

Current State and the Good Practices to Implement Energy Efficiency Obligation Schemes and Alternative Measures

Policy Paper



Current State and the Good Practices to Implement Energy Efficiency Obligation Schemes and Alternative Measures

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LIST OF ABBREVIATIONS/ACRONYMS

EEOs	Energy Efficiency Obligation Schemes
ESCOs	Energy Service Companies
EPC	Energy Performance Contracting
KEEA	Kosovo Energy Efficiency Agency
Ministry	The Ministry responsible for the energy sector
EED	Energy Efficiency Directive
EU	European Union
ESIP 2018-2020	Energy Strategy Implementation Program 2018-2020
EBRD	European Bank for Reconstruction and Development
VA	Voluntary Agreements
MS	Member States
EBRD COOs	EBRD Countries of Operation

1. Introduction

This paper serves as a framework for guiding a discussion on how to introduce and design an effective energy efficiency obligation (EEO) scheme and other alternative measures. It covers the description of Kosovo context concerning EEO, elaboration of key features of EEOs, providing definitions, explanations of the scope and importance and options to consider. The explanations in this discussion paper are supported by evidence from EEOs and other energy efficiency alternative measures in Europe and elsewhere. Additionally, this paper can be used to increase alignment with Article 7 of the European Union (EU) Energy Efficiency Directive (EED; 2012/27/EU), by which EU countries and Energy Community Treaty Contracting Parties (where Kosovo fits), must realize and set a cumulative end-use energy savings target that is implementable until 31 December 2020 either through an EEO scheme, and/or additional 'alternative policy measures.' This paper does not assume that the content of this paper will fully ensure compliance with Article 7; nevertheless, the content of this discussion paper is based on the experience and research of good practices to implement energy efficiency obligation schemes and other alternative measures.

a) Current legal framework in Kosovo

Kosovo has a strong commitment to EU integration. Therefore, it is amongst the countries that have embraced the implementation of the above-mentioned requirements derived from Article 7 of the European Union (EU) Energy Efficiency Directive (EED; 2012/27/EU). Kosovo became a signing party in the Energy Community Treaty in 2005¹ and since then has been driven by the commitment and common vision of the Energy Community. Kosovo has developed its legal framework for the energy efficiency within the energy sector for internal regulation and to ensure that treaty obligations and EU directives are met and followed.

The primary legislation that governs energy efficiency in Kosovo is the Law No.04/L-016 and its preceding Law No. 06/L-079 on Energy Efficiency, by which is presented the broad policy framework for energy efficiency. This followed with the creation of the Kosovo Energy Efficiency Agency as the main body for the development and implementation of energy efficiency policies, and Energy Efficiency Fund that is aimed to enable a sustainable financial flow on project implementation of energy efficiency measures.

In fulfilment of energy efficiency measures, a set of secondary legislation has been passed, such as Administrative Instruction on Energy Auditing; Administrative Instruction on Energy Efficiency Promotion; Administrative Instruction on Home Appliance Labelling - specifying the measures and tasks that must be undertaken within the energy sector. Additionally, other

¹ <https://mzhe-ks.net/en/treaty-establishing-the-energy-community-#.XtgQ1UBuKIU> (accessed on 03/06/2020)

primary legislation that has been processed and that affect indirectly the energy efficiency measures are Law No. 03 / L – 185 on the Energy Regulatory Office, Law No. 03 / L – 184 on Energy, Law on Electricity, Law on the Energy Regulator, Law on Spatial Planning and Law on Construction.

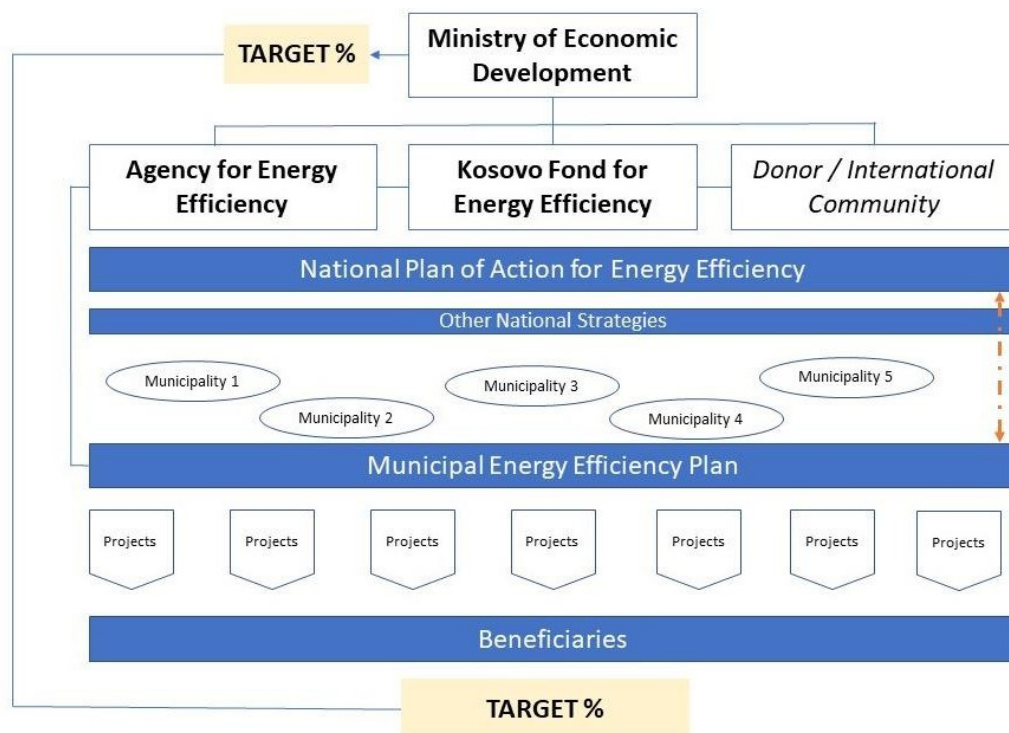


Figure 1: Key actors and policy structure for Energy Efficiency in Kosovo

It is worth mentioning that Article 7 of the Energy Efficiency Directive 2012/27/EU has a key role in the delivery of measures of the EU that aim to achieve a 20% improvement in energy efficiency by 2020. The importance of Article 7 has been further reinstated in the revised energy efficiency directive (EED Directive 2018/2002) as a key instrument in delivery of energy-saving targets set for until 2030. Thus, as a signatory of the Energy Community Treaty as well as being on its path towards EU integration, Kosovo is obliged to also move forward in employing into practice the EEO schemes.

In a similar approach, article 10 of the Law No. 06/L-079 on Energy Efficiency (in Kosovo), articulates who are the Obligatory Parties and sets the cumulative annual energy saving on 0.7% (of total energy sales), whereas transport fuels are excluded from this equation. The effect of exclusion of transport may encourage continues increase of individual motorised mobility in disfavour of public transport development, resulting in the larger split of fuel consumed across the country. In addition to imposing EEO schemes to obligated parties, according to the above-mentioned law, central government reserves the right to take other policy measures to partially achieve energy savings among final customers.

Primary legal framework obliges local authorities to take on a range of actions in support of the national energy efficiency target, such as the development of Municipal Energy Efficiency Plans (MEEPs), in line with the instructions of the Kosovo Energy Efficiency Agency (KEEA). Such plans need to be adopted by the Municipal Assembly and presented to the KEEA. The municipalities are also obligated to develop the MEEP Implementation Progress Report, in line with the instructions of the KEEA. These reports have to be adopted by the Municipal Assembly and delivered to the KEEA. Such MEEPs have now been completed by 15 (out of 37) municipalities².

In addition, Kosovo institutions have produced and updated a number of strategies and plans on energy efficiency, most notably the 1st, 2nd and 3rd version of National Energy Efficiency Action Plan (NEEAP); Energy Strategy (2009-2018) and its Action Plan (2010 – 2018); and Energy Strategy of the Republic of Kosovo (2017-2026) and its Implementation Plan (2018 – 2020).

The Energy Strategy Implementation Plan 2018-2020 which is prepared based on the Law no. 06/I-079 on energy efficiency and its vision states that the aim is ‘to create a developed energy sector, which is friendly to the environment and health, supporting economic development and social wellbeing in Kosovo, under a free and competitive market’. While, for the implementation of objective five (5) of ESIP 2018-2020 are set thirteen (13) measures/specific measures and forty-one (41) activities, in fulfilment of targets and obligations on energy efficiency, renewable energy sources and environmental protection.

To summarise, the following strategies address the reduction of primary energy in Kosovo:

- Kosovo Energy Strategy 2009-2018
- National Development Strategy 2016-2021
- Plan for Sustainable Development, IV Pillars, Energy treatment, Policy Analysis/Strategic Planning Office of the Prime Minister's Office
- ERP- Economic Reform Program (2016)
- Kosovo Public Finance Review of Fiscal Policies for a Young Nation 2014, Report No: ACS9351
- Heating Strategy 2011-2018
- Transmission Development Plan 2012 - 2021
- Distribution Development Plan 2010-2014 and 2016-2022
- Central Heating Development Plan - Termokos
- Action Plan of the Economic Vision of Kosovo 2011-2014
- Long Term Energy Balance 2015-2024³

² Eptisa Final Report: National Building Energy Efficiency Study for Kosovo. 2013

³ 3rd Third National Plan of Action for Energy Efficiency (NEEAP) in Kosovo

Conversely though, although the developed legal framework has been promising a wealth of positive developments, energy efficiency projects have had a patchy implementation at best, whereas at many occasions being driven by the external donor community and development aid. A World Bank report (2016)⁴ emphasizes that regulated energy prices in Kosovo have impaired the cost-reflective nature of energy efficiency measures and thus being considered as the main obstacle of its development. And, EU IPA report⁵ states that Kosovo is lagging in the implementation of the overall energy efficiency target due to lack of financial resources to invest on energy efficiency measures. The energy saving planned under the 2nd Midterm National Plan (2013- 15) was only about half implemented (the achieved energy saving in 2015 is about 4.4% compared to 6% required).

b) Problem statement

Kosovo has enjoyed a steady economic growth post 1999 period, amongst others, resulting in continuing increase of demand for electrical supply. The current supply of electricity relies on two derelict lignite-based power plants and the plans for a new for the coming modern lignite powered plant, have recently been halted⁶. Consequently, this recent development has strengthened confidence of stakeholders in pursuing opportunities in renewables and their added social, environmental and economic benefits.

As demand has been outstripping supply, Kosovo has continuously varied on unpredictable electricity imports, and especially after the new power plant has been put on halt, further intensifying the dependability on energy imports is deemed to follow. On the other hand, during summer months, despite the adverse environmental impacts in running, there is a noticeable electricity surplus produced by those lignite-based plants which is then exported to the regional grid.

Kosovo is subject to harsh winters and hot summer periods, so household heating and cooling has predominantly relied on a mixture of biomass sources and electricity for the first and only electrical-based climate regulators for the later. The continuously increasing energy consumption for both heating and cooling has had adverse environmental, economic and health impacts due to the Kosovo reliance on two ageing and unreliable lignite-based power plants that have caused the spread of vast quantities of ash that pollutes all country's air while ash 'hill' over it is visible from more than 10km away⁷. Similarly, high use of electricity for heating during winter season adds pressure to the outdated supply chain causing power supply

⁴ World Bank 2016, Options for Financing Energy Efficiency in Public Buildings in Kosovo

⁵ https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/ipa_2017_040506.07_ks_eu_support_to_the_energy_efficiency_fund.pdf (accessed on 03/06/2020)

⁶ <https://www.reuters.com/article/brief-contourglobal-says-halted-plans-to/brief-contourglobal-says-halted-plans-to-build-a-500-megawatt-coal-fired-power-plant-in-kosovo-idUSFWN2B91XB> (accessed on 03/06/2020)

⁷ <https://www.worldbank.org/en/country/kosovo/brief/energy-in-kosovo> (accessed on 15/06/20)

interruptions. In result, shortfall in electricity supply has been quoted as a major constraint to business development Kosovo⁸.

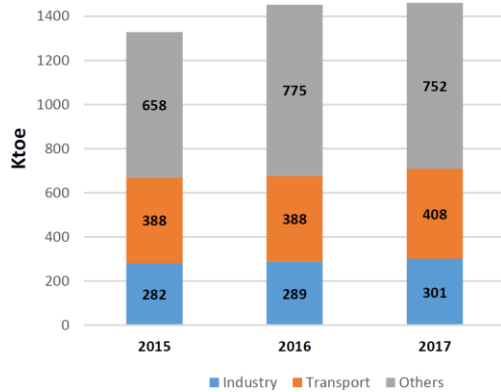


Figure 2: Final and Primary energy consumption per sector in 2015-2017⁹

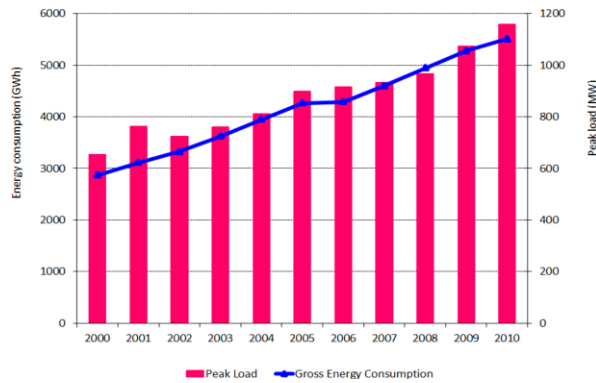


Figure 3: Historical consumption (GWh) and Peak Demand (MW) in Kosovo 2000-2010¹⁰

While in response, several studies done by World Bank, EU and Kosovo institutions have concluded, among other things, that the energy supply gap should be tapped by renewable energy and energy efficiency measures. On October 2018 World Bank has stated that there will be no more support for lignite power plant in Kosovo since ‘the least cost option’ for energy production is now energy produced from renewable sources. This effect has come due to the global expansion of renewable usages, whereas solar and wind power-based application is strongly supported. This in effect promises a low-carbon energy scenario for Kosovo’s current and future energy needs.

2. Framing the EEO

An Energy Efficiency Obligation (EEO) scheme is a legislative, obligatory or a voluntary mechanism that requires the obligated parties (OP) to meet measurable energy savings targets through stimulation of lucrative investments in end-use ¹¹. Profitability of an investment measure is based on consideration of the costs and benefits of energy savings from an overall social perspective. Thus, the cost-effectiveness is not referred to as how economical it is to acquire savings at the lowest cost, but rather to the scope at which diverse benefits that stream from the investment are greater than the full cost of those policies and measures (government, energy companies, and/or end-users).

In addition to designating responsibility for ensuring efficiency actions are undertaken, EEOs

⁸ World Bank 20116, Options for Financing Energy Efficiency in Public Buildings in Kosovo

⁹ Third Annual Report under the Energy Efficiency Directive. Kosovo Energy Efficiency Agency, 2019

¹⁰ Eptisa Final Report: National Building Energy Efficiency Study for Kosovo. 2013

¹¹ Energy Efficiency Obligation Schemes: Policy guidelines. Prepared jointly by the European Bank for Reconstruction and Development and the Energy Community Secretariat (edited 2019)

offer benefits such as:

- the 'polluter pays' principle, as end-users eventually pay for the costs of the EEOs through the monthly bill that they receive from energy supplier;
- reducing strain on public spending since financing comes ultimately from end-users;
- path a way toward a stable outlook that is not sensitive to public budgetary fluctuations and changing government budgetary decisions;
- proven record of being a more cost-effective solution when compared to other energy efficiency policies¹².

For illustration, a 2017 Snapshot Report¹³, Austria had voluntary agreements from 2009 to 2014; Denmark had obligation to deliver energy advice services from the 1990s for electricity distributors and early 2000s for gas distributors, up to 2005; Ireland had voluntary agreements from 2011 to 2013; Lithuania voted a new energy efficiency law in November 2016¹³ reinforcing the voluntary agreement with the energy companies started in 2010; Slovenia had voluntary agreements from 2010 to 2014; and UK: obligation of means (EESoP: Energy Efficiency Standard of Performance), from 1994 to 2002. By and large, EEOs have functioned successfully in both scenarios of monopolistic segments and in liberalized energy markets. They have a proven record within Europe and globally on their flexibility to adapt to local circumstances, which is also noted as their key strength. EEOs can become accustomed to the current energy market, whether that is regulated or liberalized, the common conduct of the obligated parties, energy savings approaches of various end-users and also the local culture. In this sense, this exact potential of flexibility that EEOs enjoy is also a key difficulty that this research has faced in providing specific recommendations; at this occasion, it was settled with supplying provision of possibilities that can be tailored to the local conditions. Though having a monopoly provider in place for electricity, such is the case in Kosovo, can offset the results and the market benefits to be gained from the competitive nature of EEO schemes, that commonly arise in liberalized environments.

EEOs began its implementation globally on the providers of electricity and gas, though more recently, they are also- being placed on providers of other energy forms, for example, road transport fuel, heating oil, district heating, and so on. The global experience has been that it is rare for the energy savings target not to be met¹⁴. This is as a result of the use of financial incentives if the energy savings target is exceeded (common in the United States) or the threat of financial penalties if the energy savings target is not met (common in Europe). The usual

¹² Regulatory Assistance Project, Best Practices in Designing and Implementing Energy Efficiency Obligation Schemes, 06.2012.

¹³ Snapshot of Energy Efficiency Obligations schemes in Europe: 2017 update. Fourth European Workshop of the White Certificates Club. Friday 30th June 2017

¹⁴ Lees, E., and Bayer, E. (2016, February). Toolkit for Energy Efficiency Obligations. Brussels, Belgium: Regulatory Assistance Project. Retrieved from <http://www.raponline.org/document/download/id/8029>

approach identified with EEO's focusses on setting energy savings targets for a few years, more often a three-year period, by the end of which the obligated parties have to achieve certain reductions in energy use by end-users.

As a market-based mechanism, EEOs commonly do not set the measures to be installed. Whilst, OPs are given the operational liberty to define specific measures and their method of implementation, though in consideration of guidance defined by the state. Consequently, conditions are created to allow the free market forces to identify the most lucrative approach on achieving energy savings, subject to the local context. To increase the effectiveness in the delivery of overall energy savings, EEOs need to be complemented by building codes policies, appliance standards, suitable regulatory incentives, and with obligations for energy companies and end-users. While is worth bearing in mind that EEOs are not a universal remedy to reaching all energy efficiency targets and achieving all-encompassing cost-effective capacity. More willingly, they are an instrument with a proven track record of effective delivery of energy efficiency measures, at least when compared to the trend or business-as-usual scenario.

The common set of stakeholders engaged across the EEO scheme implementation are the central government, EEO scheme administrators, obligated parties and private sector. The table below summarizes the roles of each of the above-mentioned stakeholders.

	GOVERNMENT	ADMINISTRATORS	OBLIGATED PARTIES¹⁵	PRIVATE SECTOR¹⁶
ROLES	Establish EE targets Identify type of entity as OP Set sources of funding Define rules & regulations	Negotiate obligations with OP's Establish penalties for failed processess Monitor & verify results on EE	Manage implementation Communicate with end user Ensure quality assurance Track and report regularly	Leverage to sell efficiency Provide funding Install EE measures

Adapted from: Wasserman, N., & Neme, C. (2012)¹⁷

a) Key sections of EEO schemes

The following passage summarizes the key components of an EEO scheme and researched best practices to consider implementation within the Kosovo context. By and large, to ensure implementation of EEO schemes, key guidelines are provided for regulating the following three components: a suitable legal framework, a scheme administration unit and delivery mechanisms for obligated party delivery. Thereby, these components are elaborated into more details below.

Section 1: Legislation

¹⁵ Electricity and/or thermal energy System Operators or retail energy sales companies and/or liquid energy fuel distributors to retailers and/or direct supplying fuels to final consumers operating in the territory of the Republic of Kosovo according to the relevant legislation are considered Obligated Parties of the energy efficiency obligation scheme.
Source: Law no. 06/I-079 on energy efficiency, Article 10/2

¹⁶ Generally, these are service providers; financial institutions; community organisations and/or others

¹⁷ Wasserman, N., & Neme, C. (2012). Policies to achieve greater energy efficiency. The Regulatory Assistance Project with Energy Futures Group and Sleeping Lion Consulting.

Retrieved from: <https://www.raponline.org/wp-content/uploads/2016/05/sleepinglion-nemewasserman-globalproj1-final-2012-oct-16.pdf>

A primary precondition set is the development of a legal framework that treats the EEO schemes. In this regard, a widely accepted approach is for the primary law to cover a description of scheme targets, responsibilities of different agencies and potential reward/penalty schemes for compliance/noncompliance. Whereas, secondary legislation may be then used to illustrate target specific methodologies, calculation of energy savings, the scale of penalty rates, as well as monitoring and verification processes.

Special attention should receive the issue of the legal basis for issuing penalties in case of non-compliance that will incentivize OPs to deliver (see Monitoring and Verification below). This is of relevance to Kosovo and its patchy implementation record across government policies, thus noting that non-compliance will rapidly harm scheme credibility. Likewise, ensuring legal and regulatory framework that accommodates an effective monitoring and verifications systems is paramount to maintaining EEO scheme credibility. Accordingly, clear guidance on requirements to undertake necessary sampling checks (by both by the OPs and by the administrator) on claimed savings are central to gaining confidence in the schemes' effectiveness and ensuring lifelong of operations.

Section 2: Administration

To ensure the EEO scheme cover accreditation, as well as auditing and monitoring, it is required to develop institutional structures and capacities, operational methodologies, monitoring and evaluation processes and systems. By this, to put in place administrative capacity such as skilled staff tailored to the needs, and backup documentation and tools that ensure effective flow of processes. Generally, the responsibility for effective running of the EEO scheme is typically assigned for the 'Scheme Administrator', which includes the key tasks of collecting, approving and accrediting claimed savings as well as undertaking/directing related auditing requirements.

Amongst the tasks of the 'Scheme administrator' is the reporting which is done for at least once a year to the government, and dissemination of information on progress and any challenges stumble upon.

Another key task is the drafting and continuous upkeep of non-legislative documentation such as process and technical guidance for evidencing and submitting claims, and very importantly the maintenance of a centralized database. The task here may expand to support of OPs with the provision of guidance and tools for calculating energy savings. Moreover, the 'scheme administrator' is also in charge of approving actions planned by OP, verifying the performance of each stage of scheme, and taking adequate enforcement action to ensure compliance.

Once the government is set on the overall targets for the EEO, scheme administrator moves forward with the further delegation of targets to the OPs. While it is important noting that target setting needs to follow the logic by which the OPs are proportionally obliged against their

market share in terms of the volume of energy they supply and/or distribute.

‘Scheme administrator’ must ensure that obligations introduced will treat with caution the issue of low-income households, both in the way that the costs are passed through and in not neglecting them in the actual energy efficiency measures installed. Above all, ‘Scheme administrator’ must ensure that the costs of the EEOs to end-use customers and potential market players are fully transparent. In this will way, strengthening a more market-like approach to the implementation of energy efficiency measures and serve as a benchmark for evaluating the cost-effectiveness of EEOs.

In terms of costs, measures should be taken to ensure that 'scheme administrator' component does not create a burden over the public budget. A standard format of staffing should include one full-time equivalent technical expert and one full-time equivalent administrative staff. While, amongst the above-noted tasks, the verification of performance of the OPs is most likely to be outsourced to a panel of independent professionals. In early stages and for a limited time, additional technical support will be needed in the drafting of the obligatory regulations and guidance documents as well as logistics of operations and communications. Afterwards, one should also consider ongoing operational costs.

On the other hand, the experience both within Europe and globally shows that over time, the EEO will incur financial gains on end-user by reducing peak demand and costs to the grid.

Section 3: Delivery structures for OPs

Once the legal framework is in place and the 'scheme administration' is operational, the last step is the defining process of the delivery mechanisms, financial implications, approach and methodologies and monitoring and verifications processes.

The gradual introduction of the EEO schemes with careful planning of stages and sufficient timing allocated for coordination between the ‘scheme administrator and selected OPs, is a key to ensure effective running of the schemes. In this regard, time and resources would have been in place for broadening the professional knowledge on stages of EEO schemes as well as for the idea to mature and settle within the community of OPs. Certainly, though, there should be a mechanism in place to pressure for a timely performance amongst all stakeholders.

It is a common sight for the EEO schemes to stumble upon resistance from OPs, particularly noticeable during initial establishment stage. While, this resistance is understandable considering that commonly OPs have persistently advocated for the increased use of their goods and/or services which in result yields higher revenues, whereas now continuously are required to reduce and/or limit the number of goods and/or service they provide. Since the operation of EEO scheme will have a major financial implication for the OPs and end-user, there

is no surprise on resistance from OPs which will have genuine concerns over costs that associate EEO schemes and the potential risk of becoming disadvantaged within the market they operate (this is applicable for the liberalised markets).

On the positive note, implications for OPs will ultimately deliver a platform of a stable source of revenue and minimized risk. While also offering confidence to the private sector that deals with instalment/servicing of energy efficiency measures to develop sustainable businesses.

Generally, the costs associated under EEO schemes are met by OPs in the form of subsidies from the government along with contributions from end-users such as customers, landlords, local authorities, businesses, religious institutions and other actors. Although, there should be pressure for the cost of the EEO to be part of the cost of business, just like other environmental requirements and will be passed on to the end customer, with an expectation that in future energy market share will be more spread and then competition will ensure that the energy companies deliver their obligations at the lowest cost possible.

3. Kosovo Energy savings target and EEO's place in policy measure mix

a) The contribution of EEO schemes towards the 2020 Article 7 obligation

Based on latest findings from 3rd NEEAP reporting, Kosovo as a signatory of Energy Community Treaty has taken well-acknowledged steps towards energy reductions in primary energy such as in lignite production sector, in the sector of electricity generation, electricity transmission and distribution, heating, network tariffs and regulations, network design and operations.

Article 10 of the Law No. 06/L-079 on Energy Efficiency (in Kosovo), sets the role of OPs and the cumulative annual energy saving on 0.7% (about total energy sales), whereas transport fuels are excluded from this equation. However, there is no evidence to demonstrate any progress on the establishment of EEOs in pursuit of energy savings stated in primary legislation. Therefore, it is rather challenging to discuss the EEO's place in policy measures mix in Kosovo's context.

On the other hand, there is a great deal of experience from the EU Member States that have applied EEOs and other policy measures that Kosovo can learn from. According to the project funded by European Commission: Energy Saving Policies and Energy Efficiency Obligation Schemes (ENSPOL), as of 2015, the following Member States have been using EEOs and alternative policy measures to achieve 2020 Article 7 obligations.

- Seventeen (17) Member States use EEOs (Four (4) Member States use EEOs as the only measure: Bulgaria, Denmark, Poland and Luxembourg);

- Eleven (11) Member States use alternative policy measures (Belgium, Cyprus, Czechia, Deutschland, Greece, Finland, Netherland, Portugal, Romania, Slovakia, and Sweden);
- All Member States (but Sweden) have excluded transport from baseline in the calculation of the target.

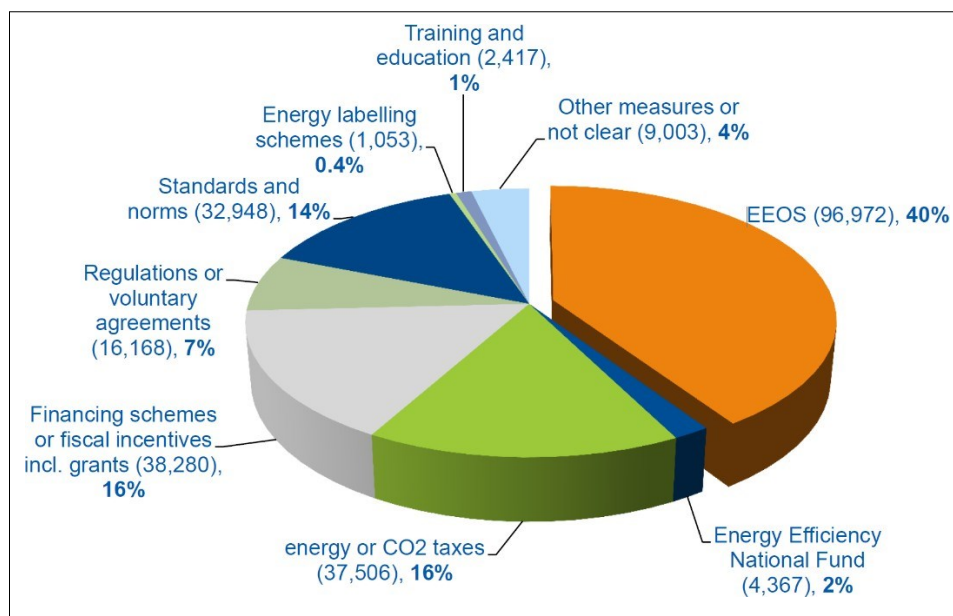


Figure 4: Breakdown of energy savings based on notified savings by type of policy¹⁸

As per reported data from the Member States, EEO scheme is the only policy instrument that delivers the highest share of Article 7 required energy efficiency savings, by 40%. Other policy measures follow up:

- financing schemes and energy or CO2 taxes with 16%;
- standards and norms with 14%;
- regulations or voluntary agreements with 7%;
- other measures 4%;
- energy Efficiency National Fund (2%), and
- energy labelling schemes (0.4%).

As noted, EEOs can deliver a considerable share of a country's Article 7 energy efficiency savings. However, for the EEOs to successfully deliver targeted savings they must be designed and implemented correctly.

¹⁸ Kiela Vilumsone, L., (2015, February). Article 7 of the Energy Efficiency Directive: State of Play. ENSPOL workshop on Article 7 of the EED. Brussels, Belgium.

b) Selecting an effective and coherent policy mix for Article 7

As previously stated, EEOs have proven to deliver a considerable share of a country's Article 7 savings. However, relying only on one policy instrument to deliver energy efficiency savings is deemed to be risky – regardless that several Member States use EEO as their only measure. Considering the rising concerns of consumers incurring all financial expenditures of the policy, and if such a public and political pressure would lead to abolish levy-funded energy efficiency policies, this could have a significant impact on the sustainability of the energy efficiency market. Using only one policy instrument does not enable the possibility to exploit synergies arising from other policy instruments. Carbon reduction measures as required from the Paris Agreement are more likely to be achieved when applying a coherent policy mix.

In addition to imposing EEO schemes to obligated parties, according to the new Law on Energy Efficiency No. 04/L-016, Kosovo's government reserves the right to take other policy instruments to partially achieve energy savings among final customers. These may include (though not limited to), the following policies:

- energy or CO₂ taxes that have the effect of reducing end-use energy consumption;
- financing schemes and instruments or fiscal incentives that lead to the application of energy-efficient technology or techniques and have the effect of reducing end-use energy consumption;
- regulations or voluntary agreements that lead to the application of energy-efficient technology or techniques and have the effect of reducing end-use energy consumption;
- standards and norms that aim at improving the energy efficiency of products and services, including buildings and vehicles, except where these are mandatory and applicable in Kosovo;
- energy labelling schemes, except for those that are mandatory and applicable in Kosovo;
- training and education, including energy advisory programmers, that lead to the application of energy-efficient technology or techniques and have the effect of reducing end-use energy consumption

The new Law on Energy Efficiency stipulates that the Ministry shall adopt secondary legislation to define the percentage of the cumulative target to be achieved through alternative measures and the percentage to be allocated to obligated parties. To this date, the Ministry has not adopted all of the necessary secondary legislation that would define how other alternative measures would operate and thus, contribute to energy-saving targets. Considering the lack of secondary legal framework on alternative measures, the report draws on the experiences of other countries and brings forward the pros and cons of each policy.

Energy or CO₂ tax

The CO₂ tax is defined as an instrument that is used to internalize environmental costs¹⁹. It operates on the polluter pays principle by obliging producers and consumers to pay fees per every ton of CO₂ emissions. The tax has proved to be rather a simple and cost-effective tool to curb adverse impact on climate – greenhouse emissions; however, many states have challenges in dealing with the politics of pricing such a tax.

ADVANTAGES	<ul style="list-style-type: none"> ▪ The approach provides an effective incentive to improve energy efficiency measures and clean energy technologies that substitute for existing fossil fuel-based technologies. ▪ It encourages alternatives to facilitate the transition from a fossil-based economy to clean based energy. ▪ Revenues generated from the tax can be used to subsidize alternative energy sources and initiatives. ▪ The tax increases public awareness on adverse impacts of greenhouse emissions by making producers and consumers pay the social costs and overcome excessive energy consumption – reduce energy demand. ▪ The tax has proved to be a successful tool since many countries have reported a substantial decrease in CO₂ emissions after the policy was introduced.
DISADVANTAGES	<ul style="list-style-type: none"> ▪ The current low-end carbon benchmark of EUR 30 per ton of CO₂ is not sufficient to curb climate damage and cannot meet the objectives set by the Paris Agreement. ▪ Current tax structure of many EU countries is not properly harmonized with all pollution profiles of energy sources: <ul style="list-style-type: none"> ○ Throughout 44 OECD countries, coal has an average effective carbon tax rate close to zero, even though it is one of the most polluting fossil fuels. ○ Eighty-five percent of energy-related CO₂ emissions take place outside the transportation sector. Taxes only cover 18% of these emissions, leaving a tax of zero for the remaining 82% of non-transportation emissions. Only Denmark, the Netherlands, Norway and Switzerland, tax non-transportation emissions at more EUR 30 per ton on average²⁰. ▪ The policy can stimulate tax evasion – companies polluting illegally to avoid tax.

Regulations of voluntary agreements

¹⁹ OECD, Glossary of Statistical Terms, 2001

²⁰ OECD, Taxing Energy Use, 2019

According to the report prepared by The Policy Partners and SQ Consult, Voluntary Agreements are “considered as a contract between the government and industry or negotiated targets with commitments and time schedules on the part of all participating parties”. VAs are seen as actions taken by various stakeholders that collectively go beyond regulatory energy efficiency requirements. In most countries, VAs are considered to act as a stand-alone policy tool with little overlap with regulatory instruments²¹. The report draws on the definition set by the International Efficiency Agency (1997) on VAs, and reflects on current practices and efficiency of the policy in achieving energy saving through equipment and appliances.

ADVANTAGES	<ul style="list-style-type: none"> ▪ VAs are considered to be as an efficient policy tool when there is a need for policy actions and current regulations are not practical enough to achieve that. ▪ VAs with proper essential elements can support policymakers in achieving national objectives on energy savings. ▪ VAs can be used for industrial companies to benefit because they are granted financial incentives, e.g. energy tax reduction.
DISADVANTAGES	<ul style="list-style-type: none"> ▪ The challenge is to keep a good balance in benefits among participating companies, costs of participation and reduction of benefits for companies. ▪ Challenge to keep a good balance in benefits among the government and participating companies.

Energy Labelling Schemes

Energy labels were first introduced throughout Europe for several household appliances in the 90's. The policy is considered to generate substantial savings cost-effectively. Currently, the scheme has a comparative evaluation scale for energy performance of household appliances from A, being the most efficient, to G, being the least efficient, applicable for 25 categories of household appliances. The policy helps the consumers to choose among products considering energy efficiency performance and encourages producers to be more innovative in manufacturing²².

As of 2019, 6 product groups of household appliances were relabelled: 1) dishwashers; 2) washing machines and washer-driers; 3) refrigerators, including wine storage fridges; 4) lamps; 5) electronic displays, including televisions monitors and digital signage displays; and 6) commercial fridges.

Furthermore, EU introduced an additional regulation, eco-design, aimed to complement the

²¹ Effectiveness of Energy Efficiency Voluntary Agreements, Final report. Frank Klinckenberg (The Policy Partners) Mirjam Harmelink (SQ Consult). 2017

²² https://ec.europa.eu/info/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/energy-label-and-ecodesign/about_en. Accessed on 05/06/2020

energy labelling policy. The newly introduced tool requires minimum standards to be implemented from producers: energy use of appliances when not operational (standby mode), maintenance convenience and rather easy access to spare parts from consumers. Besides supporting energy-saving targets, the eco-design requirements also contribute in realizing waste recycling and circular economy concept²³. Both tools are based on Ecodesign Directive and Energy Labelling Regulation as determined from the European Commission.

ADVANTAGES	<p>The policy has proved to be a very successful energy-saving tool:</p> <ul style="list-style-type: none"> ▪ According to the Internal Commission (European Commission) estimations, the total annual final energy savings of new labelling system by 2030 is calculated at 38TWh/year, equivalent to the annual electricity consumption of Hungary. ▪ The new eco-design regulation is expected to increase energy savings by 2030 at the level of 94 TWh/year, equivalent to the annual electricity consumption of Belgium and Luxembourg.
DISADVANTAGES	<ul style="list-style-type: none"> ▪ The current design of the label layout does not allow easy comparison with other similar product models in the market and therefore limiting their effectiveness, which highly depends on what and how it is presented to consumers. ▪ The Ecodesign Directive focuses specifically on the energy consumption in the use phase, thus neglecting the environmental impact of all the other life cycle phases of products.²⁴

Standards and norms

These are policy measures established by MS that are aimed at improving the energy efficiency of (for example) products, services, buildings and vehicles. The parties under these schemes are 'implementing public authorities'. Standards and norms are seen as a tool for removing energy-inefficient options from the market. This policy functions to enable other efficiency policies to work. Without standards and norms for measuring the efficiency of products, homes, insulation materials etc. most policy instruments would not be able to function. They are therefore not so much complementary as much as foundational for all policy instruments. Standards and norms help ensure that the quality of technologies adopted is high, increase transparency and reliability, and reduce information asymmetries, which in turn reduces transaction cost²⁵.

Kosovo has adopted three regulations at the end of 2018 that deal with minimum requirements

²³ https://ec.europa.eu/commission/presscorner/detail/e%2Bn/MEMO_19_1596. Accessed on 05/06/2020

²⁴ Russo, A. C., Rossi, M., Germani, M., & Favi, F. (May 2018). Energy Label Directive: current limitations and guidelines for improvement. 25th CIRP Life Cycle Engineering Conference, May 2018, Copenhagen, Denmark.

²⁵ Energy Saving Policies and Energy Efficiency Obligation Schemes, D5.1 Combining of Energy Efficiency Obligations and alternative policies

for energy efficiency in buildings:

- Regulation for minimum requirements for the energy performance of buildings;
- Regulation for minimum requirements for the energy certification of buildings;
- Regulation on national calculation methodology for integrated energy performance of buildings.

ADVANTAGES	<ul style="list-style-type: none"> ▪ Minimum efficiency standards might be a suitable mean of reducing industrial energy demand, as they address the main obstacles to the take-up of cost-effective energy-efficiency measures in the industry: risk aversion and uncertainty.²⁶ ▪ Standards and norms have a reinforcing impact on all other policy measures.
DISADVANTAGES	<ul style="list-style-type: none"> ▪ As industrial processes can be very (sub)sector-specific, standard-setting might be challenging; ▪ Combinations of policy instruments providing financial incentives are more problematic and the expected effects are diminishing.

Financing schemes and instruments or fiscal incentives

In Kosovo, there are a number of financial schemes and instruments in place that offer project financing and loans to implement energy efficiency programs. A large number of these financial schemes are funded from donor agencies operating in Kosovo (World Bank, EBRD, GIZ, USAID, EU etc.). Up to date, most of the financial schemes implemented in the country have financed energy efficiency programs only for public buildings.

Kosovo has limited experience in dealing with various financial models, therefore the paper has looked into some of the international experiences. The World Bank report on energy efficiency financing options for public buildings has identified²⁷ three appropriate financial models²⁷.

1. Budget financing with capital recovery. The model is based on the method of capturing energy cost savings. The Ministry provides funds for EE investments and recovers the costs by reducing future budgetary outlays – meaning reduced budgets for energy bills of the budget agencies in future years.

²⁷ The World Bank. (September 2016). Europe and Central Asia: Energy Efficiency Financing Options Papers for Kosovo.

ADVANTAGES	<ul style="list-style-type: none"> ▪ The model works well for the central and local level because there is no risk of non-payment and is easy to implement. Municipalities can engage with such a model even if they do not have any credit history. ▪ Does not require any investment from the public agencies
DISADVANTAGES	<ul style="list-style-type: none"> ▪ Requires active participation of the responsible ministry and establishing a special mechanism to manage the model ▪ There is no guarantee that the model will work sustainably

2. Energy Efficiency Fund (EEF) is an independent financing institution that uses public funds to provide finance for public energy efficiency projects. The Law on Energy Efficiency in Kosovo has already established the EEF as an instrument and has set forth all necessary steps on how to functionalize the mechanism. However, bringing forward the advantages and disadvantages of the policy will help guide the discussion in the process of implementing the law requires.

ADVANTAGES	<ul style="list-style-type: none"> ▪ Will address the needs of all public agencies ▪ A good platform to introduce Energy Saving Performance Contracts (ESPCs) and ESCO industries
DISADVANTAGES	<ul style="list-style-type: none"> ▪ The model may need payment security mechanism to be set up to secure payments for services ▪ The current model foresees investments only in public buildings, while the residential sector has the greatest portion of energy consumption in Kosovo

3. ESCOs are specialized energy service companies ranging from equipment installers, building companies, heating companies, auditors, and building assessors. The Law on EE allows for ESCOs to be established as registered entities in the respective ministry responsible for business registration. The Law took a slightly different approach from the World Bank report recommendation. The report recommended going for the establishment of Super ESCO, a public institution. Although the law provides a set of stipulations that guide how ESCOs can be established and operationalized, the paper brings forward some of the advantages and disadvantages of the model.

ADVANTAGES	<ul style="list-style-type: none"> ▪ A good tool to unlock energy saving potential in the market ▪ The average ESCO market of the EU has been on a steady rise ▪ Potential for creating job opportunities in the energy sector
DISADVANTAGES	<ul style="list-style-type: none"> ▪ The policy regulating the energy service market development has proved to be rather complex, globally. ▪ In many countries, local energy providers can be key actors in the process of developing the energy service market and thus it is quite important to understand how to stimulate the implementation process.

Training and education

Training and education including energy advisory programmes is considered a must in all potential scenarios of policy assembly. Relying on the backing of Article 7 in EU Directive, as well as Kosovo primary legislation, training and education policy needs to ensure a continuous flow of technical know-how and suitable certification in the sector that has the effect of reducing end-use energy consumption.

Kosovo has experience in these practices, the Commission for Certification of Energy Managers and Auditors (CCEMA) was established in 2012 by being considered as an essential tool for accomplishing energy efficiency targets. By operating under its respective line ministry, its main objective is to establish for providing well-trained and qualified experts, as well as certifying them. There were 52 trained and certified Energy auditors in Kosovo, while as part of Project were the commissioning of energy audits.

On this regard 65 energy audits took place in 2009/10 commissioned by European Commission Liaison Office. This project was followed by EE measures in 63 schools and in hospitals at the local level. The energy-saving measures in these buildings included: insulation of walls, replacement of windows, insulation of roofs and basements and installation of EE lighting. All energy audits were carried out in buildings belonging to the public sector (both central and local level). And, more recently a 'Training of trainers' program for energy auditor is implemented in 2019²⁸.

Interaction between policies

The key concern of Member States is which policies can complement each other and thus create a coherent policy mix. As stated above, a large number of Member States are already applying a number of measures to achieve saving targets.

²⁸ Non-statutory audit report, Office of the auditor general. 2015

During the process of selecting a coherent policy mix, it is of utmost importance to understand the issue of policy interactions, especially when planning to introduce an EEO to existing policies, or new EEO and policies simultaneously as is the case in Kosovo. The main reason is that policy interactions take place among two and more policies targeting similar sectors.

The ENSPOL team has developed an analysis of policy interaction within EU Member States. The analysis has been made using literature research and using expert opinions. The table below will help initiate a wider discussion among policymakers and experts on selecting the best policy mix – as stipulated from the new law on energy efficiency. The analysis has determined definitions for three possible interactions between policies²⁹:

- 1) Complementary combinations deliver more savings than the policies individually;
- 2) Neutrally combinations deliver the same as the policies individually;
- 3) Overlapping combinations deliver less than individual policies.

Policy Type	Interaction with other policies
Energy Efficiency Obligations	<u>Overlapping</u> with tax rebates, grants, loans and on-bill finance. Neutral or complementary with other policies.
Regulations	<u>Neutral</u> or <u>complementary</u> with all policies except voluntary agreements.
Voluntary agreements	<u>Neutral</u> or <u>complementary</u> with all policies except EEO and regulations.
Energy or CO2 taxes	Always <u>complementary</u> .
Standards and norms	Always <u>complementary</u> .
Energy labelling schemes	Always <u>complementary</u> .
Information, advice, billing feedback, smart metering	Always <u>complementary</u>

Figure 5: Summary of interactions by policy type³⁰

4. Scenarios/methods and business models to achieve targets of Kosovo

a) Review of best practices and status of EEO schemes and alternative measures

Due to the widespread implementation of EEO schemes globally, identification of experiences is an effortless endeavour, though models identified came with a varying degree of success rate. Parenthetically, the following chapter summarises few of the lessons learned with successful implementation across the region and globally in an attempt to ease the Kosovo path towards setting and implementation of the EEO schemes.

²⁹ ENSPOL (September, 2016). Energy Saving Policies & Energy Efficiency Obligation Scheme. Final Report.

³⁰ ENSPOL Final Report, 2016

While it's worth noting that EEO schemes have been operational in quite a few EU member states before the introduction of the EU Energy Efficiency Directive. More specifically and active up until 2013 - in Denmark, France, Italy and the UK³¹. Each of these state schemes has been increasing the energy savings targets to be achieved, while also evaluating progress and amending scheme rules to meet changing objectives and circumstances. This only strengthens the argument that tried and tested policy approach has been adopted with Article 7 of the EU Directive.

The longest-running EEO schemes are those in the UK and Denmark, both in operation for more than 25 years. In the UK, EEO schemes application originally began in 1994 when the national government-imposed energy efficiency obligations on energy suppliers. Suppliers were allowed to charge on the bills of residential and SME's customer to meet energy savings targets. From 2002 onwards, SME's were removed from the scheme, which is a unique approach entirely within the EU. While through the years, the scheme has undergone reinvention of its objectives, measures, savings, costs and mechanisms have varied over time at approximately every 3 years. The OPs are 15 suppliers of electricity and gas suppliers that have been allowed to implement their activities, and/or engage in partnership with third parties (such as social housing associations, retailers, manufacturers, etc.) aiming to deliver projects.

Similarly, in Denmark EEO schemes were applied since the early 1990s with the scheme covering residential households, industry, trade and services sector and the public sector, while from the year 2000 onwards, the gas distribution companies got involved with the scheme. With the district heating and oil companies joining in 2006, more demanding requirements of performance were set from the year 2006. Whereas, more recently, a 2015–2020 target is set at equivalent to saving 3% of total energy in Denmark (excluding transport)³². Generally, households account for 30% of the energy savings, about 20% of the savings are achieved in the service sector (public and private) and 1% in transports. Energy distributors (natural gas, electricity, district heating and oil) are appointed OPs, covering all end-use sectors (except transports). Furthermore, OPs can arrange contracts with other contractors (consultants, energy traders, technical teams of craftsmen, installers, etc.) that will implement projects for end-users.

More closer to our region, in Slovenia, since the Article 7 of the EU Directive is in force, has set a good example to follow with their step-by-step approach of building upon existing nationalised 'Eco Fund' that funded energy efficiency activities by raising funds through taxation. This already running infrastructure, enabled a smooth transitioning to a functioning

³¹ Energy efficiency obligation schemes: their future in the EU. Tina Fawcett & Jan Rosenow & Paolo Bertoldi. 2018. Available from: <https://link.springer.com/article/10.1007/s12053-018-9657-1>, accessed on 18/06/2020

³² Snapshot of Energy Efficiency Obligations schemes in Europe: 2017 update. Fourth European Workshop of the White Certificates Club. 2017

EEO scheme. At about 70% of the energy savings in the year 2015 derived from three types of intervention: fuel additives in transport, application of energy management systems in the industry, and renovation of heating sub-stations in district heating. They have set OPs that are suppliers of heat/district heating, electricity, natural gas, and liquid and solid fuels to final customers in all end-use sectors. While lacking the practices of the trading market, OPs in Slovenia can fulfil their obligations by making a payment to the 'Eco Fund'.

Bulgaria, on the other hand, had a rather bumpy start of EEO scheme implementation in the year 2014, mostly affected by changes in government at the time. While, more recently with the clarity on targets, mechanisms for cost recovery, and enforcement procedures for non-compliance managed to acquire OP investments of €25M in 2018 and €50M in 2019-2020. As set, OPs are all distributors of energy to end-user beyond a threshold set (depending on the energy type), excluding fuels for transport. A varied set of actions were approved across all sectors as long as they could prove energy savings. A common practice of monitoring results is used the Energy Audits with before/after comparisons. In the previous scheme implemented up to the year 2016, obligations were also allocated for the large industrial companies and public authorities with the added benefit enabling these large OPs to get energy savings credits. Most of the energy savings reported so far have been achieved in the industry.

Greece in the reference year 2017 has commenced the EEO scheme implementation obliging OPs such as electricity, gas and oil products (LPG, gasoline, diesel and heavy fuel oil) retailers with the option of paying into an EE Fund to buy-out a proportion of their target and also penalties for not complying. Set OPs consist of suppliers or retailers whose market share is higher than 1% and representing in total at least 95% of the sold energy for each fuel separately electricity, gas. OPs may implement projects themselves, as well as through subcontracting and/or partnerships, while the exchange of energy savings between OPs is also permitted.

Regarding the Energy Community Contracting Parties, there are no EEOs in place yet, although steps have been taken in their preparation.

In Bosnia and Herzegovina, the primary legislation is adopted, while the secondary one is in draft form, yet to be adopted. The EEO features in the latest NEEAP and the scheme has been under development for 3 years with the support of USAID. A high-level roadmap for the EEO has been drafted as well as a detailed guidebook and other associated secondary legislation³³.

North Macedonia finally approved its Law on Energy Efficiency. However, the existing secondary legislation will have to be amended or issued new ones to implement the Energy Efficiency Law. An EEO scheme in combination with alternative measures is foreseen but the relative weightings between measures are yet to be decided.

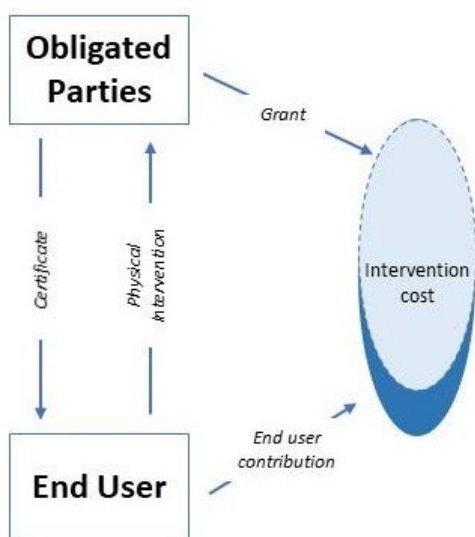
³³ Energy Efficiency Obligation Schemes: Policy guidelines

Serbia is yet to make a formal decision regarding its policy approach to Article 7 of the EED and whether to adopt an EEO scheme. The country is receiving support from the EBRD’s Regional Energy Efficiency Programme Plus (REEP Plus) in this process. Both an EE Fund and an EEO scheme are under consideration. The main barriers at present are the lack of ministerial capacity and competition in the energy supply market for electricity, as well as the combination of low electricity prices and a sluggish economy.

b) Business models/scenarios of EEOs

In regards to the operational model, research has found that the predominant delivery mechanism for the EEO schemes has been grant financing, whereby the first and foremost, it must be ensured that the cost-recovery mechanism is implemented through tariffs, as this is compulsory to successful delivery, without it – there is very limited scope for successful business delivery of EEO schemes³⁴. Also, EEO schemes need to be carefully planned and thought from the perspective of the end-user in a sense of calculating how much are they willing to contribute themselves to entice end users to take upon the energy efficiency measures³⁵.

As mentioned earlier, the key strength of EEO scheme is their potential to adapt to the context, thus there are numerous business delivery models applied across the EU countries and globally. From that, it is possible to distinguish two of these models that in essence promote 'the polluter pays principle' and that have the potential to get ahead within the Kosovo context.



Model 1: 'Scheme administrator' sets the targets for the OP, and then OPs engage directly with the end-user to identify joint investment opportunities in energy efficiency measures. Then OPs subsidise a part of the cost of investment (such as building insulation), while end-user contributes as well financially. The costs are recovered through initial increased tariffs and the average leverage rates are 2:1. Optionally, scheme administrator can have the powers to limit OPs on collecting a charge to end-user. By which, the scheme administrator would be responsible for implementing the energy efficiency measures, in this way providing a reliable source of income.

Figure 6: Graphical representation of Model 1: Directly by the OP who installs the EE measure itself (possibly via a subsidiary unit)

³⁴ Energy Efficiency Obligation Schemes: Policy guidelines. Deep Dive on Key Policy Mechanism That Can Be Deployed under Article 7 of the Energy Efficiency Directive. Prepared jointly by the European Bank for Reconstruction and Development and the Energy Community Secretariat. February 2019

³⁵ EU Energy Efficiency Directive (2012/27/EU): Guidebook for Strong Implementation

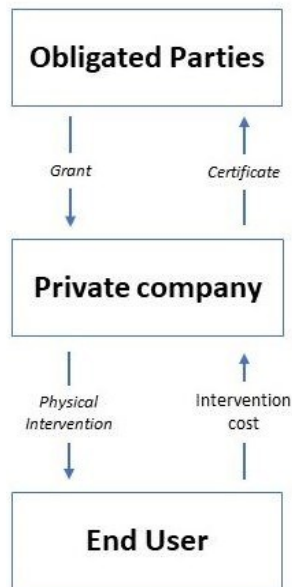


Figure 7: Graphical representation of Model 1: Provide to a third party contracted by the OP to install an EE measure

Model 2 is similar to the previous model, aside for introduction of the private sector energy installation firms as an intermediary between the OPs and end-user in a sense of providing specialised advice and interventions. In this way, OPs engage specialised firms and provide them with a grant. Then these smaller firms engage with end-user in identifying and implementing energy efficiency measures. The end-user also contributes to the investment costs, whereas again cost is recovered through initial increased tariffs from the OPs for a limited time.

5. OPs and targets

a) Energy: Supplier vs Distributors

The decision on whether to place the obligation on either the supplier or the distributor is linked to the energy efficiency history of the utilities, and the local culture of energy efficiency delivery and local status of the energy market is liberalised or vertically integrated. As documented universally, there is no fast rule on who to oblige - both approaches have functioned. It is worth noting that EEOs have started their lifeline on vertically integrated electricity utilities and then expanded on into non-regulated heating fuels (such as heating oil, or LPG), solid fuels, road transport fuels, etc³⁶.

While in Kosovo, 92.3% energy supply is provided by Kosovo Energy Corporation (KEK) with only 7.7% based on renewables³⁷. Whereas, Kosovo Energy Distribution and Supply Company (KEDS) is a company operating throughout Kosovo having the exclusivity for electricity distribution in the territory of Kosovo. Since May 2013, Kosovo Energy Distribution and Supply split from KEK and started its operational activities as a joint-stock company. KEDS is owned now by Turkish companies Çalık Holding and Limak. In November 2018, Kosovo Business Registration Agency registered a supply company Elektroserver, wholly owned by the Electric Power Utility of Serbia, EPS. Licensing of a Serbian supplier in Kosovo is a precondition for the entry into force of the Connection Agreement between ENTSO-E and KOSTT³⁸.

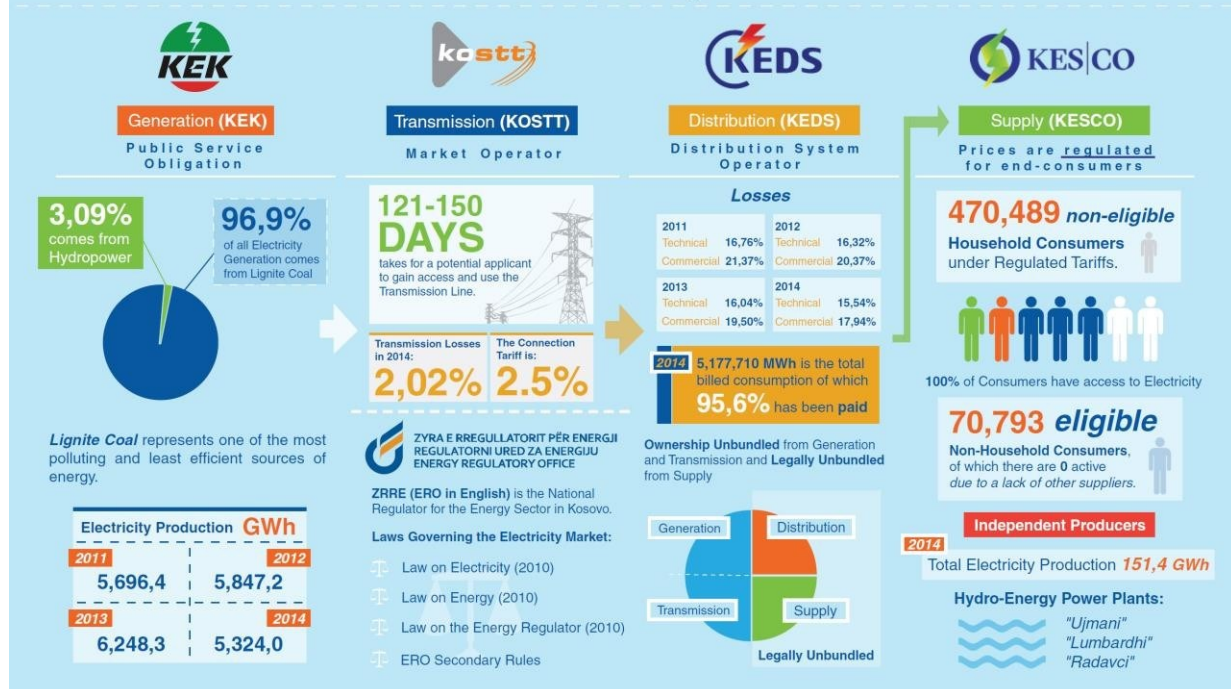
³⁶ Lees, E., and Bayer, E. (2016, February). Toolkit for Energy Efficiency Obligations. Brussels, Belgium: Regulatory Assistance Project. Retrieved from <http://www.raponline.org/document/download/id/8029>

³⁷ The Prospects for an energy Market in Kosovo: The Case of Electricity. INDEP, 2015

³⁸ <https://energy-community.org/implementation/Kosovo.html> (accessed on 06/04/20)

Electricity Market Structure Map

The energy sector represents the backbone of economic development and is a key political tool towards regional integration. Indeed, how the electricity sector functions also radiates into the way we consume it, the price we pay for it, and the goods and services offered. It also indirectly affects our disposable income for other goods and services. Namely, the more money a household spends on electricity the less it can afford to spend on other things.



Source: The Prospects for an energy Market in Kosovo: The Case of Electricity. INDEP, 2015

District heating services in Kosovo are present in three cities: Pristina, Gjakova and Mitrovica -, with coverage to a maximum of 5 - 7% of the building stock in those cities. With the financial support of KfW, Kosovo B plant has been transformed into a combined heat and power (CHP)-cogeneration type facility to supply a large part of Pristina with heating and so increase the proportion of customers connected to the district heating network.

b) Range of the Fuel Coverage

Electricity was the default OP on all EEOs, and where applicable - natural gas is also widely obligated. While more recently different fuel suppliers and distributors have been obligated as shown in the table above. It is worth noting that the costs of implementing EEOs for OPs decrease steadily with economies of scale, thus smaller OPs may create difficulties due to their cost increase. A common remedy to this is the exemption of smaller OPs until they reach a certain percentage of the market such as examples in France, Italy, Great Britain³⁹. Alternatively, practices in USA is that smaller OPs to pay into a common fund that aggregates all the contributions. The scheme administrator or an administrator of the fund then delivers the energy savings.

³⁹ Lees, E., and Bayer, E. (2016, February). Toolkit for Energy Efficiency Obligations. Brussels, Belgium: Regulatory Assistance Project. Retrieved from <http://www.raponline.org/document/download/id/8029>

c) End-Use Sectors

Available end-use sectors are those where energy savings can count toward an obligated party's EEO. There is a wide range of available end-use sectors and these usually are Residential, Commercial, Public, Industry, Transport and Agriculture. Deciding on the end-user sector is linked to the identification of the utmost energy savings potential. For illustration, the table below presents the eligible end-use sectors in EU:

Table 1. Eligible end-use sectors in EU

Residential (9/9)	Commercial (8/9)	Public (8/9)	Industry (8/9)	Transport (6/9)	Agriculture (5/9)
Austria, Bulgaria, Denmark, Spain, France, Ireland, Italy, Lithuania, Poland, Slovakia, UK	Austria, Bulgaria, Denmark, Spain, France, Ireland, Italy, Lithuania, Poland, Slovakia	Austria, Bulgaria, Denmark, Spain, France, Ireland, Italy, Lithuania, Poland, Slovakia	Austria, Bulgaria, Denmark, Spain, France, Ireland, Italy, Lithuania, Poland, Slovakia	Austria, Bulgaria, Denmark, Spain, France, Ireland, Italy, Slovakia	Austria, Bulgaria, Denmark, Spain, France, Ireland, Slovakia

Adapted from: Lees, E., and Bayer, E. (2016, February). Toolkit for Energy Efficiency Obligations. Brussels, Belgium: Regulatory Assistance Project. Retrieved from <http://www.raponline.org/document/download/id/8029>

6. Policy measures and energy savings obligations by sector (some of the possible measures)

When developing an EEO model, the sector to be selected must be defined, clearly stating whether obligated parties can achieve savings in all sectors or only in some. Options include all sectors, housing sector, commercial sector, industrial sector, public sector, transport sector, and a combination of the above. The advantages and disadvantages of these options are summarized below:

	Advantages	Disadvantages
All sectors	Flexibility for obligated parties	More complex than focusing on only one or two sectors
Housing sector	Great potential for simple and replicable measures for energy efficiency Because these customers pay the majority, they would have the greatest benefits from EE measures It is possible to implement simple procedures for monitoring and verification	A large number of involved actors
Commercial sector	Smaller number of actors involved	Technical measures potentially quite complex Payback periods requested short
Industrial sector	Smaller number of actors involved	Technical measures very complex Payback periods requested short
Public sector	Smaller number of actors involved	Technical measures potentially more complex Donor money and soft loans available

Transport sector	Emission reductions in the sector usually do not contribute as much as other sectors	Technical measures potentially quite complex Limited potential for replicable energy efficiency measures
Combinations	Flexibility for obligated parties	More complex than focusing on only one or two sectors

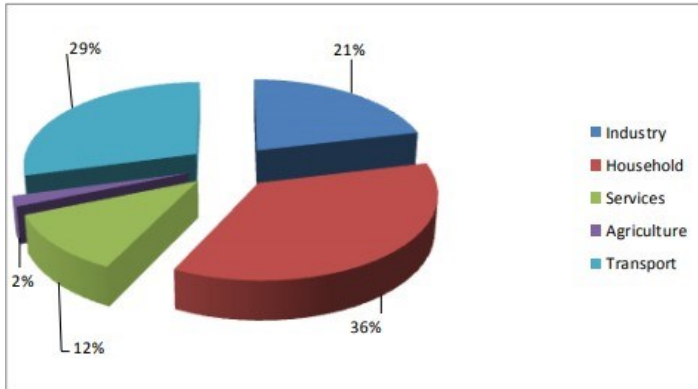


Figure 8: Final energy consumption

INDEP recommends that Kosovo initially focuses on the residential sector, as this sector provides significant potential for replicable, low-cost energy efficiency measures. Also, domestic buildings are major contributors to energy demand in Kosovo – 36% as shown in Figure 9. In addition, vulnerable customer programs can be incorporated into the EEO scheme to help vulnerable customers reduce their energy usage. Most of the EEO models in Europe have delivered most of their energy savings in the residential sector.⁴⁰

To increase energy efficiency the following measures should be considered as priorities:

- Development of national building renovation strategies in line with the Energy Performance of Buildings Directive;
- Programmes to replace household stoves, insulation of facades, and replacement of energy inefficient windows and lighting;
- Setting up long-term financing programmes at low-interest rates for investments in refurbishment, modernisation, and construction of residential, commercial and public buildings, with high-efficiency standards and large use of distributed renewable energy solar, biomass heating, heat pumps (e.g. as implemented in Germany by the KfW);
- Development of strategies for the decarbonisation of district heating networks in cities (replication of co-generation project of Prishtina central heating);
- Supporting SMEs to manufacture locally energy-efficient technologies/appliances, and small renewable energy equipment, for households: e.g. efficient biomass/biogas heating boilers, solar heating panels or heating/cooling pumps;
- Introducing obligatory energy audits based on Article 7 and 8 of the Energy Efficiency Directive.⁴¹

⁴⁰ Draft Energy Efficiency Obligation Scheme Outline for Bosnia and Herzegovina

⁴¹ Agora Energiewende & Energy Community Secretariat | Supporting the Energy Transition in the Western Balkans

7. Energy savings monitoring, reporting and verification system

This is a crucial segment of the EEO development, it includes steps that set a target, rules for determining the energy savings and procedures for monitoring and verifying that those energy savings claimed have indeed materialised. Generally, a set of rules need to be set for:

- i. Desk-based validation of energy efficiency measures installed
- ii. On-site inspections of a sample of the measures installed
- iii. Quality control of the measures installed

The monitoring and verification roles need to be carried out by the 'scheme administrator' and there are different approaches for large vs small projects. The first check is to ensure there are no fraud elements involved for example confirming that the energy efficiency measures have been installed. Then for the larger projects that have independent monitoring, this is a rather simple process. Whereas, for the projects that have used deemed energy savings, the 'scheme administrator' could use the sampling approach. By this, the 'scheme administrator' will contact the beneficiaries' premises to confirm the energy efficiency measures that are declared by the OP. At this point, it could also be possible to collect data on the client feedback and potential improvements for the approach. While ensuring that EE measures have been properly installed and achieving customer satisfaction as this is important for repeated business and ease of project development in future. Yet again, this is an area where it is clear that technical expertise is often required for the administrator to check that the savings claimed are indeed valid.

On another note, it should be taken into account that a Monitoring and Verification Platform (MVP) developed by GIZ is under implementation in other Energy Community countries. It is an innovative web platform, based on a bottom-up methodology for calculation of energy savings.

8. Conclusion

An energy efficiency obligation scheme, correctly designed, can successfully deliver sustained energy savings over multiple years. It is flexible and can be designed in a variety of way to meet national needs and to fit within very different policy mixes. EEOs have been used to deliver savings primarily through upgrading the building stock, early replacement of inefficient appliances and equipment, and improving industrial processes—efficiency savings which are not covered by minimum standards or regulations. EEOs have delivered considerable energy savings and are expected to do so into the future. In total, 15 EU countries now have an EEOs, while the other member states have not adopted EEOs and are not currently planning to do so. In addition, as elaborated earlier EEOs have delivered higher energy savings in Denmark and the UK, there has been public and political concern about the cost to bill payers, and this influenced the reduced ambition levels of the UK and Danish EEOs.

INDEP's analysis of existing EEO schemes indicates that most schemes have grown incrementally and steadily in scale. Besides the savings target, the number of obligated parties (and linked markets) has grown over time. Most schemes focused so far on the residential sector, promoting low-cost measures like roof insulation. When the aim is to have a scheme with many active parties, rules need to be kept simple, transparent and easy to understand.

EEOs are a proven and effective route to delivering incentives for verified, low cost, mass-market measures. Most countries have decided that alternative policies outside the responsibility of utilities are necessary to meet their energy savings target. Both EEOs and other approaches can provide user incentives. Their relative roles require further analysis.

The rule of thumb highlighted seems to be that starting off with the voluntary agreements and their later reinforcement and/or extension could provide a good entry point into EEO schemes. Then, larger all-encompassing schemes that include as many OPs as possible (all possible energy types for the targets, all end-use sectors), offers distribution of burden and makes room for flexible approaches.

On the other hand, there are good results from focusing within one sector, such is the case in UK and its focus on the residential sector with particular social care for reaching alternative targets in energy poverty and care for vulnerable homes.

Alternatively, setting up a 'learning phase' with all OPs as a consensus-seeking approach is strongly recommended. By this, offering flexibility in reaching thresholds per year with follow-up review for the action plan in a participatory manner, ultimately enabling OPs to adapt and to develop their strategies, while the presence of a stimulus factor provides an incentive to implement measures with energy-poor households.

Finally, municipalities have the potential to play a key role in the discussion on scheme shaping due to their craving desire to attract and keep the potential EE investments in their territory. This is especially relevant if the district heating companies are included within the OPs list, as they tend to be owned by their respective municipality.

9. Recommendation

Looking into worldwide experiences, the success of EEOs is not determined by who the OP is, how energy efficiency saving targets are set, and the sectors in which EEOs operate. On the other hand, factors that the successful schemes have in common worldwide are:

- Drafting a roadmap and a detailed guidebook for the EEO
- Setting a modest level of energy efficiency saving targets as per the local context,
- Progressively increasing target levels over time,
- Learning by doing – reflecting on early phases and redesigning EEOs accordingly (e.g. every three years) so they can be more efficient and effective,
- Developing a consistent monitoring system to evaluate the performance of EEOs. The practice has shown that this action is best delivered by an independent party.
- Setting up an effective penalty system in case of non – compliance. Two types of penalties can be set: (1) fixed penalties that are set in advance; and (2) penalties not set in advance but rather adapted to the type and severity of non-compliance.
- Devising transparent methods of calculating savings and an effective communication strategy.

In all referenced cases above, despite their successes, the main hindrance of increasing overall cost to end-users from the application of schemes has been raising public and political concerns, and consequently, the continues revised policies have reflected on this. There is a high degree of possibility that any application of EEO scheme will need to overcome the fear of increasing energy prices. In addition, issues to look out for that could hinder the implementation of alternative measures in compliance with Article 7 requirements are:

- Insufficient funding from end-users, ESCOs and difficulty to access finance;
- Past energy efficiency market activity focused on low hanging-fruit (i.e. the rapid implementation of measures with short payback periods);
- The high public cost associated with fiscal measures;
- Low technical capability of municipalities' and banks' technical staff;
- Lack of awareness and motivation from public entities and households for participation.

There are two key approaches when initiating EEOs, so-called learning periods:

- Learn from the existing experience of a voluntary scheme (voluntary scheme has proved to be a successful scheme) for obliged parties and improve the overall design system accordingly.
- Find and adopt a successful EEO design from another country. Learning from other

countries experience helps out in learning from other countries mistakes.

To manage the shortfalls of the policy, the government must provide solid evidence that EEO, as a policy instrument, will enable environmental, social and economic benefits for the community. Such an approach can be achieved by gaining support from consumers groups, environmental and social NGOs. A strong communication and awareness campaign should be set in motion for the policy to be successfully realized.

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