



Action plan

Part I – General information

Project: FINERPOL

Partner organisation: CEiiA – Centre of Engineering and Product Development

Other partner organisations involved:

Commission for the Coordination and Development of the Northern Region of Portugal

Matosinhos Municipality

Vila Nova de Gaia Municipality

Porto Municipality

Faculty of Engineering of the University of Porto

University of Minho

Country: Portugal

NUTS2 region: Northern Region

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Part II – Policy context

- The Action Plan aims to impact:
- Investment for Growth and Jobs programme
 - European Territorial Cooperation programme
 - Other regional development policy instrument

Name of the policy instrument addressed: "NORTE 2020" - Northern Region Operational Programme 2014-2020 - Investment Priority (IP) 4.3 - "Supporting energy efficiency, smart energy management and the use of renewable energy in public infrastructure, including public buildings and the housing sector."

The Northern Region Operational Programme (OP) 2014-2020 - "NORTE 2020", managed by the Commission for the Coordination and Development of the Northern Region of Portugal (CCDR-N), is directed exclusively to the NUTS II Northern Region of Portugal, with a financial support for the regional development of EUR 3,400 million of Community funds (ERDF and ESF), plus the national counterpart (public and private). In addition to this financial envelope, the Northern Region has access to thematic OPs and other financial instruments (FIs) to achieve the vision of the "NORTE 2020" regional development strategy:

"In 2020, the Northern Region will be able to generate a level of production of tradable goods and services that will enable the regain of its convergence with the European trajectory, ensuring a sustainable increase in income and employment for its population and promoting economic, social and territorial cohesion".

This Action Plan (AP) refers to the Priority Axis 3 - "Low Carbon Economy", IP 4.3 - "Support energy efficiency, intelligent energy management and the use of renewable energy sources in public infrastructures, namely in public buildings and in the residential sector". This IP has a total ERDF budget of EUR 107,019,526 and includes the following specific objectives:

Specific Objective 1: Increase energy efficiency in public local administration infrastructures by supporting the implementation of integrated measures to promote energy efficiency and rationalizing consumption.

Specific Objective 2: Increase energy efficiency in the social housing sector by supporting the implementation of integrated measures to promote energy efficiency and rationalizing consumption.

By the end of April 2018, three calls for proposals had been opened under the IP 4.3 - two related to Energy Efficiency (EE) in local public administration infrastructures (Specific Objective 1), in October 2016 and November 2017, and other related to energy renovation in social housing buildings (Specific Objective 2), in February 2017. 4,948 projects were approved under "NORTE 2020", but only 8, related to energy renovation in social housing buildings, under the IP 4.3. Of the EUR 107,019,526 ERDF planned to be approved under this IP until 2020, only EUR 11,728,361.05 were already approved.

On one hand, the call for proposals launched for “NORTE 2020” IP 4.3 Specific Objective 1, in October 2016, worth EUR 70 million, did not receive applications. In November 2017, a new call was opened. Since this call is still open, there are no results yet.

On the other hand, “NORTE 2020” IP 4.3 Specific Objective 2, launched in February 2017, received several applications, so the approval process is delayed.

During Phase 1 of the FINERPOL project, the Portuguese Council of Ministers approved a Resolution establishing the strategic vision, objectives and instruments of action for a New Generation of Housing Policies. To create the conditions for rehabilitation to pass from exception to rule, becoming the predominant form of intervention, the New Generation of Housing Policies required a joint action on the legal and regulatory framework (adapting it to the specificities of the rehabilitation), and on the financing of the interventions, guaranteeing the existence of favourable conditions to the investment in rehabilitation. In this context, the following financial instruments/programmes, which stand out within the scope of FINERPOL project, were readjusted and complemented with new ones:

- **Programme for urban rehabilitation of social neighbourhoods in the energy efficiency strand:** supports interventions aimed at increasing EE and the use of renewable energies for self-consumption in social housing buildings;
- **Casa Eficiente 2020 Programme:** aims at financing, in favourable conditions (compared to the market), operations that promote the improvement of the environmental performance of buildings and dwellings, with a special focus on energy and water efficiency, as well as on urban waste management;
- **Financial Instrument for Urban Rehabilitation and Revitalization (IFRRU 2020):** aims to support urban rehabilitation and revitalization (buildings rehabilitation, in particular), and to promote EE. IFRRU 2020 stands out for the flexibility in the eligibility criteria, together with the simplicity and support given in the application process.

Considering the range of financing options available in Portugal for EE in buildings, through programmes and FIs (recently readjusted), crowdfunding and Energy Performance Contracting (EPC), in the analysis of possible actions for this AP, CEiiA focused on specific characteristics, not necessarily in the financial perspective, inherent to existing programmes and FIs, with potential to complement the gaps identified to the OP of the Northern Region of Portugal, instead of the creation of new FI.

In addition to the FINERPOL project, CCDR-N (Managing Authority of the OP “NORTE 2020”) is a partner/stakeholder of the following EE in buildings related Interreg Europe projects:

- Social Green - Regional Policies towards Greening the Social Housing Sector;
- LOCARBO - Novel roles of regional and LOcal authorities in supporting energy consumers' behaviour change towards a low CARBOn economy.

Like the FINERPOL project, in these projects, the Local/Regional APs will focus on the improvement of the OP "NORTE 2020" IP 4.3, targeting different aspects.

Influenced by the experience gained in these projects, CCDR-N plans to develop a Regional Agenda for the Improvement of Social Housing, to be concluded in 2019, with the aim of influencing not only IP 4.3 of this OP, but also other existing FIs and programmes.

CEiiA will take this opportunity to cooperate with CCDR-N and contribute to the elaboration of this Regional Agenda, conveying knowledge acquired during the interregional learning process of the FINERPOL project.

Implementing this AP, CEiiA will promote the restructuring of the eligibility criteria and result indicators of a forthcoming call for proposals for the OP "NORTE 2020" IP 4.3 under the period 2014-2020. According to the Programme Manual, point 4.3.1, this constitutes a Type 2 "Improved governance" improvement of the OP, as the AP focuses on promoting changes in the contents of the calls for proposals (eligibility criteria and result indicators), improving its monitoring and evaluating methodology.

Part III – Details of the actions envisaged

Restructuring of the eligibility criteria and result indicators of a forthcoming call for proposals for “NORTE 2020” IP 4.3

The background

Local/regional learning process – Stakeholder group

In an initial phase, CEiiA sought to identify weaknesses inherent to the OP "NORTE 2020" IP 4.3 to justify the obtained results. In this aspect, within the Exchange of Experience process of Phase 1 of the FINERPOL project, the local/regional stakeholder meetings were very enlightening. The multidisciplinary group was composed of public and private, local and regional entities (including two representatives of the Managing Authority of the OP “NORTE2020”) and very productive discussions were generated. A wide range of disincentives to investment in EE in buildings was identified, within which, in the scope of the PI "NORTE 2020" IP 4.3, the following two were highlighted:

a) Counter productivity of the eligibility criteria of the IP 4.3

There are some limitations in the eligibility criteria concerning the support of alternative building materials to External Thermal Insulation Composite Systems (ETICS). In fact, standard costs are exclusively defined for ETICS, making it difficult to apply alternative solutions, namely the use of materials and building systems appropriate to specific situations in which ETICS solutions do not work correctly, “blocking” the adoption of more technically adequate and efficient solutions, in a medium and long-term basis.

Financing does not consider the life cycle of building materials and energy-efficient equipment, namely solar and photovoltaic panels, heating systems and storage of water with thermal insulation, in particular its maintenance, making it costlier to the municipalities.

b) Inadequacy of the result indicators of the IP 4.3

Due to the climatic conditions of the Northern Region, thermal comfort solutions are more relevant than active EE measures. Therefore, emphasis should be placed on passive EE measures (ex: thermal control, insulation and ventilation).

On the other hand, the social neighbourhoods dwelling interior energy expenses are ensured by the residents. Due to their socio-economic conditions, social housing residents have almost null energy costs, as they do not spend money on heating or cooling. Energy renewal actions in these buildings result in theoretical consumption reductions, but not in actual reductions. With the installation of photovoltaic/thermal solar panels, consumption can even increase in less sunny seasons, which results in residents' discontent. Under these conditions, the

“NORTE 2020” IP 4.3 Specific Objective 2 result indicator “Households with improved energy consumption” does not adapt to the dwelling interior.

In this type of housing, energy certification does not translate energy consumption, and the result indicator “Social housing dwellings with improved energy class” loses relevance. This scenario raises the question of whether the priority should be the increase in EE or the minimization of discomfort, improving living conditions and the residents’ quality of life. Achieving a high-energy class entails requirements in terms of equipment to be installed, which later involve high maintenance costs for municipalities.

Interregional learning process

To identify the actions for reversing this situation, the interregional learning process was essential, enabling the share of experience and Good Practices (GPs) between project partners, stakeholders, and Managing Authorities (MAs). The following points describe the events and the best practices with special relevance for the elaboration of the AP:

a) Interregional events

Tartu (EE), January 2018

In this event, CEiiA was accompanied by two representatives of the MA of the OP “NORTE 2020”, who had the opportunity to learn about innovative financing schemes and their applications in Estonia, and to exchange experiences with the other project partners, stakeholders and MAs.

During this event, partners presented their draft Ex-Ante Assessments, allowing the comparison between the different local/regional situations. It was possible to identify similarities between the gaps identified in the PIs tackled by CEiiA and Trento. After this meeting, CEiiA and Trento maintained contact for exchange of ideas in the elaboration of the AP.

Porto (PT), May 2018

In the public seminar “Financing Energy Efficiency in Urban Rehabilitation”, organized within this event, one representative of the MA of the OP “NORTE 2020” participated as speaker, presenting the OP and respective gaps identified by the local/regional stakeholder group of the FINERPOL project.

Moreover, within the learning camp activity held during this event, partners presented their AP and then gathered in smaller groups to evaluate the different actions proposed. This activity allowed a peer review between CEiiA and Trento.

b) Good practices

During the interregional events (IEs), namely through the organized study visits, seminars, or simply by peer reviewing with partners, CEiiA gained knowledge on GPs on FIs for EE in buildings and projects where these have been applied in the partnership cities/regions.

Due to the innovative nature of the FINERPOL topic, there is lack of GPs in the partner regions. For this reason, GPs analysed within the project were not only from partner cities/regions, but also from similar European

regions. Besides, the application form included some IEs to be celebrated in regions outside the partnership to visit some interesting GPs. This was the case of the IE in Gdansk, Pomorskie Region, where Urban Development Fund was presented and discussed.

To adapt eligibility criteria and result indicators to the local reality and to the needs of the beneficiaries (the needs identified by CEiiA and the local stakeholder group to improve the Northern Region OP), monitoring and actions to promote improved capacity for policy makers, such as direct contact with potential beneficiaries and cooperation between different sectors, are considered essential tools.

Actions to improve monitoring processes are reflected in this AP through Actions 2.1 and 2.2. The following GPs and respective characteristics influenced the definition of this strategy:

University Centre for Energy Efficient Buildings (UCEEB) – Prague (CZ): Considering the EE concept, the experiments that are conducted in the UCEEB building are supposed to facilitate in the future full-scale testing, enabling results providing accurate information on functional parameters of individual materials, structures, energy management systems and intelligent control systems, including impact on both the interior climate and the environment. To this end, an energy management system has been designed for the building to serve as an experimental bed to test the interaction of energy sources with the building and the energy grid.

EPC for public buildings - Moravská Třebová (CZ): This project focused on monitoring the operation and energy consumption of installed equipment, as well as on the evaluation of savings and optimisation of operating parameters, including central controlling system for energy management. The city now has a permanent overview of the heat, electricity and water consumption, as well as possibilities for further optimisation of energy expenditure.

EPC for Landstinget i Östergötland – Östergötland (SE): Within this project, green management control systems were applied in 189 public buildings.

Actions to promote improved capacity for policy makers are reflected in this AP through all sub-actions of Action 1 and 2. It should be noted that monitoring actions also contribute to improved capacity for policy makers. The following GPs and respective characteristics influenced the definition of this strategy:

Progetto Manifattura – Trento (IT): Network is a keyword at Progetto Manifattura, a mission for whom has ideated this project. For this reason, a network-event was created as the "Piazza Condominiale", a convivial potluck where all the associated startups meet and mingle to discuss new business-ops, ideas, projects, or to listen and chat with invited guest from across the green-biz world spectrum.

Urban Development Fund – Pomorskie (PL): Urban Development Fund is an ERDF co-funded FI, managed by Bank Gospodarstwa Krajowego (BGK), the State Development Bank of Poland. It supported urban projects in the region's four major cities: Gdańsk, Gdynia, Sopot and Stupsk. To CEiiA, very close cooperation between the final recipient, BGK and Pomerania Development Agency, happening during the preliminary implementation stage was key to highlight this GP. This allowed stakeholders to adapt their mentality and attitudes, be more proactive, open and engage in dialogue with others.

Fedesco – Belgium (BE): Fedesco was created as a public ESCO to study and implement EE projects in Belgian federal public buildings and created a “Knowledgecenter” department to provide EPC facilitation services to non-federal public authorities, i.e. regions, provinces, cities and municipalities.

Lourdes Renove – Tudela (ES): Lourdes Renove project was conceived as the first phase of an Integral Energy Rehabilitation of the Lourdes District in Tudela city. Within this project, the Lourdes Renove Office was created as a meeting point between technicians and residents, so that they could share knowledge and define the best strategy of action.

ACTION 1 – Awareness-raising for the MA about the necessity to improve the OP

1. Action

The first step to modify the OP is to make the MA of the OP “NORTE 2020” conscious of the necessity to do so. For this reason, the involvement of the MA during the lifetime of FINERPOL Phase 1 was crucial. Also, the involvement of the local stakeholders was essential, mainly municipalities, sharing their experience using the OP, and universities, sharing technical knowledge on EE. Supporting and advising to the MA was active during all Phase 1, while cooperation works and meetings about the modification of the OP concentrated at the end of Phase 1. The relationship with our key actors will be carried on during Phase 2 with stakeholder meetings to support them and monitor the process of the modification of the OP. One essential tool for this process of convincing our MA has been the regional Ex-Ante Assessment as it clearly states the counter productivity of the eligibility criteria and the inadequacy of the result indicators of the IP 4.3 of the OP, where an improved monitoring and evaluating methodology is necessary to the adaptation of the OP to the needs of its beneficiaries and to the regional reality.

The actions that have been and will be undertaken to support our MA are summarized below:

Action 1.1 - Meetings with the MA and key stakeholders to advice and support

A total of 3 stakeholder meetings will be held to advice and support the MA on the best way of adapting the eligibility criteria and result indicators of the OP.

Action 1.2 - Presentation of the final Regional Ex-ante Assessment to the MA and key stakeholders

The main outputs and conclusions of the Northern Region Ex-Ante Assessment will be presented to key actors of our region during a local stakeholder meeting to set the base to proceed with the modification of the OP.

2. Players involved

The main player of this action is CEiiA, which will establish contact with other key stakeholders and the MA of the OP to achieve the objective of the action.

3. Timeframe

Action 1.1 – March and September 2018; January 2019;

Action 1.2 - March 2018.

4. Costs

3000 €

ACTION 2 – Restructuring of the eligibility criteria and result indicators of the OP

1. Action

After the process described in Action 1, the MA is aware of the necessity to improve the OP but needs more technical data to decide the specificities of the alterations to be done to the eligibility criteria and result indicators of the IP 4.3 of the OP. First, CEiiA will cooperate with the University of Minho, identifying the most cost-effective technical solutions in the market for EE in buildings to be included in the eligibility criteria of the OP. Then, with the collected data, CEiiA will cooperate with the University of Porto to decide on result indicators that better adapt to the regional reality.

The last steps before starting the modification procedure is the presentation and defence of the proposal of modification of the OP to the MA and its approval.

The actions that will be undertaken are summarized below:

Action 2.1 - Cooperation with the University of Minho for the identification of the most cost-effective technical solutions in the market to be included in the eligibility criteria of the OP

The University of Minho is an active member of the local stakeholder group and is currently developing research projects in this thematic, among which stands out a project aiming to investigate cost-effective strategies for reducing greenhouse gas emissions and energy use in buildings in cities at district level, combining both EE measures and renewable energy measures. The project focuses on the following objectives:

- To give an overview on several technology options, considering existing and emerging efficient technologies with potential to be successfully applied within that context, and how challenges specifically occurring in an urban context can be overcome;
- To develop a methodology which can be applied to urban districts to identify such cost-effective strategies, supporting decision makers in the evaluation of the efficiency, impacts, cost-effectiveness and acceptance of several strategies for renovating urban districts;

- To illustrate the development of such strategies in selected case studies;
- To give recommendations to policy makers and energy related companies on how they can influence the uptake of cost-effective combinations of EE measures and renewable energy measures in building renovation at district level, and to give guidance to building owners/investors on related cost-effective renovation strategies.

Since this entity needs help in finding energy renewal projects in the design or implementation phases to quantitatively measuring the effectiveness and efficiency of different adopted technical solutions, in real context, CEiiA will establish an agreement of cooperation with this university and work as a mediator between them and Northern Region municipalities. One meeting will be held between CEiiA and the University of Minho and three other meetings will be held including three municipalities (Matosinhos, Vila Nova de Gaia and Porto).

The resulting data will be systematically collected to a database that CEiiA will create, enabling the preparation of lifecycle cost-effectiveness analysis for the tested technical solutions and the formulation of different scenarios reflecting their validation within the eligibility criteria of the “NORTE 2020” IP 4.3.

Action 2.2 - Collaboration with the University of Porto for the identification of result indicators adapted to the regional reality

For the identification of result indicators adapted to the regional reality, the most relevant stakeholder is the Faculty of Engineering of the University of Porto, with a lot of experience in this thematic. An individual meeting will be held with this entity for the presentation of the experimental results obtained and collected in the database. A second meeting will be held for the definition of new result indicators to adapt the OP evaluation system to the regional reality.

Action 2.3 - Defence of the proposal of modification of the OP to the MA

CEiiA will present a final proposal of modification of the eligibility criteria and result indicators of the OP in an official event to be held with the MA in their facilities.

Action 2.4 – Revision and approval of the proposal by the MA

The proposal elaborated by CEiiA will be reviewed and approved by the MA. Once this is validated, the MA will amend the OP.

2. Players involved

The main player of this action is CEiiA, which will establish contact with other key stakeholders and the MA of the OP to achieve the objective of the action. Other stakeholders with a key role in this action are the MA of the OP and the Universities of Minho and Porto.

3. Timeframe

Action 2.1 – November 2018 to March 2019;

Action 2.2 – February to April 2019;

Action 2.3 – May 2019;

Action 2.4 – June 2019.

4. Costs

7000 €

ACTION 3 – Monitoring of the modification of the OP and of new applications to the IP 4.3, depleted by the restructure of its calls for proposals

5. Action

The monitoring of the modification of the OP will initiate with the starting of the process of modification and carry on until the amendment of the OP.

An improved monitoring and evaluating methodology leads to the adaptation of the OP to the needs of its beneficiaries and to the regional reality, and by being more favourable to its beneficiaries, the application of EE funds will be maximized. To monitor the impact of the OP modification CEiiA will then quantify the extent to which the revision of the call for proposals had influence in new applications.

The actions that will be undertaken are summarized below:

Action 3.1 – Monitoring the modification of the OP

Action 3.2 – Monitoring of new applications to the IP 4.3, depleted by the restructure of its calls for proposals

In close collaboration with the MA of the OP, CEiiA will create a questionnaire, which will be sent to the entities applying for the modified call for proposals, quantifying the extent to which the revision of the call for proposals had influence in their application.

6. Players involved

CEiiA will monitor the modification of the OP and support the MA in the monitoring of new applications to the IP 4.3.

7. Timeframe

Action 3.1 – June to December 2019

Action 3.2 – December 2019 to February 2020

8. Costs

5000 €

Date: 23/10/2018

Signature: *Catherine Seledang*