Policy recommendations for Renewable Energy Communities Development

Baltic Sea Region

WHITE PAPER

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Interreg Baltic Sea Region

EUROPEAN UNION

EUROPEAN REGIONAL DEVELOPMENT FUND

Co2mmunity

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RENCOP Roadmap

White Paper

Regional level

BSR/EU level

National level

Policy Paper

Interreg Baltic Sea Region

EUROPEAN UNION

EUROPEAN REGIONAL DEVELOPMENT FUND

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Main authors

Nele Ivask (Tartu Regional Energy Agency)

Neeme Kärbo (Tartu Regional Energy Agency)

Martin Kikas (Tartu Regional Energy Agency)

Aare Vabamägi (Energy Agency of Tallinn)

Contributors

Gerlind Wagner-Vogel (Kiel University)

Pierre Ståhl (Energy Agency for South-East Sweden)

Salvatore Ruggiero (Aalto University Foundation)

Joanna Makowska (Foundation for Sustainable Energy)

Anna Marczak (Foundation for Sustainable Energy)

Andrea Cederqvist (Heinrich-Böll Foundation Schleswig-Holstein e.V.)

Agris Kamenders (Riga Planning Region)

Ilgvars Francis (Riga Planning Region)

Päivi Tuisku (Regional Council of South Ostrobothnia)

Anne Viljanen (Thermopolis Ltd - Energy Agency of South Ostrobothnia)

Lina Murauskaite (Lithuanian Energy Institute)

Mareike Johannsen (Municipality of Middelfart)

Peter Keller (Green City Experience München)

Green Net Finland

Kaunas Regional Energy Agency

Lund University

Legal notice

Edited by: Stella Adamson

Aalto University

gnf Green Net Finland

Tartu Regiooni Energiaagentuur
Tartu Regional Energy Agency

FNEZ

Etelä-Pohjanmaan Liitto
Regional Council of South Ostrobothnia

KREA save · agency

Thermopolis
www.thermopolis.fi

energikontor sydost

Middelfart Kommune

GREEN CITY EXPERIENCE

Riga Planning Region

Lund University

C A U
Kiel University
Christian-Albrechts-Universität zu Kiel

WiGeo
Economic Geography

Heinrich Böll Stiftung
Schleswig-Holstein

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SUMMARY

including key information/recommendations

Co2mmunity

White Paper Policy recommendations to support/initiate Community Energy (CE) projects in the Baltic Sea Region (BSR) countries.

For national/regional policy decision-makers in the Baltic Sea area
Developed by Co2mmunity

Main barriers for community energy in BSR countries

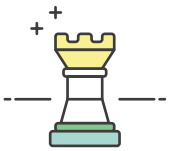
- Lack of stable policy framework for CE and Renewable Energy (RE) investments.
- Lack of long-term and low-interest investment funding schemes.
- Existing regulatory barriers. Hindering metering regulations, legal restrictions on the location of RES installations, may affect the development of CE projects in certain BSR countries.
- Competition between community energy projects and energy companies.
- Lack of understanding of the co-benefits of community energy projects.
- Lack of expert knowledge about CE.
- Lacking the right conditions for support organizations to operate.
- Cultural barriers and a certain sceptical mindset about collective action preventing the popularization of CE initiatives.
- Low awareness about CE and its opportunities and benefits.
- Too rigid and complicated legal procedures, a lot of bureaucracy, administrative regulations and long timeframes.
- Fossil competition - the CO_2 price is still too low.

The main drivers for establishing CE projects are

- Measurable benefits of CE projects for local economic development and environment.
- The possibility to reduce energy costs.
- Feed-in tariffs, grants and loan schemes and tax incentives
- Environmentalism and the desire to show the “right example”.
- Desire for greater energy independence.
- Decrease in cost for setting up RE projects - to a level where it is competitive with traditional fossil energy sources.

POLICY RECOMMENDATIONS

to support/ initiate community energy projects



Create stable policy framework for CE projects

Recommendation 1: Allocate sufficient human and financial resources to implement the requirements of the amended directives and integrate them into national and regional law in the best possible way by taking into account the national circumstances.

Recommendation 2: Initiate on a national level a critical debate about the need for large, national grids vs. a decentralised energy system.

Recommendation 3: Analyse and define the role of municipalities as a tool to develop and implement CE projects and at the municipal level, promote collaboration between cities and community energy projects by:

- Including community ownership targets in long-term climate and energy strategies
- Steering new neighbourhood developments towards community energy
- Creating a dedicated body to support citizens' projects (e.g. one-stop shops or information hubs)
- Opening the capital of municipal energy projects
- In the case of an existing municipality-owned network (district heating), open for shared ownership with local citizens

Recommendation 4: Introduce the following changes in the tax regulation in order to enhance and enable CE development:

- Link carbon emissions directly to taxes and tariffs at realistic carbon prices. The income from taxes and tariffs should be divided as in the carbon fee and dividend model
- Introduce a tax reduction for co-owned energy production – RE tax reduction, VAT tax reduction (for a certain period, the first 3 to 5 years)
- Remove tax for self-produced electricity consumed within own property (today there is a limit in amount —microproduction)

Recommendation 5: Introduce or strengthen regulations enabling the development of prosumer potential for entities that do not have access to sufficient space to build their own RES source (like residents of multi-apartment buildings/housing estates with insufficient roof surface), such as metering regulations so that they allow residents of multi-apartment buildings to benefit from the solar PV self-consumption in their apartments.

Recommendation 6: Changes in the grid regulation:

- Make it possible to share electricity between adjacent properties for all
- Grid fee reduction
- Remove the requirement to be a net-consumer on yearly basis for microproducers

Recommendation 7: Create national guidance on safety regulations for solar-PV targeting emergency services.

Recommendation 8: Separate tendering for CE projects.

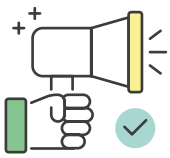
Recommendation 9: Keep legal procedures as simple as possible.

Recommendation 10: A share of new RE projects could be reserved for local ownership (CE projects).

Establish preferential funding opportunities for CE projects

Recommendation 1: Provide early-stage funding. Early-stage funding is essential for conducting feasibility studies and accessing specialist consultancy services that can transform an idea into an easy to implement project plan.

Recommendation 2: Provide long-term and low-interest investment funding schemes.



Promotion of CE in society and responsible institutions on national and regional level (especially crucial in the eastern countries of the Baltic Sea area)

Recommendation 1: Systematically disseminate knowledge and integrate community energy into relevant documents; cooperate with intermediate bodies; attend information seminars; foster Rencops.

Recommendation 2: Involve citizen society representatives (citizen associations, relevant NGOs, etc.) into the energy policy-making process. Currently, the process is participated in and focussed more on big energy industry and their interests.

Recommendation 3: Strengthen the role of citizens: increase citizens' knowledge on how to get involved with CE projects, such as disseminating guidelines about how to do so.

Recommendation 4: Systematically disseminate information widely in society to raise general public awareness about the decentralisation of energy systems and CE opportunity and benefits.

Establish advice and technical support services for CE projects

Recommendation 1: Establish national-/regional-/municipal-level info points or one-stop shops for CE to gather information about legislation and the juridically correct way to establish and operate a CE organization — simple, understandable information about how to create a CE organization.

Recommendation 2: Establish promotional training courses and independent high-quality technical information about RE technology suitable for CE — create a pool of CE technical advisers or order a service for CE initiators to gather them together to provide independent technical information suitable for CE projects.

Recommendation 3: One well-trained RENCOP manager should be employed per every 20,000 inhabitants with suitable organisation (depending on the system — in the existing energy agency, respective department in the municipality, etc.).

Recommendation 4: Enable special pilots, "sandbox cases" — special pilot projects for testing and experimenting. Allows testing and analysis of how an incentive measure works or how the removal of an obstacle actually affects the project.

Contents

List of abbreviations

RE	Renewable Energy
BSR	Baltic Sea Region
CE	Community Energy
CEP	Clean Energy for all Europeans Package
REC	Renewable Energy Community
Prosumer	(Producer-consumer) Individual or organisation that both produce and consume energy within the same property.
EU	European Union
MS	Member States
NGO	Non-governmental Organisation
EMD	Electricity Market Directive
RED	Renewable Energy Directive
RENCOP	Renewable Energy Cooperative Partnerships. A project-specific name for cooperation within the renewable energy sphere
SME	Small or medium enterprise
IRENA	International Renewable Energy Agency

About the document

This document contains policy recommendations for mainly national-level policy makers in the Baltic Sea Region (BSR) to stimulate, support and promote community energy (CE) projects. Recommendations have been prepared during implementation and as one of the main outputs of the BSR program Co2mmunity project. The first part of the document provides a brief and clear overview of the definition of community energy. The second part focuses mainly on the existing policy framework for community energy and lists the main barriers and drivers that are currently affecting the development of community energy in the BSR. The final chapter provides policy recommendations to alleviate existing barriers and to make the policy framework more favourable to community energy projects. These suggestions have been developed over the course of almost three years during the Co2mmunity project.

Introduction

With the increasing use of renewable energy (RE) sources, climate challenges and the energy transition in general, the topic of community energy (CE) has become more popular as one of the possible and beneficial actions that also has added-value to achieve climate goals. Although the production, use and storage of energy by citizens and communities has been practiced in EU countries for years, in some regions even decades, community energy in the Eastern European countries is a relatively new topic. At the same time, the development of these societies and the overall need for cleaner energy have come to a point where decentralization and greater independence in energy production are slowly but surely gaining popularity even while they collide with obstacles and restrictions in the existing legal framework. Societies, in communities and by citizens, also need to take decisions at the national and regional level in this area to increase preparedness. Recommendations for these decisions are the essence of this document. Both theoretical and practical experience were used to develop the current recommendations.

1.1 The aim of the document

The overall purpose of the policy recommendations is to stimulate the further development of and support for the utilisation of RE in the respective regions, thereby contributing to national and EU energy targets. Current policy recommendations for national and regional institutions aim at improving the institutional situation for CE development via improving national and regional policies to support CE projects. It includes valuable information about the CE situation in the BSR countries, clearly outlines the current major obstacles in the region and provides recommendations on how to overcome them.

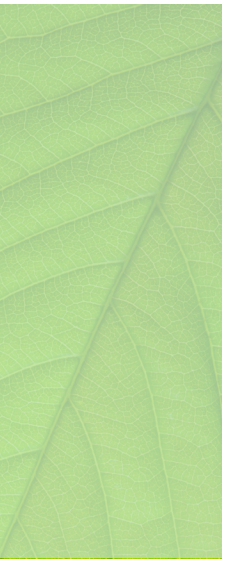
1.2 Target audience

Policy recommendations and other information included in this document is targeted mainly at institutions responsible for national or regional energy planning and ERDF Operational Programmes for improving the regulatory framework on the regional and/or national level. This includes ministry and public officers responsible for (renewable) energy issues as well as government agencies and regional authorities. It should enable them to derive concrete measures to take in order to improve the situation for CE development in their respective countries or regions as well as point out and propose solutions for existing barriers or lags in the national or regional policy framework.

2. Renewable Energy (RE) and European Green Deal – background for CE

Global warming as well as the need and the targets to increase the share of RE sources are challenges the whole world is facing, and Europe has taken the lead in tackling the problem.

In the BSR, **'Energy from renewable sources'** or **'renewable energy'** means energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, hydropower, biomass, sewage treatment plant gas and biogas.



The European Commission presented the **European Green Deal**, the most ambitious package of measures to enable European citizens and businesses to benefit from a sustainable green transition with the overall target to become the world's first climate-neutral continent by 2050.

Measures accompanied with an initial roadmap of key policies range from ambitiously cutting emissions to investing in cutting-edge research and innovation to preserving Europe's natural environment.

Supported by investments in green technologies, sustainable solutions and new businesses, the Green Deal can be considered a new EU growth strategy. The involvement and commitment of the public and of all stakeholders is crucial to its success. Above all, the European Green Deal sets a path for a transition that is just and socially fair. It is designed in such a way as to leave no individual or region behind in the great transformation ahead.[1]

With participation in CE projects, every person is involved and can support the European Green Deal to achieve the well-being and health of EU citizens and future generations by cutting energy bills with prosuming renewable energy with zero emissions.

[1] https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

2.1 Definition of community energy (CE)

In the literature, there is no agreed-upon definition for community energy. According to the International Renewable Energy Agency (IRENA), Coalition for Action, CE means "the economic and operational participation and/or ownership by citizens or members of a defined community in a renewable energy project".[2] Is important to note that citizens can participate in RE projects in various ways. First, they can join RE projects, such as large wind-power projects, as investors. Such is the case in Denmark, where the law establishes that wind-power projects must be owned at least 20% by local people. Citizens, however, can also take full ownership of local energy assets like in the case of RE cooperatives.

The term community energy is applied to a wide array of initiatives that may range from RE generation to energy storage and distribution. Moreover, it can refer to initiatives encompassing various technologies, types of organizational models and degrees of citizens' participation.[3] Some examples of CE initiatives include energy efficiency or generation projects led by cooperatives, ecovillages, housing companies or citizens' associations. One important feature that these various initiatives share is that the benefits of RE projects are typically shared locally.

The concept of CE has lately gained a strong foothold in European energy legislation. The recently adopted Clean Energy for All Europeans package (CEP) has introduced for the first time in EU energy legislation rights for new actors such as "renewable energy communities". Although the CEP represents a first step, renewable energy communities (REC) have now a clear right to consume, store or sell their generated energy without being discriminated.[4]

The definition of renewable energy community provided by the new Renewable Energy Directive is a legal entity:

a) which, in accordance with the applicable national law, is based on open and voluntary participation, is autonomous and is effectively controlled by shareholders or members that are located in the proximity of the renewable energy projects that are owned and developed by that legal entity;

b) the shareholders or members of which are natural persons, SMEs or local authorities, including municipalities;

c) the primary purpose of which is to provide environmental, economic or social community benefits for its shareholders or members or for the local areas where it operates, rather than financial profits.* Each country should have its own rules for the CE legal body but they may not contradictory to EU directives.

One of the main characteristics of REC is the fact that they are recognized as non-commercial market actors whose main goal is to provide socioeconomic or environmental benefits rather than profit. Moreover, the definition of REC enshrined in the new RES directive includes a proximity requirement. This implies that RECs are to be understood as communities of place (i.e. geographically defined communities). Therefore, whereas the concept of community energy has been used to define more strictly citizens' ownership of local energy assets, the definition of REC given by the RES directive establishes that actors other than natural persons (e.g. municipalities or SMEs) can also constitute energy communities. The Renewables Directive requires Member States to develop at the national level "an enabling framework" promoting renewable energy communities. Among other things, Member States should provide capacity building tools to facilitate access to finance and information, ensure access to vulnerable and low-income households, and remove unjustified regulatory and administrative barriers.[5]

[2] https://coalition.irena.org/-/media/Files/IRENA/Coalition-for-Action/Publication/Coalition-for-Action_Community-Energy_2018.pdf

[3] http://wiki.ecolise.eu/index.php/Community_energy

[4] http://www.neon-ombudsman.org/2019/04/23/after-the-clean-energy-package-towards-a-prosumer-rights-framework/

[5] https://www.compile-project.eu/wp-content/uploads/Explanatory-note-on-energy-community-definitions.pdf

2.2 About the Co2mmunity project

Co2mmunity is a network of 15 organizations from eight countries around the Baltic Sea, established and currently acting in the framework of the Co2mmunity project.

8
countries

15
project partners

The Co2mmunity project's main goal is to encourage, facilitate and further CE project development as part of a transition to RE sources. In continuous and active cooperation between participating countries with very different CE experiences (from the CE frontrunners like Denmark and Germany to the Baltic States with relatively underdeveloped CE status), analysis about the current situation in Baltic Sea Region is published and a database is constantly updated. Establishing renewable energy cooperative partnerships (RENCOPs) in every participating country is the main goal and practical basis for the project in order to support local partnerships for energy project development, provide knowledge, develop tools and organise stakeholder meetings.

From such shared practical experience, Co2mmunity created a CE knowledge base to help enhance institutional capacities to support local communities as well as to provide guidelines and recommendations for policy proposals for different levels of stakeholders, institutions responsible for regional energy planning and political decision-makers.

Please find out more about the Co2mmunity project activities and results at

www.co2mmunity.eu

3. Main challenges in BSR countries

3.1 Review of current policy framework situation in countries around the Baltic Sea.

Policy framework situation in BSR countries

A supporting policy framework is an indispensable prerequisite for the development and facilitation of community energy. When it comes to the political framework for CE in the countries of the BSR, it is obvious that clear differences exist, which also principally follow the overall development level of CE projects. Countries with a strong CE tradition, such as Denmark, have implemented long and systematically supportive legislation toward renewable energy at the national or regional level and the promoted community energy projects (the Co2mmunity Working Paper at http://co2mmunity.eu/wp-content/uploads/2019/03/Co2mmunity-working-paper-2.3.pdf offers more information). This example proves that establishing favourable conditions in the regulatory framework has a strong supportive impact on the development of CE. However, as research has revealed, even in such countries, the situation can change significantly as a result of national-level policy decisions. For example, in Germany, the government's decision to introduce an auctioning system in 2014 for nearly all RE sources was a fundamental shift from a system based solely on feed-in tariffs, and significantly slowed down the decentralised movement and the establishment of citizen-driven RE projects. At the same time, in other countries, national legislation has only begun to reflect on this in recent years, and no stable policy framework has been developed yet. Currently, Member States are adopting the EU recast RED and Electricity Market Directive (EMD). One can assume that this process will strongly contribute to a more supportive legal framework in all countries.

Other countries

Generally, in the Baltic Sea Region countries, there are currently no policies for CE specifically. This field is usually governed by a number of other legislative acts, which have mainly been enforced in related fields like renewable energy, the electricity market, grid regulations, etc. All countries have set renewable energy share targets in **National Energy and Climate Plans for 2030**, 2040 or 2050. The targets are different and vary between more ambitious and moderate, but the common goal is to increase the share of renewable sources by 2030, 2040 and 2050 as much as possible. Some countries are particularly advanced in setting and meeting their targets. For example, in Sweden the EU 2020 goal of a 50% renewable share for Swedish energy use was reached, and now the country is working towards goals related to CO2 emissions reduction (zero net CO2 emissions by 2045).

Those strategic objectives create excellent opportunities for the development of CE projects to contribute to achieving targets.

The other most common legal framework instruments regulating CE on a national level are the Renewable Energy Sources Act, Electricity Law Act, and legal acts regulating spatial planning and land development. There are generally no legal barriers for CE development in the BSR countries. However, some countries have to take into account restrictions that may directly affect CE project development. For example, in Poland and Estonia, the main restrictions concern the location of onshore wind projects. There are restrictions on distances (from residential buildings, nature parks, NATURA 2000 areas, etc.) and height.

Policy decision-making levels and differences between countries

Depending on the size and governing system of the country, there may be one or more levels of policy decision-making (including energy decision-making).

Usually, the responsibility for overall energy targets and energy policy framework in the country lies with the national-level ministries or state government. The national level is responsible for the setting up the medium- and long-term national energy and climate action plans and reflecting changes from the EU directives in renewed legislation. The local-level government sets the rules for general planning and detail planning following the national targets and local needs. The local government gives rules for the locations and technical conditions in accordance with the local spatial plans, for example, for PV parks and wind parks. Germany, as a federal republic, experiences a slightly different situation, operating a more decentralised energy planning system.

3.2 Main drivers and barriers for developing CE

More detailed information about the barriers and drivers for specific countries is available in country-specific handbooks at

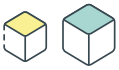
http://co2mmunity.eu/country-specific-handbooks

Barriers

Lack of a stable policy framework for CE and RE investments.
Citizens participating in many CE projects make investment decisions with a long-term perspective in mind. Therefore, it is essential that all investors can operate within a stable policy framework.

Lack of long-term and low-interest investment funding schemes.
A major barrier is the lack of good financing mechanisms through which community groups can easily raise the needed capital to invest in RE and energy efficiency projects.

Existing regulatory barriers.
In some BSR countries, the current metering regulations prevent many residents of housing associations from benefiting from the solar PV self-consumption in their apartments, or the legal restrictions on the location of RES installations, especially wind turbines, may affect the development of CE projects in certain BSR countries.



Competition between community energy projects and large energy companies.
In many countries, large energy companies have vested interests in conventional energy assets and in some countries have been reluctant to open local district heating networks to energy prosumers.

Lack of understanding of the co-benefits of community energy projects, namely renewable energy acceptance, socio-economic development in rural areas, increased social cohesion and energy literacy.
Supporting CE projects should not be seen merely as an energy policy issue, but also as a matter of industrial policy. CE projects can provide numerous benefits in terms of job creation, tax income and local socio-economic development. Investment grants should be provided to RE projects that promote local economic development and social regeneration. National or regional governments could also introduce dedicated finance support schemes for energy communities which help them during the planning and project set-up phases.

Lack of expert knowledge about CE.
New competences are needed for energy advisors and experts to explain the possibilities and benefits of RE and retrofitting projects for local residents. It is crucial that citizens have access to technical information and guidance.

Missing the right conditions for support organizations to operate.
Many CE projects can be made possible with the support of an intermediary organization. People often have more trust in these knowledgeable actors when they are not directly involved in technology providers or authorities. Government funding is often needed to establish these kinds of actors.

Cultural barriers and a certain sceptical mindset about collective action preventing the popularization of CE initiatives.
This is particularly the case in the Baltic States due to historical experience. Among the cultural barriers in some BSR countries, we can indicate, inter alia, reluctance of citizens to deal with the administration and fear of bureaucracy, reluctance to enter into long-term commitments (loans), and the centuries-old culture of using fossil fuels for energy purposes (individual, municipal, industrial). Also of note is the reluctance of community members to undertake collective projects, among others, out of an unwillingness to jointly bear the costs and consequences of these projects (collective responsibility).

Low awareness about CE, opportunities for it and its benefits among regular citizen and citizen associations. It is also connected to the lack or insufficient knowledge of the economy in society.

Rigid and complicated legal procedures, a lot of bureaucracy and administrative regulations, and long timeframes.

Fossil competition – the CO_2 price is still too low.
This means that the financial incentives are still too skewed against renewables and CE.

Drivers

Measurable and tangible benefits of CE projects for local economic development and environment.

The possibility to reduce energy costs.

Feed-in tariffs, grants and loan schemes, and tax incentives – makes CE projects economically more feasible. There are different feed-in tariffs and premium systems as well as support programmes and grants established in countries mainly for RES investments, but these options often can be used by potential CE projects (housing cooperatives, etc).

Environmentalism and the desire to show the "right example".

Desire for greater energy independence.

Decrease in the cost of setting up RE projects as a general tendency – to a level where it is competitive with traditional fossil energy sources. The need for support systems is lower, and many large-scale plants are being built without any subsidiaries.

4. Recommendations and action plans to support/initiate CE projects

(Policy implications addressed and recommendations)

4.1 Common recommendations for the BSR region

Create stable policy framework for CE projects

A supporting policy framework is an indispensable prerequisite for the development and facilitation of CE. According to the information collected during the preparation of the Co2mmunity project's main outputs, key policy instruments for RE in the BSR differ from country to country depending on the state policies and budget opportunities and preferences, and shows that in the heat and electricity sector supportive feed tariffs for bio- and renewable energy and tax reduction for renewable energy or the introduction of pollution taxation and financial instruments are the main instruments foreseen in the policy frameworks.

All those instruments also should be available for CE initiatives. With the supportive EU RED and EMD and due to the obligation to adapt those EU Directives into the legislation of the Member States by June 2021, presumably the barriers for CE in countries' legislation will be reduced considerably and eliminated eventually. REDII requires Member States to put in place enabling frameworks that support citizens and communities investing in renewables.

- **Policy recommendation 1:** Allocate sufficient human and financial resources to implement the requirements of the amended directives and integrate them into national and regional law in the best possible way, taking into account the national circumstances. The Directives provide more general guidance, such as the obligation not to hinder small producers (including energy communities) from entering the energy market and to ensure equal treatment for all. National legislation should provide targeted measures and tools in sufficient detail to enforce these obligations.

- **Policy recommendation 2:** Initiate on a national level a critical debate about the need for large, national grids vs. a decentralised energy system.

- **Policy recommendation 3:** Analyse and define the role of municipalities as a tool to develop and implement CE projects and at the municipal level promote collaboration between cities and community energy projects by:
  - Including community ownership targets in long-term climate and energy strategies
  - Steering new neighbourhood developments towards community energy
  - Creating a dedicated body to support citizens' projects (e.g. one-stop shops or information hubs)
  - Opening the capital of municipal energy projects
  - In the case of an existing municipality-owned network (district heating), open for shared ownership with local citizens

- **Policy recommendation 4:** Introduce the following changes in the tax regulation in order to enhance and enable CE development:
  - Link carbon emissions directly to taxes and tariffs at realistic carbon prices. The income from taxes and tariffs should be divided as the principles in the model of "Carbon Fee and dividend".
  - Introduce a tax reduction for co-owned energy production – RE tax reduction, VAT tax reduction (for a certain period, the first 3 to 5 years)
  - Remove tax for self-produced electricity consumed within own property (today there is a limit in amount – microproduction)

- **Policy recommendation 5:** Introduce or strengthen regulations enabling the development of prosumer potential for entities that do not have access to sufficient space to build their own RES source (like residents of multi-apartment buildings/housing estates with insufficient roof surface), such as metering regulations so that they allow residents of multi-apartment buildings benefiting from the solar PV self-consumption in their apartments.

- **Policy recommendation 6:** Changes in the grid regulation:
  - make it possible to share electricity between adjacent properties for all.
  - grid fee reduction
  - remove the requirement to be a net-consumer on a yearly basis for microproducer

- **Policy recommendation 7:** Create national guidance on safety regulations for solar-PV targeting emergency services.

- **Policy recommendation 8:** Separate tendering for CE projects.

- **Policy recommendation 9:** Keep legal procedures as simple as possible. It has become clear within the Co2mmunity project that in some countries the complexity of the procedures complicates the implementation of the CE projects.

- **Policy recommendation 10:** A share of new local RE projects could be reserved for local ownership (CE projects).

Establish preferential funding opportunities for CE projects

Funding is an important and often problematic issue in all countries. The Co2mmunity project has clearly identified the need for more solid financial support. Implementing the CE project requires financial resources right from the planning and set-up phase, and local communities usually do not have spare finances. In some countries, different investment grants are in place, mainly for enterprises, municipalities or farmers, but not for communities or cooperatives. Loans from banks generally have a very high interest rate, which does not encourage or motivate communities to carry out CE projects. Developing sustainable, long-term and stable financial instruments and financing schemes is a key issue for the further development of community energy.

- **Policy recommendation 1:** Provide early-stage funding. National or regional governments should introduce dedicated finance support schemes for energy communities to help them during the planning and project set-up phases. Early-stage funding is essential for conducting feasibility studies and accessing specialist consultancy services that can transform an idea into an easy-to-implement project plan.

- **Policy recommendation 2:** Provide long-term and low-interest investment funding schemes. According to the long-term experience of forerunner countries, CE dedicated financing schemes are crucial. Regarding funding for CE projects, an example could be a renewable energy tax for electricity, and from this tax RE and CE projects will be supported.

Promotion of CE in society and responsible institutions at national and regional level

The development of community energy requires widespread support and awareness at various decision-making levels as well as in society. Promotion of CE is especially crucial on the eastern coast of the Baltic Sea where awareness is relatively low. Awareness of society and institutions about the essence, opportunities and benefits of the topic is a crucial prerequisite for the development of community energy. It becomes clear within the Co2mmunity project that there is no problem with countries with a long-standing community tradition, such as Denmark, Germany or Sweden. However, in other countries, especially on the eastern coast of the Baltic Sea, awareness is still significantly lower. This applies to society in general, to ordinary citizens as well as to municipalities and state institutions.

- **Policy recommendation 1:** Systematically disseminate knowledge and integrate community energy into relevant documents with increased attention; cooperation with intermediate bodies (like energy agencies, etc.); attend information seminars; foster RENCOPs.

- **Policy recommendation 2:** Involve citizen society representatives (citizen associations, relevant NGOs, etc.) in the energy policy-making process. Currently, the process is participated in and focussed more on big energy industry and their interests.

- **Policy recommendation 3:** Strengthen the role of citizens: increase the knowledge for citizens in how to get involved with CE projects, such as disseminate the guidelines on how to do so.

- **Policy recommendation 4:** Systematically disseminate information widely in society to raise general public awareness about the decentralisation of energy systems and CE opportunity and benefits.

Establish advice and technical support services for CE projects

To support CE initiatives, independent and professional advice about organizing CE as legal body and technical advice for CE initiatives is needed.

- **Policy recommendation 1:** Establish national-/regional-/municipal-level info points or one-stop shops for CE to gather information about legislation and juridically correct way to establish and operate a CE organization – simple, understandable information about how to create a CE organization.

- **Policy recommendation 2:** Establish promotional training courses and independent high quality technical information about RE technology suitable for CE – create the pool of CE technical advisers or order service for CE initiators to gather to provide them with independent technical information suitable for CE projects.

- **Policy recommendation 3:** One well-trained RENCOP manager should be employed per 20,000 inhabitants in suitable organisation (depending on the system – in the existing energy agency, respective department in the municipality, etc.)

- **Policy recommendation 4:** Enable special pilots, "sandbox cases" – special pilot projects for testing and experimenting. Allows testing and analysis of how an incentive measure works or how the removal of an obstacle actually affects the project.

4.2 Country-specific good examples

Good examples from BSR countries:

Case 1

CO_2 tax system in Sweden

The Swedish CO_2 tax was first introduced in 1991. This has mainly made biofuels from forestry competitive compared to fossil oil, coal and gas. It has resulted in a situation were almost all heat plants are fuelled with biofuels. The tax has been adjusted over the years and is now approximately 10 cents/kg CO_2, which is the highest in the world. Not all CO_2 emissions are taxed, and exemptions are given for biofuels such as forest waste and biogas from food waste. A recent change in the system puts a full tax on CO_2-emissions from waste incineration.

Case 2

Denmark has a section in its energy law aimed specifically at communities

Danish energy law indicates that onshore wind projects must offer 20% of the shares to the local population to ensure local ownership. This was done to lower resistance to such projects[6] (Oteman et al., 2014). In addition, Danish law allows for favourable forms of collective ownership and associations, which can be used as legal formats for CE projects.

[6] Oteman, M., Wiering, M., Helderman, J., 2014. The institutional space of community initiatives for renewable energy: a comparative case study of the Netherlands, Germany and Denmark. Energy, Sustainability and Society, 4, 11. Available at: https://energsustainsoc.biomedcentral.com/articles/10.1186/2192-0567-4-11 (Acessed 07.05.2020)

Case 3

KREDEX

Technical support scheme in **Estonia**

This scheme is completely applicable to community energy projects. As a replicable example from Estonia, the support scheme relating to providing independent technical advice for flat-owners associations to start with deep retrofitting was successful. The preliminary selected technically educated building or energy engineers were additionally educated (funded by the state) in a specific program, and after finishing the program with a test, they were certificated and available to give advice for flat-owners' associations.

Case 4

Positive legislative changes are underway in **Finland**

to make it easier for residents to utilize solar electricity produced and consumed on the property. Energy self-consumption in apartment buildings is currently limited to the energy needs of the common parts of the buildings (e.g. staircase, elevators, laundry rooms, etc.). Under the current regulation, apartment owners who want to utilize solar PV production for their own use need to feed their electricity into the grid and pay transfer fees and taxes, which reduces the economic viability of solar energy communities. Moreover, prosumers need to pay VAT on the generated production. However, legislative changes are underway to make it easier for residents to utilize solar electricity produced and consumed on the property. The currently discussed regulatory changes will remove unjustified fees and allow grid operators to offer at a small fee an automated net metering system to automatically balance the amount of energy produced and bought from the grid. Moreover, the tax authority recently ruled that the self-consumption of solar electricity within the property of housing companies should be exempt from VAT. The implementation of the new regulatory framework is expected to take place in the next two years. With regard to aggregators and virtual energy communities, there have been pilot projects to test the independent aggregator operating model. The pilot projects carried out have revealed that this model has potential but requires significant updates to the IT systems and data exchange to ensure effectiveness and impartiality.

Case 5

The energy accounting system in Poland

Renewable energy prosumers and energy cooperatives have the possibility to settle the amount of electricity introduced into the power distribution network against the amount of electricity taken from this network for consumption for their own needs (in the case of a renewable energy prosumer producing electricity in a micro-installation [i.e. up to 50 kW] with a total installed electrical capacity: [1] more than 10 kW in the ratio 1 to 0.7; [2] not more than 10 kW in the ratio 1 to 0.8; in the case of an energy cooperative in the ratio 1 to 0.6). Additionally, the prosumer and the energy cooperative do not pay certain charges related to energy billing and distribution.

Case 6

Financial incentives for renewable energy communities in Lithuania

Will be launched in 2020 by using funds earned from the transfer of green energy statistics to Luxembourg. Renewable energy communities will be eligible for up to 50% of support for specific RE projects. Initiatives are mainly related to the Multi-apartment Building Renovation (Modernisation) Programme. Housing associations are CE that could ask for financial support to install solar collectors or heat pumps during deep renovation of multi-family buildings. Solar PV is still an issue for multi-family buildings because the legislative framework for allocating solar PV electricity does not exist.

In order to encourage residents, an online platform that sells a share of a remote large solar PV park was introduced on October 2019. The aim of increasing prosumers to 500,000 by 2030 in Lithuania is foreseen; thus online platforms for remote solar PV are growing in popularity. The first such solar power plant is planned to start generating electricity in March 2020. Around 1500 households will be able to become its owners at the initial stage.

Case 7

Support for energy efficiency and renewable energy projects in Latvia

Latvia has raised its 2030 renewable energy target to 50% in line with the recommendations of the European Commission. To achieve this goal, a series of incentives for new energy efficiency measures and renewable energy solutions have been introduced in recent years. The most popular and successful support programmes to date have been implemented by the state-owned development finance institution ALTUM (https://www.altum.lv/en/).

ALTUM offers state aid for various target groups with the help of various financial tools, for instance, loans, credit guarantees and investment in venture capital funds. They also manage the implementation of the energy efficiency improvements for the multi-apartment buildings with financing coming from the ERDF. During the budget programming period for 2014-2020, around 1000 projects totalling more than EUR 176 million EUR were implemented or are still being implemented.

The objective of the programme is to promote improvement of energy efficiency and encourage use of renewable energy resources in apartment buildings. The most important target group and beneficiaries are the owners of individual apartments in the multi-apartment buildings. Common practice provides for a non-repayable grant of to 50% of all eligible project costs and the rest can be acquired as a loan either from a commercial bank or ALTUM. In addition to financial support, complimentary consultations on the terms of the programme and assistance in preparation of the technical documentation are provided.

The way ahead is associated with the implementation of the new National Energy and Climate Plan (NECP 2030) that is the most important strategic energy and climate policy document in Latvia. NECP 2030 details goals, instruments and actions that contribute to the development of a climate neutral national economy. NECP 2030 lists around 100 policy measures within 12 action lines. For the first time, the plan clearly demonstrates the necessity to encourage implementation of community energy approaches in Latvia.

Most support activities proposed in the NECP 2030 have also been included in the National Development Plan of Latvia 2021-2027, linking them to national development priorities.

Decisions that had a negative impact on CE projects.

Case 8

Auctioning system in Germany

Germany is still perceived as a frontrunner when it comes to fostering CE projects. This position was mainly due to the progressive core legislative instrument underpinning the energy transition in Germany, the Renewable Energy Act (Erneuerbare-Energien-Gesetz – EEG), which initially set out very strong incentives to foster CE projects. However, the German government's decision to introduce an auctioning system in 2014 for nearly all RE sources was a fundamental shift from a system based solely on feed-in tariffs and stabbed the decentralised movement in the back. An example: the introduction of tendering is one of the laws which has become a barrier to citizens' energy because the bidding processes are too complicated and costly for many small citizen-driven projects.

§ EEG

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