



Energy Efficiency: The Role of Local and Regional Authorities

Background

Global challenges: Improving resilience to climate change and securing affordable and sustainable energy

Acknowledging the threat of climate change, in 1992 countries joined the UN Framework Convention on Climate Change (UNFCCC) as a means for cooperating internationally to combat climate change by limiting the global temperature increases and coping with the inevitable impact. The Kyoto Protocol, which binds developed countries to emission reduction targets, was later adopted. The protocol's first commitment period started in 2008 and ended in 2012. The second commitment period began on 1 January 2013 and will end in 2020.

On 12 December 2015, the Paris Agreement was adopted; this marked the latest steps in the evaluation of the UN climate change regime and was based on the work undertaken within the framework of the Convention. This Agreement introduces a new course to take in the global effort to combat climate change. The Paris Agreement acknowledges and welcomes the efforts undertaken by local and regional governments in outlining their climate change action plans and calls to enhance their engagement in the Lima-Paris Action Agenda (LPAA).

Enhancing energy efficiency is one of the major means of tackling future challenges both for EU and EaP countries. It is connected to both climate action and energy security, in a multifaceted approach: energy availability, affordability, infrastructure development, environmental and social effects, regulation and governance.

EU response

Having acknowledged the role of energy efficiency, the EU recognised it as one of its five central objectives. In its 2010 "2020 Energy Strategy", the European Commission stated: "Energy efficiency is the most cost effective way to reduce emissions, improve energy security and competitiveness, make energy consumption more affordable for consumers as well as create employment, including in export industries¹". A year later, the Commission presented a proposal for a Directive on energy efficiency² (EED), which came into force in 4 December 2012. Member States reaffirmed the imperative need to achieve a 20% energy-saving target in 2020 and to carry on implementing the Directive. In November 2016, the European Commission proposed an [update to the Energy Efficiency Directive](#) including a new 30% energy efficiency target for 2030, and measures to update the Directive to make sure the new target is met. Since 2014, each EU Member State has drawn up its National Energy Efficiency Action Plan (NEEAP), which according to the EED should be submitted every three years. Member States are required to report annually on their NEEAPs. Most EU cities

¹ https://ec.europa.eu/energy/sites/ener/files/documents/2011_energy2020_en_0.pdf

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:315:0001:0056:EN:PDF>

have prepared their Sustainable Energy Action Plans, which were approved by the European Commission within the Covenant of Mayors framework. In the EU, energy efficiency is often combined at community level with local renewable energy production, yielding a more encompassing approach to sustainable energy.

After the adoption, in 2008, of the 2020 EU Climate and Energy Package, the European Commission launched the Covenant of Mayors initiative to endorse and support the efforts deployed by local authorities in the implementation of sustainable energy policies. Building on the success of its governance model, the Mayors Adapt initiative was launched in 2014 to foster political commitments towards climate action. End of 2015, these initiatives merged under the new integrated Covenant of Mayors for Climate & Energy, extended to the 2030 timeframe. The new Covenant adopted an integrated approach across the pillars of climate change mitigation, adaptation and secure, sustainable and affordable energy. This became a cornerstone for several EU initiatives and policies including a European Energy Union, which aims to put citizens at the heart of energy transition.

The Covenant of Mayors initiative was certainly enhanced by engaging Neighbourhood East in 2011, supporting local authorities in Eastern Partnership countries within the CoM East experience.

EU programmes within the Eastern Partnership framework offer communities a wide range of opportunities for the energy sector and sustainable economic development, by engaging communities in climate change adaptation and mitigation activities. Unlike state-level strategies, based on a weak top-down approach, the Covenant of Mayors offers a bottom-up method that is capable of stimulating local authorities and citizen (energy consumers) engagement with local energy issues and climate change. This reason behind this approach is to serve the country's ultimate goal of strengthening its energy security. In this respect, Covenant of Mayor Signatories are able to reinforce their EE and energy-saving strategies by gaining relevant knowledge and experience in engaging citizens in activities, cooperating with local and international institutions, providing energy statistics, promoting energy policies and implementing them within the Covenant of Mayors SUDeP (Sustainable Urban Demonstration Projects) framework.

In 2016, the EU Covenant of Mayors movement merged with the UN Compact of Mayors - launched in 2014 as a global coalition of mayors and city officials pledging to reduce local greenhouse gas emissions and enhance resilience to climate change – into the Global Covenant of Mayors.

The situation in EaP countries

EaP countries still face complex geopolitical, social and economic challenges that hamper their energy sectors and sustainable development. Among such challenges are:

- a) insufficient competence of communities, required for developing energy strategies;
- b) lack of financial resources for implementing the energy strategy;
- c) low level of involvement of financial institutions and the private sector in municipal EE programmes;
- d) insufficient government support.

Since the collapse of the Soviet Union, and a decade after the decrease in energy consumption during the 1990s, along with GDP growth, almost all EaP countries experienced a growth in energy demand too. Nevertheless, due to the low level of environmental and energy awareness among the public, poor construction standards, worn-out electricity distribution networks and the energy pricing policy (including high fossil fuel subsidies), energy intensity

remains high while energy efficiency falls behind. Due to the condition of the energy infrastructure inherited from the Soviet Union and the lack of necessary investment, both energy suppliers and consumers consistently suffer massive energy losses. Whilst they carry their post-soviet legacy (including outdated public buildings and infrastructure), the owners of community buildings, school premises and large office complexes remain major stakeholders and influencers in the sustainable energy sector.

Most EaP countries face energy challenges. On average, they are three times more energy-intensive than EU countries³. While some EaP countries earn revenues from energy export or transportation, ensuring their energy security, others remain heavily dependent on energy imports. There are also a number of administrative and financial decentralisation differences between these countries.

While falling far behind European standards, nevertheless, in the political spheres of these countries some steps were taken to aim at complying with the UNFCCC, Kyoto Protocol and COP21 standards, EU directives and Europe's energy policy in general, all of them having signed the Paris Agreement in 2015.

It is important to mention that all EaP countries have developed their own national strategies and relevant laws aimed at supporting these strategies and promoting energy efficiency and energy saving. Armenia, Moldova, Ukraine and Georgia have further developed their NEEAPs, some of which have been approved by their national governments. Some countries are at the stage of preparing their second NEEAPs. Despite the fact that only a few NEEAPs were approved, and regardless of the extent of their implementation, EaP countries, which all share a common Soviet legacy and have a high level of energy consumption due to the massively uneconomical Soviet infrastructure, should be commended for developing these documents.

It is essential that the Intended Nationally Determined Contributions (INDC), developed by Armenia⁴ and Georgia⁵ and submitted for UNFCCC approval, include a number of direct and indirect references to the role of local governments and their commitments to the Covenant of Mayors framework.

Local authorities that are committed to implementing the Covenant are the key players, capable of changing the rules of the game by defining new trends and innovating in business and everyday life by bringing down CO₂ emissions in their regions. Being close to the public sector, regional and local authorities have more opportunities to influence public opinion as well as to mobilise private and public resources for addressing environmental, climate and energy-efficiency issues.

As a result, it was decided that the energy efficiency issue should become the topic of a political report to feed into CORLEAP recommendations towards the 5th EaP Summit.

³ Energy Efficiency: the role of local and regional authorities in Eastern Partnership countries, file note, Karolina Zubel, October 21, 2016

⁴ <http://www4.unfccc.int/ndcregistry/PublishedDocuments/Armenia%20First/INDC-Armenia.pdf>

⁵ http://www4.unfccc.int/submissions/INDC/Published%20Documents/Georgia/1/INDC_of_Georgia.pdf

Current efforts undertaken in the EU and in the EaP countries⁶

The European Union is currently working on a revision of its energy efficiency legislation in order to bring it in line with the commitments entered into under the Paris Agreement. The European Committee of the Regions (CoR) has adopted an opinion on the legislative proposals⁷, and is preparing an opinion on 'Climate finance: An essential tool for the implementation of the Paris Agreement'⁸ which will also form the basis of the participation the CoR delegation at the UNFCCC COP 23 in Bonn in November 2017.

The Covenant of Mayors plays a significant role in the sectoral policy implemented at local and regional levels. The majority of these local policies were promoted by the Covenant of Mayors initiative. 17 Armenian municipalities joined the Covenant, 14 of which are active, out of which 7 successfully submitted their SEAPs, and one signatory is a rural municipality. From Belarus, 23 municipalities joined the Covenant, 18 of which are active, out of which 9 have submitted their SEAPs. From Moldova, 35 municipalities joined the Covenant, 14 of which are active, out of which 12 have submitted their SEAPs. Only one Azerbaijan city joined the Covenant of Mayors and it has submitted its SEAP. 11 Georgian municipalities signed the Covenant and they all have submitted their SEAPs. Tbilisi's SEAP is currently in the process of being monitored. In Armenia, rural municipalities also show great interest in energy efficiency. In Ukraine, the SEAPs are subject to monitoring activities. Five Ukrainian cities have submitted their monitoring reports.

Comparing the proportion of the population involved in the Covenant of Mayors, it is estimated that more than 50% of the population of Armenia and Georgia live in the active municipalities that joined the Covenant of Mayors, while in Ukraine and Moldova the percentage is only 24% and 13% respectively. This can be explained by the fact that the level of urbanisation in Armenia and Georgia is high, and large cities have joined the Covenant of Mayors. But in total, only 20% of the EaP's population reside in the cities that joined the Covenant of Mayors, which is an unsatisfactory result.

In those EaP countries, where regional authorities have sufficient resources and capacity, such as Ukraine or in individual regions with a special status (such as the Nakhchivan Autonomous Republic in Azerbaijan), regions develop and launch regional EE and/or energy-saving strategies on their own initiatives, which are financed by regional funds. On the other hand, in those EaP countries that lack the regional authorities or sufficient financial resources and independence, local authorities are more active. Large and economically powerful cities, such as capitals like Yerevan and Tbilisi, are capable of developing their sustainable energy policies with their own resources, even in terms of lack of capacity or donor funds.

It is important that in the process of promoting sustainable energy policies and strategies, where top-down communication activities are not applied, the bottom-up principle is used, and state authorities and representatives of government are engaged in promoting these strategies. On the subject of state and regional authorities' involvement in promoting EE, it is worth noting the initiative by the CoM, which outlined some guidelines that EaP countries should follow in the energy sector. Armenia, Georgia, Moldova and Ukraine are engaged in the initiative at state level, being coordinated by state ministries and, where possible, by regional authorities. In the South Caucasus region, two republics are engaged in the initiative along with their coordinating ministries. For Armenia, this level of engagement is characterised by

⁶ Covenant of Mayors official web-site: <http://www.covenantofmayors.eu>

⁷ COR-2017-00832-00-01-AC-TRA-EN.docx, Rapporteur Daiva Matonienė (LT/ECR)

⁸ Rapporteur Marco Dus (IT/PES)

the state policy on Energy Security, whereas in Georgia it is in accordance with the programme of association, cooperation and convergence with the EU policy.

The Covenant of Mayors Supporting Structures also play a significant role in promoting this sector; they are the major players. In the countries that have LRA associations, supporting structures are mainly represented by these associations and the respective countries' leading energy companies. In some countries, these associations also combine the role of the sector's leading institution. In Belarus, the Council for Interaction of Local Self-Governments has been established within the Council of the Republic of the National Assembly of the Republic of Belarus, which efficiently coordinates work with local authorities. The role of the supporting structures in promoting energy policies is huge. They not only support local authorities in promoting Sustainable Energy Action Plans, but also reinforce state authorities in developing NEEAPs at national level. They also provide advisory support to specialised credit and banking institutions in promoting energy policies.

Local and international financial institutions, such as banks, specialised credit institutions, donor agencies etc., also play a significant role in the energy sector. Other major players, including EBRD, WB, E5P, etc., prefer to invest money in large-scale projects, which are usually aimed at solving financial issues in big cities, mainly capitals. Small towns, however, have no access to cheap credit facilities. Traditional bank loans, which are offered by local banks and credit institutions, are generally available for small towns, although there are a number of limitations in the legislative field, or national government's approval/guarantee may be required.

Georgia and Ukraine benefit from great opportunities to access donor funds, followed by Belarus and Moldova.

Unlike its neighbours, Armenia is deficient in such a wide choice of international donor funds. The EU, with its various institutions, funds and grants, remains Armenia's major donor organisation. The UNDP is also one of the country's main donors. It carries out projects financed by the Green Climate Fund.

The role of Local and Regional Authorities

Major bottlenecks

Thus when it comes to promoting and implementing a sustainable energy policy, local and regional authorities face the following challenges:

1. A low level of decentralisation, concentration of power and financial resources.
2. Insufficient administrative capacity, lack of skills for implementing energy strategies and policies.
3. Uneven distribution of donor funds among EaP countries. Donor funds are accessible only to large municipalities.

Despite the low level of decentralisation – including political and fiscal decentralisation –, limited numbers of grants and loans, a lack of relevant skills and competence, and sometimes a lack of political will, LRAs in EaP countries have done extensive work in the sphere of energy efficiency, energy saving and clean energy.

Considering that the major share of energy resources is consumed by urban communities, it is evident that the only comprehensive solution to energy problems is local authorities'

involvement in the process, as they remain the main players in implementing state strategies. The only instrument for promoting an energy policy at national level is the Covenant of Mayors initiative, but various international/US, European and local donor funds exist to enable it to be implemented. However, European credit and donor funds remain in first place.

Success stories

EaP countries have fostered different approaches to project implementation. Some countries are actively involved in project implementation at local self-government and state agencies level by cooperating with various state, private and public organisations. Others are in the process of transitioning from donor funding to self-financing for implementing EE projects and reforms.

In this context, it is worth mentioning that Georgia strives to become a climate-neutral country by 2050. This plan is based on the calculations done by municipalities that believe no external help was needed. Georgia plans to establish an Energy Efficiency Fund with a focus on project/investment identification, donor coordination, facilitation of grant-making, and facilitation of technical assistance. It is envisioned that this Fund would eventually cover lending-type investments (in conjunction with private capital), making Georgia independent from external aid.

On the subject of energy efficiency in practice, it is important to mention the projects aimed at influencing people's behaviour. Among such behaviour change projects is the agreement⁹ signed in 2015 between the Tbilisi authorities and the Georgian Ministry of Energy. According to this agreement, a special education practice will be introduced at Tbilisi kindergartens that will help to nurture environmental awareness. The new discipline will embrace topics such as waste management, water resource management, energy efficiency etc.

In Armenia EE provisions included in the law on Yerevan City Small Centre have had a great impact on local authorities. As a result, an EE laboratory has been established at the State University of Architecture and Construction; educational curricula modules for younger pupils have been developed. Armenian LRAs deserve praise for dissemination activities related to EE. Under the EU-funded Civil Society Local Energy Efficiency Network (CLEEN) and thanks to their cooperation with Noyemberian Fine Arts School Armenian National YWCA, they have developed an interactive lesson on "Energy Efficiency and Renewable Energy" for younger children. This initiative, which links the presentation of new drawing techniques with environmentally-friendly technologies, was broadly promoted during the EU Energy Days in late September 2016. Other municipalities are also in the midst of preparing public campaigns that target young people. In the long term, there are prospects that the country might become a photovoltaic solar panels manufacturer.

Belarus implemented an EU-funded programme for employment and vocational education and training in Belarus. The Centre will have laboratories specialised in electrical engineering management, including traditional and renewable energy sources, energy-saving and heat-saving technologies, bioenergetics, and thermal power equipment. It will provide training on water treatment automation, filtration, water supply, production technologies, distribution and energy consumption.

⁹ CORLEAP discussion paper submitted by Tbilisi authorities

In Azerbaijan, the Nakhchivan Autonomous Republic has developed an effective regional energy strategy aimed at ensuring energy security as part of economic growth and the priority development of green energy in combination with other energy saving methods. A number of energy efficiency and energy security projects are financed from the regional budget. In the last 15 years, thanks to the regional policy ensuring energy independence, the region has transformed itself from an energy deficient area into an electricity exporter (to Iran and Turkey). The largest solar power plant in the South Caucasus (EUR 35 million) and four hydroelectric power plants have been built, and the electricity transfer and management system has been fully reconstructed. In 2016, solar power accounted for 6.8% and hydroelectric power for 46.6% of all electricity generated, achieving a 53.4% share of renewable and alternative energy in the Nakhchivan Autonomous Republic. Currently, work is under way to increase the solar power plant's capacity and EUR 0.3 million from the regional budget have been allocated for that purpose. At the same time, thermal efficiency upgrade measures for multi-apartment and public buildings in the cities and villages have been planned and implemented. The region spends over EUR 7 million annually on this. Another trend is the upgrade and introduction of new heating technologies.

In addition, ongoing projects managed by central government representatives in Azerbaijan are specifically targeting LRAs and local players (including SMEs). Such projects include EUR 993 343 for CLEEN, EUR 2.14 million for the Regional Energy Efficiency Programme for Corporate Sector and the South Caucasus Sustainable Energy Finance Facility. The total budget allocated for these types of projects is EUR 5.3 million.

Recommendations

A number of measures could be taken to foster LRAs' role in EE.

- Energy governance should not be overlooked. A multi-level approach with voluntary commitments - valorising local resources - should be prioritized.
- Devolve more powers and responsibilities to LRAs and communities, including decision-making powers on housing and planning and greater financial autonomy.
- Create joint local authority/business/research entities to promote local economic development. According to the European Commission (2012), a more decentralised system would seem to offer more freedom for innovation and therefore competitiveness. More innovative freedom means at least two things: a) the initiation of decentralisation plays a bigger role; and b) there is a much closer relationship between stakeholders, who are more likely to cooperate and imitate and innovate (especially in fields like EE).
- Create a coherent database of knowledge. EE monitoring is a complex and sophisticated process. Many project teams faced similar problems at various stages of their projects. Hence, it would be beneficial to develop a dedicated database of monitoring tools, where the main findings and observations from each project would be stored. This would help in the sharing of knowledge and experience and reduce errors. In this respect, we suggest the development of an efficient online information platform, which would grant free access to each scientist and project manager. Well-structured and easily understood processes can be replicable in space and time, which is useful for both scientists and stakeholders. During the development phase, the importance of simplicity and clarity should not be underestimated.
- Simplification of EE Fund application procedures. The current complicated application procedures are mentioned as the most pressing issue by LRAs from all the countries

involved. Greater flexibility and clearer guidelines would allow public administrations to apply for available funds.

- Enhance EaP municipalities' and regional authorities' involvement in EE and energy-saving projects. Current projects, which have not yet been adopted on a massive scale, are a good example. It is important to promote the application of know-how techniques and best practices within each EaP country, as well as in EU-EaP cooperation.
- LRAs should organise youth campaigns aimed at promoting energy saving and supporting central authorities in identifying possibilities and obstacles. Existing platforms and meetings should serve for sharing experiences and exchanging best practices.
- Push LRAs to include EE components in their communication plans. So far, chapters on energy-saving measures barely exist in the discourse of local planning. The ideas implemented within the majority of the projects not only support environmental monitoring, but the results are used for public engagement and educational and awareness-raising activities for both tourists and citizens. Society can effectively be motivated to take responsibility for environmental protection actions.
- LRAs should support behaviour change towards EE. This includes general EE campaigns.
- Municipalities should promote EE and energy-saving public awareness. They should also provide consultations through engaging various players, such as private sector representatives.
- Buildings need to be recognised as a key component of the energy infrastructure. Building renovation programmes reduce energy demand, provide employment opportunities, yield a return on investments and offer multiple benefits.
- Add EE components in public procurement tender documents. Ensure that authorities select not only the lowest price in the short term but also consider the potential long-term energy usage impact of any procurement related to energy.
- Enhance municipalities' skills and competence. Small municipalities do not have sufficient capabilities to be able to make preliminary assessments of financial investments, or to calculate the cash flow required to promote EE.
- Municipalities should work actively towards advertising their preliminary assessment of financial investments. Municipalities have the opportunity to finance their projects through loans or innovative financing schemes by cooperating with private sector partners. If they want to benefit from the international financial institutions, other financial organisations and grants provided by donors, technical assistance, loans or guarantees, they should be aware of current prospects in this sphere and must advertise their priority projects to potential sponsors in a timely manner. Political support and mayors' strong governance play a significant role in this process.

To cope with above-mentioned challenges and facilitate the implementation of recommendations it is necessary to intensify the cooperation between the EU and EaP governments and LRAs through such platforms as CORLEAP. Exchange of experience and good practice, showcasing success stories, increasing interregional and international cooperation with regard to the energy efficiency measures, holding joint conferences, as well as involving local authorities, NGOs and businesses in the discussions, would all constitute major assets in successful implementation of energy efficiency policies.