Interreg Danube Region

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NRGCOM

Policy Recommendation

Empowering energy communities: policy recommendation for the removal of barriers affecting the establishment and/or spread of energy communities in 2024

Prepared by: PP12 – National Energy Cluster NEK, Slovak Republic

In the framework of the NRGCOM – Creating appropriate operational conditions for renewable energy communities in the Danube Region project, under Activity A.T.1.5, as Deliverable D.1.5.1

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Introduction

The spread of energy communities in several European countries is a working concept. The foundations of development from October 1, 2022 can already be found in Slovak legislation. Community energy, which is well-known abroad and has been functioning for a long time, is part of the package of measures of the European Union labeled "Clean Energy for all Europeans" (Clean Energy for all Europeans Package). The main goals of this package of measures are to prioritize energy efficiency, achieve global leadership in the field of energy from RES and also ensure fair conditions for consumers. Here in Slovakia, it is still a novelty.

1. National legislative

background

The Slovak Republic partially transposed this package by amendment no. 256/2022 Coll. of Basic Law no. 251/2012 Coll. on energy, which brought several changes and news from October 1, 2022. One of them is community energy, which brought two new market players into the Slovak legal order, namely the energy community and the community producing energy from renewable energy sources (RES).

The basic definition of the energy community and the community producing energy from RES is based on the law of the European Union - specifically from the directive of the European Parliament and of the Council (EU) 2019/944 of June 5, 2019 on common rules for the internal electricity market and on the amendment of directive 2012/27/EU and in the case of the Community from Directive (EU) 2018/2001 of the European Parliament and of the Council of December 11, 2018 on the promotion of the use of energy from renewable sources. The primary purpose of these new players on the energy market is the organization of community activities in the field of energy, through a legal entity founded by specific persons,

with democratic management principles and for a non-commercial purpose and on a non-discriminatory basis in relation to other market participants.

The above-mentioned principles were embodied in the newly created section § 11a of the Act on Energy, which regulates both the energy community and the community producing energy from RES.

In order for an energy community or a community producing energy from RES to be established, it is necessary that the following conditions are simultaneously met:

- it must always be a legal entity that does not perform its activities primarily for the purpose of making a profit,
- is based on voluntary participation,
- the method of conducting control is based on the democratic principle,
- members are only entities defined by law (natural persons, small businesses, medium-sized enterprises - only in the case of communities producing energy from RES, higher territorial units, municipalities in the territorial district of the higher territorial unit in which the energy community and the community have their headquarters).

The fulfillment of the mentioned conditions is evaluated by the Office for the Regulation of Network Industries (ÚRSO), which issues a certificate based on the proposal. This certificate, issued to legal entities, is registered on the Office for the Regulation of Network Industries (ÚRSO) website and is used to prove oneself in legal relations with other participants in the electricity market or the gas market.

A certain element of decentralization was introduced into the current relatively centralized energy market by the legal regulation of community energy. This gives the end customers the opportunity to reduce the amount of energy consumed and the dependence on the central supplier and to ensure a certain degree of independence with energy at the community level locally.

The amendment to the Act on Energy also brought with it another element, which is the sharing of electricity or gas.

Sharing is defined as the provision of electricity to an active customer or energy community and the provision of gas by a renewable energy community for a reason other than sale. Sharing is distinguished from supply primarily by the fact that it is a free provision of electricity/gas, or that the payment for sharing will not be a directly proportionate consideration for the provision of electricity/gas. The right to share electricity/gas should be regulated in the founding document of the energy community or community producing energy from RES and will be conditioned, for example, by providing a member deposit.

2. Organizational structures and membership

For the appropriate application of community energy in Slovakia, legal forms currently come into consideration:

Civic associations (OZ) are traditional and relatively simple (basic) forms for groups with a smaller number of members (natural persons), where the main goal is not profit, but joint production and consumption of electricity. A civic association can be suitable for local initiatives and communities that want to jointly invest in, for example, renewable resources and share the energy produced.

Cooperatives, while this type of legal form is suitable for groups of subjects (natural or legal persons) who want to cooperate more closely and have common economic, social or cultural needs. In energy, a cooperative can be effective in situations where a high level of involvement of members and their interest in long-term sustainability and energy independence is assumed.

Non-profit organizations in which the primary goal of their members or shareholders is not to generate profit, but to reinvest income in their core activities, which support, for example, electricity sharing and ensure community development.

Interest associations of legal entities, whose members, however, by law, can only be legal entities, which, especially in the case of communities of owners of apartments or other real estate, in the vast majority of cases of such specific energy communities, is not feasible.

Organizational charts and management structures for all the mentioned forms are a matter of individual decision of the founding members, while the basic rules are captured in the written documents of the given form of the established energy community or community producing energy from RES.

3. Identified bottlenecks

and areas of intervention

If the participants of the NRGCOM project correctly identify the most pressing problems of the energy communities in the Danube region as part of their joint activities, they will be able to create realistic guidelines for the removal of the most hindering bottlenecks for the necessary intervention of national authorities.

3.1 Legislation

With the issue of national legislation in Slovakia, the P12 NEK researcher dealt in detail as part of the NRGCOM project as part of his previous activities in parts of A.T. 1.1 to 1.3 and A.T.1.5.

As part of this activity A.T.1.5, our P12 NEK already dealt with this issue in more detail when fulfilling the task of A.T.1.1 in point 2. National legislative background, where he described the Slovak legislative definition of the energy community and the community producing energy from RES, which is the result of the transposition of European law Union - Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal electricity market and amending Directive 2012/27/EU and, in the case of the Community, Directive of the European Parliament and of the Council (EU) 2018/2001 of December 11, 2018 on supporting the use of energy from renewable sources. The essence of the principles within the legislative changes were transferred in Slovakia to the newly created provisions of § 11a of the Act on Energy, which regulates both the energy community and the community producing energy from RES.

3.2 Business model development

The advantage of the energy community and community in practice can be, for example, that active customers will not be dependent only on consuming electricity themselves, or storing it in their own storage facilities or selling it to the network. Associated with sharing are broader possibilities in the area of community energy, where it will be common practice to share surpluses among members, for example neighbors or sharing to local production factories. The very operating model of the energy community or community will already depend on the mutual agreement of the members and their needs.

A great advantage of the Slovak legislation is that, as regards the energy community or the community producing energy from RES, activities such as electricity production in a facility with an installed capacity of up to 1 MW, storage of electricity in a facility for storing electricity with an installed capacity of up to 1 MW, aggregation or supply electricity and the production or supply of biomethane for its members are not considered energy business, and a "simple" notification to the ÚRSO[6] is sufficient for their implementation.

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 of 2024.

Electricity sharing itself is currently not feasible. A prerequisite for the proper sharing of electricity within the energy community, the community producing energy from RES or active customers is primarily a functional electronic system displaying individual data, i.e. the Energy Data Center (EDC). Its launch is planned in two phases, and the operator of the ED is to be the state organizer of the short-term electricity market OKTE, a.s. He expects the launch of the first phase at the end of June this year, and from July 1, 2024, the basic functionality should be operational to allow new market participants to participate in electricity sharing and providing flexibility.

Legislation and related legal regulations and internal documents for the establishment and functioning of energy communities are, according to the carried out mapping of the state and possibilities in which we are the partners of the NRGCOM project, dependent both on general regulations on energy communities in the European Union and at the same time on national regulations, which are regulated in various documents (analyzed in detail as part of the project's task A.T.1.1) on energy, energy-efficient organization, production, distribution and consumption reduction, as well as environmental and social impacts and limitations.

The specifics are the regulations that regulate the particularity of the establishment and management of energy communities as legal forms in the given country of the partner, for example, they are different:

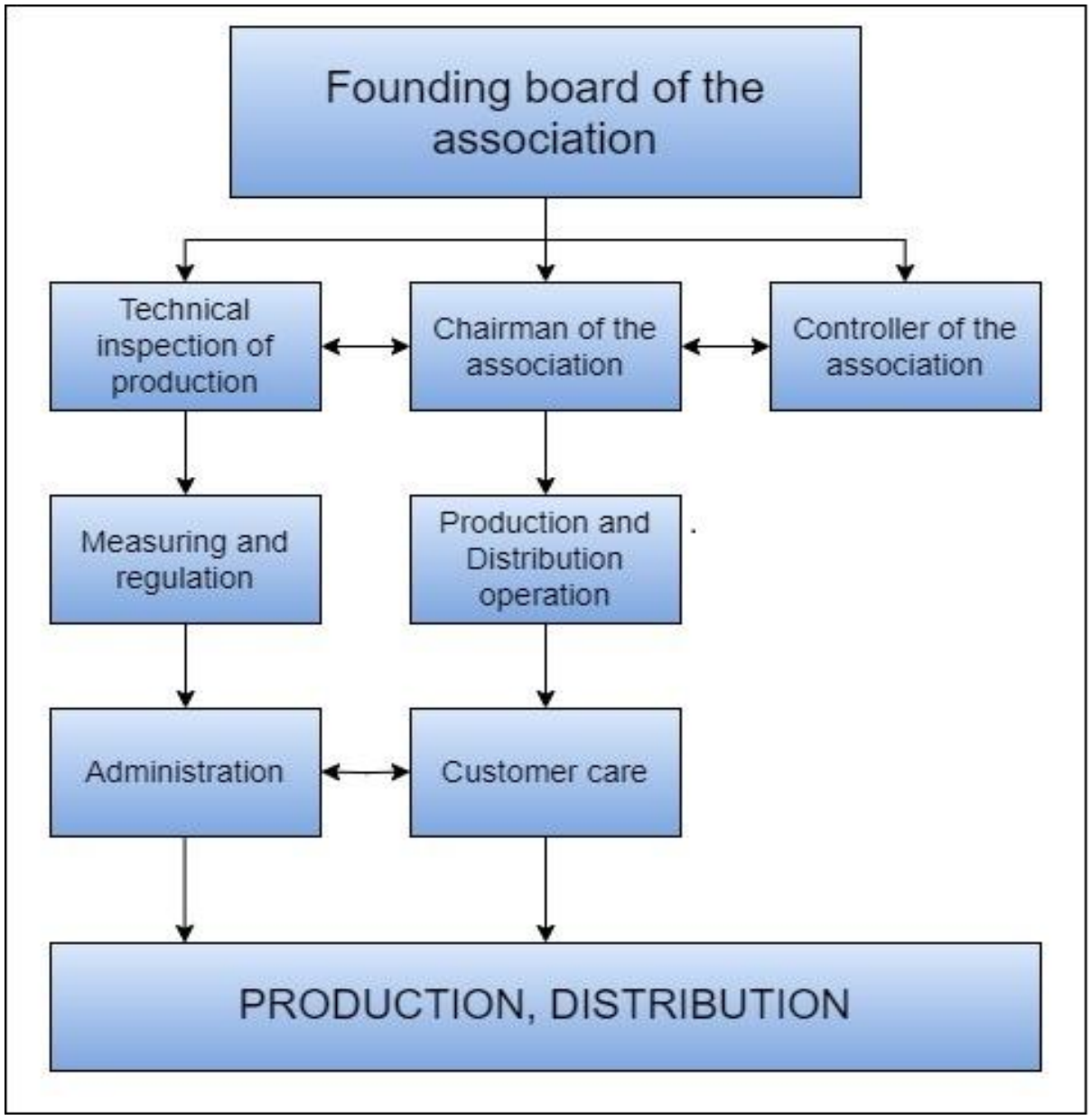
- Commercial Codes,
- Economic laws,
- Tax and accounting regulations
- Regulations on registration obligations

with a special description of the rules for cooperatives, business companies, non-profit organizations and associations with a civil component of membership.

The form of an energy community based on an interest association of legal entities is governed by the regulations on the establishment of non-profit organizations, contributory organizations according to the economic laws of the given country, and its characteristic feature is that the members of the association participate in its functioning exclusively on the basis of member voting rights, either dependent or independent / equal to the size of the EC member's organization, and according to this, the redistribution of the EC's management share is determined in the founding and administrative documents. According to EU legislation, the association is perceived as a specific form of non-profit organization and does not generate accounting profit, but only the so-called economic growth to support one's own development. For any business procedure in the activity of the association beyond its definition of the energy community, it is necessary in all countries, in addition to registration, to establish a separate trade certificate/permit and to report such management independently.

Details are in the next description of this catalog sheet.

Organizationally, ECs in the Slovak Republic are designed only as interest associations of legal entities and function according to the following organizational scheme



3.3 Challenges of stakeholder management

It should be true that all participants in the energy market must be given the chance to participate in the energy transformation, but even the other amendment to the Act on Energy still does not allow them to do so in Slovakia. If we assume that all green sources are pluggable (unless the distributor proves otherwise), then all energy communities should be directly interested parties in solving this issue.

When we take into account all the information related to this question about the substantial changes currently taking place in the abbreviated legislative procedure, announced suddenly only on 6.5.2024, but nevertheless with the planned effect from 1.7.2024, then the number of steps forced by

management in the short future are changing as part of the accelerated legislative process and are therefore very unclear.

NEK, as in Slovakia with several managements of the energy community, or the community producing energy from RES, the cooperating leader of NPEECA - the National Platform of Energy and Environmental Clusters and Associations of Slovakia assumes and believes that in the end common sense will prevail and all the negatives will not be enacted in Slovakia and will it can be said that, according to the initial reactions of the affected energy market participants, compared to the European principles of the use of RES, the regulatory proposals of the ÚRSO are directly regressive and even completely incomprehensible, also significantly damaging to the Slovak economy in the segment of energy communities.

3.4 Difficulties in internal governance and conflict resolution

As a significantly negative example of difficulties with internal management and conflict resolution, we can cite the Slovak ÚRSO's planned fee increase (for the so-called G component, up to 233%), which will bring financial problems not only to existing renewable energy sources in Slovakia, but will also mean a traffic stop for new projects. The consequences of the fee increase prepared by this office will be felt not only by green resources, but also by the economy and employment, as many representatives of producers of electricity from renewable sources claim, and the Slovak Photovoltaic Industry and Renewable Energy Association (SAPI) also publicly points out.

This conflict arises from the fact that electricity producers pay the given fee to the operators of the network to which their power plants are connected. According to SAPI, with such an increase, a significant part of water, photovoltaic, wind, but also biogas power plants cannot operate without loss, because they cannot earn the loans or finance necessary for their operation. In addition, the approval of the increase of this fee will also mean a stop sign for the construction of new RES in Slovakia, which is contrary to the practice in other countries of the European Union, which are trying to simplify the development of renewable resources.

At the same time, representatives of green energy producers point out that ÚRSO has not submitted any analysis of the proposal to increase the key fee, which would justify the proposed increase, which is indefensible. At the same time, it is questionable that, given the abbreviated comment procedure, whether the regulator is even interested in discussing its validity and consequences. ÚRSO justifies its unexpected proposal to increase the G component for users of distribution systems from 15 percent of the value of the maximum reserved capacity to 50 percent simply because these users also use distribution systems.

In order to overcome difficulties with internal management and conflict resolution at EC level, it is necessary to introduce the application of these well-known 10 principles of successful change management into managerial practice, as documented in the following table.

Table 1: Ten valid principles of successful change management

PRINCIPLE 1	Top management plays a key role in managing change.

PRINCIPLE 2	Developing a vision that must be clearly articulated and understandable to all.
PRINCIPLE 3	Awareness of the need for change (it must be clear to everyone that change is a condition for success, even if everything works).
PRINCIPLE 4	Elaboration of a specific project, which will be used to proceed with the change of the cluster organization.
PRINCIPLE 5	Necessity of continuous education with all employees of the organization.
PRINCIPLE 6	Team approach (changes are not made by individuals, but by project teams).
PRINCIPLE 7	Elaboration of a project of gradual implementation of change.
PRINCIPLE 8	Monitoring, evaluation and correction of all activities so that any deficiencies identified can be remedied.
PRINCIPLE 9	There must be open, ongoing communication between management and other employees.
PRINCIPLE 10	It is advantageous to cooperate with external consultants as partners in the implementation of the change.

3.5 Network connection issues

Paradoxically, our national regulatory authority (ÚRSO) is currently causing considerable problems with grid connection to traditional energy producers, but also to newly formed energy communities and communities producing energy from RES, which should rather solve and eliminate problems instead of causing uncertainty.

Despite the facts detailed in the previous sections, we believe that the state regulator will resolve the given situation in Slovakia in a way that will respect valid European procedures and that even the new management of ÚRSO will not hinder any representatives of community energy on the way to their further, extremely necessary and beneficial development in the sector production, distribution and sharing of green energy.

3.6 Access to data

The recent monopoly position of state-owned and later partially privatized production or distribution companies on the energy market is already a thing of the past in Slovakia. These companies have been coming up with new products for customers for a long time. It happens without unnecessary bureaucracy or the need to register in some system, which cannot be said about the new state Energy Data Center (EDC).

The official EDC is supposed to be a means to achieve a more diverse range of products and entities on the electricity market. It should serve to open the possibility of sharing electricity between collection points, accumulation or aggregation of available flexibility. Traditional electricity suppliers, however, are not affected by this new platform, which also results from the fact that the legislation directly excludes them from the possibility of establishing energy communities.

In fact, many vendors have been offering products themselves for some time that the state-run data center has yet to enable. Suppliers become active and can obtain the necessary data themselves. That is why they have been offering energy sharing in communities, storage of surpluses from photovoltaics, or virtual batteries for a long time. So all this is already working and we will see how EDC will really help. According to the assessment of the participants of the eFocus portal conference "Digitalization of the (renewable) energy market", held in November 2023 - not much yet. In other words, electricity suppliers do not rely on EDC, but they innovate their services anyway.

3.7 Consumer protection, accounting

In order to be comprehensive within this issue, at the EU level with consumer protection, DIRECTIVE 2011/83/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2011 on consumer rights, which amends Council Directive 93/13/EEC and Directive 2011/83/EU of the European Parliament and Council 1999/44/EC and which repeals Council Directive 85/577/EEC and European Parliament and Council Directive 97/7/EC. The purpose of this Directive is to contribute, through the achievement of a high level of consumer protection, to the proper functioning of the internal market by approximating certain aspects of the laws, regulations and administrative measures of the Member States relating to contracts concluded between consumers and traders.

Directive 93/13/EEC on unfair terms (hereinafter referred to as Directive 93/13/EEC) regulates probably the most important institution of modern contract law, namely the content control of standard (adhesive or form) consumer contracts. The directive imposes on member states the obligation to ensure consumer protection against unfair, or unacceptable clauses in contracts, in the creation of which the consumer did not participate, and which fundamentally worsen his position.

The Slovak legislative bodies in the field of consumer protection incorporated the conditions of the mentioned EU directives into several laws:

Law no. 250/2007 Coll. on consumer protection and on the amendment of Act of the Slovak National Council No. 372/1990 Coll. on offenses as amended

Law no. 102/2014 Coll. on consumer protection when selling goods or providing services on the basis of a contract concluded at a distance or a contract concluded outside the seller's premises and on amendments to certain laws

Law no. 391/2015 Coll. on alternative resolution of consumer disputes and on amendments to certain laws

Law no. 161/2011 Coll. on consumer protection in the provision of certain tourism services and on amendments to certain laws

Law no. 128/2002 Coll. on state control of the internal market in matters of consumer protection and on amendments to certain laws

Law no. 147/2001 Coll. on advertising and on amendments to certain laws

The digital world has brought many benefits, but at the same time consumers are becoming more vulnerable, which

requires a new approach (also) of state authorities to consumer protection. We need to redefine what justice means in the new digital reality. The EU consumer policy strategy for the next period represents a unique opportunity to prepare the ground for a new generation of legislation and

measures that will respond to some current trends. In a world dominated by digital technologies, advanced marketing techniques and new sales methods, we cannot leave the consumer alone, as stated by the press department of the Slovak Ministry of Economy at the Consumer Dialogue on the Protection of Vulnerable Consumers in the Digital Age, which was co-organized by the Ministry and the European Commission.

The task of keeping and protecting accounting documentation is managed by the Financial Administration of the Slovak Republic, which it carries out through detailed laws and guidelines. Their basis is that every accounting unit has an obligation to ensure the protection of its accounting documentation against loss, theft, destruction or damage. At the same time, it is obliged to ensure the protection of the used technical means, information carriers and software against their misuse, damage, destruction, unauthorized interference with them, unauthorized access to them, loss or theft.

The provability and correctness of accounting requires that the accounting unit has at its disposal verifiable accounting records, the permanence of which is ensured during the entire processing and storage period. The general regulations on archiving also apply to the handling of accounting documentation in the Slovak Republic.

3.8 Technological accessibility and adaptability

As regards the availability or possibilities of providing various technological solutions for the needs of the functioning of energy communities and communities producing energy from RES, Slovakia is at the standard level of other European countries. It means that in this respect adaptability, i.e. the adaptability of the environment from a technical point of view has no limitations, but quite the opposite. In many cases, we can observe that energy communities connect producers and consumers of electricity, which makes their services more advantageous than, for example, using classic batteries for local storage.

If the legislation is cleared and it becomes possible to actually share electricity, which is cheaper than supply from the grid, it is realistic to assume that this adaptability will result in the same development as has already occurred in other EU states in the past - hundreds of new energy companies will be created in Slovakia as well. communities.

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. [7,8,9,10] This is a key outcome and a knowledge for conception of any meaningful RES solution and application. Until 2030 will the orientational trajectory achieve at least the planned contribution of a membership country. The concrete orientational 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 2: Estimated RES trajectories [3, 14]

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 problematic year seems to be the first control year 2022, where an exceptional increase is shown in contrast to the anticipation for 2020 and 2021. For the year 2020 there is a risk that the binding goal of 15% won‘t be fulfilled. In the area of RES, according to our interim analyses, the overall investment severity in reaching the RES area goals will reach 4,3 mil. Eur for 19,2% ratio. In terms of the RES framework an indicative goal is set in a form of orientational value of 1,3 percentual point as the yearly average for the periods of 2021-2025 and 2026-2030. The shown orientational value is lowered by 1,1 percentage point if the heat and coolness waste is not used. Orientational values reach the average yearly level 1,3% and 1,4%. We consider the reaching of increased growth or cumulative heat consumption in the industrial technology processes as very problematic from the standpoint of the yearly installation and exchange of equipment using RES. [7,10,11,12,22]

4. Possibilities for integrating different operating models

The operation of community energy while complying with legislative requirements and restrictions in the conditions of the Slovak Republic is possible according to several models, which are mainly determined by the selection and choice of possible ways of doing business. Since the law requires legal entities to operate in this segment, founders in Slovakia most often choose from the legal forms that we described in more detail above. As we have already stated in point 3 Organizational structures and membership, such forms are various civic associations, cooperatives, non-profit organizations, or interest associations of legal entities. Taking into account the experience of P12 NEK from these options within SO 1, we will focus on the last option - interest associations of legal entities.

In the conditions of the Slovak Republic, clusters are typical representatives of such community-based energy management. In this case, mainly regional energy and environmental clusters. These associations established the National Platform of Energy and Environmental Clusters and Associations of Slovakia (NPEECA) as an executive form for cooperation and the creation of a common professional background and a common information, advisory, organizational and legislative base, for the development of energy, ecology, related technical and industrial development and innovation mutual cooperation and communication in the conception, solution and implementation of joint projects and programs as well as the presentation of results and efforts in the environment of the professional public and in contact with the bodies of state administration, local government and the business sphere with a special focus on the field of activity in energy and ecology of industry.

NPEECA through its members for P12 NEK will also be an important helper in the creation of NRGCOM final materials, which will be created as SO 3 final materials. In this phase of the project, we would like to draw the attention of our partners to the possibilities that the members of the P12 NEK author's collective have already presented in the near past also at domestic professional events.

5. Potential incentives

The development of community energy in Slovakia should also be helped by the Ministry of Economy of the Slovak Republic, which is expanding its powers to create a support framework for promoting and facilitating development. Over 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 performed by the Slovak Innovation and Energy Agency (SIEA).

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, after clarifying the situation and eliminating the above-described and exclusively domestic legislative threats, should contribute to an increase in energy efficiency and self-sufficiency.

Due to the fact that the regulation of energy communities and communities producing energy from RES defines only the basic conditions for their creation and functioning, we can expect that other mechanisms and processes will soon be created after the application practice has stabilized.

Real measurements in order to support the energetic efficiency (Tab 3) in the industry for the long period of 2021-2050 are a combination of validated actions and activities from the Slovak action plans for energetic efficiency from the period before 2020 and newly proposed actions and activities at least until 2030. New measurement ideas reflect the need of SR to increase the pace at which the energy savings are reached in the industry, while stemming from the other countries‘ experience where they were proven to be very effective. [10, 11, 13]

	Table 3: Supporting measurements for energetics efficiency [9, 10]

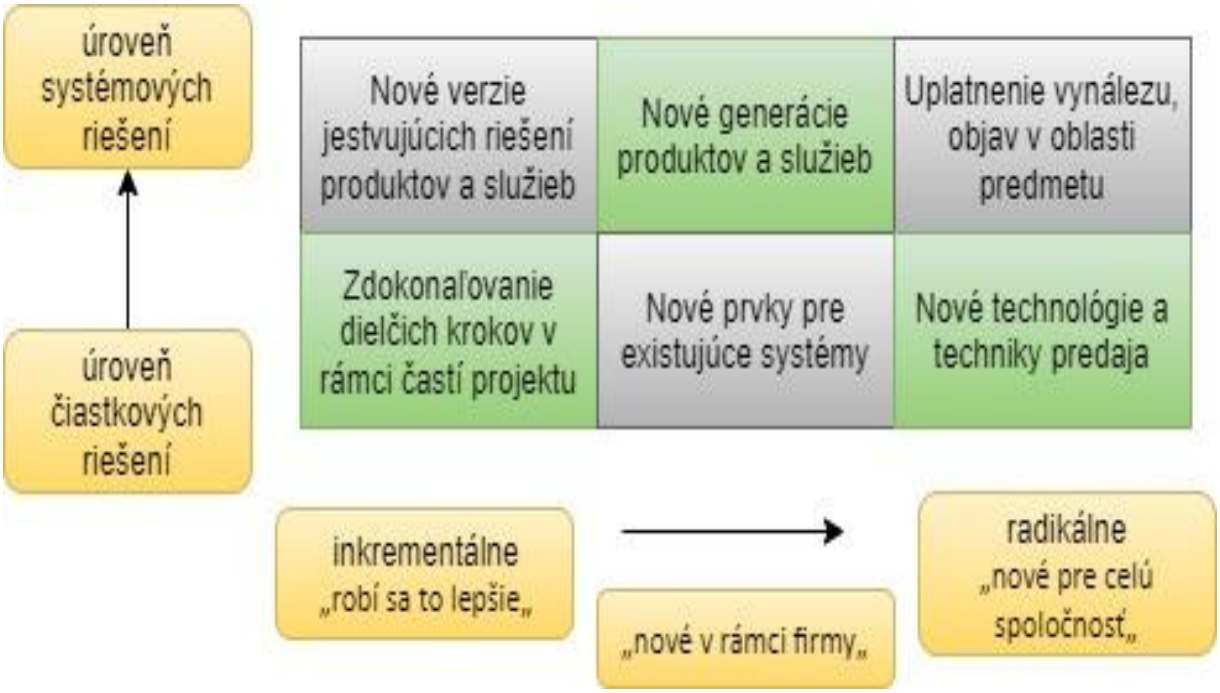
1.	Additional increase of energetic efficiency in the industry and industrial processes on top of modelled scenario framework.
2.	Introducing the circular economy and innovations into the industrial processes, for example usage of hydrogen as an innovative technology (including the switch to steel production based on hydrogen in case of sufficient hydrogen supply), including the compliance to Findings about BAT („best available techniques“).
3.	Innovate the energetically and materially demanding businesses in the industry area.
4.	Transfer to the new, clearer ways of power production and products also via using the energy sources without the greenhouse gas emissions in the industry or implementing the principles of circular economy.
5.	Lowering the usage of fossil fuels in the industry under the condition that it is technically and economically effective and this solution brings a real emission saving.
6.	Capturing and using all the thermal waste from the industrial and energetic processes in an efficient, cost saving way.
7.	Adjustment of the financial supporting mechanisms from EU and SR by means that those will be able to finance as much as possible of decarbonating measurements and measurements lowering the energetic severity, including the administrative burden along the project submissions.
8.	Including the fulfillment of Parisian agreement into the basic enactments in the international trading agreements between EU and third countries (tzv. „Paris clause“).
9.	Transformation shouldn‘t endanger the competitiveness of industry. Therefore, it is necessary to introduce a supporting measurement for the third country product importers into EU as for EU product exporters from EU to third countries. As a supporting measure for the product importers Slovak Republic supports the introduction of a customs duty for import according to the carbon footprint (so-called carbon border adjustment/tax), while it is also required to solve the measurements for keeping the exporters‘ competitiveness.

6. Further proposed solutions

When applying appropriate models of operating community energy, we necessarily come across the need for changes, which also entails innovation in the functioning of the forms of community functioning chosen by the founders.

It is indisputable that within the framework of our NRGCOM project we cannot completely solve all the pitfalls of the given issue, because it is a dynamically developing area. As a contribution to guide our common journey, we will also use another author's proposal from the set of P12 NEK membership.

These are different dimensions and levels of addressing the needs of changes within the energy community, which can also be represented as follows:



For the management of EKs and the functioning of their management, it is also possible to recommend our own proposal for a scheme of integration and implementation of modern process project management, based on a highly individual approach to the production and distribution of energy in the local conditions of EKs. The table documents the types of known integrations and interests in the process approach, as well as the main principles of introducing process management into the operation and management of EC.

Table 4: Integration and implementation of process management

THE TYPES OF INTEGRATION AND INTEREST IN THE PROCEDURE APPROACH ARE IN:	**THE MAIN PRINCIPLES FOR THE INTRODUCTION OF PROCESS MANAGEMENT CAN BE DETERMINED AS:**
Operations integration - the basis for team management. At present, a more well-educated worker is gaining more attention than a one-sided, low-educated worker.	Starting a new organizational cluster culture - to teach the whole team and management to think process. The process begins with training and teaching.
Integration of customers into the cluster production process. The customer can comment on how he wants to have the product or service configured and only then gives the signal for	Reassessment of the internal management system - elaboration of a new cluster strategy and the subsequent new creation of a new organizational structure

production.	
Supplier integration into the production process. The supplier becomes a direct part of production and services and is not just a supplier of individual components.	Redesign of management processes - elimination of unnecessary and duplicate activities; complementing missing activities and innovating inefficient activities

Synergy of energetic and environmental res aspects in industrial businesses and their innovation potential

It concerns an important understanding of industrial behavior per industrial business, whose main goal is to produce goods or services with the highest possible economic effect (ergo the lowest manufacturing and operational costs along the highest revenues in a given time and area of coverage).

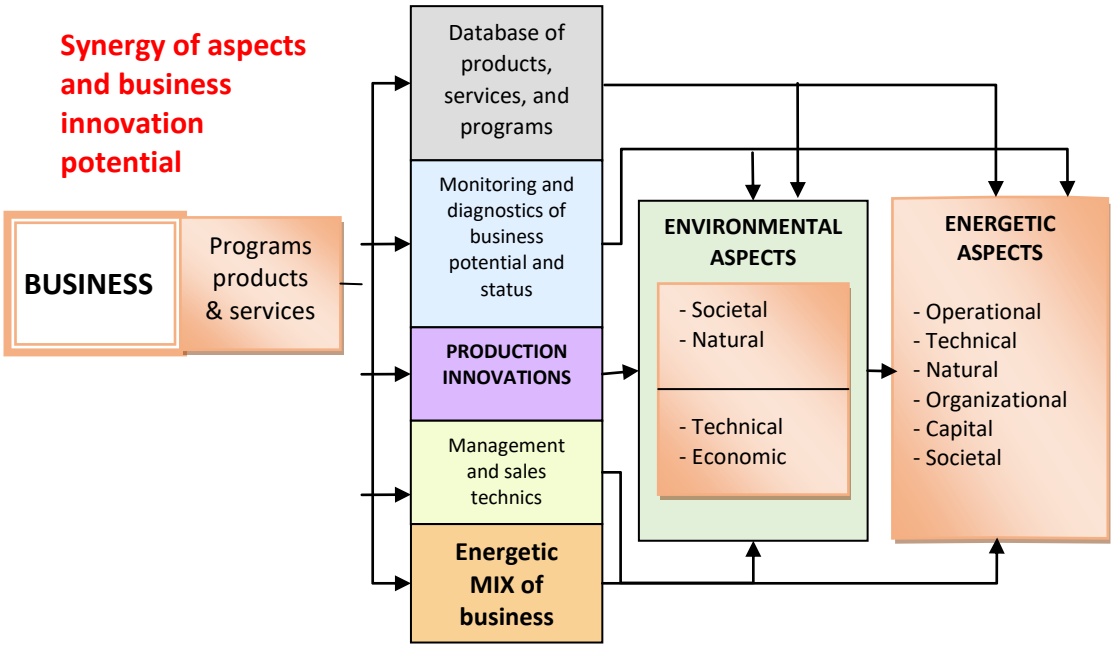
However, the need to mind the energetic and environmental aspects in production is realistically unfavorable circumstance and a constraint, paradoxically it is also essential need for the growth of innovative potential and selling success on the market – synergy effect and joint cohesion without a choice to omit whichever of these aspects to make a business survive.

This happens in the ever changing and competitive environment and also provides the industrial businesses an opportunity to search and implement the new innovations for securing this synergy. New professional requirements for industrial production and increasing expectations cause businesses to count on the change from conventional way of thinking to a more efficient means of governance.

Nevertheless, if the essentiality of the need for change is not firmly set, it is not possible to set a goal and method of change execution. One of the most effective changes looks to be, according to these principles, fundamental management of the business productional, managerial, distributional, and operational processes. The switch to the new ways of governance is enabled also via new innovative approaches and new informational technologies, which are a part of managerial informatics systems in a business.

However, the base finding is a knowledge of wide range file of eligible diagnostic methods and audits, which have a sufficient actual value for the business and connect the innovation factors and attributes in regards of application of modern approach towards the energetics and environmental aspects of business governance.

For understanding the basic connections of this synergy, the authors created their own working model on picture 3, which was and will be an object for deeper research in the area of modern energetic sources for the industry. This model steadily follows the existing auctorial outputs that were processed and published and the energetic effectivity of governing RES in the industry implementation model itself.



The given model specifies an industrial business as a file of processes that pursue the production as their priority, providing industrial services and related operational activities, which are split into five components:

a) Database of products, services, and programs – tells about what is the industrial business producing, which technological background it covers and material-technical security, which services it secures for the rest of market subjects and how it appeals on the market,

b) Monitoring and diagnostics of business potential and status – presents an actual status and level of business innovations per se, but also its process system management, monitoring and control of continuously received volumetric, qualitative, and economic results in production,

c) Production innovations – a key component for a business with focus on steering, connected with its own innovation potential and position as a result of its individual abilities, creativity and competitiveness support against the other businesses on the relevant market. Nevertheless, innovation is a process (not an action, event, or occurrence) and as such it must be governed or managed. Factors, which could define this process, could be affected, and therefore also affect the result. It is valid that innovation potential contains inventional and innovational ability, therefore an elastic reaction towards the market demand, quick realization of changes and adjustment of goals and conditions, based on which it was executed; effective research. It could be stated that a decision making is a process of evaluation and innovation choice appropriate for fulfilling the strategic goal and governance repose on the innovation creation, which could change the current status.

d) Management and sales technics – consists of ability of business to govern, control, and create the new products and use the new techniques and methods of sales, which highlight the energetic and ecologic effect and usage of products on the market, and mainly their creation in the production process, and also exerting the adequate public relations tools, ads and propagation for the evaluation of its products on the market and the given societal area,

e) Energetic mix of business – represents the actual status of energetic sources, which are used in the business during production process and operation and restriction of current and future status individually usable RES and their ratio towards the CES (conventional energy source), securing the energy supply internally or via central distribution networks.

Consequently, the model shows how those components are existentially interconnected and have an impact on the environmental aspects – split into so-called general items such as societal and natural aspects (which business cannot directly influence and is forced to accept them) and also so-called expert items as technical and economic aspects (which business can influence significantly by own production). Additionally, it is an interconnection with the energetic aspects which are directly in a choice competence and application of business in production and those are operational, technical, natural, organizational, investment and societal components. Given scheme shows the impact of a business on energetic and environmental aspects in relation to governance and innovations on one side as well as backward interconnection of aspects on business operation and its market position.

In managing energetic and environmental policy of industrial business with the explicit aim to improve its innovation potential is necessary to keep in view the given measures to support the energetic efficiency (described in tab 2) set by authors of this report with a choice of those exact measurements, which are related to possible implementation in a concrete situation of a given business. At the same time the management needs to also observe the position development of a given energy and environmentalism bounded to development prognosis of the end consumption energetics (CES) and development of the primary energetics consumption (PES) as described on pictures 1 and 2, which could be very eminent among innovation parameters ranks in the business in the future. Authors approach this problematic with their own professional opinion as such – energetic and environmental aspects in the conditions of industrial business create impacts not only on their character and production capacity and related current innovation potential, but also are an impulse for their own innovational creativity inside the business in regards of changes and improvement of its energetic mix and operational approach.

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