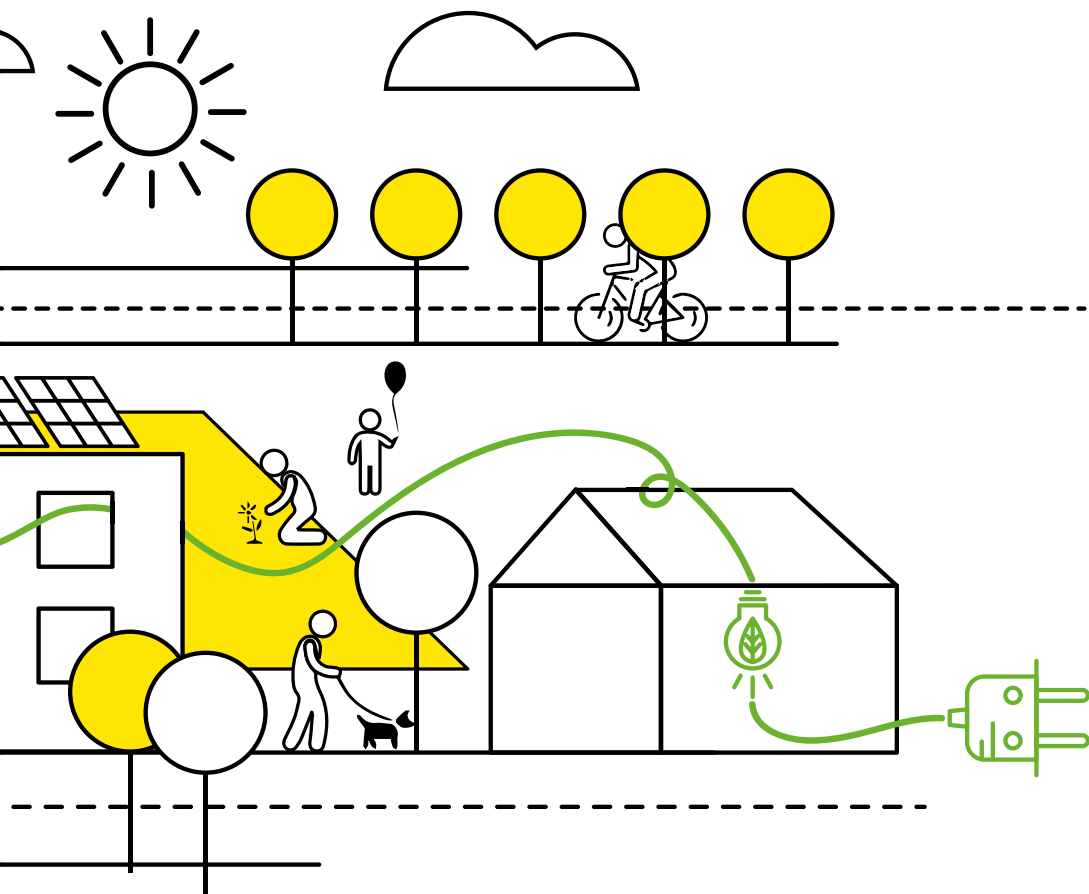


Booklet

on the main results of the
CO-CLEAN project



CO-CLEAN

Co-designed and implementation of local sustainable energy action

CO-CLEAN **“Co-designed and implementation of local sustainable energy action”** is a European project funded by the Interreg IPA CBC Italy-Albania-Montenegro Programme 2014/2020. The main objective of the project was to increase the energy efficiency and the use of renewable energies in several public buildings through the implementation of innovative actions, training and awareness-raising activities.

In line with the Paris Agreement and the European Green Deal, the project aimed to generate a positive change in the behavior of citizens and stakeholders about the sustainable use of energy sources, the reduction of CO2 emissions and the halt of climate change. Moreover, it encouraged the use of energy efficiency technologies in the public sector, by influencing and training public employees and improving their knowledge on energy saving. The project also reduced know-how disparities among the territories and created a permanent network to foster the continuous exchange of good practices, data and information to combat the global heating.

Key specific objectives

- Generate a positive change in the behavior of citizens and stakeholders on the rational and sustainable use of energy sources and on issues of CO2 growth and climate change;
- Increase, in the public sector, levels of energy efficiency and the use of renewable energy through concrete actions and the implementation of the knowledge of public employees and local energy expertise;
- Reduce know-how disparities among project partners through the creation of a permanent network to promote the exchange of good practices, data and information on energy efficiency.

Project Duration: 36 months (1 July 2020 – 30 June 2023)

Total Budget: € 693.350,00

IPA II Contribution: € 589.347,50



PARTNERSHIP

Municipality of Brindisi (Italy)

Municipality of Racale (Italy)

Consortium for the Industrial Development of the Biferno Valley - COSIB (Italy)

Municipality of Valona (Albania)

Municipality of Berane (Montenegro)

MUNICIPALITY OF BRINDISI (PUGLIA, ITALY)

Lead Partner

Pilot Action: Energy efficiency improvement of the Sant'Elia-Commenda Comprehensive Institute and creation of the Renewable Energy Community (REC) of Brindisi

The Municipality of Brindisi implemented, for the entire duration of the project, several activities inspired by the principles of democracy and energy efficiency, the objective of which was to contribute to the sustainable development of the territory using sustainable and renewable energies. One of the main activities carried out concerns the pilot action, which envisaged the implementation of energy efficiency measures and, specifically, the installation of a photovoltaic system on the roof of the elementary school of the S.Elia-Commenda Comprehensive Institute.



The installed system, with a nominal power of 30 kWp, has the following technical characteristics:

- Nominal installed power: 30 kWp;
- Peak power: 30.15 kWp;
- 67 photovoltaic modules each with a nominal power of 450Wp (monocrystalline silicon) PHASE 5;
- Three-phase generator;
- 30 remote control devices to be connected to the meters of the members of the Energy Community.

The plant will allow an estimated physical self-consumption of around 50%, helping to generate

savings energy and environmental aspects and will also allow the introduction of energy into the network useful for evaluating energy community scenarios, aggregating various consumption users, both residential and other uses. In fact, the system is connected to the public electricity grid and supplies renewable energy to the school, to cover their consumption, but also to the families of the neighborhood who will join the energy community, thus reducing energy costs and bringing economic, social and environmental benefits to the whole community.



The impact of the work is null, as it does not involve any burden on the environment, and indeed, thanks to the savings in terms of kWh taken from the electricity grid, a significant reduction in TOE (Tons of Oil Equivalent) could be obtained, of CO₂ in the atmosphere and of substances which contribute to the greenhouse effect. The pilot action has also made citizens aware of the rational use of energy and the benefits deriving from self-consumption in real time of the energy produced by the photovoltaic system and has established mutually beneficial relationships (win-win strategy) between local stakeholders and the creation of job opportunities in the energy management sector. Furthermore, the Municipality of Brindisi has carried out a Feasibility Study functional to the installation of the photovoltaic system which provided for a preliminary environmental assessment, in which the potential impacts of the intervention were evaluated in relation to the territorial context and possible urban planning constraints, in order to identify the best technical solution and an estimate of the possible electricity production of the photovoltaic system, which took into account the characteristics of the site, the latitude of the site and the average solar radiation available, the power of the modules and all potential losses. The opening ceremony was held on 7 November 2022 in the presence of the Mayor of Brindisi, Riccardo Rossi.





The Renewable Energy Community (REC) of Brindisi

The Municipality of Brindisi has started the technical and bureaucratic process for the creation of a Renewable Energy Community (REC) which has actively involved the citizens of the area through a series of information meetings organized with the aim of raising awareness on issues related to sustainable energy. The energy produced by the plant installed at the S.Elia-Commenda Comprehensive Institute in fact is shared among the families and businesses that join the REC. Furthermore, citizens have been made aware not only of the rational use of energy but also of the benefits deriving from real-time self-consumption of the energy produced by the photovoltaic system. In addition to producing and sharing renewable energy, to autonomously generate and manage green energy at advantageous costs, the Energy Community will contribute to the reduction of CO2 emissions and energy waste.

Social and environmental objectives of RECs:

- Making households, businesses, EELL and territories protagonists of an accessible, fair energy transition, capable of responding to local needs and opportunities;
- Reducing the energy expenditure of businesses and households (with particular attention to vulnerable consumers, with a view to mitigating energy poverty);
- Promoting the rational use of energy by the community in order to maximize energy savings;
- Building mutually beneficial relationships between the stakeholders, for example Municipalities, businesses, families, communities, etc.;
- Promoting the local economy and train local resources in energy management in order to create job opportunities;
- Promoting collective actions starting from themes such as sustainability and common goods to revitalize the local community, mitigate depopulation, promote inclusion, etc.



Dissemination events to raise awareness on the issue of renewable energy and the importance of Energy Communities

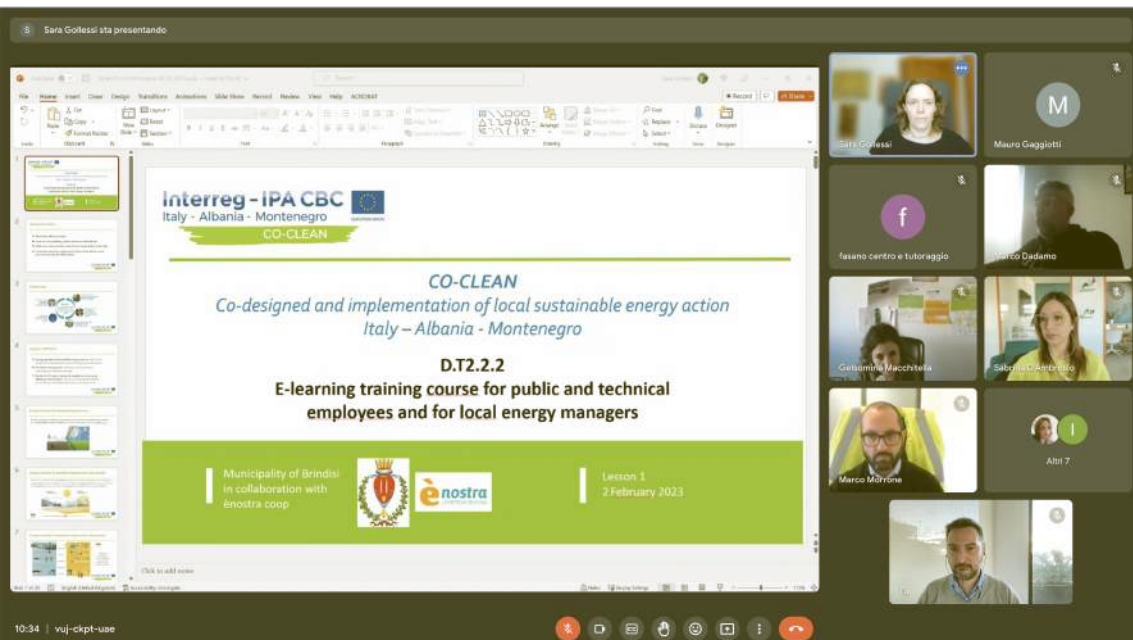
The Municipality of Brindisi organized on 24 and 25 May 2022 the launch and presentation event to the whole city of Brindisi of the emerging renewable energy community (REC) thanks to the CO-CLEAN project. The completion of the pilot action, which saw the installation of the photovoltaic system on the roof of the Sant'Elia-Commenda Comprehensive Institute, allowed the inhabitants of Brindisi, protagonists of this phase, to be involved in identifying potential REC members. The dissemination events made it possible to present the project to all citizens and to illustrate the aims and subsequent phases, promoting a comparison with all the stakeholders interested in replicating the initiatives in other areas of the city. In order to facilitate the understanding of the RECs, a neighborhood reception desk was opened to discuss with interested citizens the benefits they would obtain from joining the REC.

This support to the establishment of energy communities led to the elaboration of a cross-border roadmap to replicate similar experiences and promote the creation of new RECs.

E-learning training course for public and technical employees and for local energy manager

Within the CO-CLEAN project, a cross-border e-learning training course was also organized for public officials in charge of energy planning of the competent administrations of the three countries, with the aim of acquiring useful knowledge on operational tools and knowledge to implement innovative energy efficiency interventions in public buildings in relation to the design/implementation of Action Plans for Sustainable Energy. The course increased the participants' professionalism in

order to adequately address the issue of energy saving and efficiency. This activity laid the foundations for reducing the know-how disparity between project partners and increasing the level of knowledge of civil servants and local professionals on energy efficiency technologies and policies. The course, dedicated to the innovative principles of energy democracy and the results of the pilot action, was a useful tool for the dissemination of the project results.



The screenshot shows a Zoom meeting interface. On the left, a presentation slide is displayed. The slide content includes:

- Logo for **Interreg - IPA CBC Italy - Albania - Montenegro** and **CO-CLEAN**.
- Section title: **CO-CLEAN**
- Subtitle: *Co-designed and implementation of local sustainable energy action Italy - Albania - Montenegro*
- Section ID: **D.T2.2.2**
- Course title: **E-learning training course for public and technical employees and for local energy managers**
- Logos for **Municipality of Brindisi** and **enostra**.
- Text: **Lesson 1** and **2 February 2023**.

On the right side of the Zoom window, a grid of participants is visible. The participants shown are:

- Sara Goleesi (presenting)
- Maura Gagliotti
- tesano centro e tutoraggio
- Marco Dadamo
- Giuseppina Macchitella
- Sabrina C. Andriano
- Marco Milione
- Albi 7

At the bottom of the Zoom window, there is a toolbar with icons for chat, mute, video, and other meeting controls.

Protocol for the creation of energy community and for the replication of self-consumption scheme

The deliverable consists in a report which describes the process for the setup of a Renewable Energy Community (REC) at local level, using the pilot case implemented in the municipality of Brindisi as a practical example. The report identifies and analyse the main steps, starting from the technical and economic feasibility study for the identification and assessment of potential sites, and going through the awareness campaign, the citizen engagement initiatives, the installation of the renewable power plant (usually a PV plant) and the final constitution of the juridical subject, with the approval of the Statute and the internal rules. Some lesson learnt deriving from the Italian context are also outlined. All partners contributed to the definition and implementation of the protocol for the creation of the energy community.

MUNICIPALITY OF RACALE (PUGLIA, ITALY)

Pilot Action: Energy efficiency intervention of the public swimming pool through the installation of a photovoltaic system

The Municipality of Racale carried out its pilot action which consisted in the installation of a photovoltaic system on the roof of the municipal swimming pool and connected to the public electricity network, capable of making the building much more efficient from an energy point of view. The new photovoltaic system allows the exploitation of renewable resources for the self-production of electricity, which will serve to partially cover the energy consumption of the structure. The intervention also envisaged the installation of an electrical storage system, capable of accumulating the energy produced in excess of the needs for self-consumption, and then returning it to the user when the

solar system is inactive, for example during of low insolation, using the traditional electricity network only in case of emergency.

Particular attention was paid to the operating logic of the electricity absorption plant and to the real possibility of having large energy and economic savings through the exploitation and production of this energy vector on site through production from renewable sources (RES). This system makes it possible to use the energy stored in particular hours of the day when the scarce or absent solar radiation will not allow the self-production of quantities of electricity, such as to cover all the needs of the building.



Solar Energy
PA-CSC
The Future is Now

Icons: Sun, Leaf, Gear, Plug, House, Dollar Sign, Recycle, Water Drop, Wind Turbine, Solar Panel, Lightbulb, Leaf, Gear, Plug, House, Dollar Sign, Recycle, Water Drop, Wind Turbine, Solar Panel, Lightbulb

Bar chart with 5 bars of increasing height, colored green and yellow.





When the instantaneous production of the photovoltaic system will have a production of electricity greater than the actual request that exists in the building at that moment, the surplus electric kWh produced by the PV system, instead of being discharged into the national electricity grid, will be stored in electric storage. This battery bank reuses the stored energy to satisfy an important part of the energy demand of the building structure. The system created is of the grid-connected type, with a three-phase low voltage connection and has a total power of 24,90kW, deriving from 60 photovoltaic modules, each of 415W connected to no. 2 conversion groups, which will be installed on the terrace of the public swimming pool.

The storage system consists of 16 high-performance 200 Ah batteries for photovoltaic systems.

The goal is to exploit all the energy produced by the PV system, making the system autonomous and more efficient and is integrated with an intelligent wireless network that allows you to monitor the performance of the system at any time and to manage intelligent connected loads. The system is also monitored by means of wireless devices applied to electrical appliances (heat pumps, air conditioners, lighting, etc...) which allow, based on energy availability, to decide when and which loads to connect in order to reduce the use of the accumulation. The concept behind storage solutions consists in creating an energy buffer to better respond to the demands of the connected loads. The photovoltaic system built in Racale, for the public swimming pool, was inaugurated on 26 June 2023, in the presence of local citizens, stakeholders and all operators in the energy sector.



Energy Festival in Racale: The Energy Communities and Info Day to present the results of the CO-CLEAN project

The Municipality of Racale dedicated the days of 8 and 9 February 2023 to the organization of the Energy Festival focused on the theme of Renewable Energy Communities and the importance of the Energy Transition. The general objective of the initiative was to generate a positive change in the behavior of citizens and stakeholders with reference to the sustainable use of energy resources and the reduction of CO2 emissions, the negative impacts caused by climate change and the disparities in know-how between the territories involved, creating a permanent network to encourage the constant exchange of good practices, data and information to counter global warming.

The Energy Festival was also an opportunity to give voice to the territory and the transformations it is undergoing. Among the topics addressed are sustainability and innovation, energy efficiency, energy production and consumption models and the tools to face the energy revolution of recent years.

The first day of the Energy Festival involved the students of the "Angelo Vassallo" Comprehensive Institute and saw the creation of educational workshops and training courses on the theme of sustainable energy.

Specifically, the activities included:

- The Sit and Pedal Laboratory: two pedal energy generators were positioned which, through pedaling, powered the students' smartphones and tablets;
- The Biodiesel Laboratory: the positioning of a small machine and the use of a laboratory kit transformed the used oil into biodiesel;
- The Solar Cooking Experience: The laboratory allowed the students to cook an excellent soft-boiled egg with solar cooking, exploiting the alternative energy deriving from the sun.



The second day of the Energy Festival, on the other hand, saw the creation of an Info Day dedicated to the CO-CLEAN project which was attended by citizens, technicians, experts and organizations interested in the energy issue. The event, which saw a discussion between stakeholders in the sector, focused on the issues of the circular economy and environmental sustainability, on the importance of the Energy Transition to reduce CO2 emissions and on the issue of Renewable Energy Communities (REC), essential for overcoming the know-how disparities between the territories involved. The Energy Festival was also an opportunity to underline how much a network of stakeholders in the sector can promote the constant exchange of good practices, data and information to combat global warming.



Dissemination event on the main results achieved by CO-CLEAN and inauguration of the photovoltaic plant in the Municipality of Racale's pilot action

The Municipality of Racale organized the inauguration event of the photovoltaic system built thanks to the CO-CLEAN project on 26 June 2023 at the public swimming pool. The inauguration ceremony and the subsequent press conference, which were held in the presence of the Mayor of Racale, Antonio Salsetti, were also an opportunity to present the project and the results achieved so far to all those present.

The intervention, which saw the installation of a photovoltaic system on the roof of the public swimming pool, was carried out with the aim of making the building much more efficient from an energy point of view. The new system will, in fact, make it possible to exploit renewable resources for the self-production of electricity, which will serve to partly cover the energy consumption of the structure. Furthermore, the installation of an electrical storage system has been envisaged, capable of accumulating the energy produced in excess of the needs for self-consumption.



CONSORTIUM FOR THE INDUSTRIAL DEVELOPMENT OF THE BIFERNO VALLEY - COSIB (MOLISE, ITALY)

Pilot Action: Implementation and restoration of the existing air conditioning system in the administrative headquarters of COSIB

The Consortium for the Industrial Development of the Biferno Valley (COSIB) replaced the air conditioning system dating back to 1998, obsolete and highly energy-consuming, in its administrative headquarter, located in the industrial area of Termoli.

The main objectives reached by the intervention realized were:

- The improvement of the energy class of the building with a consequent reduction in energy and economic consumption;
- The increase in the thermal comfort of the workers;
- The containment of energy costs offset by the production of energy from renewable sources.

The implementation of the pilot action was also possible thanks to the implementation of an ex-ante energy diagnosis which consisted of a set of inspection and analysis activities on the use and consumption of energy in the building, conducted with the aim of the identifying potential improvements in energy efficiency.

The energy audit highlighted that:

- The electricity consumption (the building's only energy carrier) was mainly due to air conditioning (heating and cooling) and lighting;
- The building didn't have a plant to produce electricity from renewable sources.



The proposed diagnosis:

- Install an 11.00 kWp photovoltaic system;
- Replace the existing air conditioning system (installed in 1998) serving the floor basement, first floor and second floor with a better performing VRV system energy and with R410 refrigerant gas. This intervention ensures:
 1. The improvement of two energy classes from C to A1, complying with greater respect environmental sustainability by reducing CO2 emissions;
 2. The improvement of environmental comfort thanks to better control performance of the proposed plant;
 3. The introduction of an eco-sustainable technology that involved the replacement of refrigerant gas R22;
 4. The containment of energy costs offset by the production of energy from sources renewable.

Intervention n.1: HEAT PUMP AIR - AIR – VRV. The first intervention proposed the replacement of the existing VRV air conditioning system, with units more efficient from an energy point of view. The containment of energy consumption is guaranteed by the inverter which adjusts the absorbed power to the real system requirements.

The pilot action realized brings the following benefits:

- Optimal adaptation to the energy requests of the building;
- Compensation of defrost cycles;
- Simple management software;
- Expandable installation;
- Powered only by electricity;
- Elimination of water leaks;
- Silent system.

VRV inverter systems therefore constitute a solution capable of satisfying all needs. In combination with photovoltaic fields, they also allow the zeroing of management costs and polluting emissions into the atmosphere.

Intervention n.2: PHOTOVOLTAIC SYSTEM. The second intervention proposed the installation of an 11.00 kWp photovoltaic system. A photovoltaic system allows to transform solar energy directly and instantly into electricity without the use of any fuel.

The benefits guaranteed by the plant are:

- Decrease of management costs;
- Compliance with national legislation;
- Eco-sustainability.

After the installation of the new air conditioning system the results from the installation of the pilot regarding the benefits coming from the new system in terms of energy efficiency confirm the reduction of energy consumption and the advantages coming from the use of solar energy.



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Italy Albania Montenegro

COOLPLAN

Energy Festival: Energy Transition and sustainable development opportunities

The realization of the Energy Festival concluded the activities that the Industrial Consortium for the Development of the Biferno Valley (COSIB) has carried out in recent years as part of CO-CLEAN project, contributing to the results of this virtuous collaboration with Apulian, Montenegrin and Albanian partners. The occasion allowed for a comparison of different experiences on the issue of energy transition which, also in Molise, highlights an ambitious and responsible local protagonism. The Festival has also placed the accent on the various opportunities which, in an extremely interesting temporal

context even for small realities, the European Union makes available to reduce the gap in development and well-being that still characterizes large areas of the European.

The scope of the event highlighted the importance of generating a positive change in the behavior of citizens and stakeholders on the rational and sustainable use of energy sources and increasing knowledge on the most recent policies and technologies in the energy sector. The festival has foreseen the realization of seminars and workshops for experts and technicians of the sector.

LOCATION



University of Cambridge

Centre for Carbon Capture and Storage



CO-CLEAN

Carbon Capture and Storage

Centre for Carbon Capture and Storage

MUNICIPALITY OF VALONA (ALBANIA)

Pilot Action: Energy efficiency interventions of the municipal kindergarten no.5 of Vlora

The Municipality of Vlora provided for the energy requalification of the entire building that houses the municipal kindergarten no.5 and its systems, located in the western part of the city, through the replacement of the existing traditional energy sources, such as fuel or energy supplied by the electricity grid, with solutions that exploit renewable energies and through interventions to repair the damage to the external structure of the building. In this way, an increase in the energy efficiency level of the building and a significant reduction in costs associated with electricity consumption is guaranteed. Specifically, the CO-CLEAN project allowed the previous heating and cooling system was replaced with a more suitable and

modern one and the external walls were completely rebuilt, with thermal insulation, plastering and painting restored. The works also concerned the thermal insulation of the ground floor including laminated parquet, the roof with hydro-insulation, the replacement of the existing fixtures with plastic double glazing, a new HVAC system, capable of guaranteeing more comfortable conditions suitable for children and teachers in their daily activities. The building has been equipped with solar panels for domestic hot water, thus improving the thermal comfort conditions for its users and increasing the efficiency of the kindergarten in terms of electricity consumption.



These interventions were possible thanks to the realization of a preliminary Feasibility Study which established and identified, through a series of meetings and site inspections, the operating and maintenance procedures, the survey, the technical specifications of existing energy systems and other issues related to:

1. Operation of building systems;
2. Building structure (wall insulation, windows, doors, ceiling, etc.);
3. Lighting system (illumination intensity, use efficiency and control);
4. General characteristics of the electrical system;
5. Heating/cooling system: general characteristics (fuel, number of operating units, coefficient of performance, etc.).

The Feasibility Study included a description of the plants and their operation, an analysis of the plants with the highest energy consumption, a description of the recommended measures and construction costs.

The proposed technical solution consisted of:

1. Thermal insulation of the external walls (5cm EPS);
2. Thermal insulation of the ground floor (3cm XPS) and all necessary layers;
3. Thermal insulation of the roof (10cm XPS) and all necessary layers,
4. Replacement of old windows with new plastic double glazing;
5. Redesign of a new HVAC system for heating and cooling;
6. Solar panel for hot water.

The efficiency measures will lead to a reduction in energy consumption by approximately 73%. Kindergarten No.5 building moves from category D to B.

These interventions will allow the municipal kindergarten to become an example of best practice for the entire community since the new plant will significantly reduce the environmental impact as well as having a positive effect on the quality of teaching, on the school activities carried out daily within the facility and the health of students and educators.



Dissemination and awareness-raising events on renewable energy and sustainable development issues

On Thursday 1 June 2023, on the occasion of Children's Day, the Municipality of Vlora organized an event to disseminate and present the activities and, in particular, the energy efficiency interventions carried out in the municipal kindergarten no.5, present in the city of Vlora. A perfect opportunity to share the synergies that have led to the success of this important project which will guarantee efficient energy savings, less impact on the environment and better comfort for students and school staff. Environmental sustainability is one of the fundamental pillars of the CO-CLEAN project which is part of a broader program for the development of a series of constant actions to improve the livability of the territory.

The building, now more beautiful, safe and efficient thanks to the work carried out, is in perfect harmony and at the forefront of the national and European scene from the point of view of environmental sustainability.





MUNICIPALITY OF BERANE (MONTENEGRO)

Pilot Action: Replacement of the electric heating system of the Public Institution Cultural Center with a heating system powered by renewable energy sources

The Municipality of Berane (Montenegro) within the project duration period, implemented Pilot Action as its main activity within the WPTI. The project foreseen an action related to the installation of heating pipes in the municipal Cultural Center for the Municipality of Berane.

Public institution Cultural Center was founded on 1960. This is the basic cultural institution in Berane of great significance and value. This complex institution realizes conceptually different programs from all areas of cultural and artistic creation, as well as the protection and preservation of cultural heritage. It consists of special organizational units: the Memorial House "Duke Gavro Vuković", the National Library "Dr Radovan Lalic" and the Service for Cultural, Artistic, Stage and Cinema Activities.

Over the years, high heating costs and the inability to adequately heat this space have been a lingering problem for the municipality. Inadequate heating led to damage of the building. Respecting the conservation conditions and bearing in mind the significance of the building in the architectural and historical sense, the current electric heating system was replaced by ecological heating from a renewable source - pellets, through an implementation of the pilot action.

In order to resolve the crucial problem of the Culture Center, project team members of Berane municipality, within CO-CLEAN project implemented the following activities which resulted in the consecutive deliverables.

The Municipality of Berane conducted market research and launched service single tender procedure for the engagement of consulting company for the preparation of *both D.T1.1.1 Ex ante energy diagnosis on public buildings and realization of feasibility studies and D.T1.1.3 Ex post energy monitoring and analysis of results for the building of Culture Center in Berane.*

Ex ante analysis document presented the current condition of the building of Berane Cultural center, the measurement results and the analysis of the measured values. Energy audit of the Public Institution Culture Centre of Berane referred to a period of two years: from June 2019 to June 2021.

The document indicated that there is no central space heating system in the building and that Cultural Center is heated by: electric radiators of which 9 pieces of 2kW and 2.5kW, one electric heater 1kW located in the administrative premises and 3 heaters of 10kW to heat the main hall with a stage that serves for organizing cultural and artistic content and showing film screenings. This way of heating leads to high electricity consumption and the inability to achieve optimal temperature in the building. This Ex-Ante Analysis proposes the measures for increasing energy efficiency, impact on environmental protection and investment.



On the basis of D.T1.1.1 Ex ante energy diagnosis document obtained and with regards to *D.T1.1.2 Energy efficiency interventions and renewable plant installation on public buildings*, Municipality of Berane launched competitive tender procedure for supply and installation of heating system in the building of CC Berane. The project dealt with the increase of energy efficiency, leading to reduction of energy consumption and financial savings. Thus, directly acting to reduce greenhouse gas emissions, which contribute to the effects of global

warming and preserving the environment.

Central heating system with 2 hot water boilers using wood pellets was introduced. The boilers have a heat capacity of 110 kW and 90 kW operating pressure of 3 bar. The system includes, in addition to the above, a pellet tank, equipment for automatic pellet cleaning with a cyclone system, hot water buffer with a capacity of 1000 liters, circulating pumps, expansion vessels of 1000 liters, flue gas sets, boiler manifold with three busbars, aluminum radiators and thermoregulation accessories.



Following the installation of the heating system, the document *Ex post monitoring and analysis of results* was prepared and submitted 15.06.2022. The aim of the document was to monitor and analyze the operation of the system from the point of view of providing optimal conditions for the usage of the facility as well as savings in electrical consumption. After the Commission of the central heating system on November 29, 2021 until the end of heating season (May 2022), the consumption of estimated and real savings was performed. The main conclusion was, that based on the overview of comparative electricity consumption for the period of operation of the central heating system in the same months 2019/20, 2020/21, 2021/22, total electric consumption was reduced 6.6 times or 606%, which fully justifies investment.



PROJECT MAIN OUTPUT

O.T1.1 – Cross border RES&RUE development plan

The deliverable consists in a report which presents the general framework around energy transition and the recent energy crisis situation, provides an overview of the policy and legal framework for renewable energy production, energy efficiency and Renewable energy Communities and defines the concept of Renewable Energy Community, together with its main characteristics and objectives, and the role that these bottom-up and collective initiatives can play to push forward an inclusive and just energy transition. The 5 pilot cases implemented within the CO-CLEAN project are also presented, in order to provide examples of practical interventions and their main economic, environmental and social benefits. Finally, the report outlines an overview of the new EU funding Programmes 2021-2027, to provide information about potential funding sources to replicate similar initiatives.

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Municipality of Brindisi



Municipality of Racale



Municipality of Vlore



Municipality of Berane

