

Roman Municipality – SEAP commitment and projects implemented



Roman City, October 4, 2017





- Roman city adhered to the Covenant of Mayors on May 14, 2014, the main European movement where are involved local and regional authorities that volunteer to increase energy efficiency and use renewable energy sources in their territories.
- At the invitation of the European Commission, a delegation from Roman City took part at the first ceremony of the Covenant of Mayors and the Mayor's Adapt Initiative on October 15, 2015 in Brussels. The ceremony marked the launch of a new Covenant of Mayors, which set a new target of at least 40% reduction in CO2 emissions by 2030, and set up mitigation and adaptation pillars by integrating the Covenant of Mayors into the Mayors' Adapt movement.



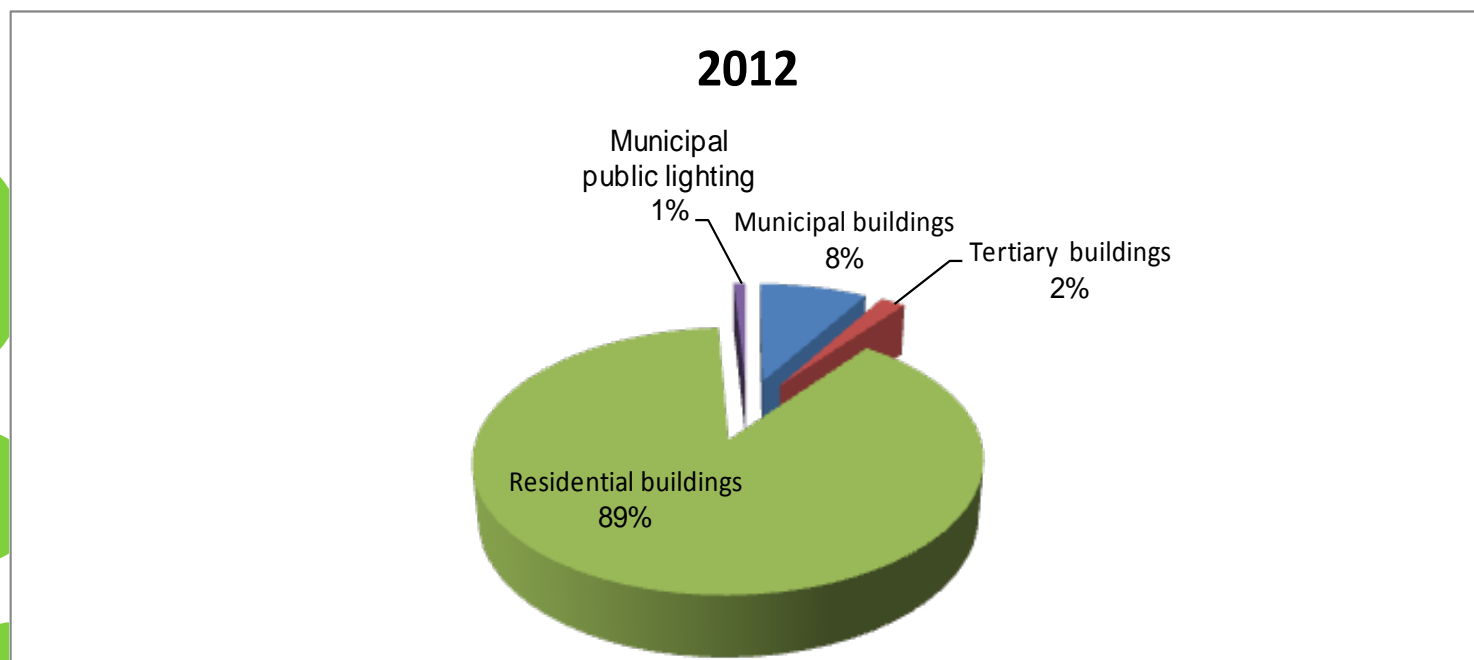
- ✓ By the Local Council Decision no. 77 of April 30, 2015 approved the establishment of the Working Group for the elaboration, implementation, monitoring and reporting of the Action Plan for Sustainable Energy of the Roman Municipality, having as members, local councilors and employees of the City Hall.
- ✓ The Sustainable Energy Action Plan, approved by the Local Council Decision no. 114 on May 13, 2016, is an integral part of the strategic policy documents for the sustainable development of the city of Roman, and it contains a substantial analysis of the local energy situation, highlights CO2 emissions at local level and proposes clear actions in strict accordance with national and international policies for energy and climate change and, implicitly, the Europe 2020 strategy.





GLOBAL STRATEGY

- The overall CO2 reduction target: **at least 20% by 2020.**
- Absolute reduction: **13,189 t CO2.**
- SEAP reference level: **Describes the situation of energy consumption in areas / sectors within the sphere of competence of the local authority in 2012.**



Graphic representation of final energy consumption in Roman municipality, 2012

Long-term vision of the local authority: "Roman City, a socio-economic, a neutral pole for greenhouse gas emissions, at the horizon of 2050."





The Sustainable Energy Action Plan of the City of Roman focuses on the following areas of intervention:

- municipal buildings;**
- tertiary sector buildings;**
- residential buildings;**
- public lighting;**
- local electricity production and use of renewable energy sources;**
- urban planning (strategic urban planning, development of local regulations in support of sustainable construction);**
- communication (technical assistance and consultation services, financial support and subsidies, information and awareness campaigns, training sessions, the organization of Municipal Energy Days).**

THE OBJECTIVES of the local government are clearly oriented towards the fulfillment of the mission for local energy efficiency, which will lead to a sustainable development of Roman City and are in line with the national, international and European policies.

The implementation of the Sustainable Energy Action Plan of the Roman Municipality up to 2020 requires an investment volume of about **EUR 34,295,983** and will lead to a **saving of about 46.3 GWh /** additional renewable electricity of at least **0.8 GWh / year** and CO2 reduction by 2020 with a minimum of **13.189 tons of CO2** compared to 2012.





The main actions of SEAP Roman:

The Sustainable Energy Action Plan (SEAP) includes a series of short and medium-term measures aimed at:

- **increasing the energy efficiency of public buildings;**
- **rational use of energy in homes and buildings in the tertiary sector;**
- **supporting the private initiative in the field of energy efficiency of the buildings in the city;**
- **modernization of the system for public lighting;**
- **producing an important part of the local energy needed from renewable sources;**
- **education at all levels to raise awareness and win the local community on behalf of the local administration for the efficient use of energy.**

IMPLEMENTED PROJECTS

Roman CITY



We have recently focused on transforming Roman City into a "green city" by addressing its resources in a rational and long-term perspective in order to ensure a competitive, sustainable and inclusive energy future, developing a series of projects and investments included in the Sustainable Energy Action Plan of the Municipality of Roman, such as:

MICRO-HYDROPOWER PLANT ON MOLDOVA RIVER - "Roman Hydro Power Plant 1"

The overall objective of the project: to achieve a new electricity generation capacity in the Roman municipality and neighboring areas, in order to capitalize on the renewable energy resources by placing a micro-hydropower plant on the Moldavian River, thus providing the electricity needed by the



MICRO-HYDROPOWER PLANT ON MOLDOVA RIVER

Roman CITY

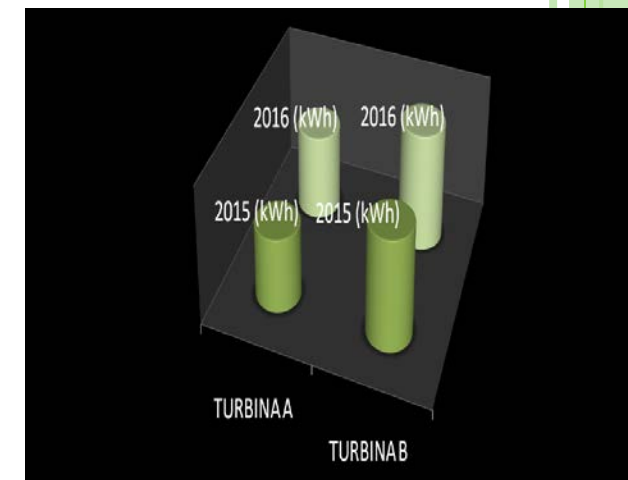


The project was funded by the European Regional Development Fund through the **SECTORAL OPERATIONAL PROGRAM: INCREASING THE ECONOMIC COMPETITIVENESS 2007-2013**.

The works for the hydropower system actually took place during the period 2012-2014, they cost about 5.83 Million €. During the first two years of effective operation (2015 and 2016), the hydroelectric plant produced about 2900 MWh of energy, covering the consumption of public lighting, schools and public institutions belonging to the Roman City. The energy produced is intended exclusively for community consumption, and is not intended for sale to third parties. For example, the value of the savings for the City Hall in the first half of 2017 is about 300,000 lei.



GREEN ENERGY PRODUCTION
TOTAL ENERGY 2015 = 1,165,387 kWh TOTAL
ENERGY 2016 = 1,672,888 kWh



MICRO-HYDROPOWER PLANT ON MOLDOVA RIVER

Roman CITY



The amounts thus saved can be used to fund projects to the community interest, so that in the end, the gain will be for both the community and the municipality.

The amount of potential energy to be produced, according to the project indicators, is 3000 MWh per year, at a power of 580 kW, but this depends very much on the hydrological conditions in the area and on the flow of the Moldova river.

In addition to the savings made, the construction of the hydroelectric power plant through low accumulation can compete to take up floods in case of upstream flow increases, preventing flooding in the area. On the other hand,



IMPLEMENTED PROJECTS

Roman CITY



NEW HEAT PRODUCTION CAPACITIES BY RENEWABLE ENERGY RESOURCES FOR THE MUNICIPAL HOSPITAL, SPORTS HALL AND

The "Green House" Program of the Ministry of Environment and the Environment Fund Administration. Value: 2,997,982 lei.

The potential of the area has been exploited by the program "New Thermal Power Capacities by Valuing Renewable Energy Resources" at the Municipal Emergency Hospital, the Sports Hall and Sports High School where two new heat sources were introduced: solar panels and heat pumps (two pumps at the Sports Hall and the Sports High School and 8 heat pumps at the Hospital), the economy over a calendar year being over 50%.



IMPLEMENTED PROJECTS

Roman CITY



NEW HEAT PRODUCTION CAPACITIES BY RENEWABLE ENERGY RESOURCES FOR THE MUNICIPAL HOSPITAL, SPORTS HALL AND

The hybrid solution - heat pumps, solar thermal panels and methane gas thermal plant- is considered the best for these public objectives both in terms of investment and efficiency.

With the new annual technical system, 1,281,723 kW of solar energy and 2,225,460.3 kW of geothermal energy are produced.

This energy is not polluting, the amount of CO₂ that will no longer be emitted into the atmosphere is 1,578.23 tons / year.



IMPLEMENTED PROJECTS

Roman CITY



PHOTOVOLTAIC PANELS FOR THE "MOLDOVA" SPORTS AND LEISURE

The newest attraction of the city of Roman is the result of an investment of almost 2.5 million euros.

Inaugurated in 2015, the Roman Municipal Pool includes 3 swimming pools: one for children, the second for beginners, and the third for Olympic, is a challenge for swimmers. Taking into account the public purpose of the pools, water is treated and recirculated.

Warm water preparation is done through 70 solar panels. They produce a daily flow of 19,600 liters of hot water at a temperature of 60 degrees Celsius.



IMPLEMENTED PROJECTS

Roman CITY



REHABILITATION, MODERNIZATION AND DEVELOPMENT OF THE "ROMAN - VODA" NATIONAL COLLEGE – Building B

One of the objectives of the project was to increase energy efficiency in the rehabilitated education unit.

The project was implemented from October 15, 2014 to June 30, 2016 through the Regional Operational Program 2007 - 2013, Priority Axis 3 - "Improving Social Infrastructure".

The total value of the project is 6,014,976.22 lei.



Total Energy Consumption 2012 (MWh / year)	Total energy consumption after rehabilitation (MWh / year)	Energy saving (MWh / year)	Percentage of energy savings	Reduction of CO2 emissionst T CO2 / year
1059,21	847,37	211,84	21 %	46.15

IMPLEMENTED PROJECTS

Roman CITY



RESTORATION, CONSOLIDATION AND SUSTAINABLE VALORIZATION OF CULTURAL HERITAGE - "GEORGE RADU MELIDON" MUNICIPAL LIBRARY

Between 2012 and 2015 took place the consolidation and modernization of the "George Radu Melidon" Municipal Library.

The building, despite the indisputable architectural process, was in an advanced stage of degradation: damaged roofs, poor insulation of the electrical and thermal installations, lack of sewerage and, last but not least, it was on seismic risk.

The project "Restoration, consolidation and sustainable valorization of the cultural heritage "George Radu Melidon" Municipal Library, had the value of 4,622,237.13 lei.



Total Energy Consumption 2012 (MWh / year)	Total energy consumption after rehabilitation (MWh / year)	Energy saving (MWh / year)	Percentage of energy savings	Reduction of CO2 emissions T CO2 / year
23,273	19,077	4,196	22%	2,942

IMPLEMENTED PROJECTS

Roman CITY



THERMAL REHABILITATION OF HOUSING BLOCKS OF FLATS

During 2011 the thermal rehabilitation of the blocks no. 25 and 32 on Roman Musat Blvd. was built in Roman by the National Program for Building Energy Efficiency of Buildings.

The funding was made by MDRT 50%, 30% of the local budget and 20% of the owners' contributions.

The thermal rehabilitation of the two blocks is an example for the rest of the Roman citizens to increase the energy consumption efficiency of multi-storey dwellings in the city.



IMPLEMENTED PROJECTS

Roman CITY



REHABILITATION ON THE "ROMAN - VODA" NATIONAL COLLEGE -

School Infrastructure Rehabilitation Program -
Ministry of Education, Research, Youth and Sport.

Project value: 3,698,146 lei.

Within this project, which gave a new garment to this representative city building, the local budget contributed nearly 350,000 lei to replace some utilities connections and build a thermal power plant.



REHABILITATION, MODERNIZATION OF NO. 5 ELEMENTARY SCHOOL ROMAN

School Infrastructure Rehabilitation Program - Ministry of
Education, Research, Youth and Sport.

Project value: 2,550,829 lei



PROJECTS SUBMITTED FOR FUNDING:

Roman CITY



RESTAURATION, CONSOLIDATION, PROTECTION AND CONSERVATION OF THE BUILDING FOR THE MUSEUM OF ROMAN PERSONALITIES

The project makes a major contribution to reducing negative impacts on the environment and maximizing benefits in terms of economic, social and environmental components and contributing to improving energy efficiency.

Total investment: 3,824,260.00 lei.

Overall duration of the project: 28 months.

Funding Source: ROP 2014-2020, Axis 5: Improvement of the urban environment and preservation, protection and sustainable valorization of the cultural heritage.

CONSERVATION, RESTAURATION AND PROTECTION OF THE CELIBIDACHE HOUSE

Objective of the project: Rehabilitation and enhancement of the heritage building in order to transform into a museum and a multifunctional cultural space.

Total investment value: 4.238.529,20 lei.

Overall duration of the project: 28 months.

Source of funding: ROP 2014-2020, Axis 5: Improving the urban environment and preserving, protecting and sustainable valorisation of cultural heritage



PROJECTS SUBMITTED FOR FUNDING:

Roman CITY



Increasing the energy efficiency in residential buildings and public buildings, for which the projects *"INCREASING THE ENERGY EFFICIENCY OF THE BUILDING OF THE UNIREA MULTICULTURAL CENTER OF THE ROMAN MUNICIPALITY"* and *"INCREASING THE ENERGY EFFICIENCY OF THE PUBLIC BUILDING IN THE ROMAN MUNICIPALITY, NO 28, SMIRDAVA STREET"* are completed



THERMAL REHABILITATION OF ROMAN MUNICIPAL BUILDING HOUSES

Project objectives

Increasing energy efficiency of residential buildings:

- thermal insulation for buildings;
- thermal rehabilitation works of the heating system;
- installation of alternative energy generation systems from renewable sources;

Funding Source: EU Funds & Programmes, State Budget, Local Budget, Owner`s Contribution

Emission reduction: 11.075 tCO₂ / year

Energy saving: 41,075 MWh / year



PROJECTS SUBMITTED FOR FUNDING:

Roman CITY



MODERNIZATION AND EXTENSION OF THE PUBLIC LIGHTING SYSTEM IN THE CITY

(installation of light sources with increase efficiency, ignition points equipped with tele-management modules offering the possibility of ignition / extinguish depending on the natural lighting level or after a predefined schedule, remote control ignition / extinguishing, monitoring consumption, operational status assessment).



Reducing the carbon emissions by increasing the less exploited energy production from renewable sources in the city of Roman will be the project "COMPLETING THE EXISTING HEATING SYSTEM WITH RENEWABLE ENERGY SOURCES - BIOMASS - AT THE MAIN PUBLIC INSTITUTIONS" by equipping them with thermal power plants with biomass operation, represented by energy spade, wood and wood pellets.





Through the projects implemented in the 2015 - 2016 period, the Roman Municipality **reduced its CO2 emissions by 363.4 tons.**

As a recognition of the activity, the Roman city obtained the first place in the country in terms of carbon emissions reduction, **the Carbon Offset Certificate** being awarded at the International Conference *"Contribution of local public authorities to reduce the carbon footprint in Romania"* organized within the framework of the Project **"Green Cities - Green Regions"** by the TERRA Mileniul III Foundation, together with its partners: the Romanian Municipalities Association and the R20 Network - Climate Action Regions in Switzerland. The implemented projects and SEAP objectives confirm the municipality's commitment to moving towards a low-carbon economy.





Thank You

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