

TAKING  
**COOPERATION**  
FORWARD



**Block 2: *Management of Energy Plans***



**Module 2.5. Monitoring and evaluation, indicators**



Katerina Maneva Mitrovikj, Pavel Ruzicka, ENVIROS, Czech Republic

The module presents the efficiency  
and the impact of the overall performance  
of the Energy Plans



- **Evaluation of Energy Plans**
- **Ex-ante evaluation**
- **Ex-post evaluation**
- **Evaluation of Energy Plans in the project partners countries**



The evaluation of energy plans is carried out in order to evaluate their efficiency and impact. It can be implemented in a form of:

- ex-ante evaluation
- ex-post evaluation



Ex-ante evaluation is a process that is carried out in a preparatory phase of an Energy Plan development. The goal of this evaluation is to assess the Energy Plan efficiency and expected impacts, and to improve its quality. It focuses on assessment of intervention logic, strategic objectives, link of planned activities to other existing mechanisms, proposed indicators and system of evaluation.



Ex-post evaluation is a process that is carried out after an Energy Plan implementation (in the final implementation stage). The goal of this evaluation is to assess overall performance of the Energy Plan, achieved results and impacts (compared to what was planned/expected), efficiency of used resources, sustainability of the results, and to provide conclusions and recommendations for future plans.



# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES

The following slides provide a short overview how evaluation of energy plans is carried out in the FIRECE project partner countries and regions.

A more detailed information about evaluation and monitoring is provided in the Block 4 Monitoring the Impact of Public Investment.



# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES

Country	Ex-ante evaluation	Ex-post evaluation
Italy (Veneto)		1
Italy (Emilia-Romagna)	1	1
Germany		1
Austria		1
Poland (Lower Silesia)	1	1
Poland (Lubelskie)	1	1
Hungary	1	
Czech Republic	1	1
Croatia	1	1

*Note: Ex-post evaluation includes also evaluation that takes place during the implementation of an energy plan (i.e. interim evaluation).*

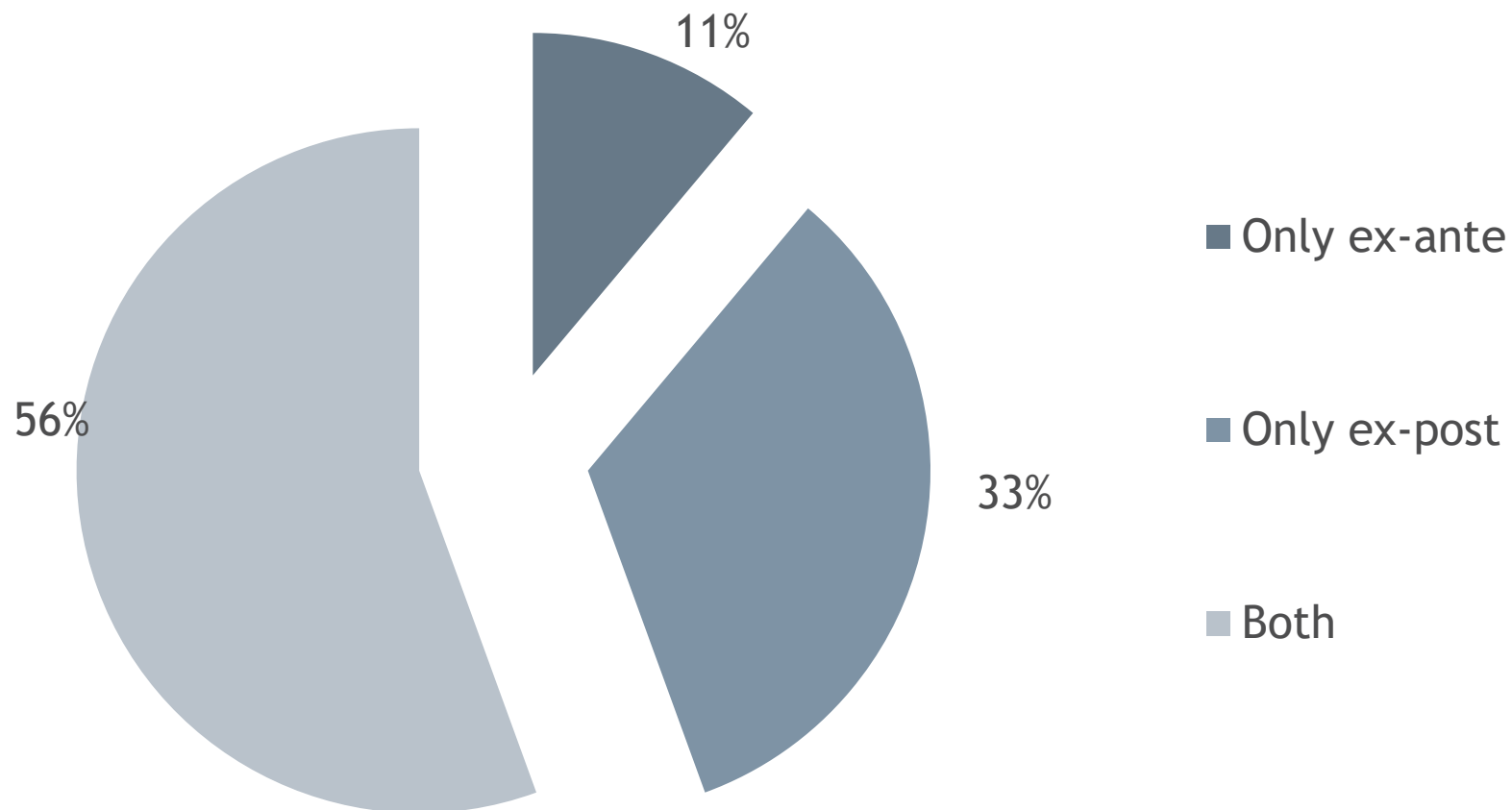
In some partner countries, evaluation is carried out based on a standardized methodology or procedure (Italy, Austria), or a pre-defined set of indicators (Poland).

In majority of regions, concrete procedures for evaluation are not set in advance.





# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES



# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES (EXAMPLE)

## Partner: Technology Promotion Burgenland Ltd. (TOB), Austria



- *How is the implementation of Energy Plans monitored and evaluated? What is the process? How often the evaluation takes place?*

Ex-ante evaluation	
Ex-post evaluation	• Ex post evaluation is made, but not regularly, based at statistic dates

- *Who carries out the evaluation - the Energy Plan operator, or an external organization?*

A team of energy experts is invited by the responsible government, but not at regular basis.

- *What methodologies / guidelines / instruments are used to carry out the evaluation?*

Based at statistic data results are discussed and interpreted.



# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES (EXAMPLE)

- *What indicators and evaluation criteria are used?*



Statistic data for energy consumption and production of energy separated in in different target groups according the classification of Statistik Austria.

- *What other indicators and criteria would you recommend?*

Energy saving data (kWh), Greenhouse gas savings (CO2), number of projects, sustainability of implemented measures.



# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES (EXAMPLE)



Partner: Chamber of Commerce of Venice Rovigo, CCIAA Delta-Lagunare, Italy

- How is the implementation of Energy Plans monitored and evaluated? What is the process? How often the evaluation takes place?

Ex-ante evaluation	<ul style="list-style-type: none"> <li>As far as we know, no ex-ante evaluation process has been foreseen</li> </ul>
Ex-post evaluation	<ul style="list-style-type: none"> <li>Monitoring process of the Regional Plan (see part 10 of the PERFER)</li> </ul>
Other (please describe)	<ul style="list-style-type: none"> <li>Intervention of the Minister of Economic Development (see art. 6 of D.M. 15/03/2012)</li> </ul>

- Who carries out the evaluation - the Energy Plan operator, or an external organization?

The Energy Sector of Veneto Region is the responsible for the Plan’s monitoring system. It relies on the cooperation of ARPAV (for the provision of specific indicators) and other regional institutions.





# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES (EXAMPLE)

Among the latter, it is possible to include the Sections on the statistic regional system; industry and craftsmanship; commerce; environment; geology and geological resources; land's defense; residential constructions; city planning and landscape; economic development; research and innovation; forests and parks; communication and information; territorial and strategic planning; etc. (see part 10 of the PERFER)

Every time a Region fails to comply with regional objectives, it is invited by the Minister of Economic Development to present observations and adopt corrective measures. A commissioner ad acta may be nominated if the region continues to fail to rectify its conduct. (see art. 6 of D.M. 15/03/2012)

- *What methodologies / guidelines / instruments are used to carry out the evaluation?*

The monitoring of the Plan is carried out on an annual basis. It allows to verify the effectiveness and efficiency of the Plan. The results are uploaded on Veneto Region's website. Sensitive environmental indicators useful to determine the variations within the energetic regional context are periodically updated by ARPAV (Veneto Region's Agency for Environmental Prevention and Protection). ARPAV carries out its collection of data activities through the network of technical facilities present on the territory of the Region. The results are then sent to Veneto Region's offices where they are interpreted with the cooperation of ARPAV.



# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES (EXAMPLE)



- *What indicators and evaluation criteria are used?*

The indicators and update deadlines are analytically listed in the PERFER and more extensively presented in the ARPAV website. Their analysis is completed with the parallel study of indicators of the context's variation which allow to determine the positive and negative effects of the Plan's implementation on the environment.

Along with these elements, the Region also relies on:

- The evolution of the regional economic development;
- The availability of economic resources supporting planned regional activities;
- The results of the monitoring of the indicators dealing with the “burden sharing” regional objective;
- Reorganization of national incentives and benefits.



# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES (EXAMPLE)



## Partner: Emilia - Romagna Region (RER), Italy



- How is the implementation of Energy Plans monitored and evaluated? What is the process? How often the evaluation takes place?

Ex-ante evaluation	• VAS (Strategic Environmental Assessment) - ARPAAE (Regional Agency for Environment and Energy)
Ex-post evaluation	• ARPAAE (Regional Agency for Environment and Energy) - ERVET (Regional Agency for Economic Development) - Regional Energy Observatory

- Who carries out the evaluation - the Energy Plan operator, or an external organization?

External organization (ARPAAE - Regional Agency for Environment and Energy)

- What methodologies / guidelines / instruments are used to carry out the evaluation?

The methodology are defined by the Regional Energy Observatory on the basis of shared indicators.



# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES (EXAMPLE)



- *What indicators and evaluation criteria are used?*

Performance indicators of the energy-environment system (gaps from local, regional, national and European targets in terms of energy efficiency, renewable energy sources, and reduction of greenhouse gas emissions).

- *What other indicators and criteria would you recommend?*

An indicator of the performance of the public instrument such as the cost per TOE saved.





# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES (EXAMPLE)

**Partner: Regional Development Agency ARLEG SA in Legnica (RDA ARLEG), Poland**



- *How is the implementation of Energy Plans monitored and evaluated? What is the process? How often the evaluation takes place?*

## Ex-ante evaluation

In order to prepare energy plans by municipalities (e.g. low-carbon emission plans), planning process is based on the output of the following data: the current status and development plans of the municipality, resulting from the spatial development plans or studies.

In accordance with the provisions of the Energy Law, the draft assumptions of energy plans prepared by municipality should specify the assessment of the current and expected changes in energy demand, projects rationalising the use of energy, the possibilities of using the existing surpluses and local resources of fuels and energy, including renewable energy sources and electricity and useful heat produced in cogeneration, and the management of waste heat from industrial installations, as well as the scope of cooperation with other communes. The draft assumptions are subject to an opinion of the voivodeship self-government in the scope of coordination of cooperation with other municipalities and compliance with the National Energy Policy.



# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES (EXAMPLE)

## Ex-post evaluation

Monitoring on the basis of the adopted set of indicators.

- According to the Energy Law Act of 10 April 1997, municipalities are obliged to develop energy plan for a period of 15 years and update it every three years.
- Monitoring of implementation of objectives of the Development Strategy of Lower Silesian Voivodship 2020 will be carried out based on set of indicators. It shows consistency with provisions of the National Strategy of Regional Development and is based on the system of monitoring of the National Development Strategy 2020. The reference for the evaluation of occurring changes will not only be the starting point determined with statistical data, but also values assumed a priori as the target point.



- *Who carries out the evaluation - the Energy Plan operator, or an external organization?*

EP Operator or external organization.

- *What methodologies / guidelines / instruments are used to carry out the evaluation?*

In the case of The Development Strategy of the Lower Silesian Voivodship 2020, these are: reports, partial reports, selection of appropriate indicators, measurable and available in official statistics, indicators of outputs, results and impacts.



# EVALUATION OF ENERGY PLANS IN THE PROJECT PARTNERS COUNTRIES (EXAMPLE)

Methods of conducting monitoring activities:

- analysis of documents,
- quantitative and qualitative analysis based mainly on data from the Central Statistical Office (GUS), EUROSTAT;
- benchmarking: mainly on the basis of CSO, EUROSTAT databases, with the possibility of using OECD, UNDP and World Bank data, as well as own research of territorial self-government units and scientific centers, etc.

▪ *What indicators and evaluation criteria are used?*

For the Development Strategy of the Lower Silesian Voivodship 2020 on environmental protection, resource efficiency and climate change adaptation and security:

- Share of electricity production from renewable energy sources in total electricity production (%),
- Electricity consumption in cities per capita (kWh),
- Air pollutant emissions SO<sub>2</sub> per capita (kg),
- NO<sub>x</sub> air pollutant emissions per inhabitant (kg)



# INFORMATION ON NATIONAL LEVEL IN PROJECT'S PARTNER REGIONS



## AUSTRIA

Source of information	Link / PDF / Video document
KPC - Kummunkredit Public Consulting. Evaluation Reports (de)	<a href="https://www.publicconsulting.at/?langswit&lt;br/&gt;ch=1">https://www.publicconsulting.at/?langswit ch=1</a>



# INFORMATION ON NATIONAL LEVEL IN PROJECT'S PARTNER REGIONS



## CROATIA

Source of information	Link / PDF / Video document
Rulebook on Methodology for Monitoring, Measurement and Verification of Energy Saving + Annex I (Official Gazette 71/2015) (cr)	<a href="https://narodne-novine.nn.hr/clanci/sluzbeni/2015_06_71_1368.html">https://narodne-novine.nn.hr/clanci/sluzbeni/2015_06_71_1368.html</a>



# INFORMATION ON NATIONAL LEVEL IN PROJECT'S PARTNER REGIONS



## CZECH REPUBLIC

Source of information	Link / PDF / Video document
Update of the National Energy Efficiency Action Plan of the Czech Republic, 2017 [pdf]	<a href="https://www.mpo.cz/assets/en/energy/energy-efficiency/strategic-documents/2017/11/NEEAP-CZ-2017_en.pdf">https://www.mpo.cz/assets/en/energy/energy-efficiency/strategic-documents/2017/11/NEEAP-CZ-2017_en.pdf</a>



# INFORMATION ON NATIONAL LEVEL IN PROJECT'S PARTNER REGIONS



## GERMANY

Source of information	Link / PDF / Video document
Monitoring project for sustainable municipalities (de)	<a href="https://difu.de/publikationen/difu-berichte-12017/monitor-nachhaltige-kommune-baukasten-fuer-kommunen.html">https://difu.de/publikationen/difu-berichte-12017/monitor-nachhaltige-kommune-baukasten-fuer-kommunen.html</a>
Leipzig awarded European Energy Award (de)	<a href="https://www.european-energy-award.de/kommunen/liste-der-eea-kommunen/details/eea/leipzig">https://www.european-energy-award.de/kommunen/liste-der-eea-kommunen/details/eea/leipzig</a>



# INFORMATION ON NATIONAL LEVEL IN PROJECT'S PARTNER REGIONS



## HUNGARY

Source of information	Link / PDF / Video document
Hungary's National Energy Efficiency Action Plan until 2020 [pdf] (pages: 27, 31, 34, 66, 82, 97, 109, 158)	<a href="https://ec.europa.eu/energy/sites/ener/files/documents/hungaryActionPlan2014_en.pdf">https://ec.europa.eu/energy/sites/ener/files/documents/hungaryActionPlan2014_en.pdf</a>





# INFORMATION ON NATIONAL LEVEL IN PROJECT'S PARTNER REGIONS



## ITALY

### Veneto (LP)

Source of information	Link / PDF / Video document
Piano Energetico Regionale - Fonti Rinnovabili - Risparmio Energetico - Efficienza Energetica (PERFER) evaluation report (it)	<a href="http://www.regione.veneto.it/web/energia/adozione-documento-di-piano-rapporto-ambientale">http://www.regione.veneto.it/web/energia/adozione-documento-di-piano-rapporto-ambientale</a>

### Emilia Romagna

Source of information	Link / PDF / Video document
ARPAE - Regional Agency for Prevention, Environment and Energy in Emilia Romagna	<a href="https://www.climate-kic.org/partners/arpae/">https://www.climate-kic.org/partners/arpae/</a>
ERVET - Regional Agency for Economic Development (it)	<a href="http://www.ervet.it/">http://www.ervet.it/</a>
Annual energy efficiency report, 2018 (it) [pdf]	<a href="http://www.fficienzaenergetica.enea.it/allegati/RAEE_2018_-_COMPLETO.pdf">http://www.fficienzaenergetica.enea.it/allegati/RAEE_2018_-_COMPLETO.pdf</a>



# INFORMATION ON NATIONAL LEVEL IN PROJECT'S PARTNER REGIONS



## POLAND

### Legnica

Source of information	Link / PDF / Video document
Report on the implementation of the Development Strategy of the Lower Silesian Voivodeship 2020	<a href="https://irt.wroc.pl/pliki/raport_z_realizacji_srwd_2020/index.html">https://irt.wroc.pl/pliki/raport_z_realizacji_srwd_2020/index.html</a>
Strategia Rozwoju Województwa Dolnośląskiego 2020 (pl) [pdf]	<a href="http://www.umwd.dolnyslask.pl/fileadmin/user_upload/Rozwoj_regionalny/SRWD/SRWD_2020-final.pdf">http://www.umwd.dolnyslask.pl/fileadmin/user_upload/Rozwoj_regionalny/SRWD/SRWD_2020-final.pdf</a>

### Lubelskie

Source of information	Link / PDF / Video document
/	/



# Thank you for your attention

