

PROMOTING TERRITORIAL STRATEGIES FOR SUSTAINABLE MOBILITY THROUGH GREEN ENERGY PROSUMER HUBS

(PROMOTER)

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ABSTRACT:

PROMOTER seeks to improve the performance of 9 policy instruments to foster the installation of prosumer energy hubs, and boost their diffusion along urban territory, channelling part of their production to serve green mobility requirements. The ultimate aim is to enable or enhance green energy production supporting sustainable urban mobility for a zero-carbon economy, thus contributing to EU goals of climate neutrality & re-power.

Partners share the challenge of accelerating energy transition by means of policy plans that manage to be politically effective, as well as economically attractive. Renewable Energy Communities allowing for a collective pooling of energy sources emerge as a powerful opportunity to address such challenge. Partners will pursue their own initiatives while maintaining a degree of proximity necessary for sharing relevant experience and acquired expertise, to be jointly analysed. A minimum of 18 documented good practices will be earmarked, tailored to the specific needs of each partner and suitably fed into the Policy Learning Platform of Interreg Europe Programme. The experience learning will ultimately result in 9 regional Policy Change actions being drawn.

Main benefits for the participating regions include:

- New practices about renewable energy management and sharing
- New practices about green mobility, inter-modality and innovative information adopted
- Effective system for monitoring Policy Change actions and assess their actual influence on regional development strategies
- Increased competence and skills of partner staff and key-stakeholders.

The project privileges a bottom up approach to formulate Policy Change actions with key-stakeholders being involved in all project activities. Their contribution to the implementation of planned actions is expected to act as a strong multiplier lever for benefit sharing and territorial cohesion of local communities. The Stakeholder Groups established within the project will constitute a permanent forum to ensure a durable impact on to the project theme and consequent actions planned/implemented.



1. INTRODUCTION

1.1 Interreg Europe

1.1.1 The Programme

Interreg Europe (IE) helps regional and local governments across Europe to develop and deliver better policy. By creating an environment and opportunities for sharing solutions, this Programme aims at ensuring that government investment, innovation and implementation efforts all lead to integrated and sustainable impact for people and place.

1.1.2 Its aim and opportunities

Solutions exist that can help European regions become the best that they can be. Today, the EU's emphasis is very much on paving the way for regions to realise their full potential – by helping them to capitalise on their innate strengths while tapping into opportunities that offer possibilities for economic, social, and environmental progress.

To achieve this goal, Interreg Europe offers opportunities for regional and local public authorities across Europe to share ideas and experience on public policy in practice, therefore improving strategies for their citizens and communities.

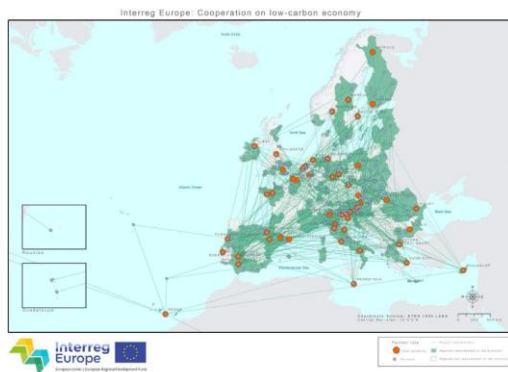


Figure 1. INTERREG EUROPE projects on low-carbon economy

1.2 PROMOTER project

1.2.1 Project summary.

PROMOTER contributes to the EU goal to achieve climate neutrality and re-power, by pursuing innovative decarbonised mobility, eventually fostering greener territorial quality. To contribute to the change, it promotes green energy hub-production at the local level to act in support of sustainable transportation needs. As prices for clean energy and storage technologies continue to fluctuate, regions explore ways to reduce emissions as well as dependency from fossil fuel, which makes the integration of higher shares of renewables increasingly urgent.

While the watchword of the pandemic was “distancing”, “proximity” imposes itself in the aftermath: energy management linked with mobility management, the increasing role of local energy communities (engaged in

both production & consumption), and digital infrastructures to monitor energy performance trends, can all play their role. At the same time, all related distribution patterns within urban and peri-urban mobility will effectively address the *proximity* of social inclusion.

1.2.2 Pre-project activities. The starting point was to recognize that policies related to sustainable mobility linked to renewable energy production could be of mutual interest, taking into account partners' individual policies, past experience and their own territorial needs and potential.

Livorno Province coordinated two online Networking Tables on the project idea, originally based of the theme of territorial quality, by introducing the issues of green mobility modes and facilities being sustained by energy prosumer initiatives. Contacts were established at those Table on how to involve new partners, with priority given to public regional or local authorities. Each partner was asked to identify a relevant policy aligned with the Greener Europe objective, and to demonstrate his capacity to effectively influence its policy. A project Logical Framework scheme was shared, then gradually supplemented by spreadsheets for activity and budget formulation.

1.2.3 The INTERREG EUROPE 2022 call. PROMOTER project proposal was formulated and submitted under the Policy Objective 2: “A greener Europe”, in particular for the field (viii): “Sustainable urban mobility for zero-carbon economy” of the Interreg Europe Programme (2021-2027 Programme Period) on 30 May 2022. The project was approved for funding on 13 December 2022 and started its operations on 1st March 2023. The completion is scheduled by 28 February 2027.

1.2.4 Aims of PROMOTER project. The project, in promoting sustainable mobility in areas of supra-municipal/metropolitan/provincial dimension, addresses the problem from the point of view of energy supply from renewable sources through the establishment of HUBs (supported by Energy Communities – Ecs) in places where the greatest movement flows are directed: production or service areas, hospitals, schools, shopping centers, etc.) for an all-round sustainable mobility. The objective is to identify the main points of destination and to set up in these places HUBs of energy production and storage, using areas of public and private assets for the placement of energy generating plants, whose production would serve nearby charging stations for vehicles of all types.

The potentials of collective self-consumption and ECs are:

- an acceleration of the energy transition process
- a better implementation of distributed generation, maximizing self-consumption and producing local benefits on the territory through community development and cohesion (see EU Directive 2018/2001, rec. 65).

Indeed, the aim is to respond to citizens' needs and expectations providing community-wide environmental, economic, and social benefits to members and the local areas in which the community operates.

1.3 PROMOTER partnership

PROMOTER project is implemented by 10 partners from 9 EU Member Countries.

Partner	Location	Country
1 Livorno Province	Livorno	Italy
2 Rezekne City Council	Rezekne	Latvia
3 AG MOBIL-O	Oostende	Belgium
4 Regional Council of Central Finland	Jyväskylä	Finland
5 DEX Innovation Centre	Liberec	Czech Republic
6 Federation of Municipalities of the Region of Murcia	Murcia	Spain
7 Sintra Municipality	Sintra	Portugal
8 South Transdanubian Regional Innovation Agency	Pécs	Hungary
9 City of Bystřice	Bystřice	Czech Republic
10 Brasov Agency for Sustainable Development (BASD)	Braşov	Romania

Table 1. PROMOTER project partners



Figure 2. Geographical location of PROMOTER partners

2. METHODOLOGY

2.1 Objectives

2.1.1 General objectives. . The methodology developed and being tested under PROMOTER aims at establishing a European reference model procedure to:

- enable or enhance green energy production supporting sustainable urban mobility for a zero-carbon economy, thus contributing to EU goals of climate neutrality & re-power
- set up shared tools for EU regions to promote policy solutions capable of improving the delivery of regional development initiatives, making them more effective and sustainable over time

2.1.2 Specific objectives.

- Exploit transport inter-modality and sustainable mobility as a significant, yet often untapped potential to improve a more diversified and efficient transport system towards everyday commute sites / reducing environmental impacts (air pollution, noise) / promoting public health / alleviating public and private spending on public and private motorised transportation and related infrastructural investment
- Fight energy poverty by setting up community-based enterprises and initiatives so as to transform the role of consumers into that of prosumers endowed with an increasing social responsibility and responsiveness. As such, “collaborative energy” is meant to foster a greater sense of community
- Boost the role of stakeholders as a multiplier lever to jointly achieve and maintain sustainable levels of territorial quality
- Gain greater independence from foreign energy supply

From a methodological perspective, other specific objectives are:

A. Knowledge-base Development. Creating a knowledge-base in the field of green energy sources and renewables

energy communities by identifying and documenting aspects of relevance through good practices.

B. Capacity Building. Building operational capacity by:
 (i) strengthening the guidance role of regional & sub-regional institutions as policy makers co-acting with stakeholders
 (ii) reinforcing public-private cooperation

C. Sustainability. Contributing to ensure the economic and environmental sustainability of ECs and other production HUBs. Economic stakeholders along these field need to acquire a global understanding on how the generation/storage/distribution system works, what is their role to play and how to satisfy sustainable mobility needs.

2.2 Methodology stages

The reference methodology is outlined in this para. 2.2 and in Figure 3. The conceptual structure consists of two main Components and 4 Sections.

2.2.1 A. Core phase: organisation of interregional learning process

Section A.1 - each partner will acquire from his own informative sources and open data the main parameters of the territorial baseline structure, and will identify “drivers and barriers” to energy self-reliance and the use of related opportunities for green transportation. Policies addressed will also be reviewed and updated. The analytical results constitute the knowledge repository to facilitate downstream activities, in particular the Policy Change Actions formulation.

A status-quo assessment methodology, including a Readiness Indicator Model, will be shared by the partners in the initial Workshop in June 2023. Partners will also review the status of policy implementation, progress in financial resource utilization, strategical expectations for the next programming period – as well as other programs – and plans at sectoral level in the region. Both D&B and status-quo assessment will provide for a baseline from which to ascertain the gaps (the range of increase in urban/territorial resilience and sustainability) between the current status-quo at project start-up and the conditions needed to achieve higher levels of quality in a medium-term (5-year) scenario.

Similarly, the preliminary assessment will shed light on the actors that share a vested interest in the project, as well as the characteristics of their involvement. This Section therefore equally deals with the structuring of permanent relations, legal and operational, with the latter. Each partner shall set up, at project start, a Stakeholder Group (STG) taking into account:

- Their interests and the potential ways they could be impacted by the project
- Their influence and importance
- Their participation strategy

Stakeholders are identified through a power/interest matrix to map out local stake-holding members and classify them by power exerted over project-related decisions, and by interest shown towards the initiative.

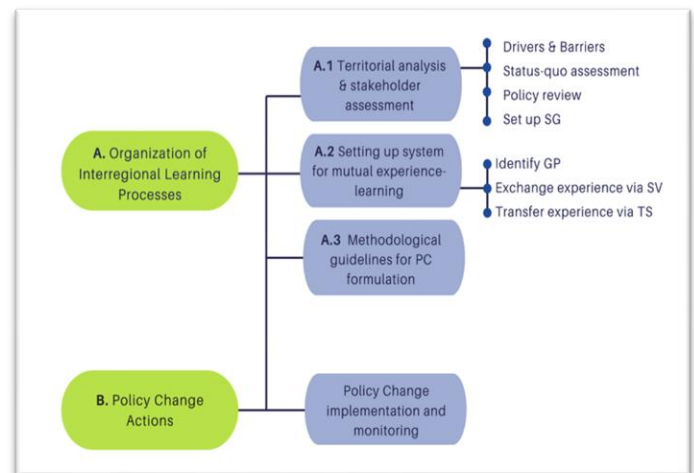


Figure 3. Methodology: logical structure

Section A.2 – partners will jointly formulate and validate a template for Good Practices to be documented, exchanged and reviewed. Partners will subsequently earmark the most interesting Good Practices and confirm their contents through study visits conducted one in each partner’s region. The purpose of each visit is to investigate the experience on site and better assess the specific characteristics and replicability aspects of each GP. The SVs should provide an ideal opportunity for the visiting partners to learn about the host partner’s territorial context, the partner GP/s, and the local community. The results of the joint evaluation will be recorded through an ad hoc reporting instrument.

Good Practices will be documented by the project with attentive regard to: technology, financial, regulatory and normative aspects, and community empowerment. The most significant experiences will become the subject of tutored transfers and eventually constitute the backbone of the actions to be undertaken.

Section A.3 – each partner will define and plan the delivery of Policy Change actions capable of closing/narrowing gaps between the present and targeted scenarios by capitalising on experiences previously ascertained as successful. Those GPs, once imported and re-engineered by an interested partner, are expected to effectively assist innovating and modifying policies & measures, by matching human, financial and other resource opportunities in the short and medium-term (2023-2027-2030).

Specific components of the said approach are:

- Creating awareness and pooling knowledge
- Establishing networks and exchanging successful models
- Develop adequate competence in the staff and stakeholders involved.

2.2.2 B. Follow-up phase: Policy Change Actions

Section B.1 – In Phase 2 (1-year period) partners will monitor and facilitate the consolidation of Policy Change actions conceived and tested previously, in a seamless process with reference to the core phase, in order to grant continuity of action. The chosen reference policy having been defined, any knowledge resting within one partner is

meant to remain accessible to fulfil any “importing” partner’s further needs, to allow for a smooth and successful process of replication. Identified experiences as well as actions capable of influencing the chosen policy direction are promoted among stakeholders, particularly when referring to:

- strengthening the approach of energy producers/consumers (prosumers)
- moving from isolated investment practices to a more holistic approach
- reducing external energy dependence and energy poverty



2.3 Outputs and Results



2.3.1 Outputs. Main outputs are those indicated in italics hereunder with number as indicated in PROMOTER application form:

1. **9** *reports of territorial context assessment* on partner regional technical/economic conditions, drivers and barriers, readiness ex-ante condition, and of reviewed policy instruments
2. **Up to 9** *Protocols* agreed/signed by Stakeholder Groups (SG) to ensure that SG are actively engaged in the project and their future role stabilized
3. A minimum of **18** *Good Practices* earmarked, validated and transferred on main aspects related to energy production management, energy accessibility, and sustainable-mobility
4. **9** *Study visits* to examine the territorial context and practices with regard to the policy addressed by each hosting partner
5. **4** *Tutoring session reports*
6. **9** *Policy Review reports*
7. **18** *interregional experience learning/exchange events* organised (including the Study Visits in 4. above) with

resulting **27** organisations with increased capacity due to their participation in project activities

8. **54** *local seminars/workshops* to facilitate territorial context analysis, GP documentation/selection, Action Plan formulation and monitoring and to ensure a coordinated synergy with interregional project activities as planned
9. **1** *Communication Programme* and related outputs (29 press releases, 1 project website, 1 poster, 2 videos, 7 Newsletters)
10. **1** *Joint Glossary* established and adopted

2.3.2 Results. The main result of the project is an achieved higher performance of **9** policy instruments having been influenced, improved and/or modified. Those policy instruments are expected to effectively contribute to the promotion of new energy production hubs, favouring the diffusion of Energy Communities shaped around a prosumer logic, and supporting local sustainable mobility patterns.

Other major results include:

- Improved skills and competences of partner key-role staff, policymakers and other stakeholders in the planning, implementing and monitoring processes. Beside the main benefits deriving from experience-sharing activities, additional advantages will derive from the use of quality management guidelines and other advanced tools before and during Policy Change actions’ formulation
- Raised awareness of local communities, authorities and operators with respect to renewable energy production and consumption, promoting fair access to it, and prompting it through public-private partnerships
- Cooperation with other EU funded projects, in particular Interreg Europe ongoing projects
- other results (as per policy indicators)

3. CONCLUSIONS

3.1 Innovative and Original Character

PROMOTER’s central output, being the setting up of prosumer hubs to address mobility and energy-supply requirements, is structured around flexibility as to meet the demand of different, socially relevant, categories of players. Indeed, it is the heterogeneity of the actors and realities involved that contributes to the project’s innovative character. The combination is firstly triggered by the cooperation among different European regions, in some cases composed of newcomers within the IE framework, bound by a common goal to be tailored according to one’s own drivers and barriers. Similarly, it occurs between public and private partnerships in the management of the assets employed to maximize results associated with energy self-dependence and effective sharing. Promoting the involvement of Renewable Energy Community (EC) to establish and manage prosumer hubs serving *inter alia* sustainable mobility services, helps consolidating the sense of community, including

enhancing their entrepreneurial spirit to actively support the bottom-up development of communities as creators of economic and social value. Innovativeness thus lies in the strategic juxtaposition of diversity and proximity. While diverse energy carriers are converted in energy hubs, taking advantage of the unique resources of each partner's territory, proximity becomes the essential resource powering energy communities, allowing for pooling and social inclusion. The concept of a "shared" asset such as "collaborative energy" constitutes a socially relevant opportunity.

GP experiences will bring innovative knowledge to partners as the scrutiny of experiences is improved by the combination of peer-review, study visits, tutoring sessions and workshops.

Thanks to the project, most partners will innovate their green mobility experiences from past Programmes.

Finally, the Policy Change methodology is innovative as the screening of potentially successful actions may in specific cases be supported by Cost-Benefit, Multi-Criteria and Sensitivity analysis, so as to identify the most effective, sustainable and durable actions; this analytical support can avail to other needs/users.

3.2 Impact and added value

PROMOTER encourages sustainable mobility which, apart from environmental and health benefits, retains a social role by bringing people together and connecting areas within the city. Its power supply given by prosumer hubs also leads to cost-savings by reducing material consumption for infrastructure and maintenance costs.

The conjunction of energy and mobility issues encompasses the three pillars of sustainable development: economic (entrepreneurship and self-dependence), environmental (low carbon energy and transportation) and social (accessible to all).

Transfer of practices constitutes only one aspect of the benefits of interregional cooperation, whereas exchange and transfer of experience can also lead to more structural changes within one's regions. Such structural changes are deemed to be part of the Policy Change actions, and the medium-term perspective for their implementation constitutes also the time-based scenario for impacts and added values to materialise. Phase 2 activities will ensure monitoring of the initial actions' implementation for the period of 1 year.

3.3 Future Developments

Sustainability. The project approach of establishing energy prosumer hubs to power green modes of transport supports the principle of sustainable development by recognizing that the preservation of the environment is a contributing factor to growth and employment. Moreover, an increasing independence from external energy sources alleviates an energy crisis which hampers in turn transport mobility; it also helps a progressively needed self-sustainable economy to cope with unpredictable socially and economically relevant events such as those taking place in the current period.

Regions, responsible for the strategies of future programmes, are expected to consider the project results and follow-up outlooks when formulating their policy plan. This may allow longer-term actions stemming from the exchanged experience. SG are expected to become permanent working forums, open to larger numbers of

more diversified participants, thus ensuring durable commitment and a constant focus on future opportunities.

3.3.2 Experience sharing. The planning model approach utilized in PROMOTER (in particular its Readiness Indicator model) is expected to be standardized and thus easily integrated, together with the supporting experience, for possible replication in other contexts and European/regional territories and the realisation of new capitalisation projects.

4. ACKNOWLEDGEMENTS

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Project website:

<http://www.interregeurope.eu/promoter>

