DELIVERABLE D.T1.1.2

INDIVIDUAL REGIONAL BASELINE REPORTS ON LOW CARBON INVESTMENTS FUNDING

[ECO ENERGY LAND]

Preface

Present Individual Regional Baseline Reports on Low Carbon Investments Funding is a strategic document to be delivered for seven Partner Regions under the Project entitled "PROmoting regional Sustainable Policies on Energy and Climate change mitigation Towards 2030" funded by the Interreg CENTRAL EUROPE Programme.

Partner Region: [EcoEnergyLand]

Programme priority:	2. Cooperating on low-carbon strategies in CENTRAL EUROPE
Specific objective:	2.2 To improve territorial based low-carbon energy planning strategies and policies supporting climate change mitigation
Project acronym:	Prospect2030
Project index number:	CE1373
Lead partner:	Piemonte Region
Project start date:	01.04.2019
Project end date:	30.09.2021
Deliverable number:	D.T1.1.2
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Date:	[30.11.2019]

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1. Background

The aim of T1 ("T1 Assessment of availability and use of public funds supporting climate change mitigation") is to assess the use of public funds dedicated to climate change mitigation in the 2014-20 period with particular focus on development of RES. The overall objective of T1 is to deliver policy recommendations targeting mainly the macro-regional strategies (EUSDR, EUSAIR, EUSBSR, EUSALP) developed in CE.

The starting point of T1 is a baseline assessment of the use of available funding for low-carbon investments in the participating regions from 2014 onwards. The funding schemes to oversee include the followings in particular:

- Decentralised funds made available from the ESI Funds through the Partnership Agreements (national, sectoral or regional operative programmes);
- EU low-carbon initiatives (H2020, LIFE, EFSI, ELENA, Jessica, SEFF schemes);
- National/federal funding schemes (grants, subsidized loans, feed in tariffs, building integrated RES schemes); and
- Cooperation with private stakeholders (EPC, ESCO schemes, crowdfunding, venture capital, etc.).

The analysis, carried out by all Project Partners (PP) in the coordination of PP8, will assess the appropriateness of funding policies, administrative procedures, planning and implementation structures, dedicated resources and impacts in environmental and economical terms. Where relevant, the environmental impacts will address the whole lifecycle of the supported RES projects. The economic analysis should particularly focus on the cost-effectiveness of the use grants and exploring best practices concerning innovative low-carbon financing solution leveraging to maximum extent private financial resources.

The participating regions and the PP responsible for the elaboration of the reports are given in the table below.

Region	PP	Abbreviated name of PP	Deliverable ID
Piemonte Region	LP	REGPIE	D.T2.2.1
Friuli Energy	PP6	RAFVG	D.T2.2.2
EcoEnergyland	PP7	EEE	D.T2.2.3
Saxony-Anhalt	PP9	HSDM	D.T2.2.4
Split and Dalmatia County	PP4	EIHP	D.T2.2.5
Mazovia Region	PP3	MAE	D.T2.2.6
Southern Great Plain Region	PP8	AACM	D.T2.2.7

The data collection for the individual regional baseline reports will base on publicly available data and interviews. Compliance with the GDPR rules will remain the responsibility of each Project Partner (PP) involved.

2. Presentation of the target region

2.1. General presentation of the target region

The EEL is situated in the south-east of Austria, within the federal province Burgenland.

Fig. 1

Burgenland is the easternmost and least populous state of Austria. It consists of two statutory cities and seven rural districts, with in total 171 municipalities. It is 166 km long from north to south but much narrower from west to east. The region is part of the Centrope Project.

Burgenland is the seventh largest of Austria's nine states, or Bundesländer, at 3.962 km2 . Burgenland borders the Austrian state of Steiermark to the southwest, and the state of Niederösterreich to the northwest. To the east it borders Hungary (Vas County and Győr-Moson-Sopron County). In the extreme north and south there are short borders with Slovakia (Bratislava Region) and Slovenia (Mura Statistical Region) respectively.

The EEL with approx. 18.100 inhabitants lies in southern Burgenland, in the districts of Güssing, Jennersdorf and Oberwart, approx. 160 km from Vienna, in the middle of the Weinidylle Nature Park. The total area of the region is 395 km², of which almost half is forest, the most important resource in this region. To the east and south, the EEL borders the Hungarian comitate Vas.

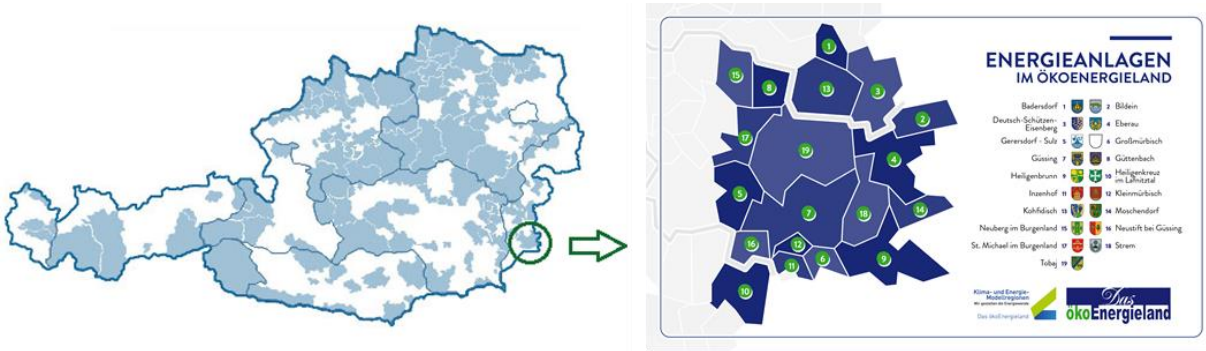


Fig. 2

2.2. Potentials for low-carbon sector development

In the previous three decades, the municipalities of the EEL have focused primarily on biomass as the most important renewable energy source. During this period, eleven district heating systems and three electric CHP power plants, two based on forestal biomass and one on residues from wood processing industry, have been installed.
Due to the development in the last decade, which led to a shift in the utilization of forestal biomass away from energy use towards a more material one for the bio-based products industry, this potential is no longer available on a larger scale, although more than 40% of the generated heat in the EEL is based on forestal biomass (mainly in small scale building central heating).

2.2.1. Energy efficiency

The biggest potential for energy efficiency measures can be found in the residential sector. Depending on the age of the building, between 55 and 80% of the building´s total energy consumption is caused by the building heating system. According to a study commissioned by the regional government in 2017, the energy efficiency potential of these buildings is 25% regarding heat and 7% regarding electricity. Since the building stock in the EEL is structured similarly to the one in the whole Burgenland, these efficiency potentials can also be applied to the buildings in place.

2.2.2. Renewables

A potential that is already exploited in the Eel is the use of mainly grass and partly maize silage and manure for the generation of electricity and heat. The main source for this type of biomass are meadows are under nature protection. In view of the fact that there are hardly any livestock left in the region, this meadow grass can hardly be fed and is therefore used in an economically viable way as a raw material in biogas plants.

The second source for renewable energy is solar radiation. It is also the main source for the future development, since the potentials for wind- and hydropower are very low and not viable from the economic point of view. Nevertheless, in combination with electric storage systems and the use of heat pumps, this technology has, although already well implemented, this technology still has a wide application potential in the future.

2.3. Regional low-carbon policies, institutional framework and policy

The Austrian climate and energy strategy Mission 2030 can be regarded as the cornerstone of future regional low-carbon policy.

2.3.1 Mission 2030 – The Austrian Climate and Energy Strategy (2018)

https://mission2030.info/wp-content/uploads/2018/05/Endfassung-der-Klima-und-Energiestrategie-Mission-2030.pdf

The aim of the strategy is to build an energy system that is secure, sustainable, innovative and competitive at the same time. Reducing greenhouse gas emissions, increasing the use of renewable energy, increasing energy and resource efficiency, promoting clean technologies and increasing the competitiveness of the location are therefore key objectives. The framework conditions for sustainable investment must be improved. Austria is to become a pioneer in research and the implementation of innovative solutions, and its international technology providers an attractive home market.

The key target indicators of the strategy:

- A 36 % reduction in CO2 emissions is to be achieved by 2030 compared to 2005.
- Electricity from renewable energy sources is to be increased from 72 % to almost 100 % by 2030.
- For the total energy demand, the share of renewable energy sources is to be increased from 35 % to 45 to 50 %.
- 100 % of the heat generated is to come from renewable energy sources by 2050. Among other things, oil-fired heating systems are to be completely eliminated from the heating market in the next 20 to 30 years. On the other hand, the phasing out of natural gas in the heating market will take some time, as there are only limited system alternatives, especially in conurbations.
- Traffic emissions should be $C0_2$-neutral by 2050.
- The renovation rate of buildings is to be raised from 1 % to 2 %.
- The tax on own power generation is to be abolished.
- The bicycle infrastructure is to be massively expanded in order to increase the proportion of bicycles in Austria from 7 % to 13 % by 2025. In cities, this percentage could be much higher in the future.
- In rural areas, rail and bus services are to be further developed. Sharing, pooling or micro-open systems are to supplement the public transport system as feeder lines.
- The master plan to promote pedestrian traffic is to be implemented and further developed by the regional authorities.

In the coming years, the climate and energy strategy will focus primarily on transport and space heating, as these two sectors offer the greatest potential for savings. Heating, hot water and cooling in buildings account for around 27 percent of Austria's total final energy demand. Heating and hot water in buildings would account for 16 percent of domestic greenhouse gas emissions in 2018.

10 lighthouse projects:

- Efficient freight transport logistics. In freight transport, the shift from road to rail is to be promoted through improved services and incentives and the combined transport of rail, water and road is to be strengthened.
- Strengthening rail transport. The development of logistics hubs and the necessary rail infrastructure should also be given special attention.
- E-mobility offensive. The focus will be on e-buses and e-commercial vehicles. And the expansion of the charging infrastructure for e-buses. Electric car subsidies are to be further expanded together with vehicle manufacturers and importers. The suitability of electric cars for everyday use is to be increased, for example by promoting private investment. This includes, in particular, the adaptation of housing law to make it easier to implement charging stations in multi-party houses. In addition, road traffic facilities are planned (e.g. exemption from IG-L restrictions, exemption from driving bans). The railway is to be electrified further.

By 2030 the degree of electrification of the ÖBB lines is to rise from 79 to 85 percent.

- The construction of 100,000 roofs with photovoltaic systems is to be promoted, as are small storage facilities. Only one percent of energy generation still comes from photovoltaic systems. Obstacles in housing and plant law are to be removed.
- Thermal building refurbishment subsidies are intended to create the incentive to abandon fossil fuels. Building envelopes and heating systems should be favoured. By 2030, greenhouse gas emissions of around 8 million tonnes of CO2 equivalent are to be reduced by three million tonnes of CO2 equivalent. In order to significantly reduce the demand for fossil energy for heating and hot water, several interlinked measures are to be implemented. The thermal standards are to be further improved in new construction and refurbishment. Here, too, subsidies are intended to create incentives.
- Renewable heat
- Renewable energy from hydrogen and biomethane should be promoted. For the transition to low-emission and zero-emission vehicles, the mix will shift in favour of alternative drive systems and fuels based on renewable energies. Electric mobility, hydrogen mobility, bio-CNG/bio-LNG and bio-fuels. For example, the production of biogas in agriculture, waste/compost and waste water management is to be boosted. The feeding of hydrogen and biogas into the natural gas grid is to be promoted. These energy sources are to be tax-favoured.
- Green finance: Incentives are to be created for investments that promote the use of green energy.
- Energy Research Initiative 1 - Building blocks for the energy systems of the future. Fossil raw materials are to be increasingly replaced by biogenic ones. To this end, an Austrian bio-economy cluster is to be created, in which experts from forestry and agriculture and the associated commercial and industrial sectors will work together. In this way, imports of raw materials are to be reduced and price fluctuations reduced.

2.3.2 Provincial Development Programme Burgenland 2011 (Landesentwicklungsprogramm **Burgenland 2011**)

http://www.phasing-out.at/media/file/797_9c_LEP2011_Ordnungsplan.pdf

The Province of Burgenland decided to draw up a regional development programme to provide orientation and security for the population, the business community and, last but not least, the administrative authorities of Burgenland. It sets out a roadmap for Burgenland's development over the next ten to fifteen years, which is developing in a number of areas of tension - between globalisation and regionalisation, tradition and modernity as well as growth and limited resources.

The LEP 2011 included contents that were also discussed throughout Austria, in neighbouring countries and at EU level. The German and Swiss spatial development strategies, for example, cite close cooperation between environmental protection, tourism, agriculture, renewable energies and social sustainability as important development principles. ÖSTRAT (Austrian Sustainability Strategy) or ÖREK 2011 (Austrian Spatial Development Concept) also document the change from earlier "static" administrative models to increasingly flexible and dynamic design approaches. The ESDP (European Spatial Development Concept) also mentions catchwords such as inter-municipal cooperation, strong regions, "new" urban-rural relations, "expanding renewable energy

production and creating more efficient settlement structures", emphasises the closer coordination between energy and spatial planning, which was already included in the 1994 LEP and was also discussed throughout Austria in the climate protection context. In the 2011 LEP, the chapter "Energy and Raw Materials" was therefore expanded and regional differences in Burgenland were discussed in greater detail in order to be able to produce even more renewable heat, electricity and fuels in the future.

Relevant priority areas:

- Space-saving and sustainable use of space
- Cooperation that transcends national and municipal boundaries: efficient use of resources
- Waste prevention, separation and recycling
- Push renewable energy production and create more efficient settlement structures
- Use and develop knowledge and research as economic capital: Competence, research and education topics that are particularly relevant for Burgenland include environmental technology, renewable energies, renewable raw materials, energy efficiency and the use of renewable energy sources.
- Develop cooperation between nature and cultural landscape conservation, agriculture and forestry and tourism: The preservation and care of nature and landscape as well as climate protection are of great importance for an integrated and sustainable regional development.
- Sustainable use of natural space: Biomass should not only be used energetically, but also increasingly as a renewable raw material in industry, pharmaceuticals or other production processes. In the medium term, this will make it possible to replace crude oil-based materials and plastics.
- Energy: The expansion of energy production plants based on renewable resources must be regionally differentiated: - in Northern Burgenland primarily wind power, agricultural and forestry biomass, - in Central Burgenland primarily forestry and agricultural biomass and - in Southern Burgenland primarily geothermal energy and agricultural and forestry biomass.Other renewable energy sources do not have a pronounced regional focus - based on their potential - and should therefore be supported nationwide, such as solar energy (solar heat and photovoltaic electricity), heat from waste or heat pumps, the spatially sustainable and environmentally compatible production of fuels and combustibles from biomass, provided that food production neither competes nor is endangered. Nationwide, regional and municipal energy concepts must be developed in accordance with the requirements of the country. Settlement developments must be oriented to the possibilities and capacities of energy supply (decentralised and centralised energy plants).
- Raw materials: The extraction of non-renewable and renewable raw materials must be coordinated taking into account the respective regional demand and potential.
- Transport: A targeted offer of mobility in public transport tailored to different user groups should be sought. Alternative forms of climate-friendly transport systems, such as electromobility, must also be given greater consideration.

2.3.3 Energy Strategy Burgenland 2020 (Energiestrategie Burgenland 2020)

http://www.tobgld.at/uploads/tx_mddownloadbox/Energiestrategie_Burgenland_2020__01.pdf

In 2009, the provincial government of Burgenland and the provincial governor set up the "Energy Team Burgenland", which among other things had the task of dealing with key technologies in the areas of energy efficiency and energy production as part of an energy strategy. The Energy Team Burgenland has developed proposals for the priority areas.

The efficient use of energy, energy saving and the production of renewable energy are commitments and challenges that affect everyone - combined with the goal of becoming independent of fossil and nuclear energy sources in the long term. This "rethinking" in the sense of renewable energies already began in Burgenland before the turn of the millennium with the first wind turbines and the increased use of biomass for heat and electricity production. As early as 2009, a team of experts was convened under the coordination of the Burgenland Energy Agency (BEA) in order to draw up an energy strategy with the participation of many experts, with the aim of working out ways towards complete energy autonomy for Burgenland. In the energy strategy, after achieving the balance sheet electricity autonomy in 2013, the use of 50 % renewable energy by 2020 and the use of 100 % renewable energy by 2050 for the entire energy consumption of Burgenland were set as targets. The way to achieve these goals was predicted through the implementation of more than 60 groups of measures in the categories of energy saving and renewable energy. Scenarios and development paths were developed both for the development of energy consumption and for increasing the production of renewable energy.

Priority areas of the strategy are energy efficiency and energy saving; energy production and resources; energy storage, conversion and logistics.

In the area of energy efficiency and energy saving, the following topics will be dealt with: Renovation of buildings, new buildings with lowest or zero energy standards (or at least passive house standards), energy-efficient equipment and installations, process optimisation, efficiency and saving in mobility.

In the area of energy production and resources, the following topics will be addressed: Wind power with optimal use, photovoltaic and solar energy, resource biomass / biogas / residual materials, district heating plants, biogas networks, other energy production from renewable resources.

In the field of energy storage, energy conversion and energy logistics, support measures for research and development, pilot projects and concept development are proposed.

Proposals for measures include private households, industry and commerce, including tourism, the public sector and municipalities as beneficiaries, but without concrete financing information.

Every strategy begins with a vision, which should be achieved in the long run. Burgenland's vision is to achieve energy self-sufficiency in 2050, which in detail should cover the complete electricity, heat and fuel consumption of Burgenland's inhabitants in 2050. Interim targets have already been achieved through previous measures and investments.

- 2013: Autonomy for electricity
- 2020: 50 % plus the total energy consumption in Burgenland is produced from renewable sources
- 2050: Complete energy self-sufficiency achieved

The regional low carbon policy decisions are primarily taken by the regional government and the municipalities. Implementation is the responsibility of the Burgenland Provincial Government Office, Department 3 - Finances, Main Department of Housing Promotion and the District Authorities.

Sphere of competence of Office of the Burgenland Provincial Government, Department 3 - Finances, Main Department Housing Promotion:

Home Ownership Unit and Multi-storey Residential Construction Unit: Comprehensive refurbishment, individual refurbishment, special promotion campaigns

Energy and Technology Unit: energy passport database, research and projects, promotion of alternative energy, energy consultations

Sphere of competence of District Authorities: Enforcement of decisions in environmental matters, advice and legal informations in environmental matters

2.3.4 Climate vision Burgenland 2050

http://www.iwo-austria.at/fileadmin/user_upload/legistik/strategien/VISION_Burgenland_2050.pdf

The central elements of the vision are the goals and principles defined for Burgenland. The climate and energy strategy for Burgenland will be drawn up in a two-stage process. The first milestone is the climate vision for Burgenland completed in 2019. The second milestone is the overall strategy.

The goals and principles of the Klimavision Burgenland 2050: The ultimate objective is to reduce greenhouse gas emissions: By 2050, no fossil fuels are to be needed, and greenhouse gases are to be reduced to around one tenth of their current levels.

Energy consumption is to be reduced by 5 petajoules.

The production of the required energy should come 100% from renewable sources. What has already been achieved in electricity production thanks to wind power in Burgenland will be a challenge in the areas of heat and mobility.

A holistic solution for the various fields of action will be worked out.

The target quadrangle of environmental sustainability, social compatibility, competitiveness and security of supply was set as a framework.

3. Decentralised funds made available from the ESI Funds through the Partnership Agreements

This Chapter is dedicated to the assessment of the relevant decentralized components of EU funding between 2014 and 2020 that is committed and disbursed within the competence of the Member States.

The programming and implementation of the EU Structural and Investment Funds (ESIFs) is conducted within a multi-annual framework covering the period of 2014-2020. Regulation (EU) N°1303/2013 lays down common provisions applicable to the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF). These Funds operate under a common framework known as the European Structural and Investment Funds. The Regulation also sets out the provisions necessary to ensure the effectiveness of the ESIF and their coordination with one another and with other EU instruments.

ESIFs include both program elements decentralised on to the EU Member States and program elements managed centrally by the European Commission or its executive bodies in accordance with the principle of subsidiary. However, the major part of ESIFs (approximately 75%) is utilised by the Member States within a decentralised implementation system.

Each Member State has concluded a Partnership Agreements with the European Commission. The Partnership Agreements uniformly provide funding for eleven Thematic Objectives defined by the European Commission. The Thematic Objectives include:

- → TO1 - Strengthening research, technological development and innovation;
- → TO2 - Enhancing access to, and use and quality of ICT;
- → TO3 - Enhancing the competitiveness of SMEs, of the agricultural sector (for EAFRD), and ofthe fishery and aquaculture sector (for EMFF);
- → **TO4 - Supporting the shift towards a low-carbon economy in all sectors;**
- → TO5 - Promoting climate change adaptation, risk prevention and management;
- → TO6 - Preserving and protecting the environment and promoting resource efficiency;
- → TO7 - Promoting sustainable transport and removing bottlenecks in key network infrastructures;
- → TO8 - Promoting sustainable and quality employment and supporting labour mobility;
- → TO9 - Promoting social inclusion, combating poverty and any discrimination;
- → TO10 - Investing in education, training and vocational training for skills and lifelong learning;
- → TO11 - Enhancing institutional capacity of public authorities and stakeholders and efficient public administration

All Partnership Agreements provide a matrix of the above Thematic Objectives (TOs) versus the structural instruments (ERDF, ESF, CF, EAFRD, EMFF; regional development, social inclusion, cohesion, agricultural & rural development and fishery funds).

The Member States are responsible to define national, sectoral or regional Operational Programmes (OPs) and ensure the translation of the Thematic Objectives onto OPs. TOs are translated into Operational Programmes (OPs) by each country in a different way. The low-carbon sector related activities may be addressed through several OPs. The OPs are typically broken down into Priority Axes (PAs) and measures within the specific PAs.
The partnership agreement adopted by the Comission was published under the title: “STRAT.AT 2020”

Fig.1 is giving an overview on the ESIF allocations on national level, acoording to “STRAT.AT 2020”. TO4 is marked in the row “(4)CO2” with a total amount of 224,3 million €. The ERDF is contributing with 118,2 mio €, the EAFRD with 105,7 mio € and the EMFF with 505 000 €. The allocation for TO4 equals a share of 4,7% in the total allocation of ESIF resources.

Tabelle 1: ESIF-Allokationen 2014–2020 nach Thematischen Zielen (Plandaten Stand Juli 2017)

Indikative Allokation der Unterstützung durch die Union nach Thematischen Zielen für die ESI-Fonds auf nationaler Ebene					
Thematisches Ziel	**ESI-Fonds 2014–2020** (Angaben zu laufenden Preisen in Euro inkl. Leistungsreserve)				
	EFRE	**ESF**	**ELER**	**EMFF**	**Summe**
(1) FTEI	206.235.238	-	71.257.620	-	277.492.858
(2) IKT	-	-	26.459.915	-	26.459.915
(3) KMU	164.732.433	-	650.409.522	3.591.500	818.733.455
(4) CO_2	118.156.167	-	105.666.508	505.000	224.327.675
(5) KLIMA	-	-	1.233.131.982	-	1.233.131.982
(6) UMW/RE	4.850.000	-	1.242.915.586	2.282.000	1.250.047.586
(7) VER	-	-	-	-	0
(8) EMPL	10.280.000	66.697.349	25.466.727	360.000	102.804.076
(9) POV	11.437.640	137.642.139	410.467.052	-	559.546.831
(10) LLL	-	211.448.374	57.389.577	-	268.837.951
(11) GOV	-	-	-	-	0
Zwischensumme	*515.691.478*	*415.787.862*	*3.823.164.489*	*6.738.500*	*4.761.382.329*
Technische Hilfe	20.570.601	26.299.491	114.387.508	226.500	161.484.100
Summe	**536.262.079**	**442.087.353**	**3.937.551.997**	**6.965.000**	**4.922.866.429**

Figure 1: Allocation of ESI Funds in Austria for the period 2014 - 2020

Fig. 2 shows the distribution of the ESI funds to the respective thematic objectives

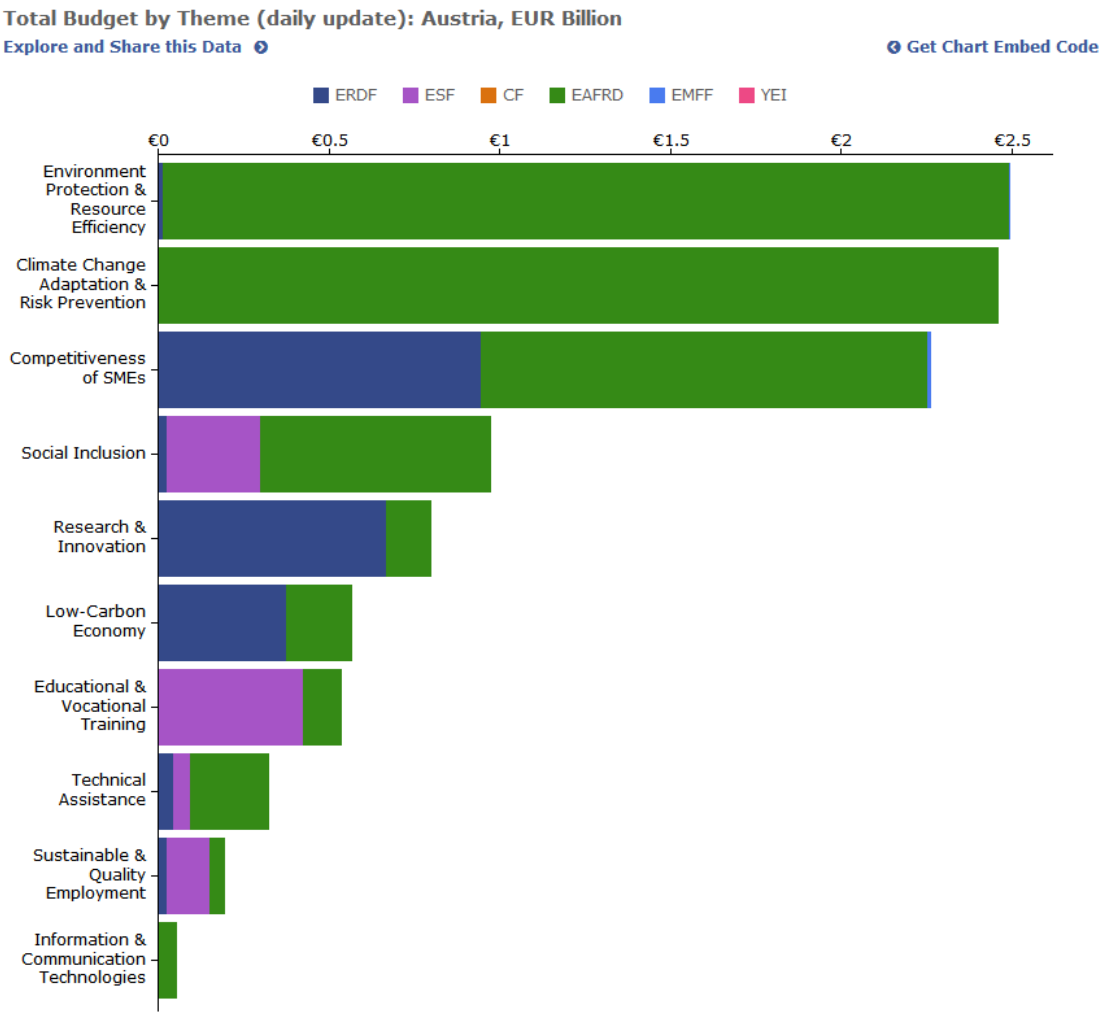


Figure 2: distribution of ESI funds to the thematic objectives

Fig 3 is showing the state of implementation of the funds in mid-2019:

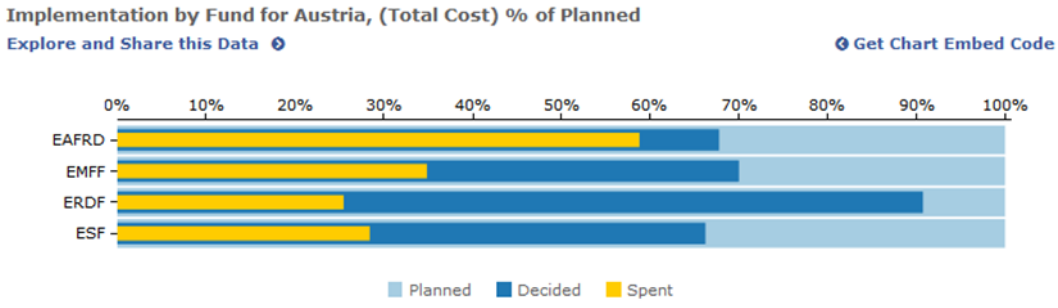


Figure 3: ESI funds – state of implementation

3.1. National/federal horizontal (sectoral) operative programmes

Operational program: “Investments in Growth and Employment Austria 2014-2020 - Operational Programme for the use of the ERDF funds”
The Operational Programme contributes to the achievement of certain elements of the Europe 2020 strategy in Austria. In particular EU funds are used to increase innovation and research and development activities in small and medium-sized enterprises, including technology transfer and investment in certain R&D infrastructure. The programme also supports SMEs in promoting their competitiveness through investments in innovation, energy efficiency and the use of renewable energies. In certain urban areas the programme supports C02 reduction strategies and integrated sustainable development, and in certain other functional urban areas, cooperation and efficient use of resources. Overall, the programme is to a very high degree (more than 80%) focussed on 3 main areas:

- Research, development and innovation,
- Competitiveness of SME
- Transition towards a low carbon economy

Austria receives EUR 536 million from the European Regional Development Fund (ERDF) for the Operational Programme "Investments in Growth and Employment" (IWB) for the entire funding period

3.2. Decentralised regional operative programmes

3.2.1 ERDF

The ERDF helps to promote economic and social cohesion in Europe and to reduce disparities between the levels of development of the regions.

In the period 2014-2020, the ERDF will support the following two objectives:

1.) Objective "Investment in growth and employment" (IWB/EFRE)

This objective is served in all regions of Europe, distinguishing between "more developed", "transitional" and "less developed" regions. With the exception of Burgenland, which in 2014-2020 has the status of a "transitional region", the other provinces in Austria belong to the category "more developed regions".
Eligibility map Austria 2014-2020

2.) European Territorial Cooperation Objective (ETC)

Austria to participate again in 2014-2020 in

- **7 cross-border ETC programmes**

The Eco Energy Land has access to funds in two cross-border programs, which are: Austria-Hungary (AT-HU) and Austria-Slovenia (SI-AT). The respective fundings for projects in the EEL are:

1.116.000 .- € in AT-HU of which 280.000.- for the establishment of a renewable energy resource management network (project: Ökoachse).
1.667.200.- € in SI-AT of which 835.400 .- € for an electromobility project (project: “E-Carriage”)

- **3 transnational ETC programmes**
    - ALPINE SPACE,
      No relevant project could be detected in the CE program for the period
    - CENTRAL EUROPE
      No relevant project could be detected in the CE program for the period
    - DANUBE TRANSNATIONAL
      565.460.- € for a project in the fields of energy security and energy efficiency (project: 3Smart)

- **4 network programs**
    - INTERREG EUROPE

No relevant project could be detected in the program for the period

    - URBACT III

No relevant project could be detected in the program for the period

- ESPON 2020

No relevant project could be detected in the program for the period

- INTERACT III

No relevant project could be detected in the program for the period

3.2.2 EAFRD

LEADER is a programme of measures adopted by the European Union to promote innovative rural development measures on a model basis since 1991. Local action groups develop development concepts on the ground. The aim is to support Europe's rural regions on their way to independent development. LEADER is based on the EAFRD

94.700 € for a concept and tools for self-powered dwellings (project: Hauskraftwerk")

88.700 € for the project "Eco-energy for municipalities"

4. Other EU low-carbon initiatives

The purpose of this Chapter for is to identify and assess individual EE and/or RES projects in which at least one project partner from the region plays a dominant role and/or the implementation partly or wholly realized in the region. Project of interest are those that have been funded from 2014 onwards.

4.1. EU initiatives managed by the European Commission

4.1.1. Horizon 2020 Programme

The amount of funds in the Horizon 2020 programme tasked for Burgenland is app. 5,8 mill. €, which equals a share of less than 1% of the program´s financial resources for Austria. In the EcoEnergyLand, an amount of 3,3 mill. € for projects in the program could be detected. This equals 59% of the amount spent in Burgenland.

4.1.2. LIFE Programme

No relevant project could be detected in the program for the period

4.1.3. INTERREG and other EU initiatives

The contents regarding projects funded by the INTERREG program have already been treated in the ERDF section (see: 3.2.1)

4.2. Joint initiatives of the EU with International Financial Institutions

4.2.1. European Fund for Strategic Investments (EFSI)

No relevant project could be detected in the program for the period

4.2.2. European Local Energy Assistance (ELENA)

No relevant project could be detected in the program for the period

4.2.3. Joint European Support for Sustainable Investment in City Areas (Jessica)

No relevant project could be detected in the program for the period

4.2.4. Sustainable Energy Finance Facility (SEFF) of EBRD

No relevant project could be detected in the program for the period

4.2.5. Others low-carbon financing schemes identified?

Currently, no such financing schemes could be identified

5. National/federal funding schemes

Austrian national funding schemes, in the following, are categorized by the responsibele agencies, which are entrusted with the completion of funding tasks .

5.1 Klima- und Energiefonds (Austrian climate and energy fund) (KPC)

The Climate and Energy Fund was set up by the Federal Government in 2007 to support the implementation of its climate strategy - in the short, medium and long term. It is owned by the Republic of Austria, represented by the Federal Ministry for Sustainability and Tourism (BMNT) and the Federal Ministry of Transport, Innovation and Technology (BMVIT). The strategies of the Austrian Federal Government in the fields of research and technology, climate protection and energy provide the essential foundations which are reflected in the programmes of the Climate and Energy Fund. The overriding objective of all actions is to reduce domestic greenhouse gas emissions as quickly and sustainably as possible.

For the region, the following funded projects could be detected for the relevant period:

Klima und Energie Modellregion (Climate and Energy Model Region): € 250.000.-

Klimawandel Anpassungsregion (Climate Change Adaption Region): € 150.000.-

5.2 Forschungsförderungsgesellschaft

The Austrian Research Promotion Agency (FFG) is the central organisation for the promotion and financing of research, development and innovation in Austria. The aim of the FFG is to strengthen Austria as a location for research and innovation in global competition and thus to sustainably safeguard high-quality jobs and prosperity in Austria.

The FFG was founded on 1 September 2004 by the Federal Law No. 73/2004 "Forschungsförderungsgesellschaft Errichtungsgesetz" (FFG Act for short). It is wholly owned by the Republic of Austria. The FFG is supported by the Federal Ministry of Transport, Innovation and Technology (BMVIT) and the Federal Ministry of Digitisation and Economic Location (BMDW). As a provider of promotional services, FFG is also active on behalf of other national and international institutions.

101.370.- € for a knowledge+innovation project (ForschungswEEg - Knowledge & Innovation in Renewable Energies from Small to Large in the Research Region Southern Burgenland)

There could be also 4 other projects in the respective field of interest detected, but with no information on the funding.

5.3 Austria Wirtschaftsservice

No relevant project could be detected in the program for the period

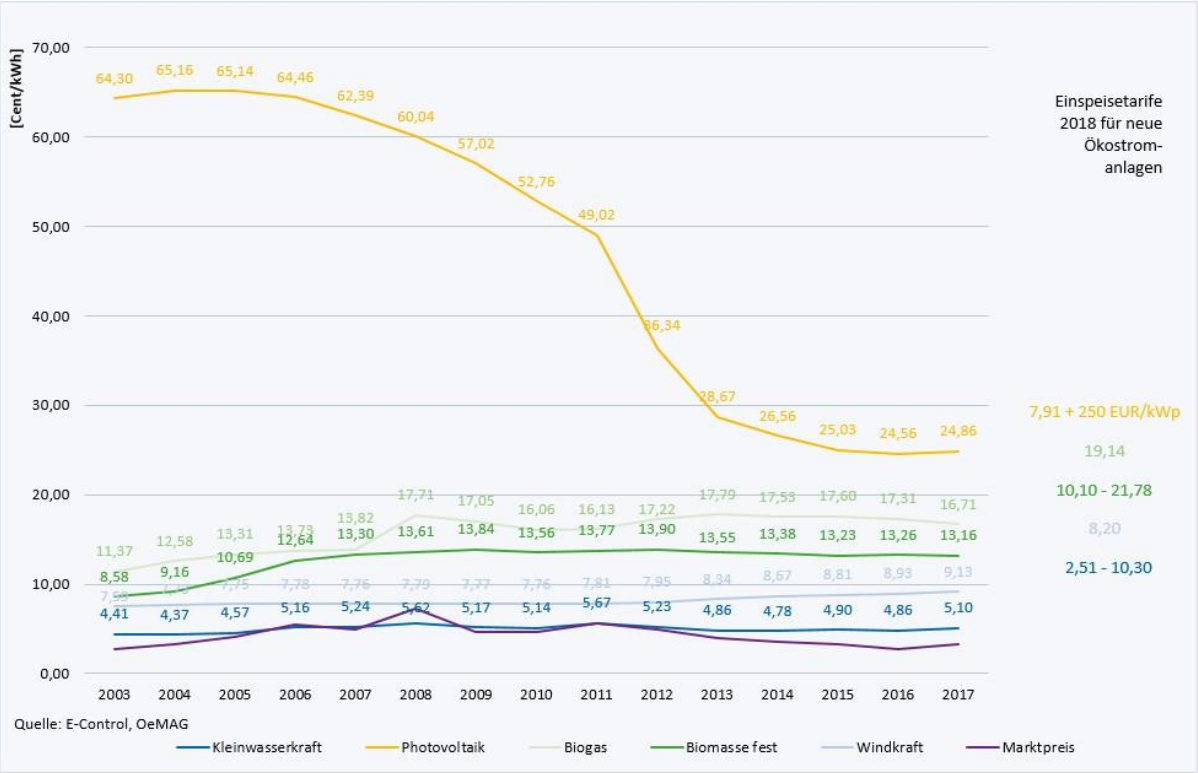
5.4 OeMAG Abwicklungsstelle für Ökostrom AG (Settlement agency for green electricity)

Green electricity makes an important contribution to achieving climate and environmental protection goals. In order to increase the production of green electricity, a statutory nationwide support scheme has been created. The aim of eco-electricity promotion is to promote the production of eco-electricity by plants in Austria in accordance with the principles of European Union law.

Recognition pursuant to § 7 ff ÖSG 2012 is necessary so that the electricity generated in the plant concerned is regarded as green electricity in accordance with the Green Electricity Act. This is the only way to ensure that electricity can be fed into the grid at the subsidised rate.

The funding is consisting of two components: an investment subsidy and a subsidized feed in tariff. Currently, in the case of photovoltaic, for each kWpeak installed a subsidy of € 250.- is granted (precondition: the plant was recognized by OeMAG as an eco-power plant.)

Fig is showing the development of the feed-into-grid incentive tariffs from 2003 to 2018, as presented by the national regulatory authority E-Control.



Between 2014 and 2019, the investment incentives from this source amounts to € 230.000.- Subsidized feed in remunerations for green electricity from all acknowledged eco-energy facilities are amounting to a sum of 26,5 million € in the same period.

5.5 Regional (federal state)

The regional governmet is funding activities in the public and residential sector regarding the the shift towards a low-carbon economy. Funded activities are investments in: alternative energy systems, alternative mobility, photovoltaic and energy storage, building refurbishment and energy consulting. The fundings can be non-repayable grants or subsidised loans.

The Burgenland Green Energy Fund serves to promote renewable energy sources and new technologies for green electricity generation as well as to increase energy efficiency in Burgenland. In 2018 almost 1,300 funding applications were approved with a total amount of over 1.5 million euros.

The amount of funds, used in the EcoEnergyLand from this source is not identifiable.

6. Cooperation with private (and public) stakeholders

- Wagenhofer PV

1 million € for a 1 MWpeak open-space photovoltaic plant have been invested by a private investor in the municipality of Strem. The plant was installed without the use of the funding schemes described above. It aims to achieve profitability on the basis of an energy community which, however, is not yet established due to the lack of concrete legal framework conditions. However, a corresponding regulation, which will also ensure legal certainty, is expected in 2020.

- Public participation photovoltaic facilities

Between 2014 and 2019, five public participation photovoltaic facilities have been installed in the EcoEnergyLand.

With a contribution of 1000 Euro it is possible to purchase a photovoltaic system in a municipality where the participants live. The electricity generated by the system is completely fed into the grid of Energie Burgenland. In return, the plant operator - the municipality itself - receives a so-called feed-in tariff for a period of 13 years. After 13 years this should not only enable the payment of a profit share in the amount of the contribution, but also the annual payment of a profit advance of approx. 4% independent of the result.

In total, a capacity of 243 kWpeak, with an investment volume of € 338.000.- has been installed.

In total, for the period from 2014 to 2019, an investment of app. 1,34 million €, based on private and private-public partnership investment, has been made.

7. Evaluation

The investigation of public funds for a transition towards a low carbon economy in the EcoEnergyLand, led to the following result:

Source	Amount 2014-2019 €
ESF+EFRE	621.642
H2020	3.303.938
Interreg	1.528.036
Leader (ELER)	183.396
Klimafonds	1.051.026
FFG	101.372
OeMAG	26.511.186
Total €	**33.300.596**

The amount of 33,3 mill € cannot be regarded as the complete number of projects and initiatives in the EcoEnergyLand, since there were also other initiatives identified but to which no totals could be assigned, due to the lack of respective information from project carriers or funding authorities. Additionally, an investment of 1,3 million €, based on cooperation with private (and public) stakeholders could be identified.

Thus, a total traceable investment of 34,6 million € was detected.

There are several approaches to define evaluation criteria for the effectiveness of low carbon investments funding. In the following, the evaluation is based on the 20-20-20 targets of Austria within the framework of the 2020 climate and energy package of the European Union.

<u>Setting priorities and objectives for low carbon funds</u>

- *To what extent do EU priorities and objectives respond to the demands of your region? Please consider all relevant initiatives described above*

EU priorities and objectives are well responding to the demands of the region, since the EEL is an association of municipalities, which pursue the same goal: to counteract the outflow of capital, to strengthen the regional economy of the border region, to create jobs and to maintain and increase the quality of life in the region. Measures to achieve these objectives include renewable energy, tourism, mobility, education and nature conservation.

- *To what extent do national priorities and objectives respond to the demands of your specific region?*

Reducing greenhouse gas emissions, increasing the use of renewable energy, increasing energy and resource efficiency, promoting clean technologies and increasing the competitiveness of the location are key objectives. The framework conditions for sustainable investment need to be improved. Austria aims to become a pioneer in research and the implementation of innovative low-carbon solutions, and its international technology providers an attractive home market

- *If there are any regional priorities and objectives, do they appropriately meet actual needs?*

The regional development strategy for Burgenland, released by the end of 2019, has a strong focus on low-carbon development and green investments. Regarding the EEL, the municipalities are having their self-imposed goals, as already described above (EU priorities)

- *To what extent setting priorities is based on public consultation?*

The setting of priorities is mainly based on expert and stakeholder consultation. In the respective context, public consultation is a rather subordinate approach, restricted on opinion polls.

- *In what low-carbon areas innovative financial schemes can be instrumental?*

Financial schemes can be instrumental in energy efficiency, RES, electromobility etc.

<u>Institutional framework</u>

- *Is/are the regional programming and implementation structure(s) appropriate? Any space for improvement?*

Up to now, the regional programming on NUTS 2 level has been less appropriate, if compared to other Austrian regions. Although a more than 100% covering rate of the regional electricity demand has been achieved, there is still space for improvements regarding energy efficiency, mobility and supply infrastructure.

- *Is the programming and related decision-making based on appropriate public consultation?*

In the respective context, public consultation is a rather subordinate approach, restricted on opinion polls

- *Are stakeholders comprehensively identified?*

Regarding institutional framework, all stakeholders are identified.

Eligibility and application conditions

- *Are the beneficiaries appropriately identified?*

The beneficiaries within the EEL are well identified, on NUTS2 level, not all beneficiaries could be identified, due to limited access to information because of privacy issues.

- *Is the financing (grants or loans) adequately sized?*

Yes

- *Are there application conditions that substantially limit the target beneficiaries or the project* scope?

There are no limiting application conditions regarding the target beneficiaries

Administrative procedures

- *Are the application procedures transparent? Is sufficient information available?*

The application procedures are transparent, but there is still a demand for more information on the part of the representatives of the interests as well as relevant stakeholders concerned, if potential beneficiaries, like SMEs, want to apply for funding.

- *Is the application process easy? Do the beneficiaries need external assistance to complete the application process?*

The process is often not transparent for newcomers and the requirements are sometimes not well communicated. The result of the gap in information- and communication-flow is, that the available funding is often not sufficiently triggered. Thus, the beneficiaries do need external assistance to complete the application process.

- *Is the required financial administration transparent and smooth?*

Yes

- *Are there significant delays in payments?*

No

Financial burdens

- *Are the financial burdens to apply for funding (e.g. lack of preparatory resources, own contribution, cash flow issues concerning pre-financing)? Can you pls. differentiate according to types of beneficiaries (e.g. local authorities, private individuals, SMEs)*

Regarding preparatory resources and pre-financing, there are no particular financial burdens to bear for local authorities, since they are well connected to the authorities responsible for funding and the procedures for applying are part of the regular workflow in the authorities. The burdens for SMEs can be tangible higher if the enterprise is small and/or not, or not well integrated in a business network; in thiese cases, mainly the question of pre-financing can be a problem. Private individuals are normally well informed regarding requirements because the procedures are normally standardized, well communicated and well attended by specially trained personnel.

Efficiency of use of funding dedicated to sustainable energies

- *Are the dedicated EU grants funding efficiently used?*

An answer to this question is depending on the definition of "efficient use" of funds. From a short to medium-term perspective, the use of fundings can be considered efficient, as long as the policy framework is reliable and consistent. In the long term, as the experience on regional, as well as national level shows, many fundings are having no lasting impact. The latter must be said for the development in the bioenergy sector, which has been massively promoted over the past decades but has been abruptly stopped in the last period, due to fundamental changes in policy framework. In the long-term and "historic" context, thus, some fundings can be rated as not sutainable, or even completely inefficient; in the bioenergy context some fundings, although used very efficiently within the short term frame of reliability, in the long term view, can be rated even as counterproductive, because the economic infrastructure based on it is also massively affected.

- *Are there areas where grant funding can (partially) be replaced by more market-oriented instruments?*

Yes, in case the investment is based on well developed and established technology, as in the case of the use of solar energy for self-supply in SMEs and the residential sector.

- *Is the blending of grants and commercial financing a usual practice in the public sector?*

There has been done some pioneering work in this context regarding the supply of public buildings with photovoltaic electricity, but it is still not a usual practice.

- *Are there aggregated projects with a critical size that attract the interest of the financial market actors?*

Currently, no.

- *Are there mechanisms to leverage private financial resources?*

Yes. There are possibilities of applying public-private partnership models but also tax reliefs for non-profit foundations, the latter mainly in the field of research and development.

8. Conclusions and recommendations

Conclusions and recommendations at the level of the target region

During the observed period a fundamental change in the framework for renewable energy supply has occurred, since the focus in the precedent two decades has been on energy from biomass. Over the past six years, the importance of biomass has been reduced in favour of the use of wind, solar and geothermal energy. The relevant regional actors of the EEL have responded to this change by focusing their activities on the production, storage, intelligent distribution and use of electricity generated by photovoltaics. They are also partners in corresponding (transnational) research and development projects. These projects show, that technical development is still very far from the framework conditions set out in the clean energy package, which are requiring a standardized, market-ready solution for deployment.

Furthermore, at national level, besides the overall gap regarding technical solutions, the legal framework conditions for the organisation and scope of action of energy communities, which are to be regarded as one of the core actors for a decentralised energy market, are still missing. Nevertheless, the preparation for the changes in the energy market is already on the way and the results of the research and development projects have shown the possibilities as well as the limitations and further challenges for the integration of prosumers in this market.

In this context, regional policy should focus on the promotion of photovoltaic generation and electricity storage deployment in homes, with the aim of increasing the coverage of own demand. Thus, the information flow regarding these issues, towards private homes and SMEs needs to be intensified, since there are currently a series of funding schemes, be it subsidized feed-in tariffs or investment incentives. With the aid of these investment encouraging subsidies, the basic infrastructure for the future energy system in the region can be developed, providing advantages and flexibility for self-consumption as well as supply for the general grid or within energy communities.

Conclusions and recommendations at national level

The national climate- and energy strategy “Mission 2030” is proposing ambitious targets, measures and a roadmap in order to achieve the objectives set. Considering the current state of technology and the time needed to implement the necessary legal framework, it is therefore essential to establish a strict timetable and evaluate the measures taken on an ongoing basis in order to be able to intervene, if necessary. The existing national support programmes already provide a good basis for a comprehensive transformation of energy systems, especially in urban areas, where about 53% of the population is living and the concentration of industry is high. The corresponding measures are

relatively easy to implement here. However, more attention should be paid to the infrastructure and, above all, the different mobility conditions in rural areas. A differentiation of support measures that takes greater account of the different conditions in rural areas would be desirable

Conclusions and recommendations at macro-regional level (EUSDR, EUSAIR, EUSBSR, EUSALP, etc.)

At macro-regional level, the exchange of experience on the requirements of regional energy systems and the measures taken can speed up the development of efficient solutions and encourage the development of common strategies to deal with the same or similar challenges. The main objective of common energy strategies is to make a comparative analysis of how energy production and consumption are distributed in the regions, to show where the region's potential for the use of renewable energies and energy saving lies, to work out which energy policy objectives are to be achieved in the medium term and to propose tailor-made measures to achieve these objectives. In view of the fundamental change in technical and regulatory conditions, more emphasis must be placed on benchmarking not only in the technical field, but also in the field of investment and investment promotion at this level.

Conclusions and recommendations at EU level

With the clean energy package, the European Union has initiated a reorganization and restructuring of the European energy system and the energy market, which should ultimately lead to a climate-neutral, low-carbon future in 2050. The targets for 2030: 40% cut in greenhouse gas emissions compared to 1990 levels; a binding renewable energy target of at least 32%; an energy efficiency target of at least 32.5% - with a possible upward revision in 2023. For the electricity market, it confirms the 2030 interconnection target of 15%, following on from the 10% target for 2020.

However, the ambitious goals require an increased use of volatile renewable energy sources, for whose efficient integration the existing infrastructure must be both adapted and expanded. Particularly with regard to efficient distribution and storage, much work still needs to be done, especially in order to be able to cover expected power peaks, for example for electro-mobility, in line with demand. This means that much more attention has to be paid on development and pilot projects regarding energy infrastructure (key technologies for generation and distribution) and energy efficiency within the funding programs. This includes also sector coupling, digitalization and interregional planning and cooperation in the energy sector.