

# PROJECT RURES

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D.T2.2.5 Report of PA 4 to test energy yard to  
increase awareness of EE and RES Zala county

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May, 2019





## 1. Introduction

<b>Project index number and acronym</b>	CE933 RURES
<b>Responsible partner (PP name and number)</b>	Zala County Government PP8
<b>Project website</b>	<a href="http://www.interreg-central.eu/RURES">http://www.interreg-central.eu/RURES</a>
<b>Pilot action number and title</b>	<ul style="list-style-type: none"> <li>▪ Activity A.I4.1 Investment for test of implementation of EEP in Lenti</li> <li>▪ Output O.I4.1 Establishing a renewable energy-yard</li> </ul>
<b>Pilot action location</b>	Address: Szombathelyi street, 3583 topographical number, Lenti - Lentszombathely, 8960, Hungary
<b>Delivery date</b>	07.05.19

## 2. General information on the pilot action

An unused area was marked out as the territory of the pilot investment, which was functioned as an elementary school in the previous times. The building has to be renewed which will be driven in synergies with other projects, alternative financing methods (ZalaGreen Mirdocredit and Crowdfunding is also an option) and the own capital of the local governments. The renewing and the installation will be implemented in parallel time.

The following tools will be purchased:

### Solar cell system average energy consumption 4400-4800 kWh/year

- power network feeding solar cell system, able to generate 4.000 kWh/year electric energy
- 15 pieces of the solar cells of 250W, perform generation of electric energy of 4.000 kWh/year,
- nominal capacity: 4 kWp
- cost 6.496,05 €

### Solar cell system average hot water consumption 50 litre/person/day

- establishing a solar collector of 10-16 m2
- complete system suitable for producing hot water of use and helping the heating
- capacity: 7 kW (10 m2 collector surface) - 11,2 kW (16 m2 collector surface)
- cost 4.489,45 €



Vertical wind generator

- vertical wind generator of 1000W,
- Size: 1,8m wide x 2,7m high (settled 6 m above the surrounding landmarks)
- Maximum rpm: 180/min, production wind speed: 3m/s
- capacity: 1 kW
- cost 12.509,5 €

Vegetable oil fed mini power plant

- small power plant operating with used vegetable oil
- capacity of 5 kW, cost 11.493,5 €

With the help of these EE/RES tools, ZCG would like to establish a zero emission exhibition yard and conference room in the building. Our plan is to connect the local hotels and apartments with the pilot action, and with the help of this connection, hotels can offer an unusual and unique venue for their conferences or the building can be visited by the guests stayed in the Lenti region. Furthermore, the pilot action will be strongly connected to the ZalaGreen Microcredit Program. Target groups: Tourists, general public (local population), SMEs, governments and schools/universities.

The main characteristics were the followings before the investment:

- The building had to be strongly renewed
- Previously, it was in the lowest EE category
- The electricity system was working, but also had to be renewed
- The gas heating had to be replaced by EE/RES solution

With the help of the investment, ZCG not just want to find a solution for these problems, but after the full cultivation of the building, it will have a totally new function as an exhibition park.

### 3. Timeframe of the pilot action

<b>Start date (dd.mm.yyyy.)</b>	04.01.19
<b>End date (dd.mm.yyyy.)</b>	03.05.19
<b>Remarks on timeframe:</b>	
<p><u>Note:</u> In connection with the timeframe, ZCG could hold the basic plan and because of the good circumstances, we could finish the investment almost one month earlier as the planned deadline (deadline of the period).</p>	



## 4. Information on preparation of the pilot action

Before the RURES project, ZCG made an energy-efficiency and climate strategy, the Espan west-Transdanubian Regional Energy Strategy. Basically, this document mentioned at first the Lentiszombathely energy yard as the "House of Renewable Energies", so all in all this paper was the ground of the idea of the pilot action.

During the RURES project we had several analysis which was related to the pilot action;

- Output fact sheet - O.14.1 Establishing a renewable energy-yard
- D.T2.1.1 Template for pre-investment report
- Feasibility studies (A.T.1.3) for Zala county (D.T.1.3.4) to implement EEP with alternative financing sources

In connection with the legal regulations, the following outcomes were seen;

- Wind generator - not needed on a free area, up to 6m and up to 1 kW.
- Vegetable oil fed mini power plant - not relevant
- Solar collector installation - on the ground of "67/2013. (III. 8.) Korm. rendelet 18. § (6) bekezdés 18. pont" not needed
- Solar cell system - need to be concluded with the local electricity company (e.g. in the Lenti area with the EON)

All in all, only at the solar cell system was needed to make an agreement with the local electricity company, but because the needed steps were detailed on the company's website, it was quite easy.

## 5. Information on implementation of the pilot action

In the field of legal requirements, in Hungary the public procurement touches only the purchases above 15 million Forints (cca. 46 296 Euro - depending on the exchange rate). On the ground of this, ZCG did not have to conduct a public procurement, only a purchase/tender with 3 valid bids. Because of ZCG in-house regulations, we had to make several decision-making working group and an evaluation working group also, but it is not the general process (only available at the local/or county governments).

At building requirements, only with the local electricity company were an agreement needed.



## 6. Cost of the pilot action

Planned cost of the pilot action as in the last approved project Application Form (in Eur)	34.988,5 Euro
Planned ERDF funding rate (in %)	85%
Planned ERDF funding (in Eur)	29.740,225 Euro
Total real cost of the pilot action (in Eur, excl. VAT)	34.988,5 Euro
Total real ERDF funding of the pilot action in Eur	29.740,225 Euro
<b>Notes (if necessary):</b>	
<p><u>Note:</u> The local government invested 2.000.000 Forints (cca. 6.172,84 Euro) for the further renovation of the building from its own contribution.</p>	



## 7. Comparability of the pilot actions (according to the results of the pilot actions)

<p><b>The impact of the pilot action (local, regional, national, global)</b></p>	<p>Local: locally was strongly needed because population living in the area were lack of the EE/RES knowledge, especially in the field of possible solutions. The basic impact will be an improvement within this field.</p> <p>Regional: we will make cooperation agreements with regional universities to use the pilot action as an educational place, so the strongest regional impact is the “EE thinking”, namely the knowledge transfer.</p> <p>National: if the pilot action will have further success (e.g. in the filed education etc.), we will represent it to the responsible part of the national government as a good practice. Impact: “Idler effect”, to make similar investments nationally.</p> <p>Global: after the education network were established, we plan to make further cbc projects in the theme. Impact: connecting point to the global EE/RES network.</p>
<p><b>Number of potential users</b></p>	<p>cca. 1.500 (from local universities, and other stakeholders)</p>
<p><b>Number of population in city/municipality</b></p>	<p>7.509 (on the ground of 2018 census)</p>
<p><b>The ratio of investment cost and potential users (€/per user)</b></p>	<p>23,34 Euro</p>
<p><b>The ratio of investment cost and city/municipality population (€/per capita)</b></p>	<p>4,66 Euro</p>
<p><b>Impact on the population - No of potential users/Total population * 100 (%)</b></p>	<p>19,98 %</p>

## 8. Transferability of the pilot action

- Public authorities/institutes used to implement this kind of investment in the framework of CBC and from some domestic programs (TOP, EFOP)
- The further development will be continued from these programs

- We are planning to make strong connections with local accommodations, universities and educational institutes and business support organizations (eg. ZMVA)

## 9. Photos of the pilot action

Before



After



## 10. Conclusion and further suggestions

This is a first step of a really important development which will be continued on several ways (universities, ZalaGreen, accommodations, new projects etc). All in all, in Hungary the part of the EE/RES energy production is only 7%, but the local population requires the EE technologies that is the aim why is this exhibition, energy park is so useful and important in the life of the area.