EXECUTIVE SUMMARY

2nd and 3rd National Action Plan on Energy Efficiency for Albania, 2017-2020

Executive summary

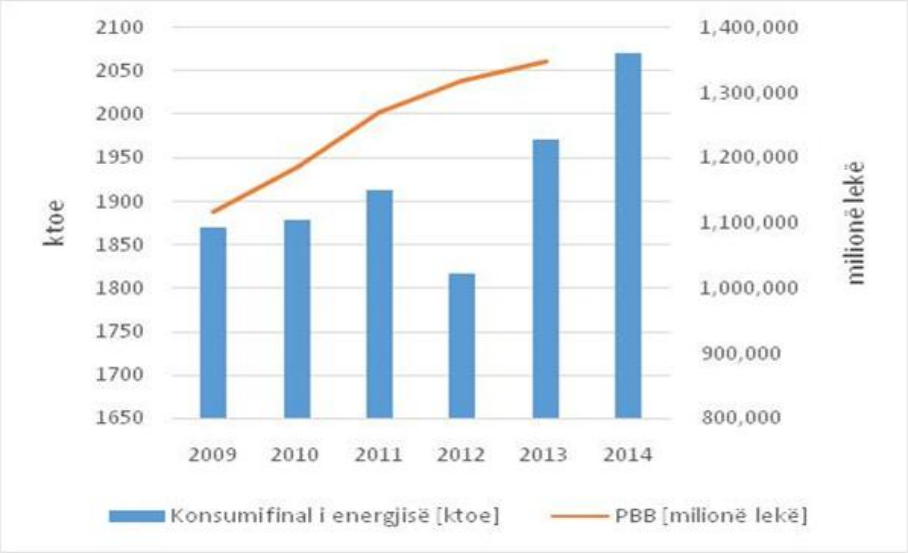
National policies for energy efficiency

The energy sector is considered by the Government of Albania as a strategic sector for the economic development of the country. To provide a framework of operational principles that enable a coordinated, coherent and integrated planning of Government policies, Albania has adopted an Integrated Planning System (IPS). A key feature of the IPS is the Second National Strategy for Development and Integration (NSDI-II), which outlines the national objectives for a social, democratic and economic development for the period of from 2015 to 2020.

NSDI-II identifies energy supply, in a safe and cost-effective fashion, as a major policy objective for Albania. This is set within the broader economic goals, which include a real GDP growth target of 4.9% per annum up until 2020. This is in contrast to a slower growth rate, albeit positive, between 2009 and 2013, partly due to the effects of the 2008-2009 global financial crisis that are still on-going to this date.

Final energy consumption in Albania grew steadily between 2007 and 2011, before shrinking in 2012, which coincides with a slowdown in the Albanian economy, as shown in **Figure 1**. This decline in consumption in 2012 was particularly noticeable in the construction sub-sector and transportation sector, which are sensitive to economic output. Despite of the GDP growth remaining low, however, energy consumption grew rapidly in 2013, mainly due to increased demand in the housing sector. Subsequently, in 2014, consumption continued to grow further, mainly thanks to the iron and steel sector. As a summary, during 2009-2014, final energy consumption increased from 1,871 ktoe to 2,070 ktoe. This represents an increase of about 11%, but growth rate was not stable over the period.

Figure 1: Final energy consumption during observed period



Source: Energy balance sheet of Albania 2009-2014, NNRA; INSTAT

The First National Action Plan for Energy Efficiency in Albania was drafted in accordance with the European Union (EU) Directive 2006/32/EC (Energy Services Directive - SEA) and the Decision of the Ministerial Council of the Energy Community 2009. The plan was endorsed by the Government of Albania in September 2011 and foresaw annual energy savings of 3% in 2012 and 9% in 2018, calculated as a percentage of average final energy consumption for the five-year period of from 2004 to 2008 (including 2008).

By Decision of the Council of Ministers No. 348, of 11 May 2016 "On the Adoption of the National Strategy for Development and Integration 2015-2020" for the energy sector, the NSDI 2015-2020 highlights additional strategic objectives, which include a number of objectives that are important for the implementation of energy efficiency measures:

- Reduced energy intensity by over 12.5%, by 2020, compared with the level of 2012;
- Completion of Albania's commitments under the 20/20/20 initiative, leading to improved energy efficiency and reduction of carbon emissions (CO2);
- Managing energy demand through increased energy efficiency, especially in the construction sector;
- Reduction of electricity losses in the distribution network up to 14%, by 2018;

Regarding climate change, Albania has submitted its *National Target Goal* (INDC), which is part of the United Nations Framework Convention on Climate Change (UNFCCC) process, for defining and meeting the objectives for reducing emissions in international level. In accordance with Decision 1/CP.19 and Decision 1/CP.20 of the UNFCCC, country INDCs set emission reduction targets based on domestic economic and industrial conditions. Albania has set a target based on the baseline scenario, which targets a level of savings (CO2 emission reductions by 11.5%, by 2030) below the level of the underlying scenario trajectory level.

Significant developments are done in order to improve the performance of the energy sector in Albania. To this end, the Council of Ministers approved on 20 January 2016 the National Action Plan for Renewable Energy Sources (NAPRES) for the period 2015-2020, which sets out the plan for achieving the 2020 target, namely that 38% of the final energy consumption shall come from renewable energy sources.

Regarding Energy Efficiency (EE), the Energy Efficiency Reference Law (Law No. 124/2015) was adopted in November 2015, transposing many of the requirements of Directive 2012/27/EU ("Directive on Energy Efficiency"). Similarly, the Draft Law on Energy Performance of Buildings (PEN), which transposes Directive 2010/31/EU (the "Energy Performance Building Directive") is adopted as well (Law No. 116/2016), representing a field with high potentials in Albania.

Together, these laws create the foundation upon which a more comprehensive regulatory framework can be established, as well as institutional structures and financial support, and the measures provided for under this new NEEAP can be successfully implemented. Indeed, the Energy Efficiency Law envisages a legally binding obligation for the Energy Efficiency Agency to draft a NEEAP for Albania.

The NEEAP envisages a plan on how these developments will achieve Albania's energy efficiency objectives and meet its obligations under the 2012/27/EU ("DEE") Directive, which was approved by the Energy Community on October 16, 2015, covering also the relevant aspects of EPBD.

Main elements of the NEEAP

This new NEEAP for Albania reviews the achievements of NEEAP I for the period of from 2010 to 2014, and then outlines a plan for meeting the new targets emerging for the period of up to 2020.

Achievements of first NEEAP, 2011-2018

Albania did not face a number of challenges related to the implementation of the measures contained in the NEEAP adopted by the Government in September 2011. Many of the measures required the cooperation of ministries and other entities outside the Ministry of Economy, Trade and Energy, and the Ministry of Energy and Industry (MEI). Said in other words, understanding, inter-ministerial coordination and, consequently, support for legal and financial acts for the plan was absent, preventing the integration of measures into sector-based plans. Also, the adoption of the Law "On Energy Efficiency", asking for the completion of the legal and regulatory framework for the establishment of a market for energy services, for establishment of an Agency dedicated to EE and the EE Fund, was overdue. Moreover, some measures were not realistic, particularly regarding the proposed timelines and readiness to monitor and implement such measures.

Despite the difficulties mentioned above, little progress has been made on EE in Albania. A number of pilot projects for renovation of public buildings have been developed, trainings have been conducted for auditors and energy managers, with the support of international financial institutions (IFNs) and donors, while domestic banks have provided lending lines for energy efficiency measures, mainly for improving of the outer appearance/layer of buildings.

The formal assessment of the energy savings achieved by the above measures was hampered by the lack of a monitoring and verification platform under which Bottom-Up (Bottom-Up) savings would be calculated, while availability and quality of national statistics has limited the usefulness of the "Top-Down" method (TD). Therefore, in order to enable timely and accurate reporting, during the period covered by this new NEEAP, the establishment of a monitoring and verification platform of measures is considered as a priority measure.

Priorities of energy saving for the new NEEAP

Stock of residential buildings in Albania and energy efficiency by 2020.

The demand for energy from the residential building sector poses a major challenge for Albania. In 2013, this sector was responsible for 30 per cent of the national end-use energy consumption and 60 per cent of the national electricity consumption. In general, Albanian dwellings are partially heated, and only for a few hours a day. The continued use of old firewood stoves brings many problems to the environment and health of citizens.

Two additional packages are proposed in the current policy framework, which are intended to turn the stock of residential buildings into buildings with the minimum level of energy consumption and carbon emissions by 2050. The scale of necessary efforts is estimated to achieve these measured objectives for the floor (residential) surface, as well as the required investments. Energy savings, energy-saving costs, CO2 emission impact, and the cost-effectiveness of intervention packages are estimated as well[1].

Findings on the final energy consumption need for thermal energy services in the residential sector in 2015 speak of 4.9 billion kWh, of which 54% were met by electricity, 37% by wood consumption, and 9% from liquid gas. The sector emitted 96,000 tons of CO2 associated with the consumption of liquid gas. The final consumed energy calculated on the basis of the geometric and thermal properties of buildings, as well as the features of the installed energy systems, differ substantially from the energy balance. For this reason, the final energy consumption was calibrated against the balance by correcting today's level of thermal comfort, namely the partial surface of the heated and cooled floor and the duration of the heating and cooling of the space.

Following the market trends, we assume a rapid increase in the electricity heat of existing dwellings. For this reason, during 2015-2030, electricity consumption will increase by 2.2%/annum, while the consumption of firewood and liquid gas will decrease respectively by about 11%/annum and 10%/annum. By 2030, CO2 emissions will account for 23% of their level in 2015, mainly due to the change in the type of energy, the transition from liquid gas to electricity. The demand for energy in existing buildings is expected to decrease despite the increase in thermal comfort due to improvements related to the period of use of the building/s, taking into account the growth of the existing stock building renovation by 2.8% per annum.

It is imperative for the building energy codes to be adopted by 2017, while an even more stringent energy code should be envisaged by 2022, with requirements that include not only interventions on thermal insulation, but also the installation of a high efficiency thermal system. In order to prepare the market, Albania needs to apply low-interest loans to build new buildings in order to achieve the required performance of the building code of 2022.

To ensure the completion of renovation of existing stock buildings, Albania should introduce financial incentives for residential sector housing investors. By 2022, financial incentives should be given in order to achieve the low carbon model performance.

The accepted investment costs for the reconstruction of buildings, to be borrowed by investors, amount to about EUR 550 million for the period of from 2015 to 2030, or 37 million per year.

[1] http://sled.rec.org/building.html

Assuming the market interest rate of 15%, the subsidized interest rate of 0 per cent and a 10-year term loan, the Government should give commercial banks EUR 600 million as compensation for the interest rate cut. The cost of grants to the Government is EUR 327 million for the period from of from 2015 to 2030, or EUR 22 million per annum. Also, investors should provide EUR 593 million for the period of from 2015 to 2030, or EUR 37 million for additional investment costs per year, compared to the *business-as-usual* practice, in order to comply with the requirements of the approved construction code in the year 2017.

Stock of residential buildings and 2020 energy efficiency

A study funded by ADA (Austrian Development Agency) provided information on sector-based modelling of Albania's public buildings' stock, for the purpose of ensuring their renewal strategy with energy efficiency. A key element in this study is the identification of the typology of public buildings in Albania, which did not exist before. Based on the study, six categories were identified based on the function of public buildings that are maintained by the central and local budget: (i) dormitories, (ii) hospitals, (iii) gardens, (iv) offices, (v) schools, and vi) universities. Demand for energy is estimated for each category.

Identification and cost of other benefits associated with improving thermal efficiency beyond energy cost savings has also been taken care of. These benefits include, *inter alia*, (i) thermal comfort, (ii) CO2 emission avoidance, (iii) avoidance of economic effects from air pollutants, (iv) employment, and (v) economic growth.

A 6.6 million m² area of the target group of public buildings was estimated, a figure that is not expected to change considerably. Meanwhile, the **classification by typology** shows that about 75%, or ¾ of the surface, is occupied by buildings used for educational purposes, 13% for offices, and 11% for hospitals. The analysis shows that 57% is located in Climate Zone A, 26% in Climate Zone B, and 17% in Climate Zone C.

The reconstruction cost and priorities

In order to reconstruct all public buildings in Albania at a moderate level, there is a need for **EUR 500 million**, the equivalent of **ALL 70 billion**. Investment costs per m² are the lowest in the category of buildings for dormitories, followed by kindergartens and schools.

The investment priority criterion is originally classified for kindergartens, followed by schools, hospitals and offices. The largest investment is needed in the Climate Zone A.

Higher demand for primary and final energy and CO2 emission reductions per m² are unequivocally in Climate Zone C buildings. These indicators are twice as low for Climate Zone A and B, and the difference between them is not so important. The higher demand for primary energy demand savings and for m² are in dormitories, hospitals and offices.

Climate Zone A covers most of the final energy savings in absolute value, because of the greater number of buildings in Climate Zone A than in Climate Zone C. As far as absolute potentials for initial and final savings are concerned, kindergartens are in the first place, followed by schools and hospitals. Under the potential savings of CO2 emissions, the greatest potential is in hospitals and kindergartens.

Average Energy Savings according to the lifespan of reconstruction are EUR 4.4/m2 per annum, or EUR 76/m2 throughout the lifespan of such reconstructions. While total energy cost savings are respectively EUR 29 million/annum and EUR 502 million over the lifespan. Almost

45% of it is in Climate Zone A because of the large number of buildings. The highest energy cost savings per m² are provided by hospitals, followed by dormitories. Saved energy costs per m² in Climate Zone C are more than twice as high as those in Climate Zone A and 65% higher than in Climate Zone B.

University reconstructions are not financially feasible, if only energy conservation costs will be taken as benefits (higher self-confidence, higher cost-benefit ratio than 1, negative NPVs, negative IRRs). Also, the reconstruction of schools and kindergartens will not be financially attractive (NPV negative, cost benefit ratio higher than 1). Dormitories and hospitals are financially feasible for reconstructions, while offices are at the borderline of feasibility.

Particularly high are the effects on GDP and employment. If all of these benefits will be taken into account in the financial analysis, the cost-effectiveness of the thermal efficiency reconstruction of all types of public buildings will be much higher.

Scenarios of renovation of public buildings provided for in NEEAP 2017-2020

From the modelling, two possible scenarios could be included in the NEEAP.

The First Scenario focuses on the typology of buildings where reconstructions are more cost effective and which can be chosen as a priority from the social point of view, namely for hospitals and gardens, for which the reconstruction of 545,000 m² is projected in Climate Zone C. For this category the total cost of the investment is EUR 40 million in the period 2017-2020 and it accounts for about 8% of the total stock of public buildings, or 2% per annum (EUR 10 million/annum).

All kindergartens and hospitals in the Climate Zone C will be reconstructed given the **moderate** performance level to determine the measures for improving energy performance.

The second scenario provides for the same amount of investment distributed in all areas proportionally to the division of the surface of buildings by type of buildings. This scenario suggests 530,000 m² of reconstructed surface distributed proportionally in three areas where the cost of EUR 40 million will be applied to 8% of construction area, or 2%/annum, constituting 10 mil. EUR per annum.

Activities envisaged under the new NEEAP

The adoption of the Law "On Energy Efficiency" and Law "On Energy Performance of Buildings" provide the foundation upon which a new EE strategy shall be developed in Albania. This includes the establishment of the Energy Efficiency Agency (EEE) and the Energy Efficiency Fund, drafting of bylaws and regulatory instruments and, most importantly, the implementation of a series of new measures as proposed in this NEEAP.

The measures proposed here and the objectives for energy efficiency created by them constitute the declaration of Albania's intention to meet its obligations under the transposition of the EE Directive. They include savings in primary energy and end use and, for the latter, address measures for the use of energy in buildings, industrial processes and transport, as well as respect for the importance of the role model, to be played by the public sector.

Expected savings of energy for a number of measures are not provided either because additional work is required before they can be assessed with a reasonable level of confidence (this is the case for most of the primary energy measures), or they are supportive measures that help save energy, but do not directly result in savings (this is the case for horizontal measures).

Demand for public funding in the new NEEAP

The implementation of proposed EE measures in Albania will depend on the cost-appeal of those measures, compared to the energy cost in their absence. Cost competitiveness will depend on market prices, subsidies, policies and welfare and consumer decisions. Market penetration forecasts and consumer decisions are issues that are gaining ground in modelling of energy policies and decision-making circles in the EU, but enough research has not yet been published to allow for a comprehensive analysis. Indeed, specific measures within this NEEAP may be subject to full regulatory impact assessments to estimate net costs for their implementation, both for the public and private sectors. This means the measures provided in this document will have concrete development plans and plans for further interventions, which will provide more concrete data on their implementation.

This document addresses the realistic energy reduction expectation, which is based on 3 priorities (the Building, Industry and Transportation Sector), and gives an exemplary example of government actions. This means that to reach the target (6.8% by 2020), measures that are directly funded by the state budget are needed.

The following tables also present an estimation of direct public cost from the state budget for proposed and cost-intensive measures, where such estimates are possible. Moreover, the proposed measures include activities that have considerably wider benefits than energy efficiency, particularly with regard to improving the transport and water supply infrastructure and, therefore, a direct comparison of the cost effectiveness between the measures can be misleading.

Table: 1 Overview of primary energy measures together with assessment of their implementation

No.	Names of energy saving measures	Expected savings by 2018 [ktoe]	Expected savings by 2020 [ktoe]	Cost in ALL million by 2020	Carbon reduction by 2018 [tCO2]	Carbon reduction 2020 [tCO2]	Responsible authority	Category of measure
E1	Revitalization of existing hydropower plants.	6	18.1	30,800			KESH	Energy production
E2	Replacement of inefficient transformers Installation of substations and new lines.	10.1	19	16,800	658.0	1,280.0	OST OSHEE	Infrastructure
E3	Reduction of Fixed Losses in Transformers and Optimizing of the TM Network Configuration.	9	10	-	530.0	650.0	OSHEE	Operation
	PRIMARY ENERGY SAVINGS	**25.1**	**47.1**	**47,600.0**	**1,188.0**	**1,930.0**		

Table 2/1: Overview of Regulatory and Information Measures in Final Energy together with the assessment of their implementation

No.	Names of energy saving measures	Expected savings by 2018 [ktoe]	Expected savings by 2020 [ktoe]	Cost in ALL million by 2020	Expected savings from carbon reduction by 2018 [tCO2]	Expected savings from carbon reduction b2020 [tCO2]	Responsible authority	Category of measure
R2		0.6	2.8	215.0	1,170.0	3,291.0	MEI/MF	Regulation & Infrastructure
R3	Establishment and functioning of the Energy Efficiency Fund, in line with Article 19-24 of Law 124/2015 "On Energy Efficiency", (2017-2020). Drafting and adoption of bylaws in service of Building Energy Performance in relation to the national PEN calculation methodology - optimal cost for minimum requirements and the use of highly efficient systems for technical systems.	3.61	9.1	28.0	1,487.0	7,167.0	MEI/EEA	Regulation
R4	Assessment of energy saving potential and PRIVATE building stock renewal strategy, determining the optimal cost of energy efficiency for buildings that are expected to undergo significant renovations and rules for new high performance buildings.	1.1	3.5	36.7			MEI/EEA	Regulation

R5	Assessment of the potential for Energy Saving and the PUBLIC Building Inventory Renewal Strategy, determining the optimal cost of energy efficiency for buildings expected to undergo significant renovation and rules for new high performance buildings.	0.8	2.83	33.6	2,341.0	3,665.0	MEI/EEA	Regulation
R6	Design of financial support schemes to improve energy performance, outerwear of buildings and technical building systems.	1.2	4.5	14.0			MEI/EEA & the EE Fund	Regulation
R7	Develop an action plan to increase the number of buildings with near to zero-energy performance.	0.3	1.2	28.0			MEI/EEA	Regulation
R8	Determining the energy class for products that have a direct or indirect impact on energy consumption, which meet the minimum energy efficiency requirements.	0.61	3.1	14.0			MEDTTE MEI/EEA	Regulation
R9	Energy Building Certification	0.34	4.2	-	-	-	MEI/EEA	Binding information
P2	Adoption of public procurement "green" rules with the focus on public buildings.	5.07	12.1	28.0	-	-	MEI, MM & MEDTTE	Regulation
I1	Minimum energy efficiency requirements for industrial processes and binding schemes.	2.25	3.7	36.7	-	-	MEI/EEA	Regulation

I3	Voluntary agreements for industrial enterprises categorized as large energy consumers, in accordance with Article 12 of Law 124/2015 "On Energy Efficiency".	0.25	0.9	9.8	3,148.0	6,009.0	MEI/EEA	Regulation
H1	Information bills, awareness campaigns, education and training on energy efficiency.	0.5	1.4	42.0	-	-	MEI/EEA	Information
H2	Promotion of Energy Performance and Energy Services Contracting.	0.3	1.2	14.0	-	-	MEI/EEA	Information
H3	Audit and energy management roadmaps for large energy consumers.	0.1	1.1	33.6	-	-	MEI/EEA	Information
H4	Establish an integrated information system for monitoring, verifying and implementing energy efficiency policies.	0.5	1.1	140.0	-	-	MEI/EEA	Monitoring
	FINAL ENERGY SAVINGS	**17.83**	**54.83**	**1,018.4**	**8,146.0**	**20,132.0**		

Table: 2/2: Overview of implementation measures in the final energy together with the assessment of their implementation

No.	Names of energy saving measures	Expected savings by 2018 [ktoe]	Expected savings by 2020 [ktoe]	Cost in ALL million by 2020	Cost in ALL million by 2020	Expected savings from carbon reduction by 2018 [tCO2]	Expected savings from carbon reduction b2020 [tCO2]	Responsible authority	Category of measure
R10	Renovation of public buildings' stock each year by 2% of the heated /cooled area for buildings that are under administration of, or used by a public authority, or provide a public service, with a view to meeting the minimum requirements for energy performance.	1.8	4.1	2,100.0	5,600.0	2,000.0	4,913.0	MEI EEA/ EE FUND/ MUD/local government	Infrastructure
P1	The "Public Energy Efficiency Lighting" Program.	1.2	3.9	191.8	334.0	-	-	MEI/EEA/ EE Fund	Financial Instrument
I2	Energy audits for industrial enterprises categorized as large energy consumers, who, according to the binding scheme, sign voluntary agreements in accordance with Article 12 of Law 124/2015 "On Energy Efficiency".	1.2	2.3	79.8	152.9	-	-	MEI/AEE/ The EE Fund	Financial Instrument
T1	Training on eco-driving (efficient driving);	3.7	11.8		3.5	293.0	732.0	MTI (supported by EEA)	Information
T2	Information and education campaigns.	1.2	3		56.0	3,683.0	9,208.0	MTI (supported by EEA)	Information

T3	Promotion of integrated transportation.	3.1	7.4		1,288.0	15,540.0	22,865.0	Local government & MTI (AEE)	Information
T4	Energy labeling of new vehicles.	-	3.497		-	-	10,827.0	MTI & MM (EEA)	Regulation/Information
T5	Establishment of a new system of fees for the environmental tax on motor vehicles (annual tax).	-	-		-	-	-	MTI/MF (supported by EEA)	Regulation
T6	Financial incentives for energy-efficient vehicles.	2.2	3.4		1,400.0	4,211.0	10,527.0	MTI/EE Fund/local government	Financial Instrument
T7	Intermodal transport of passengers and goods.	-	5.3		-	-	16,360.0	MTI	Infrastructure
T8	Modernization of the traffic light system and the introduction of automated traffic management.	4	15.1		798.0	24,749.0	92,655.0	Local government & MTI supported by EEA/ EE Fund)	Infrastructure
H5	Audit Reports and Interventions for Energy Efficient Use in Water Supply and Sewerage Systems.	2.3	9.1		3,920.0	-	-	MTI (supported by EEA/ EE Fund)	Infrastructure
	FINAL ENERGY SAVINGS	**20.70**	**68.90**	**2,371.60**	**13,552.40**	**50,476.00**	**168,087.00**		

Institutional structure and governance

As noted above, institutional structures need to be developed and clarified, so that the measures provided for in this NEEAP are easily implemented. In particular, the Energy Efficiency Law envisages the establishment of an Energy Efficiency Agency, under MEI. The Law "On Energy Efficiency" also requires the Agency to draft bylaws, to be approved by the Minister, as provided by law, as well as standards and other technical regulations for energy efficiency, to promote and disseminate information about energy efficiency programs, to coordinate training programs, administrate fines and verify audits. Further details on the duties and responsibilities of the Agency are provided in Section 6.

While the Energy Efficiency Agency will be vital to facilitating implementation and monitoring of operations, as a subordinate structure to MEI, it will not be able to provide inter-ministerial cooperation and to delegate responsibilities. Therefore, an Inter-ministerial Work Group (IWG) is proposed to ensure communication and cooperation between the ministries, on submission of the plan. The IWG including key ministries and agencies, with MEI as the lead agency, has been established during the drafting of the NEEAP and is, therefore, expected to continue its work in a similar form during its implementation, meeting at least 4 times over the course of a year.

Review of objectives for energy saving and achievements

As noted in Section 0 above, the estimation of savings achieved over the period of from 2010 to 2014 (including 2014) in relation to the implementation of NEEAP I, is challenging because of the constraints related to available data, as well as their purpose and quality. However, where sufficient data were available to conduct the assessment, a PL analysis was conducted for the measures. This analysis concluded that the cumulative energy savings achieved **by the end of 2015** is estimated at **16.4 ktoe**, which is about **0.9% of the CPI reference consumption**. This was compared with the (extrapolated) target of 5.2% and, while the analysis could not cover all the actions implemented so far, the gap is clearly significant. In order to speed up the action on the measures proposed in this document for the period of up to 2020, the analysis underlines the importance of successfully creating a suitable environment (institutional, regulatory and financial). The bulk of the energy savings in the current period was related to the improvements of the outer layers of buildings and solar collectors for water heating in the housing and services sectors, highlighting the huge potential of buildings in Albania with regards to energy savings.

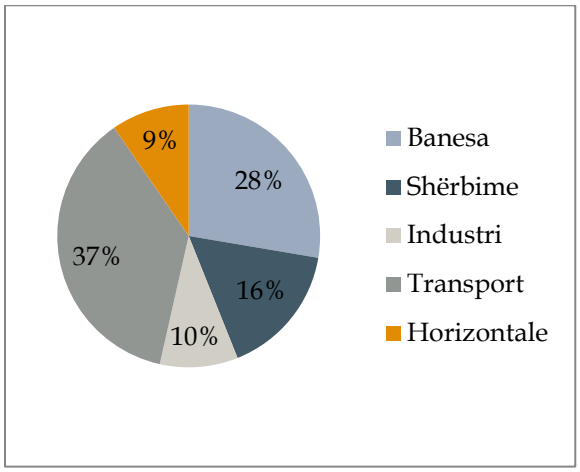
Albania maintains a target of cumulative energy savings equivalent to 9% of the CPI reference consumption (equivalent to 168 ktoe, in terms of final energy consumption, or 10 times more than cumulative savings estimated to have been achieved by the end of 2015) by the end of 2018. However, due to the passing of time and the fact that supportive regulations, funding and modelling of the scheme still need to be drafted and implemented, this objective is not really achievable. So, to accelerate energy efficiency actions, it is proposed that sufficient measures be implemented so that, by 2020, the cumulative energy savings reach as close to this level as possible. Therefore, the targets for 2018 and 2020, based on the measures contained in this NEEAP, are presented in Table 3 and Table 4 below. The first table specifically stops at the final

energy savings (also presented graphically in Figure 2), broken down by sectors, while the second table shows the primary and final energy savings.

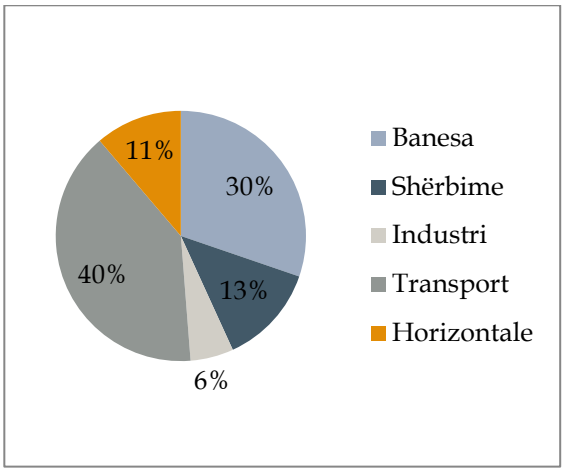
Table 3: National guiding objectives in final energy savings according to sectors

Targets as per relevant sectors	Estimates of energy savings by 2018 (ktoe)	Estimates of energy savings by 2020 (ktoe)
	From measures (PL)	From measures (PL)
Houses	**10.66**	**37.43**
Services	**6.27**	**16**
Industry	**3.7**	**6.9**
Transportation	**14.2**	**49.49**
Horizontal	**3.7**	**13.9**
Total (equivalent units):	**38.5**	**123.7**
Total (GWh):	**447.8**	**1,438.6**
Percentage (%) compared to baseline scenario	**2.1% (compared to baseline scenario 2018)**	**6.8% (compared to baseline scenario 2020)**

Figure 2: National guiding objectives in final energy savings according to sectors



Estimates of energy savings by **2018 [ktoe]**



Estimates of energy savings by **2020 [ktoe]**

Table 4: Overview of estimated / realised energy savings targets, both for primary and final energy

	Primary energy		*Final energy*		
			DSHE		*DPEN*
	Target (ktoe)	*Estimated / Realised Energy Savings (ktoe)*	*The target of final energy savings, as defined in the first / second NEEAP, or in the latest version if revised (in absolute terms (ktoe))*	*Final energy savings achieved (2015), or forecast (by 2018) (in absolute terms (ktoe))*	*Target for houses s with almost zero energy consumption (all new buildings, percentage (%) or shrinking energy performance requirements)*
2012	N/A	N/A	26	10.5	
2015	N/A	N/A	97*	16.4	#
2018	40	-	39	-	
2020	154	-	124	-	To be confirmed

* Because of the fact that the second NEEAP is not designed for Albania, the target for 2015 is taken from the one referred to in the first NEEAP, while the targets for 2018 and 2020 are the ones emerging in the context of this present document.

However, it is emphasized that the above-mentioned quantitative targets for energy savings represent only one element of the objectives of this NEEAP. Most widely, they are viewed as:

- A tool to stimulate and develop markets for the delivery of energy efficient products and services, thus benefiting Albania's economy.
- A way to improve the living standards of the citizens of Albania, by promoting their comfort and reducing the emissions.
- A contribution to achieving Albania's goals for climate change.
- A help in modernizing transportation, industry and services.

Tirana, 01.12.2017. Decision of Concuil ofMinisters no. 709