing heat in a decentralised heat source.

Act No. 321/2014 Coll. of 21 October 2014 on Energy Efficiency and on Amendments to Certain Acts (including Act No. 419/2020 Coll. of 1 December 2020)

This law provides:
(a) measures to promote and improve energy efficiency;
(b) obligations when developing concept papers in the field of energy efficiency;
(c) the rights and obligations of persons in the field of energy efficiency;

(d) rules for carrying out energy audits;
(e) business in the provision of energy services,
(f) provision of information under this Act.

Act No. 363/2020 Coll. on the Promotion of Renewable Energy Sources

Act No. 363/2022 amending Act No. 309/2009 Coll. on the promotion of renewable energy sources and high-efficiency cogeneration and amending and supplementing certain acts, as amended, also defines the following renewable energy sources as non-fossil energy sources as follows: hydropower, wind power, solar energy, geothermal energy, ambient energy, biomass, biogas, landfill gas, sewage treatment plant gas, and tide, wave and other ocean energy.
Act No. 363/2022 amending Act No. 309/2009 Coll. on the promotion of renewable energy sources and high-efficiency Combined production and Amendments and Additions to certain acts, as amended, also defines the following renewable energy sources as non-fossil energy sources as follows: hydropower, wind energy power, solar energy, geothermal energy, ambient energy, biomass, biogas, landfill gas, gas from wastewater treatment plants and tidal, wave and other ocean energy.

Act No. 17/1992 Coll. Environmental Act (as amended by No. 127/1994 Coll., 287/1994 Coll., 171/1998 Coll., 211/2000 Coll., 332/2007 Coll., 388/2021 Coll.)

The Act defines the basic concepts and establishes the basic principles of environmental protection and the obligations of legal and natural persons in protecting and improving the state of the environment and in the use of natural resources; In doing so, it is based on the principle of sustainable development and defines the following principles:-The territory must not be burdened by human activity beyond the carrying capacity.
-The permissible level of environmental pollution is determined by limit values laid down by special regulations; These values shall be determined in accordance with the state of knowledge and in such a way that human health is not endangered and other living organisms and other elements of the environment are not endangered.

-Limit values shall be determined taking into account the possible cumulative action or interaction of pollutants and activities. Where, in the light of all the circumstances, it can be assumed that there is a danger of irreversible or serious damage to the environment, there must be no doubt that such damage will actually occur as grounds for postponing measures to prevent it.

-It is forbidden to import for the purpose of incineration radioactive waste that was not produced in the territory of the Slovak Republic. Everyone may assert in a

specified manner before the competent authority his rights under this Act and other regulations governing environmental matters.

-Education, education and training are carried out in such a way as to lead to thinking and action in accordance with the principle of sustainable development, to a sense of responsibility for maintaining the quality of the environment and its individual components, and to respect for life in all its forms.

Note: This task has already been completed and will be part of the documentation in period 5 of A.T.3.6.

Institutional Landscape

Contents: List of relevant actors (regulatory authorities, ministries, local coordination offices, if applicable).

The bodies of the state administration of the Slovak Republic for the performance of the energy regulations of the energy sector and specifically energy communities and associates.

The decisive central professional and administrative legislative authorities in the Slovak Republic, competent in decision-making and management of processes relevant to energy management and environmental care, and especially for Energy Communities and Energy Communities, are, in particular:

a) Ministry of Economy of the Slovak Republic

b) Ministry of Environment of the Slovak Republic

c) Slovak Innovation and Energy Agency

d) Slovak Environment Agency

e) Regulatory Office for Network Industries

With precisely defined competencies and activities in accordance with the Programme Declaration of the Government of the Slovak Republic for the given legislative period.

Note: This task has already been completed and will be part of the documentation in period 5 of A.T.3.6.

Maturity Level and Ecosystem (Established, Emerging, Nascent)

Contents: Classification of maturity level and estimated number of functioning ECs.

Currently, the results and numbers of ECs in Slovakia are very variable, there are 7 to 8 established and functioning ECs, and currently, depending on the impacts of the NRGCOM project and PP12-NEK activities and extensive presentation and awareness-raising activities, more than 10 new ECs are being created, mainly in the regions and selected municipalities of Bratislava, Nitra, Trenčín, Prešov, Prievidza and Lučenec.

Current developments and perspectives on energy communities and associations:

The Act on Energy did not oblige either the Ministry of Economy of the Slovak Republic or the Office for the Regulation of Network Industries to draft a special decree in connection with energy companies or communities producing energy from RES. § 14 par. 10 of Act no. 309/2009 Coll. on the support of renewable energy sources, in the version effective from 1/12/2022, includes, within the scope definition, the obligation (or role) of the Ministry of the Economy of the Slovak Republic to create a "support framework for the promotion and facilitation of the development of communities producing energy from renewable sources", through which it will ensure, to:

a) Unjustified legal or administrative barriers to renewable energy communities are removed,

b) The relevant distribution system operator has cooperated with renewable energy communities to facilitate the transmission transfer of energy within renewable energy communities,

(c) Renewable energy communities are subject to non-discriminatory, proportionate and transparent procedures, including registration and licensing procedures, cost reflective network charges and fees, levies and taxes, which ensure that they contribute to the overall cost-sharing in a proportionate, fair and balanced manner.

The above, therefore, currently implies certain ambivalence in action and ambiguity in the further legislative procedure for the introduction and development of energy communities and communities in Slovakia.

Note: This task has already been completed and will be part of the documentation in period 5 of A.T.3.6.

Analysis of Specific National Barriers

Content: Identification and analysis of the specific administrative, financial, and legislative barriers prevailing in the respective country.

Note: This task is in progress and will be completed in period 5 of A.T.3.6.

Legislative and Administrative Obstacles

The legal regulation of energy communities and communities producing energy from RES is still relatively framework. A number of fundamental matters are left to the ÚRSO decree, which should enter into force in the coming months.

Electricity sharing itself is currently not feasible in Slovakia. A prerequisite for the proper sharing of electricity within the energy community, the community producing energy from RES or by active consumers is primarily a functional electronic system displaying individual data, i.e. the Energy Data Centre (EDC).

The launch of the Energy Data Centre is currently planned in two phases. According to the operator of the EDC, which is supposed to be corporation OKTE, a.s., the launch of the first phase is expected to be launched at the end of June this year, and at the beginning of July the basic functionality should be operational in order to allow new market participants to participate in electricity sharing and providing flexibility.

The Ministry of Economy of the Slovak Republic should also help the development of community energy, which is expanding its powers to create a support framework for promoting and facilitating development.

In the course of time, a point of contact for guiding the administrative procedure regarding the establishment, operation and development of energy communities and communities producing energy from RES should also be established, whose tasks will be fulfilled by the Slovak Innovation and Energy Agency.

Energy communities and communities producing energy from RES are currently a hot topic in which great potential is hidden. In the coming years, we can therefore expect a boom in community energy, which should contribute to increasing energy efficiency and self-sufficiency.

Given that the regulation of energy communities and communities producing energy from RES only defines the basic conditions for their creation and functioning, it can

be expected that other mechanisms and processes will only be created through practice.

Note: This task is in progress and will be completed in period 5 of A.T.3.6.

Market and Infrastructure Hurdles

Current developments and perspectives on energy communities and associations

The Act on Energy did not oblige either the Ministry of Economy of the Slovak Republic or the Office for the Regulation of Network Industries to draft a special decree in connection with energy companies or communities producing energy from RES. § 14 par. 10 of Act no. 309/2009 Coll. on the support of renewable energy sources, in the version effective from 1/12/2022, includes, within the scope definition, the obligation (or role) of the Ministry of the Economy of the Slovak Republic to create a "support framework for the promotion and facilitation of the development of communities producing energy from renewable sources", through which it will ensure, to:

a) unjustified legal or administrative barriers to renewable energy communities are removed,

b) the relevant distribution system operator has cooperated with renewable energy communities to facilitate the transmission transfer of energy within renewable energy communities,

(c) renewable energy communities are subject to non-discriminatory, proportionate and transparent procedures, including registration and licensing procedures, cost reflective network charges and fees, levies and taxes, which ensure that they contribute to the overall cost-sharing in a proportionate, fair and balanced manner.

The above, therefore, currently implies certain ambivalence in action and ambiguity in the further legislative procedure for the introduction and development of energy communities and communities in Slovakia.

Note: This task is in progress and will be completed in period 5 of A.T.3.6.

Financial and Capacity Gaps

Due to the currently changing Slovak legislation in the area of support financing and the possibilities of networking ECs into distribution systems at the local level, PP12-NEK is analyzing and updating the outputs.

Note: This task is in progress and will be completed in period 5 of A.T.3.6.

Case Studies and Pilot Capitalization

Contents: Presentation of best practices and project results.

Note: This task is in progress and will be completed in period 5 of A.T.3.6.

Best Practice Example (National)

Content: Case study of a successful national EEG (structure, financing, benefits).

As part of the NRGCOM project, PP12-NEK has so far presented two examples of good practice for already functioning energy communities with an energy mix of renewable energy production and distribution, namely: EK-TEEK and EK SOM_EKO. Details of the pilot testing of the methodology and evaluation of the results of the activities to date are presented in detail in A.T.3.4 and A.T.3.2.

Note: This task is in progress and will be completed in period 5 of A.T.3.6.

Results of the NRGCOM Pilot Project

Content: Final results of the NRGCOM pilot actions carried out in the country and their contribution to solving local problems.

Note: This task is in progress and will be completed in period 5 of A.T.3.6.

Policy Recommendations (Country-Specific)

Content: Specific policy recommendations for each country to remove the identified barriers.

Note: This task is in progress and will be completed in period 5 of A.T.3.6.