



SHERPA  
Rural Science-Society-Policy  
Interfaces

# A VISION FOR RURAL AREAS

MAP Position Paper



## LONG-TERM VISION FOR RURAL AREAS: CONTRIBUTION FROM 20 SCIENCE- SOCIETY-POLICY PLATFORMS

MAP POSITION PAPER— SMART ENERGY

MAP VENUS

CZECHIA

Version 22.10.2020

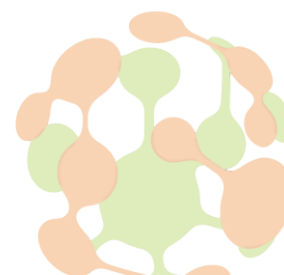
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## 1. Headline message

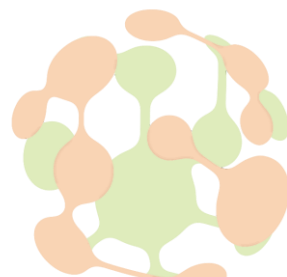
Involved members from the ranks of research, politics and the public VENUS consider one of the key points of the 2040 vision to achieve the so-called Smart Energy. "Smart energy" is defined as measurable, mapped, and decentralised energy that is economical, locally self-sufficient, and manageable. At the same time, energy self-sufficiency increases rural resilience. It is important to limit the monopoly access of the central energy supplier and distributor.

The vision of VENUS 2040 is: **Building a system of functional advice centres to realise energy savings and increase the share of renewable energy sources in the countryside.**

Above all, the deployment of smart energy requires that research well formulate a technical solution which will be discussed with politicians and citizens. A clear idea of the possibilities of energy savings, the use of renewable energy sources and community energy sharing (including smart grids, or energy storage systems) is one of the important steps in the process of established smart energy.

The ideas of the members of the maps differ in some key points from the state strategy until 2040, which was approved by the Ministry of Industry and Trade. The conflict is that the central loss tends to support nuclear energy, followed by natural gas and oil. In contrast to this strategy, MAP members see as more promising and efficient using renewables and saving energy. Several relevant expert studies say that renewables will be compete with coal in the next decade and that nuclear energy is gradually becoming the most expensive high-risk resource.

**Keywords:** *smart energy, local action group, innovation, standardisation of energy projects, renewable energy sources, knowledge transfer*



## 2. Key scientific evidence

### Socio-demographic situation

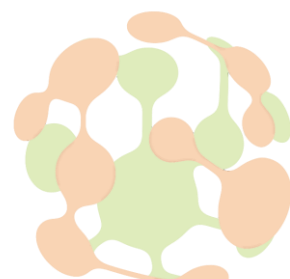
The rural population in the Czech Republic is about 27 % and this share is not significantly decreasing or increasing. However, the age of the population is changing (which applies to both the city and the countryside), the population is aging and the share of the population aged 85+ is increasing. It is advisable to invest in smart energy systems as soon as possible, because the older generations no longer recognise change. An important condition for implementing change is to have the means to invest in new technologies and change energy sources (RES). As the financial situation in families shows, the poverty rate is lower compared to other EU countries. It seems that this is also a good time to implement new energy-related technologies.

The Moravian-Silesian Region differs from the average values/data in the Czech Republic. It is the third most populous region in the Czech Republic (1.2 million inhabitants), but with its 300 municipalities it belongs to the regions with the smallest number of settlements. After the capital city of Prague, the region has the highest population density (approx. 230 inhabitants per km<sup>2</sup>), well above the Czech average (approx. 134 inhabitants per km<sup>2</sup>), but we find significant interregional differences (densely populated Ostrava versus sparsely populated Bruntál). Although more than half of the county's territory is rural, most people live in cities. Almost 59% of the region's population lives in cities with more than 20,000 people. . This is exceptional in the Czech Republic. The low share of inhabitants living in smaller rural municipalities is also atypical (only 2% of the region's population lives in municipalities with fewer than 499 inhabitants). An above-average part of the population lives in dwellings/flats (61.3% compared to 56.4% in the Czech Republic in 2019)

In the area of demographic development and in terms of the structure of the local population, the Moravian-Silesian Region in the Czech Republic is characterised by several specifics, mostly unfavourable. The population is declining naturally and through migration, and a further decline in the region's population can be expected in the future. Like the Czech Republic and other European countries, the region is facing an aging population. The lower education of the population in the region is due to the historical and economic base related to mining and heavy industry. It is the long-term significant orientation towards heavy industry together with the location of the region on the edge of the republic and the lack of endogenous potential of many municipalities that cause long-term higher unemployment (share of unemployed persons 4.4% vs. 2.8% in the Czech Republic) and higher problems in the labour market, than is in average of CZ.

The Ministry of Industry and Trade CR commissioned a comprehensive survey "Main conclusions and recommendations from a survey of awareness of energy savings among building owners and their motivations and barriers to renovations" [1]. The aim of the survey was to clarify the awareness of building owners about the possibilities of reducing energy consumption, their motivations in the preparation of energy-saving solutions and the barriers that prevent such solutions. The research is completely unique and so far no extensive analytical material has been compiled. The survey focused on the housing sector, the public sector and the business sector. The questionnaire survey was conducted with 825 respondents in the Czech Republic, in 2020. The results lead to the following conclusions:

- Homeowners most often renovate on their own. Using their savings. They prefer to renovate gradually. They carry out a minimum of administrative tasks to carry out the renovation - only about a third of the respondents reported the renovation at the building office or processed the building permit.
- The main motivation for renovation for homeowners is to improve living comfort and save energy costs.
- Only about 6% of respondents use the subsidy, for owners of family houses it is not an important trigger for the implementation of renovation. It is difficult to handle the administration of the



subsidy which is the opinion of both groups of respondents regardless of their experience with subsidies.

This activity of the Ministry of Industry and Trade preceded the intention of VENUS members who wanted to carry out a similar investigation in the Opava region in the Moravian-Silesian Region. In 2021, the VENUS working group will evaluate whether or not to carry out a similar survey.

The discussion described in the discussion paper [2] revealed the need for a multi-layered communication campaign that would explain to people why and how to invest in complex energy-saving solutions. It is time to start looking at other ways to promote energy savings than just investment subsidies, and it is necessary to motivate people to save better and behave in a more ecological way.

A key tool for achieving a higher rate of energy savings is to provide a clear and simple form of motivation for entrepreneurs to realise energy savings. It is vital that the issue of smart energy is communicated efficiently among politicians, researchers and the public. It is important to support the preparation of projects for applicants, for example in the form of active technical assistance (tailor-made projects).

## Energy development

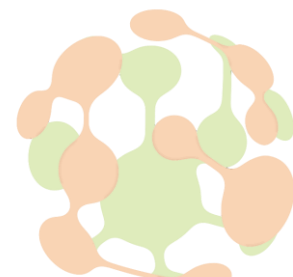
Some conclusions from the State Energy Policy of The Czech Republic, 2014, from Ministry of Industry and Trade were also presented in the discussion paper [2]. Another document, the National Plan of the Czech Republic in the Field of Energy and Climate, is also important for the countryside [3]. The document was prepared by the Ministry of Industry and Trade on the basis of the requirements of EU Regulation 2018/1999 on the Administration of the Energy Union and contains objectives and policies in all five dimensions of the Energy Union for the period 2021-2030 with a view to 2050.

Document [3] contains information that the state of the environment has significantly improved over the last 20 years in terms of emissions of airborne dust and sulphur and nitrogen oxides from large and medium combustion sources. However, the situation is still unsatisfactory in terms of health-hazardous substances and poses serious risks to human health and ecosystems in the affected areas. The situation is unsatisfactory in almost every municipality in the Czech Republic due to emissions from domestic coal-fired furnaces and in all cities due to emissions from diesel and petrol engines. Most of the population of the Czech Republic is affected. The Czech Republic's goal by 2030 is to reduce CO<sub>2</sub> emissions by 22%. Monitoring of the situation [3] shows that we are not meeting the national plan yet [3], and in 2020 the reduction in CO<sub>2</sub> emissions should have been about 6% higher. The most successful reductions are in electricity generation, the least successful ones in heating and cooling.

The use of renewable energy sources (RES) from agricultural sources is limited by the company's priority requirement for agriculture to produce food and animal feed. The area of available land usable for increasing the production of energy biomass is and will be very limited. By 2030, both the acreage of agricultural land (especially arable land) and the stability of food production will decrease, which means that the acreage of land usable to produce energy biomass will rather stagnate or could grow only very slightly. Soil protection requires not reducing the content of organic matter in the soil, so post-harvest residues for energy uses cannot be expected. Regarding a significant reduction in livestock production and thus manure production, post-harvest residues are one of the important sources of organic matter in the soil fulfilling the soil protection function. Today's acreage of agricultural land, which is steadily used annually to produce raw materials used in the energy sector, is around 350 - 400 thousand. ha<sup>1</sup>. As part of forestry, approximately 2 million m<sup>3</sup> of wood chips, 1.5 million tonnes of cellulose extracts and less than 5 million tonnes of firewood for energy purposes are produced annually. In this respect, agricultural and forestry management significantly contributes to the production of biomass further used as RES and thus contributes to increasing

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<sup>1</sup> About 1 % of agricultural land in CZ

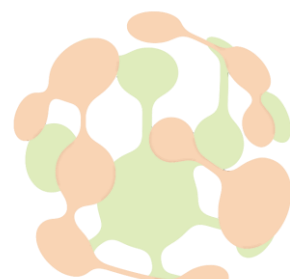


energy self-sufficiency and meeting national climate commitments [5]. The Adaptation Strategy of the Czech Republic and the National Action Plan for Adaptation to Climate Change [5] also deal with possible conflicts and synergies of biomass production and its energy use in terms of biodiversity and ecosystem services. As part of the preparation of the National Action Plan for Adaptation to Climate Change, all proposed measures were also evaluated on the basis of the criterion of impact on the environment and ecosystem services.

The estimate of the value of final energy consumption for the year 2030, i.e. 2040 [4] also influences the estimate of the use of photovoltaic energy, which should contribute to the fulfilment of the national goal of transition to renewable energy sources. Based on the obtained data, the final consumption of the Czech Republic in 2030 can be expected at the level of 976 PJ. Solar energy in 2030 produced/will produce 11.3 to 12.6 PJ. The share of solar energy in final consumption will be 1.1 to 1.3%. In 2040, the vision is to achieve a further increase in the share of PV [4]. Most existing photovoltaic power plants (PV) will be disbursed around 2030. Two questionnaire surveys were carried out (in 2014 and 2016<sup>2</sup>.) with the outcome that PV plants will be operated even after the end of the support. From these surveys it is possible to conclude that the vast majority of existing photovoltaic power plants will be preserved, but only a minority will be reconstructed. The total achievable output of existing photovoltaic power plants by 2030, after including all of them, will rather decrease by 10 to 15% compared to the current state. However, new opportunities may arise for the use of solar energy, such as the installation of panels on the roofs and facades of houses and buildings. Publicly available data from the Czech Statistical Office and documents from the Ministry of Industry and Trade were used to analyse the technical potential of photovoltaic power plants on the roofs of buildings, building facades and other non-agricultural areas (brownfields) [6, 7]. The total potential of solar sources for future use in residential and non-residential buildings is 23.8 GWp and on brownfields 15.3 GWp. These capacity values are burdened by a considerable simplification of calculations. Due to the fact that these are values of technical potential, it is not possible to assume their fulfilment. In order to achieve the overall technical potential of photovoltaic power plants, up to 2/3 of the considered locations would have to be installed by 2050 [4].

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<sup>2</sup> NGÚ Brno, Vlastní průzkum Solární asociace



### 3. Summary of the outcomes of the Delphi method

#### 3.1. Challenges and opportunities in the next 20 years

The members of MAP VENUS agree on most of the points involved in the discussed vision. There were essentially no contradictions. The interests of research, regional policy and citizens are complemented. There were no disagreements during the discussion, entrepreneurs and mayors are more directing the discussion to economic issues and energy specialists to professional ones.

The objective of regional policies should be energy self-sufficiency, resilience and possibly a comprehensively self-sufficient region. Vision 2040 brings a challenge for the research sphere, which way / technique to achieve this self-sufficiency, research should be more closely connected with the foreign one, which is at a higher level of knowledge. Citizens expect energy savings (money savings) in the future and at the same time want to achieve a higher standard of quality of life which includes the comfort of living. The common vision of 2040 aims at innovative technologies and cost-effective solutions that use energy that is measurable and manageable.

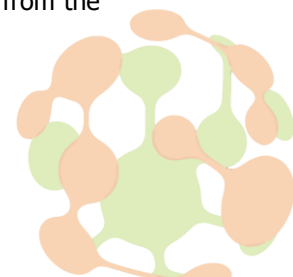
Discussions in the VENUS meetings show that rural people do not have sufficient knowledge of energy saving issues or energy as such. Energy education does not work systematically; residents are influenced by lobbies and myths, it will be important to build systemic tools in the form of education and lifelong learning, which will help prevent the effects of so-called energy poverty.

DAP VENUS brings important outputs that can improve the situation a bit, one of them is "Methodology for conceptual planning of energy savings in rural areas", then the preparation and implementation of case projects of good practice. for the implementation of the Strategy of the LAG Opavsko 2021 - 2027, where smart energy is one of the important areas.

The discussion of the vision from the discussions brought the following results:

It is necessary to build on the potential of the region, diversify energy sources and properly align them with each other so that there are no high surpluses and shortages during the day or seasons. Shared energy measures (connecting more producers, sources and consumers), also called community energy, can help to offset surpluses and energy shortages produced in each locality. The smart energy system fits into EU strategies and visions, but still needs to be refined at national and regional level.

- The system of measurement, monitoring (key condition), an element for the management and development of smart energy, also depends on research and gaining experience from countries that are further in development and practice than the Czech Republic.
- It is desirable to remove the legislative brakes in the Energy Act of the Czech Republic and to adjust the rules so that they are simple and understandable to all actors.
- It is desirable to work to increase the quality of human potential. There is still a large group of people who are not ready for change (smart energy). It is appropriate to focus on best practice and islands of positive mediation.
- It is appropriate to build a regional and national energy advisory system "**energy management**", which would provide a comprehensive service from information sharing, specific intent to implementation and measurement.
- In the field of community energy, it is desirable to test case studies (municipality + family houses, small and medium-sized enterprises) and thus provide the basis for a proposal to amend the Energy Act.
- Municipalities have short election periods for the realisation of visions and there is not a great willingness to pass on the plan. It is desirable to develop some form of commitment from the outgoing council to the newly elected.





- It is appropriate to use RES from agriculture only if there is no devastation of the soil (especially loss of organic matter in the soil) and erosion effects.
- It is appropriate to properly communicate the real benefits related to smart energy to the public, businesses and representatives. The next programming period was to be characterised by greater investment in innovation, which is the key to sustainability in energy consumption and production without negative environmental impacts. This promotes cooperation, participation and self-confidence of the inhabitants of the regions.
- It is appropriate to involve schools and young people in the discussion on energy self-sufficiency and a vision for the future.
- The countryside is understood by the working group as a space for energy production from RES, but especially where there is development or brownfield. The development of smart energy is progressing together with the savings of its consumption per citizen and at the same time with the protection of the climate and the environment.

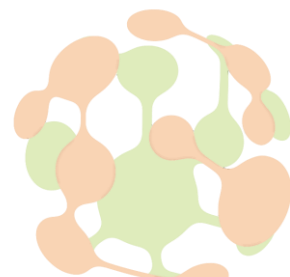
### 3.2. Desirable future for 2040

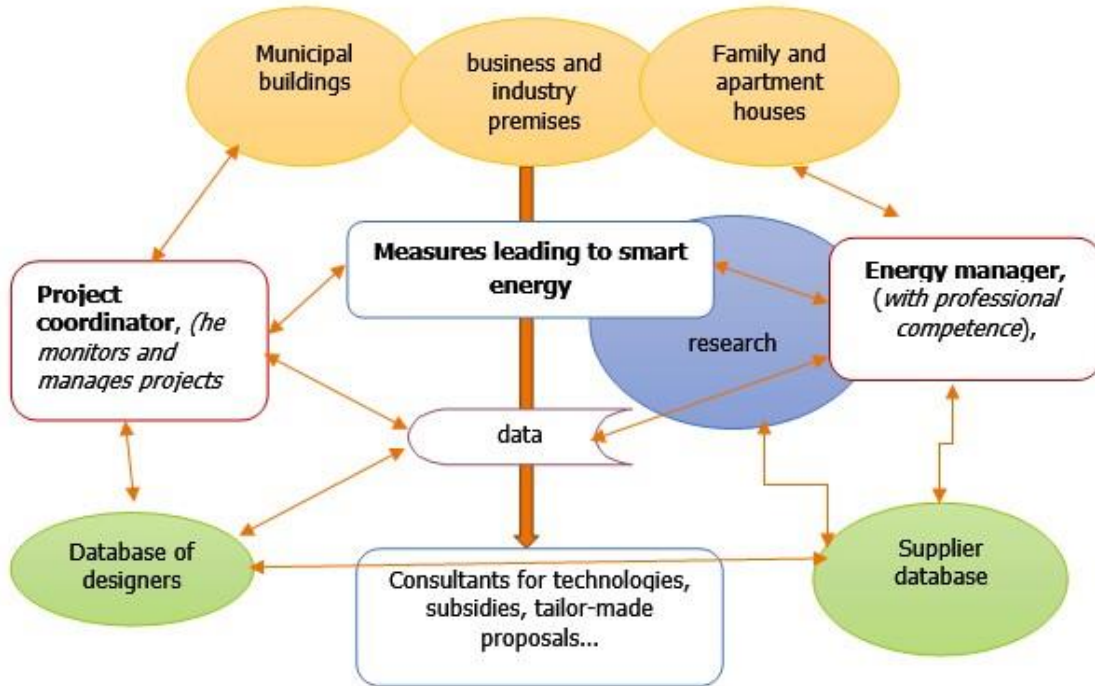
The challenge is to build a quality transfer of knowledge. It is desirable to enforce more bottom-up management, not only in the field of energy, to promote principles such as local production - local consumption, self-sufficiency, resilience. The development of the above-mentioned energy vision is an opportunity for LAGs or municipal councils. However, LAGs have several important advantages, such as:

- they can work with people from more municipalities, connect larger areas on a friendly basis
- they are not politicised and are not elected, i.e. they operate in the region continuously and for a long time
- they have established contacts and trust in the region
- they have experience with the policy of most ministries and an overview of the opportunities of operational programs
- they master the method of participation, cooperation, management, support innovative solutions and a comprehensive approach.

**The energy advisory system "energy management"** could work with the use of already existing opportunities of EKIS and the addition of other structures (functions), which include the complexity of the whole cycle of change. The comprehensively set structure of the consultancy enables fast and correct specification of the plan, precise execution of the tailor-made project and final implementation of the project. The possibilities of financing energy management can be expected from the sources of the Ministry of the Environment (Modernization Fund), the Ministry of Industry and Trade, the Ministry of Agriculture.

At the same time, co-financing of those interested in the project is planned, due to higher involvement. Part of energy management is the collection of data on the energy situation, research, capacity, etc., process monitoring, and evaluation of the result. The idea is that this will be a task for the project coordinator. Below is the energy management scheme as defined at the October 2020 workshop.





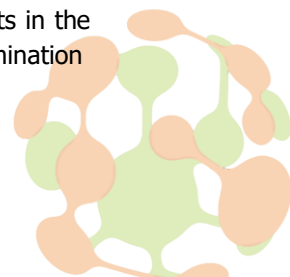
Source: Own processing within VENUS, 2020

- Expected favourable future that would enable fulfilment of the objectives set out in the MAP Venus was discussed in workshops and interviews with members of the MAP VENUS. It was later summarised in the following points:
- In general, people are becoming more aware and accessible to green solutions
- People are aware of the cost of housing, the cost of individual energy costs and the broader aspects of energy savings.
- People from the area of business, civic and private sectors (living in the region) are willing to implement energy saving measures, make maximum use of renewable energy sources, and share excess energy with each other
- Society naturally uses the knowledge of science and research, applies it in everyday life.
- The state will remove legislative and systemic obstacles to the savings and use of renewable energy sources, support R&D and decentralised energy infrastructure.

### 3.3. Enablers to achieve the vision

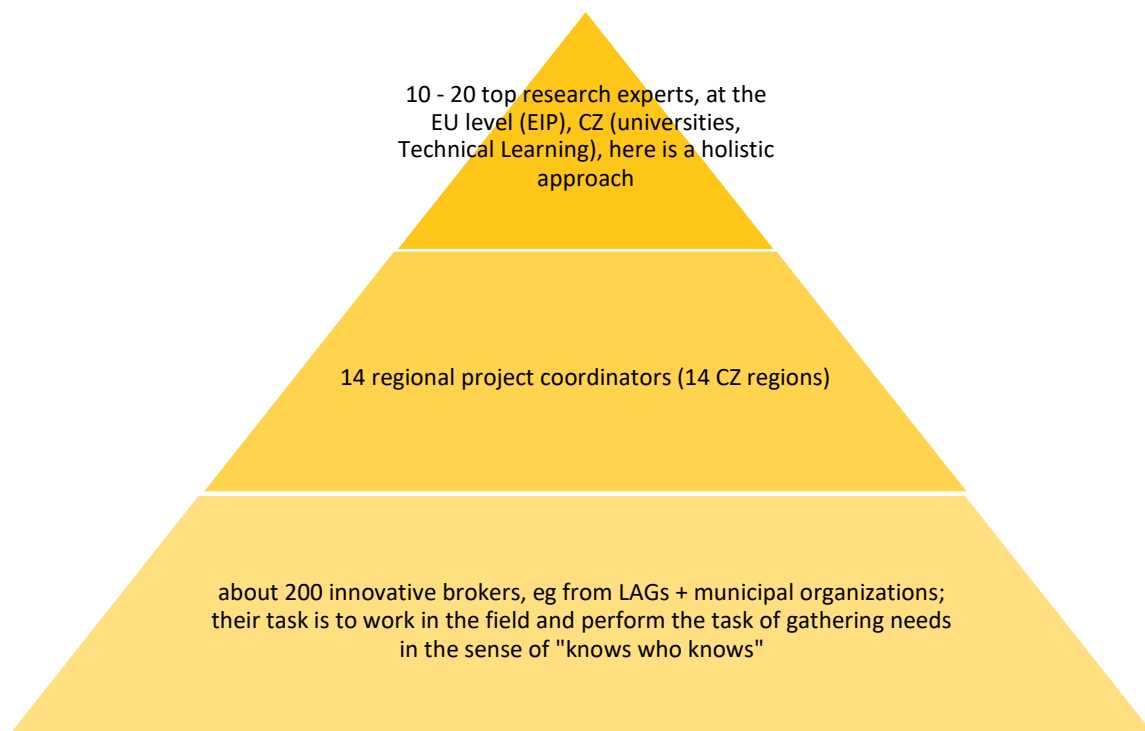
The assumptions of achieving the 2040 vision have also been discussed and the outcome can be summarised as follows:

- Functioning energy management providing advice and implementation for municipalities, entrepreneurs, citizens. This management can provide a service for owners of a wide range of types of buildings and spaces, such as municipal buildings, agricultural and industrial buildings and complexes, family and civic houses, brownfields. The operation of a comprehensive energy management, provides the right information, motivates and implements projects.
- A cluster of mayors and entrepreneurs has been set up (continued by VENUS), which acts in the regions as a disseminating best practice and a collector of incentives for the further dissemination





- of smart solutions. It can also influence policy and knowledge transfer in the field of energy, resilience and public education.
- There is a set of indicators that help achieve regional, national and European goals in carbon neutrality, RES consumption, etc.
- Measurable indicators and high-level monitoring and evaluation are set up so that data can be used to manage community energy.
- The research sphere cooperates well, actors not only in regional policy and the public, and there is a functioning transfer of knowledge across these groups, see the diagram.



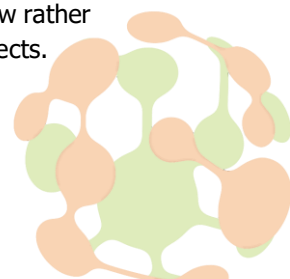
Source: Own processing within VENUS, 2020

At the time of the opening of the SHERPA project (October 2019), the LAG identified important areas and measures to improve the lives of the inhabitants of the Opava countryside. Measures to save energy and increase the share of renewable energy sources were among the most important and the LAG chose it as a carrier for the SHERPA project. Why did the LAG focus on energy? The energy segment has the highest potential for savings. Smart measures will generate financial savings that the participating community can use to solve other problems and needs - fulfilling the 2040 rural vision.

The members of the VENUS group focus on achieving the thematic goal in the field of energy by 2030. Setting a Vision 2040 is not a direct goal of the VENUS project and the deadline of 2040 was subsequently consulted in summer 2020. Nevertheless, we are trying to propose measurable results and impacts by 2040. It can be assumed that energy research will bring, for example, a change in the availability of new smart (technological and organisational) solutions that can change resource use and distribution in some way.

The regions will not do without precise energy management in the future, which will be based on foreign experience and will respond to specific problems and needs of citizens, businesses and local governments.

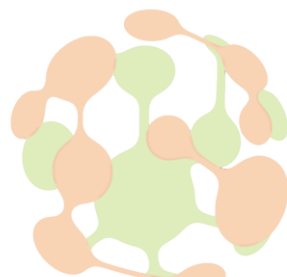
It is also necessary to influence the policy of the state administration, which is a key element, but now rather a brake, for the implementation of decentralised solutions with the involvement of community projects.



## 4. Note from the monitor and facilitator on the preparation of the position paper

Measures to achieve the vision are now being formulated in the VENUS plan. At this point, the position paper precedes the results of the work of the VENUS community and therefore it is not possible to answer all the issues of the position paper responsibly. This will be possible in December 2020, when all questionnaires from the Opava region will also be evaluated. At this point, it is only possible to rely on general statements. The next step in the work will be:

- Completion of VENUS (12/2020)
  - energy concept of the region,
  - methodology for planning energy savings in rural regions
- Discussion in the region (2021) - implementation into the LAG Strategy for 2021 -2027
- Implementation of pilot projects - examples (2020 - 2022)
- Transfer of experience and information to other regions (2021 - 2022)
- Compilation of an action plan and its implementation 2021 - 2027



## Annex 1. Methodology used in the MAP

The discussion of the position paper took place during two face-to-face interviews of the organiser with the facilitator and two other meetings of the VENUS group. The VENUS group meets on average once every 2 weeks to discuss the implementation of the set short-term plan (2020-2027). The set plan is almost identical to the Dynamic Action Plan (DAP). The vision for 2040 for SHERPA was timeless, given that the energy situation could change research and development

**The questionnaire** was published in annex in discussion paper but results will not be processed until December 2020.

### Workshops

1) Workshop in Mokrý Lazce 16.9. 2020

Topic: Community energy - selection of pilot project of community energy.

The workshop was attended by representatives of the CEZ group, LAG Opavsko (facilitator, monitor) representatives of municipalities (mayors, workers from departments in municipalities) and IAEI. A proposal was discussed, which included issues such as:

- Who can participate in the project? (participants)
- How to set the conditions for participants? (all equal or some advantages suppliers)
- How to proceed (from finding out the potential, kind of measure and proposing solutions to legislative changes)

2) Workshop Information on the implementation of DAPs, information on the progress of SHERPA.

Table 1. The programme

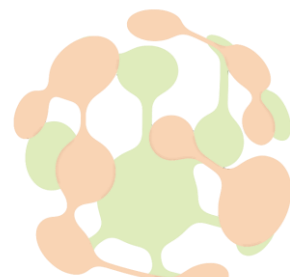
Time 7.10.2020	Programme	Participants
9:00 – 10:30	Intermediate results VENUS Wider topic: energy management in the region, definition of problems and needs, information sharing	Jiří Krist, Libor Cenek, Petr Chroust Mirek Šafařík -Prosená (zoom), Martin Krupa, Leopold Benda, Marie Trantinová, Other (zoom)
10:30 – 11:30	Community energy	Jan Šícha ČEZ - zoom
11:30 – 12:00	Report position paper for HORIZON 2020, SHERPA project questions	Marie Trantinová UZEI Jiří Krist, Petr Chroust

### Challenges and opportunities in the next 20 years (used questions)

1) What challenges and opportunities can you imagine in the next 20 years for the introduction of smart energy in rural areas? specify at least 3 to 5 ideas for describing your vision of future.

2) What role should research play in the introduction of energy-efficient energy? What will be its key role?

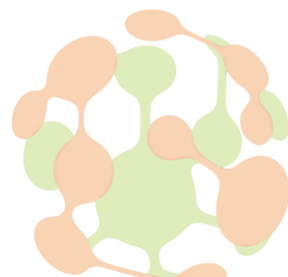
Not very general, not quite a detail



- 3) How to use energy-efficient energy (RES savings) for citizens and businesses? Example: what conditions are important to observe, to what extent
- 4) How should the integration of the three groups (society, research and policy makers) proceed to achieve the 2040 vision? Key principles.
- 5) What is needed to achieve the VENUS vision 2040?

What indicators would you recommend to monitor the achievement of the 2040 vision? What are the threats and risks (barriers) you see when implementing RES? What do you see as the threats and risks (barriers) in the energy saving process? What are the threats and risks (barriers) to the implementation of community energy?

Picture 1. Workshop 16.9. 2020 in Mokré Lazce



Picture 2. Workshop 7.10. 2020 in Hradec nad Moravicí and with zoom approach.



Picture 3. Publication in the Opava Region LAG Newsletter

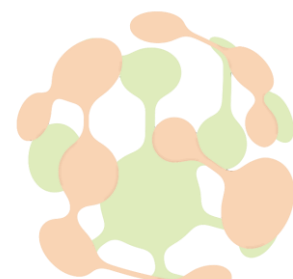
20 VÝROČNÍ ZPRÁVA STRATEGIE

## VIZE ENERGETICKY ÚSPORNÉHO REGIONU (VENUS)

**MAS Opavsko proti energetické chudobě.** S podporou Ministerstva průmyslu a obchodu ČR se snažíme vyhodnotit energetickou náročnost veřejných a soukromých budov na území obcí MAS Opavsko, navrhnout a ukázat typická řešení na snížení spotřeby energií. Dotazujeme se na potřeby obcí, občanů a podnikatelů a vytváříme zásobník projektových záměrů. Všem, kdož zrealizují úspory energií nebo instalují obnovitelné zdroje energie, se pokusíme zprostředkovat finanční podpory. Vyplněním dotazníku nám usnadníte práci s nastavením podmínek finančních podpor poskytovaných na území obcí MAS Opavsko v letech 2021 – 2027. Dotazníky naleznete k vyplnění na [www.masopavsko.cz/](http://www.masopavsko.cz/) VENUS = „Vize energeticky úsporné strategie území MAS Opavsko“

**OPAVSKÝ VENKOV V DALEKOHLEDU EU (SHERPA)**

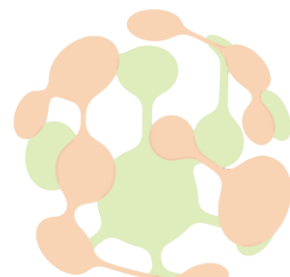
Zajímá Evropskou Unii dění na opavském venkově? Je to neuvěřitelné, ale zajímá. MAS Opavsko se prostřednictvím partnera ÚZEI (Ústav zemědělské ekonomiky a informací) aktivně zapojila do celoevropského projektu nazývaného „SHERPA“ (Sustainable Hub to Engage into Rural Policies with Actors). Na SHERPA platformě spolupracuje 17 partnerů z 21 zemí západní, východní i střední Evropy. Čtyřletý projekt (2019-2023) je financován z programu Horizont 2020. A co se v rámci projektu odehrává? Každý z partnerů se věnuje určitému společenskému tématu. Řešena jsou témata a problémy v oblasti sociální, environmentální, vzdělávání, obecně problémy a potřeby venkovských regionů. O svých výsledcích, trápeních a úspěších prostřednictvím SHERPA referujeme přímo evropským politikům. Pro MAS Opavsko je řešeným tématem komunitní energetika a energetické úspory. Do dialogů a výzkumů jsou zapojena nejen vědecká pracoviště, univerzity, profesní organizace, ale rovněž občanské iniciativy a neziskové organizace (jako MAS Opavsko). Cílem projektu je přispět k **formulaci doporučení pro budoucí politiky a směry vývoje rozhodování EU**, týkající se venkovských oblastí. <https://rural-interfaces.eu/>





## Annex 2. References

- 1) Hlavní závěry a doporučení z průzkumu povědomí o úsporách energie mezi vlastníky budov a jejich motivací a bariér pro renovace, Nielsen Admosphere, 2020. Main conclusions and recommendations from the survey of awareness of energy savings among building owners and their motivations and barriers to renovations, Prepared by the Alliance of Chances for Buildings with the professional assistance of Nielsen Atmosphere and financial support from the State Energy Saving Program - EFEKT.
- 2) Discussion paper VENUS, 15.15. 2020
- 3) Vnitrostátní plán ČR v oblasti energetiky a klimatu, listopad 2019, MPO, (Czech national plan on energy and climate, in November 2019, MIT), The national plan is based on two main strategic documents, the State Energy Concept of the Czech Republic, approved in 2015 and the Climate Protection Policy in the Czech Republic approved in 2017.
- 4) Oponentní posudek k vybraným tématům z návrhu Národního Klimaticko-Energetického Plánu (NKEP) pro oblast FVE, pro MPO zpracoval NGÚ Brno
- 5) Strategie přizpůsobení se změně klimatu v podmínkách ČR (dále jen „Adaptační strategie ČR“) byla schválena usnesením vlády č. 861 ze dne 26. října 2015. Dokument je zpracován na roky 2015 – 2020 s výhledem do roku 2030. Připraven byl v rámci mezirezortní spolupráce, přičemž koordinátorem přípravy celkového materiálu bylo Ministerstvo životního prostředí.  
[https://www.mzp.cz/cz/narodni\\_akcni\\_plan\\_zmena\\_klimatu](https://www.mzp.cz/cz/narodni_akcni_plan_zmena_klimatu)
- 6) MPO, Analýza fondu nerezidenčních budov v České republice (2014).:  
[https://www.mpoefekt.cz/upload/7799f3fd595eeee1fa66875530f33e8a/4515\\_sance\\_pro\\_budovy\\_analyza-fondunerezidencnich-budov-v-cr-a-moznosti-uspor-v-nich-spb-15-1-2015-final.pdf](https://www.mpoefekt.cz/upload/7799f3fd595eeee1fa66875530f33e8a/4515_sance_pro_budovy_analyza-fondunerezidencnich-budov-v-cr-a-moznosti-uspor-v-nich-spb-15-1-2015-final.pdf)
- 7) MPO, Národní strategie regenerace brownfieldů(2008).  
<http://www.cityinvestczech.cz/data/files/strategie-regenerace-vlada-1079.pdf>





## Annex 3. Other output of VENUS

### **Methodology of approach to energy planning in the territory of municipalities and cities up to 25 thousand inhabitants.**

The output is a universal guide for developing a regional energy concept which offers logical steps in the process, while each region can adapt it to its local conditions.

The methodology for the implementation of technical assistance in the preparation and implementation of energy saving projects is designed so that a specific entity can provide technical assistance from the initial specification of energy saving measures, through the design of optimal combinations of these measures with the evaluation of economic viability to assistance in the preparation and implementation of selected projects. The methodology is the basis of energy planning, decision-making, project implementation and evaluation of achieved savings for areas involving more municipalities.

