



LOCARBO

Interreg Europe

ACTION PLAN

Municipality of Vila Nova de Gaia

November 2018



Low-carbon
economy



European Union
European Regional
Development Fund

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Greeting from the Mayor

Our development strategy is anchored on sustainable development and focused on the transition towards a low carbon economy, by supporting energy efficiency, the use of renewable energy sources and the reduction of GHG emissions.

We believe in a future based on a policy learning process, the share of innovative solutions and good practices with other cities and regions around the world. We want to learn with other public authorities, cooperate with the industry and achieve an effective engagement with the civil society.

That's why we became partners of the Locarbo project, supported by the INTERREG Europe Programme, in a consortium integrated by six countries of the EU. This project aims to improve energy rehabilitation policies, by sharing information and knowledge with the other partners, but also by developing action plans in cooperation with local stakeholders.

Under this framework, Vila Nova de Gaia aims to become a reference case study in the transition towards a low-carbon economy, through the promotion of energy efficiency in municipal buildings and by influencing energy efficiency behavioural change among civil society.

Based on this vision, the municipality planned and designed a realistic action plan, based on concrete actions that integrate material interventions in the building environment, and immaterial actions specially designed for community target groups.

Lines of action were discussed and concerted, focusing on three relevant community target groups - school communities, disadvantaged communities and municipal services. As examples of concrete lines of action, we can point out the interventions for energy rehabilitation of social housing buildings and public facilities, namely schools and sports infrastructures; the organization of awareness-raising and training actions on the rational use of energy for municipal managers and citizens; and the adoption of technological solutions that will support the collection, analysis and integration of energy consumption data and other variables.

We believe that the set of measures gathered in this action plan will bring behavioural changes, access to new energy consumption indicators that will support decision making and the reformulation of financing policies and programmes, as well as the adoption of new models of cooperation with the target groups involved in this process.

The municipality is now determined in its implementation with the support of our local and regional stakeholders, and its monitoring over the next two years.

Signature (Eduardo Vítor Rodrigues)

Introduction

This document represents the Action Plan developed by the Municipality of Vila Nova de Gaia (Portugal), within the framework of the LOCARBO – “Novel Roles of Regional and Local Authorities in supporting Energy Consumers’ Behaviour Change towards a Low-carbon Economy” INTERREG Europe project.

It results from the learning process and exchange of experiences developed within project’s phase 1, namely the good practices identified by the other partners, and will be the basis for the influence of the Policy Instrument tackled by Vila Nova de Gaia within the LOCARBO project – Norte2020 (Operational Programme of the Northern Region) – Energy efficiency in public infrastructures of local administration.

This Action Plan is structured in several sections, including the identification of strategic objectives and fields of action, and the definition of expected impacts and required resources for its implementation.

In section 1, the regional/local motivations to develop the present Action Plan and the contextual basis to develop LOCARBO project aims in the region are presented.

Section 2 exposes the main vision and strategic goals that Vila Nova de Gaia Municipality wants to achieve with a successful Action Plan implementation.

The specific objectives presented in section 3 represent the measurable results that Vila Nova de Gaia wants to accomplish, materializing the vision and strategic goals.

Section 4 compiles a set of strategic measures, coupled with a series of action lines that describe the specific projects and activities to be implemented, in order to achieve the expected results.

In section 5, the resources needed and expected impacts that should be considered in the Action Plan implementation, in a short-medium-long term perspective, are identified.

The monitoring procedures are detailed in section 6, with a compilation of the indicators and sources of verification that will guide the monitoring process.

Finally, Section 7 summarizes the analysis of external conditions and constraints.

1. Background

This Action Plan presents the strategic aims of the Municipality of Vila Nova de Gaia in the scope of sustainable development, rational use of energy, renewable energies and the reduction of greenhouse gases emissions.

Thereby, it is coherent with the political ambition of the City Council and with the strategic and operational programmes and projects defined to promote the transition towards a low-carbon economy, such as: Gaia Strategic Plan, Gaia-2030 Sustainable Development Agenda, Municipal Options Plan (GOP) 2018, Sustainable Energy Action Plan, Local Agenda 21, etc.

The Action Plan was developed within the framework of the LOCARBO project, which is an interregional cooperation project for improving low-carbon economy policies, focused on exploring policy instruments improvement combined with innovative practices on three strongly interrelated thematic pillars:

- Supplementary services and products offered by local authorities;
- Innovative cooperation models;
- Innovative smart technologies.

Each thematic pillar corresponds to one of the following strategic objectives:

- Improve policy instruments targeting demand-driven initiatives to increase energy efficiency and the use of renewables in the built environment;
- Find innovative ways for regional and local authorities to support energy consumers' behaviour change, enhancing motivation and awareness;
- Promote more conscious consumers' decisions on energy efficiency in buildings, and more investments on smart technologies.

This Action Plan development process was the result of a set of internal and external interactions under the LOCARBO project.

At an internal level, a set of preceding documents were developed to prepare and frame the production of this Action Plan. These documents refer to the "Regional Analysis & Ambition Info Sheet" and the collected Good Practices, integrated in the project "Good Practices Inventory", and perfectly blended in each LOCARBO Thematic Pillar.

The "Regional Analysis & Ambition Info Sheet" consists in a context analysis, including themes like weaknesses/expectations within the policy-making process, resources exploitation, investments, community involvement, and the establishment of a short political statement expressing Vila Nova de Gaia's preliminary expectations on the Action Plan.

The project networking activities (including study visits, training sessions, interregional events and thematic conferences) brought excellent opportunities to knowledge transfer, namely best practices exchange to be incorporated into regional/local policies.

At an external level, the interaction that occurred between the local/regional stakeholder group and the municipal technicians and companies within the performed Local Living Lab (LLL) and Institutional Learning Platform (ILP) meetings, was also very useful for the analysis and proposal of achievable action lines and measures that are intended to be developed, implemented and monitored.

2. Strategic vision and goals

The Municipality intends to transform Vila Nova de Gaia into an international benchmark in the transition towards a low carbon economy, as a mean of increase its competitiveness and territorial attractiveness.

Based on this vision, the Municipality identified the following strategic goals:

- Positioning Vila Nova de Gaia as a reference case study in the transition towards a low-carbon economy, through the promotion of energy efficiency, GHG emissions reduction and renewable energy sources use, to improve citizens' quality of life;
- Promoting energy efficiency in municipal buildings by following the principles associated to Nearly Zero-Energy Buildings (NZEBs) and CO₂ Zero Buildings (zero GHG emissions);
- Promoting the development of awareness sessions oriented to the adoption of sustainable behaviours, with a special focus on reducing energy poverty among the population;
- Adopt innovative technological and organizational solutions, to support the collection, analysis and integration of data on energy consumption and other variables, generating policy relevant information and knowledge.

Along with this scenario and aspirations, it is also envisaged an intense interaction between the local community and several segments of stakeholders. In fact, a community cooperative approach and a multi-stakeholder involvement are very important strategies to support awareness and the achievement of all the measures and action lines comprised in this Action Plan.

Gaia Municipality aims to acquire new skills and experience through the implementation of the LOCARBO Action Plan and other municipal projects, which focus on specific target groups, such as schools and sports communities, municipal buildings managers, and final consumers of the domestic segment.

3. Specific objectives

Bearing the referred vision and strategic goals in mind, and aware of the uncertainty of financial availability for the development of this Action Plan, the Municipality identified a set of specific objectives and measures with the expectation that the necessary conditions for their implementation will be created.

The following table presents a summary of the specific objectives and measures, as well as the corresponding action lines:

Specific objectives	Measures	Action lines
Promote energy efficiency in buildings and equipments under municipal management	Energy rehabilitation of social housing buildings	Energy rehabilitation of social housing buildings
	Mapping and monitoring of equipment energy consumption	Mapping and monitoring of energy consumption patterns in municipal public buildings
Raise awareness on the advantages of rational energy use	Communication of good practices on energy efficiency, raising awareness of specific society target-groups on the advantages of rational energy use	Development of awareness raising sessions on management and rational use of energy for social housing residents Development of awareness raising sessions on management and rational use of energy for managers of municipal public buildings
	Development of training sessions on specific energy efficiency procedures	Development of technical training sessions on energy audits for managers of municipal public buildings
Develop an active and engaged community network	Setting-up active target groups responsible for raising awareness on energy efficiency	Establishment of energy management teams
	Dynamization of policy decision-making processes	Constitution of a political committee for the discussion and evaluation of local/ regional energy policies

4. Measures and action lines

The following sheets summarize the envisaged action lines.



1. The background

The Municipality of Vila Nova de Gaia has started an extensive programme oriented to the energy retrofit in public infrastructure, particularly in social housing.

The ambition to implement a new social housing policy in the municipality has determined a strong commitment to the modernization and energy rehabilitation of these housing infrastructures in a logic of social cohesion, promoting the well-being of its inhabitants.

In this sense, an extensive survey and diagnosis carried out by Gaiurb EM (Vila Nova de Gaia municipal company of urbanism and housing) made possible to assess the need of social housing requalification, and prepare applications for funding mechanisms that will support projects aimed to increase the energy efficiency performance of social housing dwellings.

The inspiring principles of the GP-TP3 (Good Practice – Thematic Pillar 3), promoted by ATER (territorial agency for residential buildings) and identified by the LOCARBO Lead Partner (Province of Potenza), represent a model of “sustainable design” for social housing, oriented to energy savings through innovative materials with a low environmental impact and RES technologies. This GP holds particular relevance for Vila Nova de Gaia energy retrofit of the social housing dwellings.

2. Objectives

The aim of this action is to promote the energy retrofit of public infrastructure under municipal management, in particular public social housing, through the implementation of energy efficiency measures.

In order to obtain effective annual reductions in primary energy consumption in public social housing buildings, this action includes interventions in the building envelope (roofs

and façades) for the installation of new insulation systems and/or external coatings replacement.

3. Players involved

The main promoter of this initiative is the Municipality of Vila Nova de Gaia, which will have the support and technical coordination of the municipal company Gaiurb EM, whose mission is to ensure an efficient management in the areas of urbanism, social housing and urban rehabilitation in the municipality.

Gaiurb will act as a facilitator in the identification and supervision of energy efficiency projects in social housing dwellings, to be developed with the support of the Northern Region Operational Programme (2014-2020) – Norte 2020, the Policy Instrument tackled by the Municipality within the LOCARBO project.

4. Timeframe

The proposal for financial support through Norte 2020 considers the period from 2019 to 2020 for the execution of this action.

5. Costs

The estimated budget is € 3,888,477.00 for the energy rehabilitation of 749 social housing dwellings, within the framework of the applications submitted (some of them already approved) to the Norte 2020 call for proposals, which corresponds to the Policy Instrument tackled by the Municipality in the scope of the LOCARBO project. The intervention includes energy requalification operations of facades and roofs in several social housing developments.

During the submission and evaluation process, the Municipality of Gaia (and also other Northern Municipalities) has sent several questions, doubts and suggestions to the technical and administrative team of the Managing Authority, and some adjustments have been made to the text of the call. These changes included, for example, aspects related to energy audits and certification.

The presentation of specific applications to the calls for proposals related to the PI demonstrates the ambition of Gaia to implement the actions and accomplish the outcomes foreseen in the LOCARBO Action Plan, acquiring capacity to influence the PI for energy efficiency in public infrastructures.

6. Funding sources

The financial support for the intervention will be provided in the form of a non reimbursable grant through the Northern Region Operational Programme (2014-2020) - Norte2020, under priority 4c - Supporting energy efficiency, smart energy management and renewable energy sources use in public infrastructure, particularly in public buildings and in the housing sector.



1. The background

This action arises from the commitment of the Municipality of Vila Nova de Gaia with the energy rehabilitation and retrofit of a set of social housing developments and dwellings, thereby ensuring improvements in residents' quality of life.

The action aims to complement an inclusive municipal strategy to combat energy poverty, promoting energy efficiency among populations under disadvantageous socio-economic and info-exclusion conditions, through the development of awareness raising actions among these consumers.

Combining these awareness sessions with the measures referred in Action Line 1, reveals a new municipal social housing strategy.

The involvement and cooperation with the community using innovative models refers to the LOCARBO project Thematic Pillar 2, as evidenced in some of the Good Practices identified by the project partners – “We resilient and Calvello Energetic Village”, presented by the Lead Partner; BEEP (Durham County Business Energy Efficiency Project) and “School Carbon Reduction Programme”, submitted by Durham County Council; and BETA (Housing Energy Efficiency Agency), presented by Kaunas University of Technology. These good practices illustrate innovative aspects for a more effective community interaction in the area of energy efficiency, providing relevant ideas for the design of this action.

2. Objectives

With the implementation of awareness raising sessions on management and rational use of energy, the following objectives are foreseen:

- Raise awareness on energy efficiency among populations under disadvantageous socio-economic conditions, namely social housing residents;
- Demonstrate in practice and suited to the routines of these consumers how the behaviour changes can be translated into effective savings in the electricity bills.

3. Players involved

To implement this action, the Municipality of Vila Nova de Gaia will have the technical support from municipal and intermunicipal companies - Gaiurb and Energaia - and the

support from other external entities (including stakeholders) who wish to join this action line or the general Action Plan.

4. Timeframe

It is expected to organise two awareness-raising sessions, between January 2019 and September 2020.

The definition of the scheduling of the awareness-raising actions will be carried out by the team from the municipal/inter-municipal companies (Gaiurb and Energaia).

5. Costs

The implementation of this action line does not foresee the use of external financing sources.

The provision of communication and awareness materials will be carried out by the team from the municipal/intermunicipal companies (Gaiurb and Energaia).

6. Funding sources

Not applicable.



Action Line 3

Mapping and monitoring of energy consumption patterns in municipal public buildings/infrastructures

1. The background

This initiative arises from the strategic ambition of the Municipality of Vila Nova de Gaia to ensure that a large part of public and/or under municipal management buildings follow the design principles associated with the concepts of nZEB and CO₂ Zero buildings until 2020.

Considering that many of these buildings are large energy consumers by nature, the implementation of measures that will substantially improve their energy performance will have a high economic impact on their management.

This action intends to implement a set of mapping and energy consumption monitoring procedures in the most representative public/municipal infrastructures. These mapping and monitoring procedures and inherent solutions will be adequate to the specificity of each infrastructure to be monitored, and may be readjusted during the action implementation.

Through this action, these infrastructures/buildings can benefit from substantial energy savings with a high economic impact, promoting the implementation of demonstrative projects and innovative solutions in the pedagogical, curricular and organizational domains.

The pioneering example presented in the LOCARBO GP-TP2 – “Durham County Business Energy Efficiency Project” (BEEP), promoted by Durham County Council represents a successful experience in delivering free energy audits and assessments to identify effective opportunities for financial savings. The exchange of information about this project was very important to the design of this action line.

2. Objectives

The purpose of this action is to identify public and/or under municipal management buildings that register higher energy consumption and/or hold less efficient equipments, through the mapping of all electronic equipments, as well as their characteristics - model, power, energy class and type of use - and associated consumption patterns.

It is intended not only to evaluate the potential to reduce energy consumption in these buildings, but also to contribute to the achievement of the following complementary objectives:

- Diagnosis of equipments and associated consumption patterns;
 - Replacing inefficient/obsolete equipments;
-

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- Obtaining real time and historical information on energy consumption;
 - Comparing the energy performance of different infrastructures/buildings analysed and share good practices;
 - Promoting a greater knowledge on energy efficiency among the administrators/managers of the examined infrastructures/buildings.

These are made possible through the reading of energy bills and simultaneous installation of smart meters in the electric circuits for certain periods of analysis.

The collected and treated energy consumption data will be inserted in the platform – Sustainability Observatory - managed by the inter-municipal company Energaia, which already aggregates consumption data from several municipal buildings and infrastructures.

This information will be very important as an input for monitoring and evaluating the projects supported by the Policy Instrument tackled by Vila Nova de Gaia within LOCARBO project.

3. Players involved

For the implementation of this action, the Municipality of Vila Nova de Gaia will have the technical support of municipal and inter-municipal companies - Gaiurb and Energaia - and the technical administrators/managers of the envisaged public infrastructures/buildings, ensuring access to the electrical equipment and energy systems.

4. Timeframe

This action is planned to be implemented between September 2018 and May 2019.

5. Costs

The acquisition of four smart meters for energy consumption monitoring corresponds to an estimated budget of € 1,000.00.

6. Funding sources

For the implementation of this action, the Municipality of Vila Nova de Gaia will apply for the “Plan for Promoting Efficiency in Electric Energy Consumption” (PPEC), promoted by the Energy Services Regulation Body (ERSE).

The remaining part of the investment will be made possible through Vila Nova de Gaia City Council own funds.



Action Line 4

Awareness-raising sessions on management and rational use of energy for managers of municipal public buildings

The framework of this action refers to the municipal strategy to promote energy efficiency in municipal public buildings and/or under municipal management, which includes material actions associated to direct interventions on buildings, and immaterial actions like awareness/training sessions and consumption monitoring procedures.

Training and awareness-raising sessions are privileged actions for the promotion of behavioural changes, encouraging knowledge exchange on energy efficiency, changes in habits and the adoption of sustainable practices. Awareness-raising actions should be suited for each target group (considering each building/infrastructure features), introducing specific solutions for a more efficient consumption.

For a successful implementation, several aspects were considered, namely the involvement and cooperation with the community/society according with innovative models (LOCARBO project - Thematic Pillar 2), as described in several Good Practices identified by project partners, namely the GPs-TP2 – “We resilient and Calvello Energetic Village”, presented by the Lead Partner; BEEP (Durham County Business Energy Efficiency Project) and “School Carbon Reduction Programme”, submitted by Durham County Council; and BETA (Housing Energy Efficiency Agency), identified by Kaunas University of Technology.

2. Objectives

The objective of this action is the organization of awareness-raising sessions on the management and rational use of energy for managers of municipal public buildings, with the following aims:

- Conduct a rational energy management in municipal and/or under municipal management buildings, promoting the acquisition of efficient equipments and systems;
- Demonstrate how behaviour changes can be translated into effective energy savings;
- Set systematic procedures for the creation and implementation of recommendations and behavioural plans in several services departments and facilities.

The implementation of these awareness raising sessions can contribute to increase the number of projects submitted to the Policy Instrument tackled by Vila Nova de Gaia in the LOCARBO project, because managers of public buildings become more aware of the potential of energy savings and the characteristics of funding programmes.

3. Players involved

For the implementation of this action, the Municipality of Vila Nova de Gaia will have the technical support from municipal and inter-municipal companies - Gaiurb and Energaia - and specific support from graduated students of the Polytechnic Institute of Management and Technology (ISLA) located in Vila Nova de Gaia, concerning the technical components on the management and rational use of energy. It is worth of notice that this training institute is part of LOCARBO local stakeholders' group.

4. Timeframe

It is expected to conduct four awareness-raising sessions, between September 2018 and September 2020.

The implementation of this action may be articulated with Action 5 – Technical training sessions on energy audits, and Action 3 - Mapping and monitoring of energy consumption patterns in municipal public buildings/infrastructures.

The scheduling of the awareness-raising actions will be carried out by the municipal/inter-municipal companies (Gaiurb and Energaia).

5. Costs

The implementation of this action does not foresee the use of external financing sources.

The provision of communication and awareness materials will be carried out by the municipal/inter-municipal companies (Gaiurb and Energaia).

6. Funding sources

Not applicable.



Action Line 5

Technical training sessions on energy audits for managers of municipal public buildings

1. The background

The need to implement a diverse set of immaterial actions, essentially focused on raising awareness and training specific target groups, arises from the need to promote behavioural changes on sustainable energy management in public and/or under municipal management buildings.

Training and awareness-raising methods are privileged actions to instil new concepts of sustainable energy management, new perceptions on energy inefficiencies, and to learn new practices, leading to a more rational use of energy.

As previously mentioned, the pioneering example described in GP-TP2- “Durham County Business Energy Efficiency Programme” (BEEP) promoted by Durham County Council, represents a successful experience in delivering free energy audits and assessments to identify cost effective opportunities to financial savings. The exchange of information about this project was very important to the design of this action line.

2. Objectives

The overall objective of this action is to ensure the acquisition of methodological and theoretical knowledge on rational management of energy, considering a correct use of energy consuming equipments and systems, and the improvement of energy efficiency in public and/or under municipal management buildings.

Training will enable trainees (managers of municipal public buildings) to acquire technical knowledge related with energy audits procedures, as well as the identification of opportunities to improve energy efficiency in buildings.

Through this training action the managers of municipal public buildings will understand the high potential of reducing the energy consumption that can be obtained through an efficient management and rational use of energy, as well as acquire and update knowledge on the energy-efficient management of services and/or equipments.

The implementation of this action can contribute to increase the number of projects submitted to the Policy Instrument tackled by Vila Nova de Gaia in the LOCARBO project, because the applications to North 2020 should include the implementation of energy audits.

3. Players involved

To implement this action, the Municipality of Vila Nova de Gaia will have the technical support from municipal and inter-municipal companies - Gaiurb and Energaia - and specific support from graduated students of the Polytechnic Institute of Management and Technology (ISLA), located in Vila Nova de Gaia, concerning technical knowledge on innovative solutions and procedures for energy management and monitoring. It is worth of notice that this training institute is part of LOCARBO local stakeholders' group.

4. Timeframe

This action is planned to be implemented from September 2018 to May 2019.

The implementation of this action may be linked with Action Lines 3 and 4.

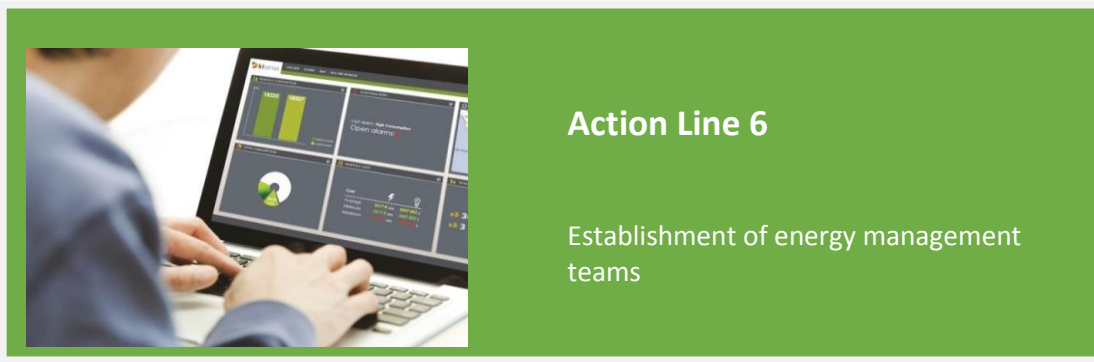
5. Costs

The implementation of this action does not foresee the use of external financing sources.

The provision of training materials, the scheduling of training sessions, and the definition of trainers and trainees will be performed by the team of municipal/inter-municipal companies (Gaiurb and Energaia) and external entities (ISLA) involved in this action.

6. Funding sources

Not applicable.



1. The background

The municipal strategy to ensure that all public and/or under municipal management buildings will have increased energy efficiency, resulted in an emergent need for innovative actions to encourage a more rational energy use by the managers of these infrastructures.

As previously mentioned, the innovative models of cooperation with the community/society recommended by other project partners, and described in the GPs-TP2 – “We resilient, Calvello Energetic Village”, BEEP, School Carbon Reduction Programme and BETA, will be considered on this action line. These good practices provide inspiring aspects for a more effective community interaction on energy efficiency issues.

2. Objectives

The overall objective of this action is to create energy management teams, in order to sensitize managers of municipal public buildings for a rational use of energy and the adoption of more sustainable practices in their daily routines.

This action will be complemented by the Action Lines 4 and 5, in order to promote a greater engagement among managers of municipal public buildings.

The object of this action complements the theoretical and practical learning provided in awareness-raising and technical training sessions. The practical activity of these energy managers’ teams will focus on the mapping of energy consumption and energy audits support and follow-up (Action Line 3).

3. Players involved

To implement this action, the Municipality of Vila Nova de Gaia will receive technical support from Gaiurb and Energaia, and specific support from graduated students from ISLA, on technical components regarding innovative solutions for energy management and monitoring.

4. Timeframe

This action is planned to be implemented from September 2018 to May 2019.

It can be articulated with the implementation of the Action Lines 3, 4 and 5.

5. Costs

This action implementation does not foresee the use of external financing sources.

The provision of educational and informative materials will be made possible by some of the partners in this initiative, namely Energaia and the National Association of Energy and Environment Agencies (RNAE).

6. Funding sources

Not applicable.



Action Line 7

Constitution of a political committee for the discussion and evaluation of local/regional energy policies

1. The background

To increase the amount of financing lines and to promote readjustments in regional operational programmes which currently support energy efficiency projects, was the impulse that led to the creation of this action line.

In the context of the work already carried out by the municipality in supporting and promoting energy efficiency in public infrastructures, new programming and financing needs were identified, and new intentions to jointly tackle these aspects with other regional executive bodies are being considered by the municipal executive.

In this sense, the municipal executive intends to set up a regional political committee to evaluate and discuss the local/regional policies addressing energy efficiency in public infrastructures. The responsibility of this political committee will be to debate and propose new lines of action and financing, which are not being covered by current funding mechanisms and regional operational programmes.

2. Objectives

With the implementation of this action, it is expected to create a political committee for the discussion and evaluation of energy local/regional policies, with the following objectives:

- Establish an active network of actors with distinct political sensibility, significant territorial coverage, and solid experience in participatory processes;
- Encourage a dynamic evaluation and discussion of local/regional policies and regional operational programmes to support energy efficiency and the rationalization of energy consumption;
- Formulate proposals for reprogramming and/or updating financing lines provided in financial instruments and strategies to support regional development.

The influence of the Policy Instrument targeted by Vila Nova de Gaia in the framework of the LOCARBO project is reinforced by the creation of this Political Committee, which will represent several municipalities of the North Region.

3. Players involved

To perform this action, the Municipality of Vila Nova de Gaia will receive the support and active participation of representatives from the following regional executive bodies: Commission for Coordination and Regional Development of the Northern Region (CCDR-N) and Metropolitan Area of Porto (AMP).

It is expected that more local and regional bodies will join and empower this political committee with complementary areas like awareness, research and ICT.

4. Timeframe

The implementation of this initiative will cover the period from September 2018 to September 2020.

5. Costs

Not applicable

6. Funding sources

Not applicable

5. Resources needed and expected impacts

Considering the diversity of resources needed for the implementation of this Action Plan, these are listed in the following table, according to different categories and corresponding expected impacts.










































Categories	Resources needed	Expected impacts
Financial resources	ERDF funds from the Northern Region Operational Programme (Norte 2020)	Increase the financial support for energy efficiency measures Influence the regional policy instrument restructuring to enlarge the scope of supported activities and eligible costs on energy efficiency measures
	Plan for Promoting Efficiency in Electric Energy Consumption (PPEC) - national tender mechanism, promoted by the National Energy Services Regulation Entity (ERSE)	Increase the financial support for measures improving efficiency in electricity consumption
	Vila Nova de Gaia City Council own funds	Raise public budget lines on environmental and climate domains, in particular the promotion of energy efficiency in public and/or under municipal management buildings
Human resources	Technical support from municipal company Gaiurb EM technicians	Acquisition of new skills and competences on participatory approaches and community involvement Skills development on energy efficient management and rational use of energy in public buildings' equipments and systems
	Technical support from Energaia (Energy Agency of the Southern Oporto Metropolitan Area) technicians	Acquisition of new skills and competences on participatory approaches and community involvement Skills development on energy efficient management and rational use of energy in public buildings' equipments and systems
	Technical support from administrators/managers of public and/or under municipal management buildings	Acquisition of new skills and competences on energy efficient management and rational use of energy in public buildings' equipments and systems



	Technical support from graduated students of the Polytechnic Institute of Management and Technology (ISLA)	Technical and professional enhancement of energy efficient management expertise
	Support from the Commission for Coordination and Regional Development of the Northern Region (CCDR-N) and the Oporto Metropolitan Area (AMP)	Setting up of an informal regional governance group strictly dedicated to policies and programmes/initiatives on energy efficiency
Other resources	Digital awareness-raising guides	Reduction of material resources consumption, lowering environmental impact Increase the share and transfer of knowledge on energy efficiency
	Energy efficiency awareness-raising kits (energy-efficient lamp bulbs)	Acquisition of new energy consumption habits, with an enabling and replicating effect
	Smart meters for energy consumption monitoring	Promote continuous and easy access to energy efficiency performance indicators (e.g.: energy intensity, carbon intensity, specific consumption) Stimulate the establishment of innovative smart/ICT technologies related with energy efficiency
	Digital and interactive platforms	Highlight municipal pilot projects on environmental and energy domains to demonstrate the leading role that public authorities can assume on transferring sustainable behaviour habits to the civic society Promote continuous and easy access to energy efficiency performance indicators (e.g.: energy intensity, carbon intensity, specific consumption) Stimulate the establishment of innovative smart/ICT technologies related with energy efficiency

6. Implementation procedure

The Action Plan covers a two-year implementation period (October-2018 to September-2020) and comprises two stages: implementation of the action lines and their associated monitoring.

The monitoring actions will be carried out periodically to allow feedback and analyse opportunities compared to previous and/or planned results.

Action Lines	Semester 6	Semester 7	Semester 8	Semester 9
1 Energy rehabilitation of social housing buildings				
2 Awareness-raising sessions on management and rational use of energy for social housing residents				 
3 Mapping and monitoring of energy consumption patterns in municipal public buildings/infrastructures				
4 Awareness-raising sessions on the management and rational use of energy for managers of municipal public buildings	 	 	 	 
5 Technical training sessions on energy audits for managers of municipal public buildings	 	 		
6 Establishment of energy management teams	 	 		
7 Constitution of a political committee for the discussion and evaluation of local/regional energy policies	 	 	 	 

Implementation 
Monitoring 

7. Indicators and sources of verification

According with LOCARBO project requirements, each partner must consider two indicator matrices: project indicators and Action Plan monitoring indicators.

Project indicators are used to measure the capacity of “influencing the Policy Instrument”. The following table presents the project indicator defined by Vila Nova de Gaia Municipality.

Organization	Country	Self-defined performance indicator	Target
Municipality of Vila Nova de Gaia	PT	Annual reduction of energy consumption in public buildings (kWh/year)	7,000,000

For the Action Plan monitoring indicators, two categories were considered: outcome indicators and impact indicators. The outcome indicators represent direct and immediate effects of each action line activities. The impact indicators measure the medium and long-term effects that each action line activities produce.

The following table comprises a synthetic view of the proposed monitoring indicators.

Action lines	Indicators	Sources of verification
1. Energy rehabilitation of social housing buildings	Outcome indicators	
	Number of energy certificates issued before rehabilitation	Gaiurb EM
	Impact indicators	
	Number of energy certificates updated after rehabilitation	Gaiurb EM
	Energy savings obtained after rehabilitation - kWh/(m ² /year)	
Emissions avoided due to rehabilitation – ton CO ₂ /year		
2. Awareness-raising sessions on management and rational use of energy for social housing residents	Outcome indicators	
	Number of sessions held per year	Gaiurb EM Energai
	Number of participants registered per session	
	Number of informative materials and awareness-raising guides produced	
	Impact indicators	
Number of participants with increased awareness on energy efficiency	Gaiurb EM Energai	

3. Mapping and monitoring of energy consumption patterns in municipal public buildings/infrastructures	Outcome indicators	
	Number of equipments registered	
	Number of energy systems registered	
	Number of energy bills analysed	Gaiurb EM Energaiia
	Number of day-time daily records	
	Number of night-time daily records	
	Average consumption per hour and building	
	Impact indicators	
	Energy savings as a consequence of monitoring - kWh/year	Gaiurb EM Energaiia
	Emissions avoided as a consequence of monitoring – ton CO ₂ /year	
4. Awareness-raising sessions on the management and rational use of energy for managers of municipal public buildings	Outcome indicators	
	Number of sessions held per year	Gaiurb EM Energaiia
	Number of participants registered per session	Polytechnic Institute of Management and Technology (ISLA) located in Vila Nova de Gaia
	Number of informative materials and awareness-raising guides produced	
	Impact indicators	
	Number of participants with increased awareness on energy efficiency	Gaiurb EM Energaiia Polytechnic Institute of Management and Technology (ISLA) located in Vila Nova de Gaia
5. Technical training sessions on energy audits for managers of municipal public buildings	Outcome indicators	
	Number of sessions held per year	Gaiurb EM Energaiia
	Number of participants registered per session	Polytechnic Institute of Management and Technology (ISLA) located in Vila Nova de Gaia
	Number of training materials/guides produced	
	Impact indicators	
	Number of participants with increased professional capacity	Gaiurb EM Energaiia Polytechnic Institute of Management and Technology (ISLA)

		located in Vila Nova de Gaia
6. Establishment of energy management teams	Outcome indicators	
	Number of teams	Gaiurb EM
	Number of members per team	Energaia
	Number of informative materials and awareness-raising guides produced	Polytechnic Institute of Management and Technology (ISLA) located in Vila Nova de Gaia
	Impact indicators	
	Number of new behavioural plans monitored by “energy management teams” in several service departments and facilities	Gaiurb EM
	Energy savings obtained after “energy management teams” monitoring - kWh/year	Energaia Polytechnic Institute of Management and Technology (ISLA) located in Vila Nova de Gaia
7. Constitution of a political committee for the discussion and evaluation of local/regional energy policies	Outcome indicators	
	Number of sessions held per year	Vila Nova de Gaia Municipality
	Number of participants per session	Coordination and Regional Development Commission of the Northern region (CCDR-N) Metropolitan Area of Porto (AMP)
	Impact indicators	
	Number of position papers produced	Vila Nova de Gaia Municipality Coordination and Regional Development Commission of the Northern region (CCDR-N) Metropolitan Area of Porto (AMP)

8. External conditions and constraints

In a scenario of high budgetary and other possible external constraints, efficient allocation of financial and human/technical resources is of major relevance. Since energy costs are a significant municipal expenditure, and energy prices are expected to rise in the upcoming years, energy efficiency is not only a desirable goal, but an indispensable strategy to ensure the continuity and quality of public services.

The vision and ambition outlined in this Action Plan, is intended to be transmitted to citizens, in order to create an empowering and replicating effect among the population, for the adoption of good energy practices in public services and in the domestic and industrial sectors, among others.

In order to predict the main challenges that the implementation of this Action Plan might face, the following table was produced, summarizing possible external conditions affecting each action line.

Action lines	External conditions
1. Energy rehabilitation of social housing buildings	Public financing delays
2. Awareness-raising sessions on management and rational use of energy for social housing residents	Lack of awareness of civil society on sustainable energy consumption habits
3. Mapping and monitoring of energy consumption patterns in municipal public buildings/infrastructures	Low municipal funding capacity Complexity in changing internal procedures
4. Awareness-raising sessions on the management and rational use of energy for managers of municipal public buildings	Low participation from the target-groups
5. Technical training sessions on energy audits for managers of municipal public buildings	Low participation from the target-groups
6. Establishment of energy management teams	Low adhesion to the initiative
7. Constitution of a political committee for the discussion and evaluation of local/regional energy policies	Low political involvement Absence of practical outcomes

Annexes




Letter of Acknowledgement from the relevant organisation responsible for policy

For Structural Funds programmes (i.e. Investment for Growth and Jobs and European Territorial Cooperation programmes), the list of policy responsible organisations is available on the 'in my country' pages on the programme website www.interreg.eu

Project acronym	LOCARBO
Project title	Novel roles of regional and Local authorities in supporting energy consumers' behaviour changes towards a low CARBOn economy
Name of the signing organisation (original) including department if relevant	Comissão de Coordenação e Desenvolvimento Regional do Norte (CCDR-N)/Autoridade de Gestão do POR NORTE 2020
Name of the signing organisation (English) including department if relevant	NORTE Regional Coordination and Development Commission/ Managing Authority of Regional Operational Program NORTE 2020
Name of the policy instrument addressed (original)	Programa Operacional Regional do Norte (2014-2020) - Norte2020
Name of the policy instrument addressed (English)	North Region Operational Program (2014-2020) - Norte2020
Name of partner(s) concerned in the application form (English)	Municipality of Vila Nova de Gaia (Portugal)

We hereby confirm in consent with the Letter of Support issued by us on 14.07.2015:

- That we acknowledge and welcome the contents and actions of the Action Plan submitted to us by the project partner, as it contains appropriate and acceptable means to monitor and improve Policy Instrument related activities;
- That we are open to continue our cooperation with the project partner in Phase2 of the LOCARBO project to further consider, discuss and take on board insights, expert information and market knowledge provided by the project partner for jointly monitoring and improving the management and the strategic focus of the Policy Instrument and its corresponding scheme conditions, following the Action Plan considerations.

Name of signatory	Fernando Freire de Sousa
Position of signatory	President
Date	09-11-2018
Signature and institution stamp (if exists)	

Fernando Freire de Sousa