MENERGERS

RO

# Assessment of Romania's energy efficiency experience

## Status Quo

Leading the way
to climate neutrality

Brasov (RO), May 2023

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# 1. Context

By 2050, European cities should be carbon-neutral, sustainable and ensure a high quality of life. In order to achieve this goal, society as a whole must become more responsible and mutual accountability must be shared among all actors. To successfully achieve the energy transition, we need mechanisms to address the environmental, economic and social aspects of the process, analysing the policies of different sectors in partnership with civil society, taking into account how citizens design their future.

As the energy transition involves radical changes in the structure, culture and practices of energy production, consumption, storage and distribution, local governments cannot carry out this journey on their own. On the contrary, the energy transition requires the effective involvement of key structures and beneficiaries alongside the administration. Ambitious goals and political commitments must therefore be linked to the commitment of civil society to decision-making and their implementation. This interdependence reveals the challenge behind Municipal Energy Management.

**The project MENERGERS - Energy Managers' Services in Municipalities is a EUKI - funded initiative to support local administrations to efficiently coordinate the energy transition toward low-emissions cities. The project's main objective is to enable and empower municipalities in Bulgaria and Romania to ensure the most useful and efficient context for the role of Municipal Energy Managers and thus contribute to the national Energy and Climate targets**.

Coordinated by the National Trust Ecofund, the Bulgarian Fund managing assets from the state budget, such as the Debt-for-Environment and the Debt-for-Nature swaps, benefitting from the experience offered by the German Independent Institute For Environmental Issues, a scientific and officially recognized non-governmental organization acting in Energy Efficiency & Energy Transition, Climate Protection & Transformative Education, Environmental Law & Participation, Nature Protection & Environmental Communication, the consortium is also formed of Sofia Energy Agency, a Bulgarian non-governmental non-profit organization established by Sofia Municipality together with the European Commission for local energy management, and of Energy Cities Romania (OER), a network formed of local authorities in energy transition, fighting to reach climate neutrality.

НАЦИОНАЛЕН ДОВЕРИТЕЛЕН ЕКОФОНД NATIONAL TRUST ECO FUND SOFENA oer The Romanian Network of Energy Cities UfU Independent Institute for Environmental Issues

*This project is part of the European Climate Initiative (EUKI) of the German Federal Ministry for Economic Affairs and Climate Action (BMWK). It is the overarching goal of the EUKI to foster climate cooperation within the European Union (EU) to mitigate greenhouse gas emissions. More information can be found at www.euki.de/en.*

# 2. Short context of the current energy efficiency in Romania

## 2.1. The Framework of the National Energy and Climate Plan 2021-2030

Improving energy efficiency is a key priority of the national energy policy, due to the increased importance of achieving security of energy supply, sustainable development and competitiveness, saving primary energy resources and reducing greenhouse gas emissions.
Following the Commission's recommendations, the updated contribution of Romania to the achievement of the EU objectives by 2030 is outlined in the table below:
**Overview of the main objectives of the 2021-2030 Integrated National Energy and Climate Plan (INECP) by 2030[1]**

| | |
|---|---|
| **ETS emissions (% compared to 2005)** | **-43.9 %[2]** |
| **Non-ETS emissions (% compared to 2005)** | -2 % |
| **The overall share of renewable energy in gross final energy consumption** | 30.7 % |
| **RES-E share** | 49.4 % |
| **RES-T share** | 14.2 % |
| **RES-H&C share** | 33.0 % |
| **Energy efficiency (% compared to the PRIMES 2007 projection for 2030)** | |
| **Primary energy consumption** | -45.1 % |
| **Final Energy Consumption** | -40.4 % |
| **Primary energy consumption (Mtoe)** | 32.3 |
| **Final energy consumption (Mtoe)** | 25.7 |

[1] https://energy.ec.europa.eu/system/files/2020-06/ro_final_necp_main_en_0.pdf
[2] The emission values correspond to those included in the draft INECP submitted to the Commission on 31 December 2018; however, it is estimated that the final value for 2030 is likely to decrease, among others, as a result of the reduction in the final energy consumption and the decrease in production of electricity from coal

By the relevant target commitments, Romania must contribute to the achievement of the EU energy efficiency target (maximum consumption of primary energy of 1 273 Mtoe and final energy of 956 Mtoe)[3]. The global target is thus at least 32.5 % in 2030 at the EU level, as indicated in Article 1(1) and in Article 3(5) of Directive 2012/27/EU, and it may be revised upwards in 2023.

Planned policies, measures and programmes to achieve the indicative national energy efficiency contributions for 2030 (as well as other objectives referred to in point 2.2 in the Energy Union Regulation, including planned measures and instruments- also of a financial nature- to promote the energy performance of buildings), were focused in particular on the following:

1. **Energy efficiency obligation schemes and alternative policy measures under Articles 7a and 7b of Directive 2012/27/EU and to be prepared following Annex II.** The National Energy Efficiency Action Plan (NEEAP IV) revealed that the introduction of an obligations scheme under Article 7 of Directive 2012/27/EU for Romania is not optimal because it does not comply with the requirements to enable the application of such scheme, more specifically compliance with the requirements of certification of achieved energy savings and the economic justification of the requirements. This is why, to comply with the Directive provisions, Romania has opted for introducing "alternative" measures and policies to achieve the target under Article 7b.
2. **Long-term renovation strategy to support the renovation of the national stock of residential and non-residential buildings, both public and private,** including policies, measures and actions to stimulate cost-effective deep renovation and policies and actions to target the worst performing segments of the national building stock, by Article 2a of Directive 2010/31/EU, as amended by Directive (EU) 2018/844. The Long-Term Renovation Strategy is an annex to the Integrated National Energy and Climate Plan (INECP) and it is monitored by the Government.


[3] Article 3(4) of Directive 2012/27/UE, see the proposal to amend the Directive

## 2.2. A few facts about Romania

Romania has 19 042 455 inhabitants (4.3% of EU27) with a continuous decreasing trend over time: over the last 10 years the population declined by 5%.

Real GDP per capita in 2022 was about EUR 10 110 (35% of the EU27 average) and has grown by 30% over the last 10 years.

Final energy consumption (FEC) in 2021 was 25.4 Mtoe (2.6% of the EU27) and it has decreased by 4.4% since 2005, while at the EU27 level, it decreased by 4.9%.

Energy consumption per capita (1.26 toe/person) in 2018 was 45% lower than the EU27 average (2.2 toe/person) and it increased by 1% in the last 10 years (while at the EU27 level, it decreased by 6%).

Energy productivity (GDP over the gross available energy) in 2021 was 5.35 Euro per Kg of oil equivalent (approx. 63% of the EU27 average), a strong dependence on energy to generate GDP (index increased by 20% in the last 5 years).

Sectors contributing to FEC are households (approx. 35% of total), industry (approx..27%), transport (approx. 27%) and services (approx. 7%).

At the national level, final energy consumption in the building sector accounts for 42% of total final energy use, of which 34% is in residential buildings and the rest (about 8 %) in commercial and public buildings.

During the 2001–2015 period, Romania reported about 11.26 Mtoe of cumulative (technical) final energy savings mainly related to the residential sector (38%) and industry sector (37%).

Romania has 3 087 central government buildings, with a total floor area of 6 750m m2. There are over 80 000 buildings owned by regional or local governments.

References:

1. EUROSTAT; Population by age and sex [demo_pjan]; extracted 2022
2. EUROSTAT; Real GDP per capita 2022
3. EUROSTAT; Final energy consumption (Europe 2020-2030); Energy efficiency [nrg_ind_eff];
4. Ratio between: EUROSTAT; Final energy consumption (Europe 2020-2030); Energy efficiency [nrg_ind_eff] and EUROSTAT; by age and sex [demo_pjan]; 2022
5. EUROSTAT; Energy productivity [T2020_RD310]; data in Euro per kilogram of oil equivalent (KGOE); extracted for 2021
6. EUROSTAT; Final consumption - other sectors - energy use; Complete energy balances [nrg_bal_c]; extracted for 2021;
7. Romania Long-term Renovation Strategy
8. This data refers to technical final energy savings
9. Odyssee database, Technical Energy Savings, the year 2016

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# 3. Legal framework in the field of energy efficiency

All 27 EU Member States committed to turning the EU into the first climate-neutral continent by 2050.

## 3.1. Energy efficiency legislative framework

**In the EU**, the field of energy efficiency is mainly regulated by the following directives:

- Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources;
- Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (recast).
- Directive 2012/27/EU of the European Parliament and of the Council of 25 **October 2012** on energy efficiency. In **December 2018**, the amended Energy Efficiency Directive ((EU) 2018/2002) entered into force, updating some specific provisions from the 2012 directive (27/2012/EU) and introducing various new elements. Above all, it established a headline EU energy efficiency target for 2030 of at least 32.5%, with a clause for a possible upwards revision by 2023. In **July 2021**, the Commission adopted its proposal for a recast of the Energy Efficiency Directive as part of the European Green Deal package, which contains legislative proposals to meet the EU objective of at least a 55% reduction in greenhouse gas emissions by 2030. The recast directive puts forward an increased and binding EU energy efficiency target[4].
- Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action. Under this regulation, each EU country is required to establish a 10-year integrated national energy and climate plan (NECP) for 2021-2030, outlining how it intends to contribute to the 2030 targets for energy efficiency, renewable energy and greenhouse gas emissions.

**National energy efficiency legislation[5]**

*A comprehensive list of laws can be found under Annex 2.*

Romania's legal framework for energy efficiency has a collection of normative acts (Laws, emergency ordinances, Regulations and Government Decisions) and national long-term strategies targeting energy efficiency.

Normative acts cover a range of topics such as:

- Energy Performance of Buildings;
- Energy efficiency;
- Authorization of energy auditors for industry;
- Certification of energy managers and energy service companies.

National long-term strategies target:

- Energy;
- Energy efficiency;
- Energy and climate;
- Sustainable Development;
- Long-term renovation.

[4] https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-targets_en

[5] Energy efficiency legislative framework in Romania – ANRE (National Authority for Energy Regulation)

## 3.2. Stakeholder mapping

The Ministry of Energy is the only governmental structure, at national level, empowered to represent Romania in bilateral and multilateral relations with regard to Romania's energy efficiency policy, as the sole body of the central public authority with powers to draft policy proposals and primary and secondary legislation in the field of energy efficiency.

1. **The Energy Efficiency department functions under the Ministry of Energy[6] and** has the following main attributions and responsibilities:
   - Developing and approving primary and secondary energy efficiency policies and legislation;
   - Monitoring the status of implementation of energy efficiency improvement programmes/measures at the national level, as well as energy savings from energy services and other energy efficiency improvement measures;
   - Cooperation with domestic and international institutions and bodies to promote the use of efficient use of energy and reduce negative environmental impacts;
   - Developing and implementing energy efficiency measures to achieve new energy-saving measures for the period from 1st of January 2021 to 31st of December 2030, in line with the targets of the National Integrated Energy and Climate Change Plan;
   - Preparation and submission of the Progress Report on the national energy efficiency targets;
   - Elaboration and development of an Integrated Energy Efficiency Strategy, at the national level, in line with the complementary areas impacted by energy efficiency policies, which will have as its main pillar the achievement of new energy savings, in the period 1 January 2021-31 December 2030;
   - **Authorisation of energy auditors in the industry and certification of municipal energy managers;**
   - **Publication and regular updating of the list of available qualified and/ or certified energy service providers and their qualifications and/ or certifications;**
   - Participating in the evaluation, approval and monitoring of energy efficiency investment projects;
   - Promoting energy efficiency programmes among consumers, through complementary actions, organising, including from external sources but also from the state budget, information and motivation campaigns of national interest to small energy consumers, including households, to use energy efficiently;
   - Drawing up a summary of the state of implementation of energy efficiency programmes by economic operators;
   - The elaboration, including through co-financing from the state budget or from external funds, of studies to support national energy efficiency programmes and participation in projects declared eligible under energy efficiency programmes initiated by international bodies;
   - Participating in the justification of indicative energy savings targets and measures to achieve them;
   - Monitoring voluntary agreements initiated by the competent authorities;
   - Supporting, in collaboration with relevant entities, the public administration authorities to comply with the obligation to purchase only products, services and buildings with high energy efficiency performance, to the extent of cost-effectiveness, economic feasibility,

[6] https://energie.gov.ro/wp-content/uploads/2021/08/ROF-MINISTERUL-ENERGIEI-1.pdf

viability and sustainability of the energy efficiency technical compliance, and a sufficient level of competition;
- Support competent authorities in the development of efficiency improvement programmes financed from the budgets of these authorities;
- Defining and developing the legal framework for the approval and implementation of the Framework for Energy Performance Contract (EPC) and the legal framework for regulating Energy Service Companies (ESCO);
- Implementing energy policy measures through national energy efficiency programmes;
- Setting up a specialised fund for energy efficiency investments. The fund has to be accessible to providers of energy efficiency improvement measures, such as energy service companies, independent energy advisors, energy distributors, distribution system operators, retail energy sales companies and final consumers. This fund is not in competition with commercially financed energy efficiency improvement measures.

2. **The Romanian Energy Regulatory Authority - ANRE** is an autonomous administrative body under Parliamentary control, entirely self-financed and independent as regards its decision-making process, organization and functioning, whose scope of activity is to issue, approve and monitor the implementation of the national-wide binding regulatory framework required for the proper functioning of the electricity, heat and natural gas sectors and markets in terms of efficiency, competition, transparency and consumer protection.

**The Energy Efficiency Department operated within the Romanian Energy Regulatory Authority until 2020 and then moved under the Ministry of Energy[7] and had the main attributions and responsibilities similar to the department under the Ministry of Energy.**

The main powers conferred on ANRE by the current primary legislation are as follows:
- Grant, modify, suspend, refuse or withdraw certificates, licences or authorisations;
- Ensure access and connection to the electricity and gas networks;
- Approves technical regulations, commercial regulations and calculation methodologies for economic operators in the sector, including performance standards for electricity and gas transmission, distribution and supply services;
- Approves tariffs for electricity and natural gas transmission and distribution services and regulated prices for heat;
- Approves and endorses the documents drawn up by the regulated economic operators by the legal provisions in force;
- Approves other regulations, rules, studies and documentation provided for by the legislation for the electricity, heat and natural gas sector;
- Monitors the functioning of the electricity and natural gas markets;
- Promotes the production of energy from renewable sources and cogeneration;
- Approves the conditions for access to cross-border interconnection capacities, including procedures for their allocation and congestion management;
- Exercises control over compliance by economic operators in the electricity, heat and gas sector with the regulations issued and the obligations laid down in national and European Union legislation in this field;

[7] in accordance with the provisions of Law 121/2014 on energy efficiency, including subsequent amendments and additions and ANRE's Order no. 95/2014, regarding the establishment of the Energy Efficiency Department within ANRE and the appointment of the head of the Department, including subsequent amendments and additions.

- Complies with and implements all relevant legally binding decisions of the European Union Agency for the Cooperation of Energy Regulators - ACER and the European Commission;
- Carries out investigations into the functioning of the electricity and gas markets, decides on and imposes any proportionate measures necessary to promote effective competition and ensures the proper functioning of the market.


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# 4. Energy management for municipalities

## 4.1. Municipal energy planning[8]

The times when demand-side requirements were the major factor for energy generation measuring while the energy production itself was the exclusive monopoly of the states, have long passed away. Decentralization of energy generation, transmission and distribution, on the one hand, and the opportunities for improvement of the efficiency of energy consumption, on the other hand, has nowadays changed radically the attitude towards energy in all phases of its realization – from generation to consumption.

An increasing number of people and institutions are nowadays paying special attention to energy planning as a significant element of their energy policy, but also of the policy regarding climate change. Agreement between top-down planning and bottom-up planning is presently one of the most important tasks, whose implementation will ensure the realism and efficiency of the efforts of both central and local authorities.

**The functions implemented by European municipalities concerning energy** put them in different **roles:**

- The municipality as an **energy consumer**.
- The municipality is an **energy producer and supplier**.
- The municipality as a **regulator and investor in the local energy sector**.
- The municipality as a **motivator** - a source of motivation for more efficient energy generation and consumption and the protection of the environment.

For the implementation of these functions, local authorities in Europe undertake a variety of actions. A considerable number of municipalities direct their efforts to the reduction of energy consumption and decrease of municipal expenditures for energy costs, reduction of harmful impacts from energy use on the environment of the municipality and change the behaviour of end-users in the local residential sector, services and industries.

Municipal energy planning is an interdisciplinary process. It requires expert knowledge and experience in different sectors – energy, economy, territorial planning, financing, management, data processing etc. Knowledge about current legislation and the political and administrative organization of the local self-government is also needed.

[8] Municipal Energy Planning, common framework methodology, a guide for municipal decision-makers and experts. https://eko.zagreb.hr/UserDocsImages/arhiva/dokumenti/EU%20projekti/Energy%20for%20Mayors/MEP%20Guide%20ENG.pdf

## 4.2. The energy manager for municipalities in Romania

Due to the important role of urban communities in the implementation of national energy efficiency policy, specific obligations regarding the implementation of energy efficiency programmes have been introduced in the legislation in Romania.

1. Local public administration authorities from municipalities with a population of more than 5000 inhabitants are obliged to have an Energy Efficiency Improvement Programme which includes short-term measures and measures for a period of 3-6 years as well as an annually report on the energy consumption at local level and what savings these measures brought.
2. Local public authorities from municipalities with a population of more than 20 000 inhabitants are obliged to:
   - To have an Energy Efficiency Improvement Programme;
   - To appoint a certified Municipal Energy Manager or to contract a legal entity/ authorized legal person certified according to the law.

The Energy Manager is a key figure that carries out important measures related to energy efficiency. In Romania, by law, energy management services can be provided in two ways:

1. **A certified energy manager acting as part of the municipal administration**
2. **A certified energy manager or a certified company providing energy services acting as an external consultant.**

The energy management service for municipalities is carried out by the Regulation for the certification of energy managers and energy service companies9, Regulation for the authorization of energy auditors for industry and the Decision regulating the minimum clauses to be included in energy management service contracts applicable to energy service companies and authorised legal persons10. The energy manager for municipalities was introduced as an obligation through the Energy Efficiency Law11, in 2014 for municipalities with a population over 20.000.

According to the Energy Efficiency Law, **the energy manager for municipalities is the specialist designated by the local public administration authority to carry out the tasks and duties set by law**.

**The responsibilities of the Municipal Energy Manager**

These responsibilities were the set by the law and were the minimum mandatory to be included in the contracts. The legal obligation is not in force anymore, but the list can serve as guidelines for any municipality interested in including them in their contracts with the Municipal Energy Manager.

- Coordinates, collects and analyses data on energy consumption at the Municipality level;
- Reviews the Energy Efficiency Improvement Programme and monitors the implementation of the energy efficiency measures included in the programme;
- Submits to the Ministry of Energy by 30 September of the year in which it was issued, the Energy Efficiency Improvement Programme (EEIP) and subsequently carries out its annual update;
- Monitors energy consumption in public buildings and public lighting in the Municipality;

[9]Regulation no. 380012/ 06.01.2021 of the Ministry of Energy, Directorate for Energy Efficiency
[10] Decision no. 1033/ 22.06. 2016 issued by the Head of the Energy Efficiency Department of the National Energy Regulatory Authority.
[11] Law 121/2014

- Develops, monitors and reports the Energy Efficiency Improvement Programme by proposing no-cost, low-cost or investment measures;
- Advises on the preparation of specifications for the purchase of energy-efficient equipment and verifies their compliance with legal requirements;
- Prepares energy efficiency reports requested by the purchaser. These reports may include an analysis of energy consumption trends, the appropriateness of implementing energy efficiency measures/projects and the purchase of energy-efficient equipment;
- Advises on the implementation of existing energy efficiency legislation and regulations;
- Provides expert assistance in the preparation of technical documentation for the purchase of electricity on the free market;
- Represents the Municipality to the Ministry of Energy, Directorate of Energy Efficiency, on energy efficiency issues.

**The certification of energy managers and companies providing energy services**

The certification of energy managers and companies providing energy services is done according to the Regulation issued for this purpose by the Ministry of Energy at the beginning of 2021[12].

The aim of the certification is the official national recognition of the technical competencies of energy managers by issuing two different types of certificates:

- Energy manager certificate for industry;
- Energy manager certificate for municipalities.

The certification of individuals as energy managers and the certification of energy service companies is carried out by the Certification Commission of the Ministry of Energy, with the logistical support of the Training Centre for Professionals in Industry, respectively involving the professional associations of energy auditors and managers in Romania.

Conditions for obtaining the certification as an energy manager and energy service company:

a) Be fully legally capable of exercising their profession;
b) Present a criminal record certificate;
c) Have professional training, specialisation and experience in the field.

The professional experience refers to teaching, research, design, execution or operation experience in the technical fields listed in the following table:

| Professional Training and Specialisation - graduates of the Bachelor's cycle in the fields | Required minimum experience | Energy management training course |
|---|---|---|
| Energy engineering<br>Electrical engineering<br>Mechanical engineering<br>Civil engineering<br>Systems engineering<br>Mining, oil and gas engineering | 3 | Necessary |
| Industrial engineering (mechanical engineering, robotics)<br>Environmental engineering<br>Chemical engineering<br>Petrochemical engineering | 5 | Necessary |

[12] https://energie.gov.ro/old/wp-content/uploads/2021/02/Regulament-Manageri-Energetici-si-SPSE.pdf

- Engineering and management
- Economic engineering
- Electronic engineering and telecommunications
- Applied electronic engineering
- Transport engineering
- Automotive engineering
- Materials engineering
- Marine engineering and navigation
- Computer Engineering
- Automatic engineering and applied computer science
- Mechatronic engineering
- Aerospace engineering
- Medical engineering
- Industrial/applied chemistry
- Engineering physics
- Applied engineering sciences
- Physics
- Computer science and information technology
- Applied mathematics and computer science in engineering

The condition relating to training in the field of energy management is fulfilled by graduating a specialist course organised by training providers or by graduating from master's courses in energy efficiency or by obtaining a doctorate in one of the fields of energy or electricity. Training courses in the field of energy management are organised by higher education institutions in the electrical/energy sector or by authorised training companies.

Once certified, Energy Managers must also fulfil continuing education requirements to maintain their certification. This includes training courses for the development of professional skills in the field of energy efficiency and/or renewable energy sources, organised by training providers who accumulate a minimum of 0.5 credits or proof of participation in a minimum of 7 symposiums, conferences, round tables in the field of energy efficiency at the national level.

The validity of the certificate is 3 years with the possibility of extension for a period of another 3 years. The certified Energy Managers can be found in the Register of Energy Managers and Energy Service Companies. The Register is developed as a digital document, published on the websites of the Ministry of Energy and the Training Centre for Professionals in Industry, and updated regularly. The Register comprises three parts: energy managers for industry, energy managers for municipalities and energy service companies.

**As a profession**, the energy manager is registered in the **Romanian Classification of Occupations** in the main group 1213 - Leaders in economic policy and planning. The description in the Classification of Occupations is policy and planning managers organise, conduct, plan and coordinate policy and strategic planning advisory/consulting activities in government or for non-governmental organisations and private sector agencies or manage the activities of enterprises providing policy and strategic planning services.
The specialisation "Energy Manager for Municipalities" is listed in the National Register of Higher Education Qualifications with code L120220010. Possible occupations after graduation according to

the Classification of Occupations in Romania: Energy manager for municipalities, according to the obligations listed in the energy efficiency law[13] for all localities in Romania with more than 20 000 inhabitants.
The evaluation of the energy manager's performance by the Municipality is transmitted electronically to the Ministry of Energy. There are 6 performance indicators graded from 1 to 10 (score 1 - minimum score, score 10 - maximum score)[14].
The indicators are:

1. Management of the energy consumption recording and monitoring system
2. Annual reports submitted to the Energy Efficiency Directorate (accuracy of reported data, compliance with reporting deadline)
3. Participation in the preparation of specifications and acceptance of energy audit work
4. Analysis of the evolution of energy consumption, the evolution of specific consumption, the opportunity to implement energy efficiency measures/projects, and purchase energy-efficient equipment (with mention of compliance with which categories)
5. Advice on how to implement energy efficiency legislation and regulations
6. Analysis of the state of implementation of the programme of energy efficiency measures and monitoring of the implementation of the energy efficiency measures included therein.

## 4.3. Energy Efficiency Improvement Programs and Sustainable Energy and Climate Action Plans (SECAPs)

In Romania, local public administration authorities from municipalities with a population of more than 5.000 inhabitants are obliged to have an Energy Efficiency Improvement Plan (EEIP) which includes short-term measures and measures for a period of 3-6 years as well as an annual report on the energy consumption at the local level and what savings these measures brought.
The main body of the EEIP is drafted once and it consists of:

- Legislative framework at EU, national and local levels in the domain of energy efficiency,
- Municipality general description (geographic position, climate characteristics, demographics),
- Energy infrastructure,
- Road infrastructure,
- Deployment of RES at the local level,
- Energy consumption on specific domains: public buildings, residential buildings, public lighting, public transport, DH, sanitation, waste & water,
- Establishing the reference year,
- Setting the objectives in terms of energy efficiency,
- Energy efficiency measures on short, medium and long term,
- Monitoring, implementing and evaluating previously mentioned measures.

[13] Law no. 121 from 18 July 2014 on energy efficiency
[14] https://energie.gov.ro/old/wp-content/uploads/2021/03/FORMULAR-APRECIERE-angajat-ManagerEnergetic_DEE_model-2021_distributed.pdf

- Each year until 30th September, each municipality submits to the Energy Ministry a report that comprises the energy consumption of the specific domains and the development of the initially proposed measures. The report is submitted along with an evaluation chart of the energy manager for communities completed by the municipality`s staff. The EEIP and the annual reports are reporting only energy efficiency actions measured in MWh and toe. There is no database of the submitted EEIPs that could act as good examples for other municipalities and no database of specific baseline indicators that municipalities could take as a reference for their energy efficiency plans. Municipalities can submit a SECAP instead of an EEIP to the Energy Ministry as long as the SECAP comprises also the energy information required by the ministry through EEIP.

The Sustainable Energy and Climate Action Plan (SECAP) is a medium and long-term strategic document that presents the vision for 2030 of local and institutional energy and environment policies to achieve the European Union's target of reducing greenhouse gas emissions by increasing energy efficiency, harnessing renewable energy sources and adapting to climate change. It uses the results of the baseline emissions inventory to identify the best areas for action and opportunities to achieve the agreed greenhouse gas reduction target. The plan sets out concrete measures to reduce energy consumption and CO2 emissions, timetables, and assigned responsibilities, capable of translating the long-term strategy into action. Moreover, the SECAP can be updated by the municipality as their vision and experience enriches in the field of sustainable development, or based on the new needs that might arise in the community.

EU Municipalities that want to commit to adopting an integrated approach to climate change mitigation and adaptation and plan to develop and implement a Sustainable Energy and Climate Action Plan with the aims of cutting CO2 emissions by at least 40% by 2030 and increasing resilience to climate change can adhere to the Covenant of Mayors for Climate and Energy. The Covenant is open to all local authorities democratically constituted with/by elected representatives, whatever their size and whatever the stage of implementation of their energy and climate policies.

**Covenant of Mayors**[15]

The Covenant of Mayors for Climate and Energy is a unique political movement steered by mayors. The EU Covenant of Mayors for Climate & Energy is an initiative supported by the European Commission bringing together thousands of local governments that want to secure a better future for their citizens. By joining the initiative, they voluntarily commit to implementing EU climate and energy objectives.

The Covenant of Mayors was launched in 2008 in Europe. Not only did the initiative introduce a first-of-its-kind bottom-up approach to energy and climate action, but its success quickly went beyond expectations. From the beginning, the Covenant of Mayor's initiative has been designed to provide local governments, in highly diversified national contexts, with a framework for their local energy and climate action based on 4 principles:

- Consistency and transparency thanks to a common reporting framework for all;
- Flexibility and adjustability of the common framework to better take specific needs and local realities into account;

[15] https://eu-mayors.ec.europa.eu/en/about

- Evaluation of the data reported by the European Commission's Joint Research Centre (signatories may be suspended in case of non-compliance);
- Promotion and exchange of experience via the website news, social media, online and offline events.
- In Romania, the first signatories of the Covenant were Aiud, Baia Mare, Brașov, Giurgiu, Mizil, Râmnicu Vâlcea and Slobozia in August 2008. Until now, Romania has 190 signatories16.
- There are some valuable benefits17 of being a Covenant signatory:
- High international recognition and visibility
- Stronger credibility of commitments and easier self-assessment
- Tailored guidance.

**Tailored guidance in the framework of the Covenant of Mayors**

The tailored guidance consists of an expert helpdesk, methodologies and tools to guide municipalities through effective energy and climate action. The Municipalities can benefit from step-by-step support in assessment, planning, implementation and monitoring. The Guidebook18 'How to Develop a Sustainable Energy and Climate Action Plan' published by the Joint Research Centre (JRC), the European Commission's science and knowledge service offers a set of methodological principles, procedures and best practices to develop SECAPs.

Part 1 of the document relates to the SECAP process; while Part 2 gives an insight into the elaboration of municipality assessments (Baseline Emissions Inventory and Risk Vulnerability Assessment), finally Part 3 describes technical issues, measures and policies that can be implemented at the local level. Signatories have to submit Monitoring Evaluation Reports every 2 years, declaring on the status of Action Plan implementation, as well as on the levels of energy consumptions and $CO_2$ reductions through Monitoring Emissions Inventories, based on the "Covenant Reporting Guidelines"[19].

## 4.4. Instruments and Tools in energy management

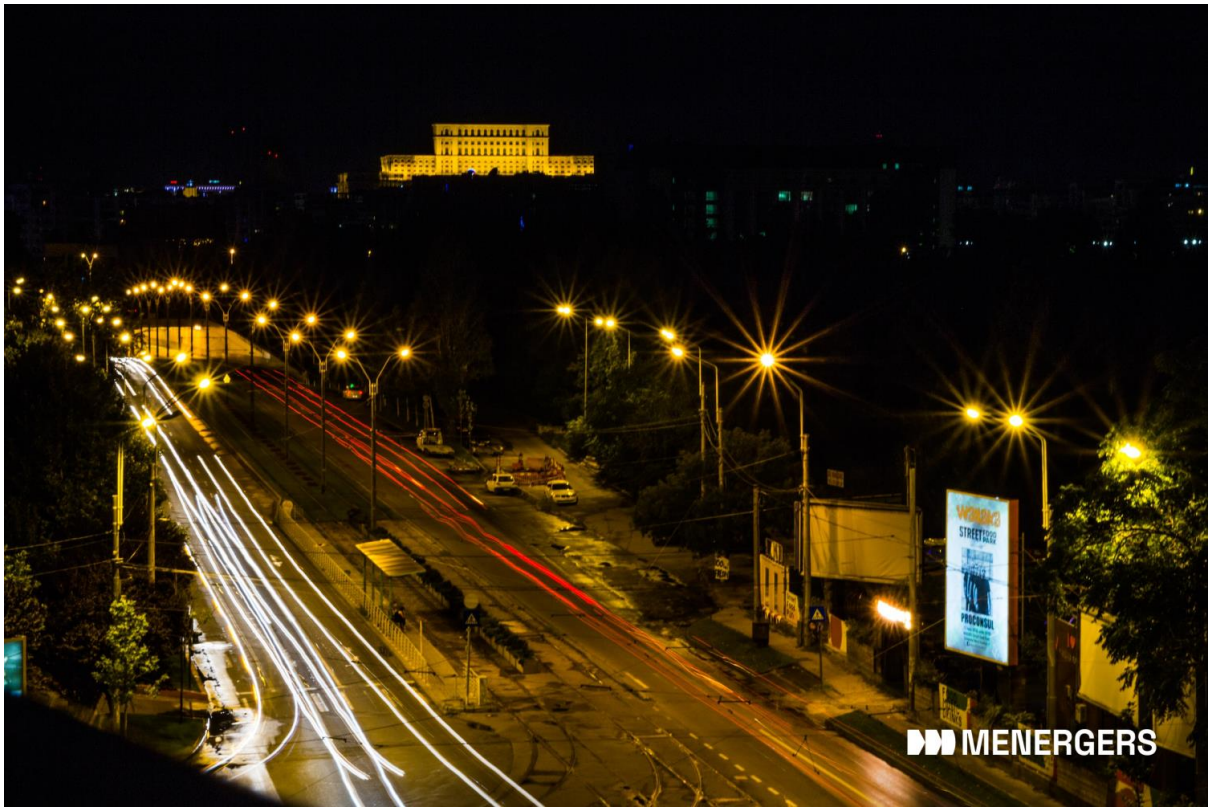
Energy Managers for municipalities in Romania play a crucial role in ensuring the efficient use of energy resources and reducing energy consumption to achieve this, they utilize various tools and instruments in their plans, for example:

- Performing technical analysis that can identify where EE measures can be implemented and what their impact could be, for example, energy audits.
- Implementing and managing local databases for monitoring the energy consumption in public buildings or other points of interest. These databases could pinpoint specific areas where there is a need for Energy Efficiency measures.
- Raising awareness events and programs dedicated to various stakeholders and to citizens, so they could bring their contribution to the sustainable development of the community.

[16] https://eu-mayors.ec.europa.eu/en/signatories
[17] https://eu-mayors.ec.europa.eu/system/files/2022-09/10reasonstojoin_en.pdf
[18] https://publications.jrc.ec.europa.eu/repository/handle/JRC112986
[19] https://eu-mayors.ec.europa.eu/en/node/254

These could be implemented as local events having as subject waste reduction and recycling, leaflets with soft measures for saving energy available at the city hall etc.

- Programs for saving energy and reducing & recycling waste in schools in order to prepare the new generation for the green future envisioned by the local authorities.
- Funding is a crucial instrument in order to achieve the estimated energy reductions drafted by the municipality. This can come under the form of:
  - Local budget,
  - Structural funds,
  - Administration of the Environment Fund,
  - EEA and Norway Grants,
  - Recovery and Resilience Facility and financial instruments,
  - Partnerships with other stakeholders,
  - EU-funded projects (Horizon Europe, Life etc.).

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# 5. Conclusions and recommendations

**Energy Manager: Strengths, Weaknesses, Opportunities and Threats**[20]

| Strengths | Weaknesses |
|---|---|
| ▪ The existence of legislation that encourages the existence of an Energy Manager in the team of municipalities;<br>▪ There are opportunities for continuous training for the Energy Managers;<br>▪ Existence of funding sources for energy management plans and actions;<br>▪ Essential support in monitoring consumption in the municipalities;<br>▪ Municipalities can have measures to improve consumption proposed by the Energy Manager;<br>▪ The Energy Manager is an important communication and information dissemination pole. | ▪ It is hard to motivate financially (*budget restriction in local public administrations*);<br>▪ The Energy Manager does not receive information about the latest developments in the field;<br>▪ It has an unclear job description (in some municipalities);<br>▪ Specific tasks are supplemented by other duties (e.g., what else is needed in the team to complete the 8-hour schedule);<br>▪ The role of the Energy Manager is not always understood, neither by colleagues/team members nor by the person occupying the position.<br>▪ The Energy Manager is not provided with the data necessary to develop the EEIP and EE measures. |
| **Opportunities** | **Threats** |
| ▪ To identify invoicing errors (regarding energy consumption);<br>▪ Contributes to lower costs because it draws early attention to problems;<br>▪ Efficient consumption reductions through regular monitoring;<br>▪ The Energy Manager knows and can propose technologies, new legislation, funding, and impact measures;<br>▪ The Energy Manager is also useful for localities with populations below 20 000 inhabitants;<br>▪ Can become a technical ambassador of the municipality, pass information to the community, and help with technical recommendations on specific projects. | ▪ Changes in legislation;<br>▪ Lack of continuity from year to year; Departure of the Energy Manager from the institution or termination of the contract;<br>▪ Non-compliance with contractual clauses;<br>▪ Lack of funding for the position within the municipalities;<br>▪ The Energy Manager's membership/ attendance in various circles of interest;<br>▪ Lack of communication with the political factor;<br>▪ Unclear reporting hierarchy;<br>▪ Political interference in the activity of the Energy Manager;<br>▪ Erroneous data collection/human error. |

**Barriers to energy efficiency**

- **Technical barriers** are, up-to-date measuring equipment and trained staff to use it, knowledge and experience in energy management, and an adequate framework for scientific research and technology transfer.

[20] SWOT Analysis done with the participation of 22 representatives of Energy Cities Romania (OER) member municipalities, the Ministry of Energy and other private sector representatives in the field of energy and green solutions during the 2023 Annual Conference and General Assembly.

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- **Economic barriers** consist of energy carrier prices that do not reflect production, transmission and distribution costs, the price control system and the non-consideration of marginal prices, and the distortion of the share of energy in the cost price of products.
- **Financial barriers** are related to the limited funds available for energy-saving measures and the lack of an adequate framework for procuring these funds.
- **Institutional and managerial barriers** derive from inadequate decision-making structure at local and national levels, incomplete legislation and regulations in the field of energy efficiency, lack of knowledge of the real potential for energy conservation, lack of economic and banking advice in the field and lack of modern energy management techniques[21].

Through the EUKI-funded project – OUR BUILDINGS, Energy Cities Romania (OER) identified the following barriers to the implementation of efficient municipal energy management[22]:

- The national legislative framework is too general, vague and sometimes contradictory.
- There has to be more rigorous control of the finished projects with punitive measures where the legislation is not rightfully applied, not only financial penalties. Quality control should be reinforced through specialists in the field.
- Technical norms have to be adapted to the current technologies in the domain.
- There has to be better control of the energy auditors for buildings and the work they are doing.
- There are problems with the property of public buildings which prevents any further actions from the municipality part.
- Energy performance indicators have to be highlighted in the tender documentation.
- The tender documentation is sometimes developed by personnel not trained in the domain; thus, the subject is poorly described or incomplete.
- The subsidies for energy should be redirected to buildings rehabilitation, in order to decrease the energy poverty.
- The indirect benefits of energy-efficient rehabilitation are usually not taken into consideration.
- The technical personnel (from the municipality or not) does not benefit from continuous professional training. The existing courses for public authorities have general information, without added value.
- Local authorities do not have sufficient time to review the national legislation and the guidelines for applying to existing funds, during the public consultations process. The same applies to some official requests from ministries.
- The legislative framework can be unpredictable (it can change by the time a measure is being implemented, thus creating unforeseen problems).
- There are contradictions between the legislative framework and the guides for applying for existing funds.
- The smaller price is the first criterion during the tender rather than the optimum price in correspondence with the quality of the materials and solution.

[21] http://www.efen.ieeia.tuiasi.ro/curs_termo/T2.%20Notiuni%20de%20eficienta%20energetica.pdf

22 The stakeholder consultation was done with 116 participants from Bacau, Sibiu, Satu Mare, Bistrita, Mizil, Targoviste in face-to-face meetings between June and July 2019.

- The national authorities should impose to the local authorities to develop & implement measures for mitigation and adaptation to climate changes in the buildings sector, but also to develop financing schemes for the local authorities to use.
- The procedure from developing a measure to implementation is very long, thus the solution remains behind the technology at the time the measure is under implementation. The public acquisition procedures are long and difficult (bureaucracy) with too much paperwork.
- All public buildings should have an energy audit performed.
- The designers usually do not have the knowledge of an energy auditor and do not take into consideration the energy consumption of a building during the project design.
- Buildings should be taxed according to their energy class/consumption.
- The public officers lack the capacity to evaluate the technical documents.
- The private-public partnership would be an improvement in the energy-efficient rehabilitation of public buildings.
- The measures are selected considering the available funds, not their energy efficiency potential.
- The energy manager (mandatory for municipalities with over 20.000 inhabitants through Law 121/2014 regarding energy efficiency) should be involved more in verifying the energy efficiency component of the tender documentation.

## Conclusions

- *The legislative changes of January 2020, which abolished the powers of the Energy Department within the National Authority for Energy Regulation, created a legislative vacuum of almost a year, until November 2021 when this department was regulated under the Ministry of Energy and January 2021 when the new Regulation was issued. The gap created confusion among Energy Managers especially related to the reauthorization process and delays in communication.*
- *Based on the data from the Ministry of Energy there are 48 Energy Managers for municipalities certified in March 2023[23]. Based on the National Institute of Statistics there are 201 cities that have a population of 20.000 and need an Energy Manager. On a simple calculation, less than a quarter of the cities with a population over 20.000 in Romania comply with the legal obligation to have an energy manager for municipalities. The fines for municipalities not complying with the law range between 15.000 and 30.000 RON.*
- *In Romania there is an inadequate decision-making structure at the local and national levels, unclear legislation and regulations in the field of energy efficiency, and does not stimulate an increase in the level of ambition. It always leaves room for the adoption of solutions without high performance. Regarding the unclear provisions, for example, you can find different methods of calculating the same indicators depending on the authority that is drafting the financial instruments or the law/regulations.*
- *There is a long legislative process and until technical norms are issued, the legal provisions become outdated or new concepts/ technologies emerge. The legislative framework can be improved in order to strengthen the Energy Efficiency domain and the technical documentation should be updated faster (some can be updated as soon as they are released due to the long drafting time). One example in Romania is the technical regulation Calculation methodology of*

[23] https://energie.gov.ro/wp-content/uploads/2023/03/Manageri-Energetici-pentru-Localitati-%E2%80%93-Martie-2023.pdf

*the energy performance of buildings, indicative Mc 001, an update that is the result of many years of effort, finally issued in 2021 but adopted in 2023.*

- *There is a general lack of adequate communication, consultation and collaboration between central and local public authorities, this is a real barrier to achieving energy efficiency ambitions, and implementing concrete measures at a larger scale or monitoring of already implemented energy efficiency measures.*
- *There is a lack of knowledge of the real potential for energy conservation, a lack of economic and banking advice in the field and a lack of modern energy management techniques.*
- *The simplification of public procurement procedures for energy efficiency services is necessary as well, as the current system makes procurement difficult and increases the duration of implementation of energy efficiency measures. This leads to obsolete technical solutions at the time of their implementation on the field or works relating to old EE standards. The authorities need to improve the way they supervise and monitor energy efficiency works and must put forward clear legislative frameworks detailing the energy efficiency standards in all economic sectors.*
- *Romania has committed to reducing its final energy consumption by 40.4% and its primary energy consumption by 45.1% by 2030, reaching a total consumption of 25.7 million tonnes of oil equivalent (Mtoe) and 32.5 Mtoe respectively. To reach these objectives, coherent and effective investment schemes for measures that increase energy efficiency are needed[24]. Even though there are funding opportunities/ schemes they are mainly available for big cities or few municipalities apply for it. There is a need for alignment of the funding schemes both with national development directions (according to the targets & objectives proposed in the national strategies) and with the needs and development at the local level. There is also a need to acknowledge local authorities as major energy consumers, thus changing the approach in communication with the local level, providing dedicated financial instruments and including them in national strategies.*
- *Municipalities contribute to the national targets, but, unfortunately, their real potential is not fully addressed. Cities need to be introduced in energy & climate national strategies as big energy consumers. This perspective would trigger a deeper assessment of the energy-saving possibilities at the local level which would, in turn, facilitate the development of improved financial instruments.*
- *Problems local authorities face in developing Energy Efficiency Improvement Plans are lack of a national open database of energy performance indicators for municipalities and with good examples of EE measures of other municipalities and not having specialized personnel or not understanding energy indicators and concepts.*
- *Consumption reporting is a difficult process that involves a macro-scale analysis of all buildings and consumers (lighting, transport etc.) within the administration. The correlation of the data with the information requested by the specialized authority (Ministry of Energy) is often done superficially, also because gathering the data is very difficult.*
- *There is a lack of databases accessible to Municipalities such as the ones from the Covenant of Mayors where municipalities upload their SECAPs and can consult other cities' strategies. Energy targets need to be translated into clear and tangible objectives and actions. Ambitious reduction targets can only be achieved by involving Municipal Energy Managers who can use the right tools to monitor, analyse and evaluate consumptions, while proposing concrete steps*

[24] https://bankwatch.org/wp-content/uploads/2021/11/2021-11-24_Fact-sheet-energy-efficiency-Romania_final.pdf

*to an efficient consumption of resources and the introduction of renewable energy sources at the local level, to secure an energy independence level as high as possible.*

- *Municipal Energy Managers are essential for the well-being of a community. They should have efficient cooperation with the decision-makers, as well as with all the relevant departments of the local authority, continuously communicating over the progress of measures and actions, and over the reaching of possible results.*
- *Municipal Energy Managers have the ability to communicate adequately about how projects and actions are/ should be prioritized, explaining the constraints but also the subsequent benefits, while involving the main public actors in the development and implementation of energy planning and long-term energy strategies, triggering new ways of acting and using public policies to create low emissions local communities.*
- *According to a 2022 IPPC report[25], "sufficiency policies are a set of measures and daily practices that avoid the demand for energy, materials, land and water while delivering human wellbeing for all within planetary boundaries". Sufficiency applies to every aspect of society but has the highest potential to reduce our consumption of resources in the building and transport sectors. Sufficiency can be a compass helping local authorities drive their policies towards a just economy, respecting the planet's boundaries and ensuring everyone's basic needs. It is a powerful tool local leaders might use to provide a framework and meaning to all their climate and energy actions. This is the place where Municipal Energy Management can step in and support local authorities in creating and providing the conditions for energy sufficiency, for the society and the private sector.*


[25] https://www.ipcc.ch/report/ar6/wg3/, consulted in May 2023

# 6. Get inspired – some good practice examples from Romania

## 6.1. ENERGY MANAGEMENT SYSTEM (EMS) developed by the Agency of Brasov for Management of Energy and Environment (ABMEE)

What is EMS?

- EMS is an application designed specifically for monitoring energy and water consumption in public buildings but can be used by virtually any institution (public/private) or individual concerned with monitoring energy and water consumption.
- The application provides an overview of the technical condition of the buildings analysed (structure, joinery, surface area, operating schedule inside the building, number of users, etc.) and allows energy and water consumption to be monitored.
- Based on the data entered into the system, the application generates a series of reports essential to any informed analysis of the technical condition of installations, the energy consumption of the building expressed in kWh/$m^2$/year, cold water consumption expressed in $m^3$/person etc.
- It also has a module dedicated to monitor public lighting.

Why EMS?

- EMS is an application that supports public institutions in implementing Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency.
- EMS provides the necessary data for any technical analysis that can help on short, medium or long-term energy planning and budget forecasting of public institutions.
- EMS provides the necessary data in the process of developing local strategies, for example, SECAP, EEIP and LTRS.
- EMS is a verified and tested tool that has been implemented in several municipalities in Romania.
- Monitoring the results of the solutions implemented in the public buildings.

What are the benefits of using EMS?

- Creation of a complete database of the buildings in the endowment (surface areas, volume, interior installations, energy efficiency measures implemented, number of building users, operating schedule etc.).
- Monitoring of energy and water consumption.
- Prioritisation of investments in regard to the worst energy-performing public buildings.
- Estimate consumption and forecast energy and water budget for public institutions.
- Medium and long-term energy planning.
- Reduce energy and water costs by increasing energy efficiency.

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## 6.2. The harmonization of the Energy Efficiency Improvement Program (PIEE) requested by Romanian legislation with the Sustainable Energy and Climate Action Plans (SECAP)

**Context:** According to the Energy Efficiency Law, in Romania, local authorities with a population of more than 5000 inhabitants are obliged to have an Energy Efficiency Improvement Program. Energy Cities Romania (OER) has made efforts to develop a unique methodology[26] at local level, at least for the signatories of the Covenant of Mayors, so that the structure of the plan is complete, to be a useful document for annual investment plans and to contain data collection and reporting documents in a unitary format to be used both for annual reports to ANRE and for the 2 and 4-year reports as required by the Covenant of Mayors for Climate & Energy.

The proposal for a single urban energy planning document in accordance with the methodology of the Covenant of Mayors for Climate & Energy and with the requirements of Law 121/2014 was launched in April 2018 during the Annual Conference of the Energy Cities Romania (OER). The proposal was received with great interest by the participants representing different institutions: the National Regulatory Authority for Energy, the National Regulatory Authority for Community Utilities Services, the Electricity Distribution Company Transylvania Sud SA, the Local Public Administrations members of the OER association, experts in the fields of interest SECAP – EEIP, such as energy-efficient rehabilitation of buildings, public lighting, electromobility, reduction of transport emissions, circulating economy and education related to waste management, awareness campaigns on energy poverty - Directorate for Justice and Consumers (CE), over 60 participants in total.

After the Conference, starting from the methodology for the realization of the Sustainable Energy and Climate Action Plans (SECAP) together with the requirements of Romanian legislation, the proposals of Energy Cities Romania (OER) were presented and discussed in several meetings with ANRE specialists, energy distributors, professional associations and representatives of local administrations. During the discussions, experts gave valuable input on the new version of EEIP that goes through the SECAP sectors, but it also comes with specific consumption indicators for each sector and some additions on how to organize and plan the public utility service within local public authorities.

There were also given inputs to the new data collection sheets designed by Energy Cities Romania (OER) and ANRE, data sheets that allow municipalities to gather information from data suppliers both for SECAP & Energy Efficiency Improvement Plan. The information concerns data regarding energy consumption, public transportation characteristics and information, sanitation, RES, DH, biomass, no of residential buildings etc.

The new version of EEIP was the subject of the National Regulatory Authority for Energy Decision on updating the model for drawing up the EEIP, alongside with the new datasheets which are now part

[26] http://2014-2020.adrbi.ro/media/2877/ghid-pentru-intocmirea-programului-de-imbunatatire-a-eficientei-energetice-aferent-localitatilor-cu-o-populatie-mai-mare-de-5000-locuitori.pdf

of the Energy Efficiency Improvement Plan. The main outcome of the initiative is that through Energy Cities Romania (OER) interventions, in order to fulfil the legal provisions, the submission of a SECAP has been accepted if it also includes the information in the EEIP.

The main benefits of having a harmonized Energy Efficiency Improvement Plan (EEIP) with the Sustainable Energy and Climate Action Plans (SECAP) realized based on the Methodology of the Covenant of Mayors for Climate & Energy:

- Higher quality for EEIP which includes proposals for clearly defined energy efficiency projects (in-depth renovation of public buildings, street lighting systems, local public transport and central heating systems, etc.);
- Having a EEIP is an eligibility condition for different funding. Both the Administration of the Environment Fund (AFM)27 and the European grant programmes make access to funding conditional on the existence of an Energy Efficiency Improvement Programme, as a commitment and assumption of responsibility on the part of local decision-makers.
- Projects included in Energy Efficiency Improvement Programme and funded through different programs, can contribute to job creation jobs in the area, given that the renovation of buildings, the installation of energy production systems and renewable energy sources, and installing and operating energy management systems are labour-intensive activities.
- Increased data quality that is consistent enough to contribute both to Romania's national target and to the achievement of specific national objectives.
- Increased data quality leads to transparent and up-to-date evidence of energy consumption and costs.


[27] The main institution providing financial support for environmental projects and programs

# Annex 1 National legal framework in the field of energy efficiency:

| Nr. | Document | Description |
|---|---|---|
| 1 | Romania's Energy Strategy for 2007-2020 *approved by Governmental Decision no. 1.069/ September 5 2007* | The overall objective of the energy sector strategy is to meet energy needs both now and in the medium and long term at the lowest possible price appropriate to a modern market economy and a civilised standard of living, in conditions that.<br>**Strategic objectives**<br>**Energy security:** Increasing energy security by securing energy resources and limiting dependence on imported energy resources; Diversification of import sources, energy resources and their transport routes; Increasing the adequacy of national electricity, gas and oil transmission networks; Protection of critical infrastructure.<br>Sustainable development: Increasing energy efficiency; Promoting energy production from renewable resources; Promotion of electricity and heat production in combined heat and power plants, in particular in high-efficiency combined heat and power plants; Supporting research and development activities and dissemination of applied research results; Reducing the negative environmental impact of the energy sector; Rational and efficient use of primary energy resources.<br>**Competitiveness:** Development of competitive markets for electricity, natural gas, oil, uranium, green certificates, greenhouse gas emission certificates and energy services; Liberalisation of energy transit and ensuring permanent and non-discriminatory access of market participants to transmission, distribution networks and international interconnections; Continuation of the restructuring and privatisation process in the electricity, heat and gas sectors; Continue the restructuring process for the lignite sector to increase profitability and access to the capital market. |
| 2 | National Energy Efficiency Action Plan (2014-2020) *approved by Governmental Decision no. 203/03.04.2019* | It is structured in two components:<br>▮ Energy savings in the energy supply transformation, transmission and distribution system;<br>▮ Energy savings at the final consumer (Art.7 EED2017/2012/EU).<br>It lists energy efficiency measures for each relevant sector. |
| 3 | Romania's Sustainable Development Strategy 2030 *adopted by Governmental Decision No. 877/9 November 2018* | Renewable energy and energy efficiency can be found under Objective 7: Clean and Affordable Energy |
| 4 | Romania's 2021-2030 Integrated National Energy and Climate Plan | Under revision with a first draft to be sent in June 2023 and the final revision in 2024. |

| | | |
|---|---|---|
| **5** | National long-term renovation strategy to support the renovation of the national stock of residential and non-residential buildings, both public and private, and its gradual transformation into a highly energy-efficient and decarbonised building stock by 2050 *adopted by Decision no. 1034/27 November 2020* | Based on the Long-Term Renovation Strategy (LTRS) of Romania, the public sector should have a demonstrative role and assume a leadership role by improving its EE by renovating 8.25m (26%) of public buildings by 2030, an achievement which would reduce energy consumption by 0.05Mtoe and achieve avoided CO2 emissions of 0.25m ton for the period 2021-2030. Most of the savings will be derived from deep or Near Zero Energy Buildings (NZEB) renovation of public buildings, lighting, and renewable energy installations[28]. |
| **6** | Law no. 372/2005 on The Energy Performance of Buildings | The purpose of this law is to promote measures to increase the energy performance of buildings, taking into account outdoor and climatic conditions, indoor comfort requirements, optimal level in terms of cost and energy performance requirements, and to improve the urban design of localities. |
| **7** | Law no 121/2014 on Energy Efficiency | The purpose of this law is to create the legal framework for the development and implementation of a national energy efficiency policy to achieve the national goal of increasing energy efficiency.<br>Energy efficiency policy measures shall apply throughout the entire chain: primary resources, production, distribution, supply, transport and final consumption. |
| **8** | Emergency Ordinance No 184/2020 for the amendment and<br>Law No 121/2014 on energy efficiency | The main change is regulating the Energy Efficiency Directorate within the Ministry of Economy, Energy and Business Environment.<br>The Ministry of Economy, Energy and Business Environment acts through the Energy Efficiency Directorate, an organisational structure at the level of the central public authority, with responsibilities for the development and approval of primary and secondary energy efficiency policies and legislation at the level of final energy consumers. |
| **9** | Regulation for the authorization of energy auditors for industry no. 380012/ 06.01.2021 | The legal procedure for authorizing the energy auditors for energy. Issued by the Energy Efficiency Directorate within the Ministry of Energy. |
| **10** | Regulation for the certification of energy managers and energy service companies 380012/06.01.2021 | The legal procedure for authorizing the energy auditors for energy. Issued by the Energy Efficiency Directorate within the Ministry of Energy. |
| **11** | Romania's Energy strategy for the period 2018-2030, with a 2050-time horizon *(Project)* | ▮ In 2016, the Ministry of Energy developed a Draft Energy Strategy for the period 2016-2030 and time horizon 2030-2050.<br>▮ Then the delays in approving the Strategy led to 2018 – 2030, 2019-2030 and 2020 – 2030 and time horizon 2030-2050;<br>▮ The vision of Romania's Energy Strategy is for sustainable growth of the energy sectors;<br>▮ The strategy is still in the project phase. |

[28] https://www.fi-compass.eu/sites/default/files/publications/The%20potential%20for%20investment%20in%20energy%20efficiency%20through%20financial%20instruments%20in%20the%20European%20Union%20-%20Romania%20in-depth%20analysis_0.pdf

# Annex 2 Glossary of terms[29]

- **Energy audit** - a systematic procedure aimed at obtaining appropriate data/information on the existing energy consumption profile of a building or group of buildings, an industrial or commercial operation or facility or a private or public service, identifying and quantifying cost-effective energy-saving opportunities and reporting the results;
- **Energy auditor** - a natural person, an authorized natural person or a legal entity, each of these categories holding an energy auditor's license entitling them to carry out energy audits on consumers, issued by the Ministry of Energy based on the Regulation on the authorization of energy auditors in industry, approved by order of the Minister of Energy; energy auditors who are natural persons carry out their activity as authorized natural persons or as employees of legal entities, by the legislation in force;
- **Energy performance contract** - a contractual agreement between the beneficiary and the provider of an energy efficiency improvement measure, verified and monitored throughout the contract period, under which investment costs related to the measure are paid in proportion to a contractually agreed level of energy efficiency improvement or other agreed energy performance criteria, such as financial savings;
- **Energy efficiency** - the ratio of the value of the resulting output of services, goods or energy to the value of the energy used for this purpose;
- **Energy savings** - the amount of energy saved determined by measuring and/or estimating consumption before and after implementation of an energy efficiency improvement measure, while ensuring normalization of external conditions affecting energy consumption;
- **Energy service provider** - a natural or legal person providing energy services or other energy efficiency improvement measures at the final consumer's facility or premises;
- **Financial instruments for energy savings** - any financial instrument, such as grants, subsidies, tax rebates, loans, third-party financing, energy performance contracts, energy savings guarantee contracts, outsourcing contracts and other contracts of the same nature that are available on the market, by public institutions or private bodies to cover part or all of the initial cost of energy efficiency improvement measures;
- **Energy efficiency improvement** - increasing energy efficiency as a result of technological, behavioural and/or economic changes;
- **Energy manager** - natural person, an authorized natural person or legal entity providing energy services, each of these categories being certified by the Ministry of Energy based on the Regulation for the certification of energy managers and the accreditation of energy service companies, approved by order of the Minister of Energy, whose activity is the organization, direction and management of the energy processes of a consumer;
- **Policy measure** - regulatory, financial, fiscal, voluntary or information provision instrument to create an enabling framework, requirement or incentive for market actors to provide and purchase energy services and undertake other energy efficiency improvement measures;
- **Energy service** - an activity that results in a physical benefit, utility or goods obtained through the efficient use of energy with energy-efficient technology and/or action which

[29] Selection from Law No 121 of 18 July 2014 on energy efficiency

may include the operation, maintenance and control activities necessary to provide the service, which is provided on a contractual basis and which, under normal conditions, results in a verifiable and measurable or estimable improvement in energy efficiency and/or primary energy savings;

- **Energy management system** - a set of interconnected or interacting elements of a plan that sets the energy efficiency target and the strategy for achieving that target;
- **ESCO energy service company**[30] - a legal or licensed natural person who provides energy services and/or other energy efficiency improvement measures at the consumer's facility or premises and who, as a result of providing these services and/or measures, accepts a degree of financial risk; payment for the services provided is based, in whole or in part, on energy efficiency improvements and the fulfilment of other performance criteria agreed by the parties.


[30] Energy Service Companies (ESCos)

# Methodology used for compiling the report:

- Desk research;
- Results from other project implemented by OER or by our partners;
- SWOT analysis done with relevant stakeholders in face-to-face meetings;
- OER expert input for conclusion and recommendations.

# Contact details:

The Romanian Network of Energy Cities

Address: 23 Mihail Kogălniceanu Blvd.,
RO - 500090 Brașov
E-mail: office@oer.ro
Telephone: +40 268 474 209
Social Media: www.facebook.com/AsociatiaOER
Website: www.oer.ro.

# Disclaimer:

*This document is realized by Energy Cities Romania (OER)- an association which brings together local authorities involved in the process of energy transition towards climate neutral communities. The association represents local authorities in relation to national institutions and supports them in the implementation of efficient energy & climate policies.*
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