



# ACTIVITY 1.2 REVISION OF LOCAL ENERGY PLANS

GUIDE FOR DELIVERABLE 1.2.4.

Local energy plans revision based on  
citizens/stakeholders input

in Niemce Commune,  
Lubelskie Voivodeship, Poland

03 2020



## Introduction

The ENES-CE project aims, among others, to fill the gap in the energy planning process, which is typically characterized by low citizen involvement with negligible public consultation.

From its commencement, the Polish partner in the project, the Lubelskie Voivodeship, together with the Niemce Commune, implementing project activities, will involve citizens and other stakeholders from the Niemce Commune in the planning and revision activities that the commune and its community would like to implement for the use of energy-efficient and renewable energy and to reduce low emissions.

The survey carried out as part of the implementation of measures D.T1.2.2 and D.T1.2.1 of the project provided the Niemce Commune with data, opinions, expectations and proposals of activities related to the use of renewable energy sources in the commune expressed by citizens and other stakeholders from the commune.

The proposals were summarized and discussed in detail during workshop No. 1 „Ideation and visualization”, which took place in January 2020 in the Niemce Commune. During the workshop, the results of completed project activities were presented to citizens and other stakeholders: an analysis of the need to create a civic energy group in the commune, the current state of implementation of Low-Carbon Economy Plan (LCEP) and proposals for renewable energy activities. These proposals were taken into account when planning the Niemce Commune LCEP update. The energy advisor explained the possibilities of implementing the proposed actions and in an open discussion discussed with the residents and other stakeholders the possibilities of implementing individual actions, also in terms of the current situation on the renewable energy market.

During the workshop, the participants were informed and it was established that the commune, for the procedural and documentation reasons, is required to prepare an updated LCEP that would be adopted by the Commune Council in February 2020. It introduced the minimum necessary updates while retaining all investment and communication activities, as it was in the 2016 LCEP, and included technical calculations until 2025. On the other hand, the non-investment activities will generally include survey proposals, which were confirmed during the first workshop meeting of the ENES-CE project.

It was agreed that the activities would be considered as future investments and require analysis in terms of technical difficulties of conversion as well as with respect to their implementation/financing. The results will be presented during the 2nd workshop, upon receiving the Excel spreadsheet developed by the partner responsible for the thematic package in the project, common to all project partners.

In addition, during workshop No. 1 „Ideation and visualization” and after presenting the arguments from the Commune representatives, it was established that the Commune was at that point unable to update its LCEP so that it would meet the SECAP conditions. It explained that the document had to present a vision for 2050 activities and assume the reduction of CO<sub>2</sub> emissions by at least 40% in 2030. SECAP also provides for an underlying inventory of emissions and an assessment of climate risk and vulnerability. The Commune will gradually strive to implement these intentions, however, in order to do so, the Commune requires baseline data and it will be necessary to employ an external expert.



## Aim of the roadmap:

### Revision of LCEP for the Niemce Commune - changes, objectives and further activities under the ENES-CE project.

As presented, discussed and established during workshop No. 1 revised in 2020. Low-Carbon Economy Plan for the Niemce Commune for 2020-2025, entitled "Low-Carbon Economy Plan for the Commune of Niemce", was adopted on 4 February 2020 by Resolution No. XIV/138/2020 of the Council of Niemce.

The entire document in Polish is available at:

<https://ugniemce.bip.lubelskie.pl/index.php?id=67&p1=szczegoly&p2=1482396>

[https://ugniemce.bip.lubelskie.pl/upload/pliki//Niskoemisyjna.Kopia\\_2.pdf](https://ugniemce.bip.lubelskie.pl/upload/pliki//Niskoemisyjna.Kopia_2.pdf)

At that stage of the project, the Niemce Commune, by the revised LCEP, introduced the minimum necessary updates: retained all investment and communication activities as it was in the 2016 LCEP and included technical calculations until 2025. On the other hand, the non-investment activities were expanded to include the survey proposals that were confirmed during the first workshop meeting of the ENES-CE project.

**The Lubelskie Voivodeship together with the Niemce Commune assumed that non-investment activities would be considered as future investments and require analysis in terms of technical difficulties of conversion, as well as with respect to their implementation/financing. The results will be presented during the 2nd workshop upon receiving the Excel spreadsheet developed by the partner responsible for the thematic package in the project, common to all project partners and hiring an external expert, as envisaged under the ENES-CE project. At the same time, the expert will be also able to propose the continuation of investment activities listed in the updated LCEP or other based on expert knowledge and experience.**

**Non-investment activities are supporting activities that do not directly lead to a reduction of pollution emissions, however, they have a major impact on building the air quality management system in the zone and also support the processes of implementation of investment activities, and after their clarification, detailing in terms of investment, they can contribute to investment planning using energy efficiency and renewable energy, as well as reducing CO<sub>2</sub> and other pollutants. These activities include:**

- *Environmental education of the community through information and promotion campaigns, air quality notification systems, raising awareness of the possibilities of reducing low emissions etc;*
- *Promotion of pro-ecological activities in the field of awareness of artificial light management and active lighting control systems;*
- *Involvement of citizens and other stakeholders from the commune in the energy planning process, energy-saving and joint bottom-up selection of investment activities using renewable energy by creating a citizen energy group in the commune;*
- *The development of the consultation system in the commune in consultation with the energy engineer to advise on possible renewable energy investments;*



- *Stakeholder involvement in the process of developing and updating programming and strategic documents related to energy efficiency, climate protection and renewable energy sources consistent with national and European guidelines (e.g. SECAP), by providing information necessary for the development of the baseline inventory;*
- *Use of spatial development plans when making renewable energy decisions;*
- *Conducting residents' control regarding the ways of using fuels and compliance with the waste burning ban;*
- *Combustion control of plant residues;*
- *Taking into account environmental and climate protection issues in public procurement by appropriately preparing public procurement specifications that will take into account the need to protect the air from pollution.*

In addition, the Niemce Community undertook to include in the LCEP Evaluation and Monitoring section of the updated LCEP document the results from the Status Quo Analysis carried out as part of the ENES-CE project and to delete the information stating that no investment in commercial electricity, heat and cooling production was being planned, taking into account the possibility of establishing the citizen energy group and its future activities.

Other changes that were introduced in LCEP for the Niemce Commune, adopted in 2020, are as follows:

Changes in conversions related to the goals set in LCEP at the same time the goals remained unchanged:

- reduction of CO<sub>2</sub> emissions compared to the base year 2010 by 4.36%;
- reduction of final energy consumption by 7.31%;
- reduction of electricity consumption from coal-fired power plants by 6.01%;
- increase in the share of renewable energy in total energy (electricity, heat and transport fuels) to the level of 1.41%;
- increase in the share of renewable energy in the electricity to 5.97%.

The update provides that :

By 2025, compared to the base year 2010, the planned CO<sub>2</sub> emissions reduction amounts to 4,307.98 Mg, which is 4.36% of CO<sub>2</sub> emissions in the base year 2010:

Emission of CO <sub>2</sub> emissions in the base year 2010 (Mg)	reduction of CO <sub>2</sub> emissions in 2025 (Mg)	Change	%
98699,8	4307,98		4,36%
final energy consumption in 2010 (kWh)	reduction of final energy consumption (kWh)		%
220 168 290	16103122,88		7,31%
electricity consumption from coal-fired power plants in the base year 2010 (kWh/year)	reduction of electricity consumption (kWh/year)		%
43430178	2609681		6,01%
final energy consumption in the year 2010 (kWh/year)	amount of energy produced from RES 2025 (kWh/year)		%
220 168 290	3 103 331,00		1,41%



**Changes were made to the table of planned investment tasks until 2025 - in CO<sub>2</sub> reduction calculations and the duration of some tasks has been changed:**

**By 2025, project activities will be implemented:**

- “Modernisation and construction of street lighting with the use of renewable energy sources”. Estimated CO<sub>2</sub> reduction: 29,42 Mg
- “Construction of a Selective Municipal Waste Collection Point (PSZOK) in the Niemce Commune in Zalesie”. Estimated CO<sub>2</sub> reduction: 13,02 Mg

**By 2022, project activities will be implemented:**

- “Mobile LOF [Partnership project under the ITI instrument in the Niemce Commune, such as an integrated transfer node]. Estimated CO<sub>2</sub> reduction: 2 544,10 Mg
- “Development of the bicycle path infrastructure in the Commune (including areas attractive to tourists, e.g. along the Ciemięga River)”. Estimated CO<sub>2</sub> reduction: 594,24 Mg

**By 2020, project activities will be implemented and completed:**

- “Thermomodernisation of public buildings located in the area of the Niemce Commune”. Estimated CO<sub>2</sub> reduction: 121,53 Mg
- “Installation of solar farms and solar collectors in households and public buildings:”. Estimated CO<sub>2</sub> reduction: 1005,68 Mg

**The current priority in the Niemce Commune is the implementation of the 3 investment activities listed in ACTIONS FOR INVOLVING PARTNERS.**

## **SECTORS AND STAKEHOLDER GROUPS**

Established from previous activities implemented under the ENES-CE project and interviews conducted directly by employees of the commune with the institutions below that expressed interest in the idea of the project and its activities:

- the Municipal Services;
- the Association of Local Initiatives of the *Gmina* Niemce;
- the Folk Artists of the Lublin Region Primary School;
- the Alfa Housing Co-operative;
- the Agricultural and Trade Co-operative “Samopomoc Chłopska” Niemce;
- the “Impala” Company;
- the Greenhouse Holding “LEONÓW”.

The sectors in the Niemce Commune that are important for joint energy planning and implementation of the project idea are: municipal, education, housing, commercial, industrial and agricultural sectors as well as non-governmental organizations. The most important element in the energy planning are the residents themselves, for whom the Commune, as a local government carries out public tasks.

According to residents and other stakeholders who responded to the questionnaires, the process of LCEP verification, energy planning and the ENES-CE project should involve: residents, experts, entrepreneurs, municipal authorities, local energy and renewable energy entities, industry specialists from the Marshal's Office, substantive employees, foreign entities with experience, experts with non-academic experience and practitioners. In addition, the following specific entities were listed:



- Przedsiębiorstwo Produkcji Materiałów Budowlanych Niemce Spółka Akcyjna (local building materials producer);
- Firma Gospodarstwo Szklarniowe "LEONÓW" Limited Liability Company (local greenhouse/fruit and vegetable producer);
- POL-SKONE Sp. z o.o. (producer of wooden doors and windows);
- Marta z Budnych Łosiowa Primary School in Niemce;
- Co-operative of Agricultural Circles in Elizówka;
- Zakład Gospodarki Komunalnej in Niemce (Municipal Services);
- Irena Kosmowska Social Initiative Association in the Krasienin Area;
- Polskie Gazownictwo Naftowe i Górnictwo, Polska Grupa Energetyczna (gas and electricity providers);
- Local Social Services;
- The local sports club;
- Farmers;
- Associations.

### **AIMS AND GOALS OF THE COMMUNE**

The aim of the Commune and LCEP is to improve air quality in the commune by reducing pollutant emissions, reducing final energy consumption and increasing the share of energy from renewable sources.

The Niemce Commune intends to include the abovementioned sectors, institutes, entrepreneurs and residents in energy planning, energy saving and the creation of a civic energy group (in the form of an energy cluster/energy cooperative), which has also been set out in its non-investment activities in the updated document LCEP for the Niemce Commune' prepared in 2020, after Workshop no. 1:

“Involvement of citizens and other stakeholders from the commune in the energy planning process, energy-saving and joint bottom-up selection of investment activities using renewable energy by creating a citizen energy group in the commune”;

“Stakeholder involvement in the process of developing and updating programming and strategic documents related to energy efficiency, climate protection and renewable energy sources consistent with national and European guidelines (e.g. SECAP), by providing information necessary for the development of the baseline inventory”;

The Niemce Commune also wants to meet the need for educational activities in the commune, through the implementation of the activities included in the updated LCEP for the commune of Niemce in 2020:

“Environmental education of the community, through information and promotion campaigns, air quality notification systems, raising awareness of the possibilities of reducing low emissions etc.”;

“Promotion of pro-ecological activities in the field of awareness of artificial light management and active lighting control systems”;



“Use of spatial development plans when making renewable energy decisions”.

By engaging in the joint implementation of project activities of an external expert under the project Lubelskie Voivodeship together with the Niemce Commune will be able to clarify the above-mentioned activities and investment activities with the help of an expert. These investment activities that will be presented to the above-mentioned stakeholders for discussion during Workshops 2 and 3 and will also include residents and other stakeholders in the development of the base emission inventory - "BEI" necessary for the implementation of the planned future activities in the ENES-CE project.

### **TOOLS AND SOURCES USED BY THE COMMUNE TO SUPPORT PARTNERS**

- data and information, maps (e.g.: online databases), such as the spatial development service map under the link <https://www.niemce.pl/gmina/mapy-gminy/> on the website of the Niemce Commune containing information on areas covered by a protected area due to natural value;
- green procurement (e.g. empowering local suppliers) in the Niemce Commune tender proceedings, specifically in the project documentation regarding planned investments, provides for the installation of equipment and material installations whose environmental impact during operation is smaller compared to devices and materials of identical purpose that would have been ordered otherwise (e.g. proceedings for the extension of lighting using LED instead of sodium lamps, etc.).

The Niemce Commune has not taken actions to promote:

- PR (e.g.: promotion of climate-friendly/green enterprises and NGOs in the local media and other commune-owned platforms);
- networking possibilities (e.g.: conferences and events, building local supply chains);
- knowledge transfer (e.g.: online courses, written know-hows, thematic workshops);
- facility (e.g.: free office and community spaces, zones for community gardens). The Niemce Commune does not own such room space;
- regulations (e.g.: green taxation, green incentives, low-speed-zones, building regulations). The Niemce Commune has no competence in regulating these provisions;
- money (e.g. supporting schemes, “green grants”, interest-rate subsidies). The Niemce Commune has no such regulatory competence.

### **ACTIONS FOR INVOLVING PARTNERS**

The current priority in the Niemce Commune is the implementation of the following 3 investment activities:



**“Modernization and construction of street lighting with the use of renewable energy sources”.  
Estimated CO<sub>2</sub> reduction: 29,42 Mg.**

1. The specific reduction measures assumed in 2020 LCEP for this project and activities are:
  - anticipated final energy reduction 324 241,00 (kWh)
  - expected electricity saving 324 241,00 (kWh/year)
  - value of electricity production from renewable energy 342 241,00 (kWh/year) estimated CO<sub>2</sub> reduction in the amount of 29,42 CO<sub>2</sub> (Mg)
2. Project cost-effectiveness: PLN 1,000,000.00, own funds, RPO WL 2014-2020 action 5.6
3. Timeframe and assigned duties and the supporting act of the commune:

The project is scheduled for 2017-2025, in 2019 the Niemce Commune submitted an application for co-financing in the next call for proposals, co-financed under the Regional Operational Program of the Lublin Voivodeship. Currently, the application is subject to formal assessment.

The Commune of Niemce is responsible for the implementation of the project as no other partners are specified in the project.
4. Timeframe and assigned responsibilities of the partner:

The envisaged implementation of the project for 2020-2022. (in submitted an application).

**“Installation of solar farms and solar collectors in households and public buildings”. Estimated CO<sub>2</sub> reduction: 1005,68 Mg.**

1. The specific reduction measures assumed in the 2020 LCEP for this project and activities are:
  - anticipated reduction of final energy 2 744 690,00 (kWh)
  - expected electricity saving 2 237 190, 00 (kWh/year)
  - expected thermal energy saving 507 500,00 (kWh/year)
  - value of electricity production from renewable energy 2 237 190,00 (kWh/year)
  - renewable energy production value from RES 507 500, 00 (kWh/year)
  - Additional capacity to generate electricity from renewable sources [kWe] 1,990.00
  - Additional capacity to generate heat from renewable sources [kWt] 1,510.00
  - estimated CO<sub>2</sub> reduction of 1,055.68 (Mg)
2. Project cost-effectiveness: PLN 12,000,000.00, own funds, RPO WL 2014-2020 measure 5.2
3. Timeframe and assigned duties and the supporting act of the commune:

The project is scheduled for 2017-2020

The Niemce Commune submitted an application for co-financing in the next call for proposals, co-financed under the Regional Operational Program of the Lubelskie Voivodeship assigned duties and commune supporting act:

The Niemce Commune is currently awaiting substantive evaluation of the submitted application for co-financing.
4. Timeframe and assigned obligations of the partner:

Project implementation scheduled for 2020.



**“Development of the bicycle path infrastructure in the Gmina (including areas attractive to tourists, e.g. along the Ciemięga River)”. Estimated CO2 reduction: 594,24 Mg**

1. The specific reduction measures assumed in PGN from 2020 for this project and activities are:
  - anticipated final energy reduction 2 386 489,67 (kWh);
  - expected saving of transport fuels 2 386 489,67 (kWh/year);
  - estimated CO2 reduction of 594,24 (Mg).
2. Project cost-effectiveness: PLN 3 000 000,00, own funds, RPO WL 2014-2020 action 5.6
3. Timeframe and assigned duties and the supporting act of the commune:  
The project is scheduled for 2017-2022,  
The Niemce Commune is a beneficiary of projects related to Integrated Territorial Investments co-financed under the Regional Operational Program of the Lubelskie Voivodship.  
assigned duties and the supporting act of the commune:  
The Niemce Commune as a partner is responsible for the implementation of the project in the commune area under Contract No. RPLU.05.06.00-06-0001/17.
4. Timeframe and assigned responsibilities of the partner  
Implementation of the project is scheduled for 2022.

**Other proposals for investment activities put forward during workshop No. 1, in addition to non-investment activities that will be considered with the external expert and the Commune and discussed with participants of workshop No. 2, include:**

1. **Replacement of boilers for new inhabitants of the commune at risk of energy poverty as part of participation in the national "Stop Smog" programme in the future, for which, however, it would be necessary to carry out basic inventories.**
2. **Investment in a source of electricity at the shooting range along with energy storage.**
3. **Installation of solar farms and solar collectors in households and public buildings.**
4. **Construction of a biogas plant** expressed in the survey by one of the entrepreneurs from the commune. In the case of acquiring an investor, it is currently not possible to obtain financing. In the future, more repayable mechanisms (including subsidized loans) will have to be reckoned with than subsidies for such investments.
5. **Construction of a solar farm**, whose construction can also be considered in the Commune if an investor is found.
6. The use of **high-efficiency cogeneration** and the possibility of obtaining CO2 for photosynthesis, for example on a greenhouse farm in the commune.

## **TIMELINE**

As in item 3: "Timeframe and assigned duties and the supporting act of the commune " in the projects above.