

NATIONAL ENERGY EFFICIENCY ACTION PLAN FOR 2013-2015

Title I

NATIONAL ENERGY EFFICIENCY ACTION PLAN BACKGROUND

Chapter 1

NATIONAL ENERGY EFFICIENCY ACTION PLAN SUMMARY

1. The National Energy Efficiency Action Plan for 2013-2015 (hereinafter referred to as the “NEEAP”) has been developed by the Agency for Energy Efficiency in co-operation with the Central and Local Public Administration Authorities, entitled to provide assistance as per its functional competences. This NEEAP is aimed at enforcement of Article 17 of the Energy Efficiency Law No. 142 dated 02.07.2010 and the provisions of the Government Decision on National Energy Efficiency Programme for 2011-2020 No. 833 dated 10.11.2011.

2. The NEEAP has been developed in compliance with the national legislation in this area, with the commitments of the Republic of Moldova assumed as a Member of the Energy Community Treaty, the provisions stipulated by the Law on Adherence of the Republic of Moldova to the Treaty establishing the Energy Community No. 117-XVIII dated 23.12.2009, taking into account the European Commission recommendations on the Guidelines and template for the preparation of the second NEEAP.

3. The purpose of this NEEAP relates exclusively to efficient energy consumption and reduction of greenhouse gas emissions.

4. The objective of the NEEAP is to reduce the energy end-use in all national economy sectors by 428 ktoe, and cut the emissions of CO₂ by 962 848 tonnes during 2013-2015.

5. Similar to the EU Member States aiming to achieve an overall national indicative energy savings target of 9% during 2008-2016, the Republic of Moldova also has set up an intermediary energy savings target of 9%, reported to the baseline of 2009, to be reached by 2016.

6. The energy savings target is envisaged to be reached by the EU Member Countries in three stages. As for Moldova, the energy savings target is to be reached in four stages displayed in five normative acts as per Table 1.

Table 1. Stages for attaining the energy savings targets by 2020.

European Union			Republic of Moldova	
			2003-2010	National Energy Conservation Programme for 2003-2010
			2011-2020	National Energy Efficiency Programme for 2011-2020
1	30 June 2007	Submission of the first Energy Efficiency Action Plan (Note: name used within the EU)	2013-2015	National Energy Efficiency Action Plan 1 based on Template I + II
2	30 June 2011	Submission of the second Energy Efficiency Action Plan	2016-20187	National Energy Efficiency Action Plan 1 based on Template II + III
3	30 June 2014	Submission of the third Energy Efficiency Action Plan	2019-2021	National Energy Efficiency Action Plan 1 based on Template III

7. The present NEEAP defines a set of measures, which implementation will lead to energy savings in different sectors of the national economy, as well as to cutting the imports of natural gas, liquid fuels (gasoline, diesel and liquefied gas) and of electricity. The public sector will be considered further as the main one, demonstrating *an exemplary role*. Due to the particular situation of the Republic of Moldova, the NEEAP pays a close attention to the energy transformation/transition sector, which has to cope with the main challenges at the national and global levels, such as excessive prices for energy and energy resources, energy supply safety, increasing the economic competitiveness and curbing the impact on the environment.

8. The NEEAP has been developed on the basis of the following pillars:

- a) dynamics of energy resources and energy consumptions in the national economy sectors;
- b) analysis of barriers to energy efficiency promotion;
- c) achievements of the National Energy Conservation Programme for 2003-2010;
- d) Republic of Moldova commitments arising under the ECT membership;
- e) coverage sources and financial tools available in the country;
- f) economic and social situation in the Republic of Moldova;
- g) EU Member Countries achievements relating to the first EEAPs.

9. Likewise, this NEEAP has been developed taking into account the conclusions and recommendations made in the Energy Efficiency Action Plan

evaluation report presented at the European Parliament sitting held on 15 December 2010. The aforementioned report comprises a series of proposals concerning the EEAP revision, namely:

- a) ensuring the wider use of energy audits and energy management;
- b) developing the normative framework for the establishment of voluntary agreements;
- c) devising favourable environments for the development of energy services companies;
- d) introducing certificates for energy performance of buildings;
- e) establishing one-stop shops/help-desks for consultancy and technical assistance provided to all customers;
- f) keeping records and continuous monitoring of all energy resources;
- g) suggesting financial incentives to support high classes of energy efficiency, etc.

10. Despite the economic crisis and the shortage of investments in the national economy sectors, the National Energy Conservation Programme for 2003-2010 has fulfilled its strategic objective in terms of energy-efficient use by having doubled the GDP, having increased the energy and energy resources use with 20% relative to the level registered in 2002. In the course of 2008-2009, due to economic and financial crisis, the GDP recorded a 3.9% decline, while since 2010 it showed economic reinvigorating signs through an 18.9%-growth or by 11.455 billion MDL (in comparable prices).

11. The main objectives pursued by the National Energy Conservation Programme for 2003-2010 were related to the recovery of electricity supply, prevention of continuous collapse of the heating sector, increased consumption of natural gas through the replacement of coal consumption, etc. More recently, the national economy sustainable development approach has been amended. This NEEAP outlines objectives referring exclusively to energy efficient use and curbing the greenhouse gas emissions. This approach envisages the implementation of energy management in all national economy sectors, having emphasised the technology performances and the need to change customers' behaviour to increase the energy efficiency. Thus, through this National Plan, the Republic of Moldova has taken the commitment to reduce the energy end-use in all national economy sectors with approximately 1.8 percentage points annually during 2013-2015 relative to the baseline of 2009.

12. The expected results of this NEEAP are as follows:

- a) energy savings - 428 ktoe by 2015, with the reduction of GHG emissions with 962 848 tonnes of CO₂;
- b) energy savings - 867 ktoe by 2016, with the reduction of GHG emissions with 1 951 294 tonnes of CO₂.

13. The NEEAP pursues the goal to set the basic conditions, i.e. to develop the legal and normative framework and the tools necessary to encourage the efficient energy use in all national economy sectors.

14. Table 2 below shows energy savings for each national economy sector, falling under the incidence of Directive 2012/27/EU of the European Parliament and Council dated 25 October 2012 on Energy Efficiency, estimated on the basis of a Top-down (TD) approach outlined by Directive 2006/32/EC on energy end-use efficiency and energy services:

Table 2. Energy Savings Targets set by Sectors based on TD Approach.

	Sectors	2013-2015		2013-2016	
		Energy savings, ktoe	%	Energy savings, ktoe	%
1	Energy	57	13,4	116	13,4
2	Industry	43	10,0	87	10
3	Transport	98	23,0	200	23
4	Public (services)	37	8,6	75	8,6
5	Households	193	45,0	390	45
	TOTAL	428	100,0	867	100

15. It is worthy to note that most savings would be achieved both due to the establishment of development conditions and the introduction of energy services on the market, having created additional earmarked funds and credit lines for those sectors. Thus, domestic and foreign financial efforts have been consolidated in order to implement the present NEEAP, including:

a) credit line for small and medium-sized enterprises and the Moldovan Sustainable Energy Financing Facility (MoSEEF) II in the total amount of 352 million MDL (22 MEUR);

b) credit line for the residential sector (MoREEF) in the total amount of 560 million MDL (35 MEUR);

c) Energy Efficiency Fund in the total amount of 520,107.6 thousand MDL for the NEEAP timeframe, the resources coming from the direct budget support provided to the energy sector;

d) energy sector budget support provided by the EU Delegation in the amount of circa 640 million MDL (40 MEUR);

e) technical assistance in the total amount of 35.2 million MDL (2.2 MEUR) provided by the EU Delegation for the implementation of the Energy Sector Budget Support Policy Matrix;

f) technical assistance provided by the Global Environment Fund to support the energy efficiency growth in the industrial sector in the total amount of 12.8 million MDL (0.8 MEUR), etc.

Chapter 2

NATIONAL BACKGROUND FOR ENERGY EFFICIENCY

Section 1. Economic Situation

16. The Moldovan economy had shown a continuous upward trend in the course of 2011, and the final outcomes showed real progress. The economic growth determined largely the increase of energy consumption, the latter being caused by the increased income of the population. The most prominent growth rates were recorded in the area of: external trade and transportation. Likewise, investments prevailed in most sectors. The positive trends registered in the economy determined the reduction of unemployment. Nevertheless, the poverty level is still high, although it depicts a downward trend from 26% in 2001 to 21.9% in 2010.

17. The promoted policies pointed out the need to ensure economic growth, which determined changes operated in the GDP structure and growth factors. Thus, during 2000-2010, the GDP recorded an average annual growth rate of 5.1%. There were periods with higher growth rates: 7.1% in 2000-2004 and 5.2% in 2005-2008.

18. From the other hand, since 2001, the energy intensity shows continuous decline, having recoded approximately 12.5% annually (as per the current prices). The main influential factor is the soaring prices for imported energy resources and slower increase of population and businesses income, which determined the optimization of energy use.

Section 2. Strategic Background

19. The Moldovan Government strategic mid-term and long-term vision is to reconcile the need to foster economic development and to ensure the environment protection in accordance with the European standards.

20. The Energy Complex is one of the main branches of the national economy and plays an important role in successful implementation of economy development programmes and maintaining social stability. Thus, the Moldovan Energy Complex, pursuant to the National Development Strategy “Moldova 2020”, approved by Law No, 166 dated 11 July 2012, has got the basic objective to provide high-quality energy at affordable prices to all country consumers and support the implementation of a sustainably developing national economy. This target is attainable on the basis of competitiveness and liberalised energy market.

21. Amongst the country long-term strategic development objectives set by the National Development Strategy “Moldova 2020” the following can be mentioned:

- a) increasing public investment in the national and local road infrastructure in order to reduce transportation costs and increase the access speed;

b) improving business climate by streamlining the regulatory framework and applying information technologies in public services for businesses and citizens;

c) reducing energy consumption by enhancing energy efficiency and using renewable energy sources, etc.

22. In order to diminish dependency on imported energy resources and the energy sector impact on climate changes, the National Energy Efficiency Programme 2011-2020, which serves as starting point for this NEEAP, pursues the accomplishment of the following objectives relative to 2009 baseline:

a) Increase the efficient use of overall primary energy with 20% by 2020;

b) Cut the greenhouse gas emissions with at least 25% by 2020 relative to the 1990 baseline.

23. By improving the energy efficiency in different national economy sectors it would be possible to exploit the energy savings potential in a cost-efficient manner. The set of measures outlined in the national policies pursue the goal to create significant benefits for each sector of the national economy, including:

a) energy transformation sector, including all related activities: production of electricity and heat, transportation and distribution of electricity, heat and natural gases, and the final use of all types of energy resources;

b) industry sector;

c) construction sector;

d) transport sector;

e) public sector.

24. The policy papers developed in the area of energy efficiency also display the conceptual framework and development directions of the energy sector and its indispensable components.

25. The main document tackling the area in question is the National Energy Efficiency Programme for 2011-2020, approved by the Government Decision No. 833 dated 10 November 2011;

Section 3. Energy Consumption

26. During the implementation period of the National Energy Conservation Programme for 2003-2010, the overall energy consumption raised by 26.16% or with 457 ktoe. The major increase was recorded by the transport sector – with 21.3% relative to 2001 and with 22.1% compared to 2003. The agricultural sector registered a substantial 66.7%-drop relative to 2001 and a 41.7%-decline compared to 2003 (see Table 3).

Table 3. Evolution of energy consumption by sector and of energy intensity (2001-2010), ktoe.

Sectors	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Energy transformations	810	802	681	783	842	817	767	764	716	737
Industry	111	117	124	130	161	163	156	142	85	107
Agriculture	68	80	80	71	61	59	52	51	46	48
Constructions	429	477	575	656	704	691	598	632	660	689
Transport	169	248	279	254	267	285	325	336	291	358
Other sectors	148	168	239	250	243	256	262	266	246	250
Overall energy consumption	1735	1892	1978	2144	2278	2271	2160	2191	2044	2189
GDP, million MDL (in current prices)	19.05	22.56	27.62	32.03	37.65	44.75	53.43	62.92	60.43	71.85
Energy intensity toe/1,000 MDL of GDP	0.09	0.08	0.07	0.07	0.06	0.05	0.04	0.04	0.04	0.03

Section 4. Institutional Framework for the NEEAP Implementation

27. During 2001-2010, the institutional framework responsible for the energy sector was subject to essential amendments. The Ministry of Energy was dissolved, while the country energy policy competence was assigned to the Ministry of Industry and Infrastructure. Subsequently, the latter was also dissolved, and the energy sector divisions were assigned to the Ministry of Economy.

28. The National Agency for Energy Conservation, which is a body assigned with the energy conservation tasks, being a self-financed body, failed to cope with financial challenges, and was subject to reorganisation in late 2006 as per the Government Decision No. 1452 dated 21 December 2006 on the activity performed by the National Agency for Energy Conservation.

29. Since energy efficiency is not a separate sector, the Government of the Republic of Moldova established the Agency for Energy Efficiency (AEE) through the National Agency for Energy Conservation reorganisation to promote and implement energy efficiency policies and employ the use of renewable energy sources in all sectors of the national economy. Thus, in 2007, along with the adoption of the Renewable Energy Law No. 160-XVI dated 12 July 2007, the first mention about the AEE emerged, although the latter was established in late 2010 by Government Decision No. 1173 dated 21 December 2010 on the Agency for Energy Efficiency on the basis of Article 8 of the Energy Efficiency Law No. 142 dated 02 July 2010.

30. The National public institutions responsible for successful implementation of the current NEEAP and achievement of the expected results are listed in Table 4 below.

Table 4. National Public Institutions in charge for the NEEAP implementation.

	National Public Institution	Responsibilities
1	Ministry of Economy	Central administrative authority empowered to set the state policy priorities in the area of energy efficiency and the main activity directions in the field of energy efficiency for public authorities.
2	Agency for Energy Efficiency	Administrative body in the area of energy efficiency, which implements the state policy in the field of energy efficiency and renewable energy sources, being subordinated to the central administrative specialist authority.
3	Ministry of Regional Development and Constructions	State authority responsible for energy performance in the sector of constructions.
4	Ministry of Environment	State authority responsible for the development and promotion of state policies and strategies in the area of environment protection and rational use of resources.
5	Ministry of Transport and Road Infrastructure	State authority responsible for the renovation and upgrading of transport networks and for monitoring and regulating the motor vehicle fleet.
6	Ministry of Finance	State authority responsible for the public funds management.

31. Successful implementation of the envisaged activities in the Republic of Moldova will depend greatly on the involvement of Local Public Authorities, which are encouraged to show an exemplary commitment in achieving energy savings. Other main actors, involved in this exercise, are the mayoralties/village halls of Moldovan communities that have signed already the Covenant of Mayors from Europe, having committed themselves to develop and implement Sustainable Energy Action Plans by 2020.

Chapter 3

REVISING THE ENERGY SAVINGS TARGETS AND ACCOMPLISHMENTS OF THE NATIONAL ENERGY CONSERVATION PROGRAMME FOR 2003-2010.

32. The National Energy Conservation Programme for 2003-2010 stipulated the strategic objective in the area of efficient use of energy through the doubling of GDP, with the increase of energy and energy resources consumption by 20% relative to the level registered in 2002.

33. The National Energy Conservation Programme specific objectives for 2003-2010 included:

- a) *energy sector* – 17.5 ktoe annually or 18%;
- b) *industry sector* – 8.05 ktoe annually or 53%;
- c) *agricultural sector* – 6.3 ktoe annually or 56%;
- d) *constructions sector* – 3.13 ktoe annually or 5%;
- e) *transport sector* – 5.52 ktoe annually or 22%;

f) other sectors (public, utilities, retail) – 3.5 ktoe annually or 5%.

34. Cumulatively, the Programme envisaged to save annually 43.4 ktoe or 18% of the consumption level recorded in the year of reference (2002).

35. Based on the analysis of the energy balance for 2003-2010, it has been ascertained that:

a) the GDP growth rate equalled to:

- 1) 13.79% annually (in current prices);
- 2) 14.38% annually (in comparable prices);

b) the growth rate of energy and energy resources consumption was 0.36% annually.

36. By 2010, the GDP grew with 277% or approximately by 2.8 times relative to 2003, while the energy intensity (toe/1000 MDL) declined with approximately 57% in 2010 relative to 2003. Concurrently, the consumption was raised with approximately 15.7% during the Programme unrolling.

37. In conclusion, the strategic objective pursued by the National Energy Conservation Programme for 2003-2010 to double the GDP was fulfilled by 138.5%, while the objective to foster consumption (set in advance at the level of 20% in 2003) was fulfilled in the proportion of 127.4%.

Title II

PRIMARY ENERGY SAVINGS

38. This Title covers a Brief description of national strategies and policies in terms of objectives and trends of primary energy savings. Also, reference will be made to strategies and policies of other sectors, having a great impact on primary energy consumption.

Chapter 1

OBJECTIVES RELATING TO PRIMARY ENERGY AND EVOLUTION OF PRIMARY ENERGY CONSUMPTION

39. The Republic of Moldova adopted multiple strategies and policies, which influenced, directly or indirectly, the energy sector performance. The evolution of energy consumption and forecasts concerning the energy and energy resources consumption have been used as basis for the current political decisions of the Republic of Moldova oriented towards providing the users with energy under safe conditions, for minimal prices and having observed the environment protection requirements.

40. The latest evolutions of energy production and fuel imports have pictured the following trends:

- a) generation of electricity increased in 2010 with circa 3% relative to 2009 – from 89 to 91 ktoe and decreased with 15.3% relative to 2001. The procurements of electricity also show a decline in 2011 (343.5 ktoe) with circa 20.2% relative to 2001 (274.75 ktoe);
- b) heat production declined in 2010 (287.4 ktoe) with circa 13% relative to 2001 (329.8 ktoe);
- c) the volume of natural gas procured by the Republic of Moldova in 2010 (960 ktoe) increased with circa 3% relative to 2001 (934.5 ktoe);
- d) the volume of fossil solid and liquid fuels procured by the Republic of Moldova in 2010 (1367 ktoe) soared with 125.2% relative to 2001 (607 ktoe).

41. The aforementioned analysis of energy resources and energy consumption was and still is useful to forecast and devise energy sector plans and development strategies. The most relevant plans, programmes and strategies are detailed below:

Section 1. Government Action Plan for 2012-2015

42. Approved by Government Decision No. 289 dated 7 May 2012 the Action Plan traces general objectives for the infrastructure and transport sector, including the energy sector:

- a) ensuring energy safety and promoting energy efficiency in all national economy sectors;

- b) enhancing energy efficiency with 1.8-2% annually, on the average;
- c) developing the sector of constructions and promoting up-to-date technologies in this area.

43. Government specific objectives relating to energy sector are as follows:

- a) Promotion of energy conservation:
 - 1) Conducting ten energy audits of public buildings;
 - 2) Issuing energy performance certificates during QIV 2012;
 - 3) Refurbishing 300 apartment blocks during QIV 2014.
 - 4) Adopting European and international standards in the area of energy performance of buildings during QII 2013.

- b) Establishment of the necessary infrastructure in the area of energy performance of buildings by QIV 2014, including:
 - 1) Developing software to compute the energy performance of buildings;
 - 2) Developing electronic system to register in a centralized manner the certificates of energy performance of buildings;
 - 3) Developing a web-page in the area of energy performance of buildings to input and publish public information.

- c) Implementation of 40 projects aimed at energy efficiency promotion and employment of renewable energy sources in schools, kindergartens and other social facilities during QIV 2012.

- d) Development of regulations on energy labelling of energy-related products in QIV 2013 and conducting the related public awareness campaign.

- e) Ensuring viability and opportunities for the thermo-energy/heating sector development through its economic, institutional and technical restructuring by the end of QIV 2013:
 - 1) Complete the Study on short-term and long-term investment needs of the heating sector from Chisinau Municipality;
 - 2) Develop and approve the draft Heating Law;
 - 3) Amend the Regulation on heat supply and use, approved by Government Decision No. 434 dated 09 April 1998.

- f) Enhancing energy efficiency in all national economy sectors:
 - 1) Devise secondary legislation aimed at implementing the Energy Efficiency Law No. 142-XVII dated 2 July 2010;
 - 2) Develop a database in the area of energy efficiency and renewable energy sources;
 - 3) Set a system for energy efficiency monitoring and evaluation.

- g) Designing the Construction Sector Development Strategy.

h) Supporting the production of construction materials in accordance with the European standards, including the establishment and fitting of test labs for conformity evaluation of construction materials by QIII 2015.

i) Facilitating the implementation of innovations and new technologies in the area of constructions through the reforming of the system for technical regulation of constructions and implementing performance standards in constructions:

1) Devise the reforming programme of the system of normative documents in the area of constructions by QII 2013;

2) Adopt and implement Euro-codes by QIV 2014 (in a proportion of 100% of adopted Euro-codes);

3) Adopt international standards in the area of constructions by QIV 2014 (in a proportion of approximately 50% of the adopted relevant standards).

44. The reduction of energy intensity and energy consumption in all sectors of the national economy is listed amongst the important tasks of this NEEAP. The basic measures suggested in this regard comprise planning and developing of the legal framework: devising the secondary legislation aimed at implementing the Energy Efficiency Law No. 142-XVII dated 2 July 2010 during QI 2013.

Section 2. National Development Strategy “Moldova 2020”

45. Approved by Government Decision No. 166 dated 11 July 2012, the Strategy states the Moldovan Government intention to create by 2020 a competitive and efficient energy complex that would provide consumers with quality energy resources, at affordable and reliable terms.

46. One of the seven objectives relates to the energy sector: “Energy: delivered safely, used efficiently”. An important role in this respect is assigned to the reduction of dependence on imported energy resources and enhancement of energy security, ensured by enhancing energy efficiency, increasing the use of renewable energy sources, developing energy resources’ transportation interconnections and Moldova’s integration into the European energy system. Also, a special emphasis will be placed on optimizing the energy mix and creating new energy generation capacity and using renewable energy sources.

47. Energy efficiency has got an essential place in the Strategy. Energy efficiency would be materialized by reducing the energy intensity in residential and industrial sectors, transport and agriculture, upgrading the energy system in terms of its generation, transmission, and distribution. Another objective set by this Strategy is to reduce the energy consumption in buildings and reach the share of 10% of renovated public buildings by 2020.

Section 3. Conception on the Republican Heating Supply System Renovation

48. Approved by Government Decision No. 189 dated 20 February 2003 the Conception pursued the goal to create alternative heating options, by involving and encouraging the private sector and enhancing the end-users' awareness about the need to pay for the heat supply services.

49. Also, the Conception envisages the heating renovation of buildings, having optimised their architectural and constructive solutions, implementation of heating systems with reduced potential and using heating sources with reduced potential (heat pumps). Most of the foreseen actions did not have funding resources; therefore, the Conception has not been implemented.

Section 4. Concept on corporate, institutional and financial restructuring of the district heating supply system from Chisinau Municipality

50. Approved by Government Decision No. 983 dated 22 December 2011, the Concept comprises the thermo-energetic sector restructuring plan in the Municipality of Chisinau. Although the Concept relates to a single administrative territory, the resolution of this problem would affect the whole energy sector of the Republic of Moldova, due to the fact that the electricity produced by the JSC "CHP-1" and JSC "CHP-2" holds a substantial share of the electricity generated in the RM. Thus, the Concept refers to the main entities responsible for the supply of heat: JSC "Termocom", JSC "CHP-1" and JSC "CHP-2". In 2010, approximately 76% of the total volume of heat necessary for JSC "Termocom" was purchased from these two co-generation plants JSC "CHP-1" (13%) and JSC "CHP-2" (63%). The remaining part (24%) was produced by the 19 heating plants of JSC "Termocom". Due to the lack of investments necessary for networks upgrading during the last 20 years, the losses amounted for circa 22.1% in 2010.

51. The Concept main objective is to improve the long-term reliability and affordability of heat and electricity supply. To this end, it envisages to:

- a) improve the legal framework relating to the sector activity;
- b) unroll financial reform, including the regulation of the current debts;
- c) unfold the corporate and institutional reform of sector undertakings;
- d) enhance the efficiency of undertaking operation both technically and technologically.

52. The Concept mentions the need to renovate the building heating system, including through the replacement of windows, having optimised the building architectural and constructive solutions; modernising the inner heat supply engineering systems; installation of heat meters (cost apportionment) and invoicing the real heat consumption.

53. The implementation of the measures aimed at renovation and upgrading the heat networks envisages the reduction of losses from 22.1% in 2010 to 16.7% by 2020.

Section 5. Midterm and Long-Term Budget Expenditure Strategy

54. The Energy Sector Expenditure Strategy was approved for the first time in 2012 as a separate chapter within the Midterm Budget Framework.

55. The volume of financing for the fuel and energy complex at the expense of the national public budget made up 0.9% of GDP in 2005 and only 0.1% in 2011. The largest investment made by the state was for the National Gasification Programme unfolded during 2004-2007. Due to the great importance of the energy sector for the national economy, the Government called for drafting an Energy Sector Expenditure Strategy for 2013-2015, comprising the following sub-programmes (Table 5):

- a) development of the electricity sector;
- b) development of the heating sector;
- c) development of the national natural gas supply system;
- d) enhancement of energy efficiency and employment of renewable energy sources;
- e) strengthening the capacity for the development and implementation of energy sector policy.

Table 5. Estimated energy sector expenditures, 2013-2015

	Programme/Sector	Total Public Expenditures (thousand MDL)	Forecasts as per the MTBF (thousand MDL)		
		2012 approved	2013	2014	2015
1.	Energy sector policy and management development	1352.3	40408.7	32580.6	60441.8
2.	Capacity building of the national natural gas supply system	6940.8	19000.0	65014.0	-
3.	Electricity sector development	10919.3	106702.8	337656.5	551114.8
4.	Thermo-energetic system development	9000	4743.2	-	-

56. Priority measures for each sub-sector are displayed below:

- a) enhance energy efficiency and employ renewable energy sources, through fostering investment projects;
- b) develop interconnections for the transportation of energy resources and their integration with the European energy system;

- c) upgrade the energy system (production, transmission, distribution, and consumption).

57. Overall, the draft Energy Sector Expenditure Strategy for 2013 – 2015 envisages a budget totalling 1,635,564.8 thousand MDL, allocated by years as follows:

- a) 2013 – 344 887.6 thousand MDL;
- b) 2014 – 626 396.8 thousand MDL;
- c) 2015 – 664 280.4 thousand MDL.

Section 6. The National Energy Efficiency Programme 2011-2020

56. The National Energy Efficiency Programme 2011-2020 approved by Government Decision No. 833 dated 10 November 2011 sets up the national objective aimed at making the overall primary energy consumption more efficient with 20% by 2020 and cutting the greenhouse gas emissions by 25% relative to 1990. Greater consideration should be given to the energy transformation sector, which specific objectives include:

- a) Promoting electricity production in co-generation mode, which is more efficient relative to separate production of electricity and heat. The overall efficiency of new heat and power plants with combined cycle shall not be less than 80 %, while the power efficiency shall not be less than 45-50 %;
- b) Curbing losses in power distribution grids from 13% in 2011 to 7-10% by 2020, imposing an annual loss reduction of 0.52% - 0.82%;
- c) Metering the natural gas consumption at the level of 100% by 2020;
- d) Developing the heating distribution networks as per a Plan devised by the Government;
- e) Completing, by 2016, the installation of heat metering/measuring devices for 100% of buildings in the Republic of Moldova;
- f) Introducing financing mechanisms for heating, cooling and domestic hot water installations based on renewable energy, etc.

59. The energy sector has been tackled by all important strategies of the country. The main activities relating to primary energy with impact on energy efficiency are as follows:

- a) Create an optimal energy mix;
- b) Increase the share of renewable energy in the energy balance;
- c) Diminish energy intensity and reduce losses in the system of heat and power transmission;
- d) Restructure and upgrade the combined heat and power plants;
- e) Reduce the energy losses in the transmission and distribution networks;
- f) Optimise the existing capacities for heat production;
- g) Promote high-efficient co-generation, etc.

60. There is an increasing number of factors, which may negatively affect the successful implementation of the objectives outlined in the aforementioned Strategies, as well as risks, which may compromise the objective fulfilment, such as:

- a) Economic and financial crisis;
 - b) GDP evolution;
 - c) Banking system reticence to support energy projects and grant lending operations;
 - d) Shortage of personnel at the institutional level;
 - e) Management not compliant with market requirements;
 - f) Low purchase power of consumers;
 - g) Lack of supporting mechanisms or non-lucrative mechanisms in place;
- etc.

Chapter 2 MEASURES AIMED AT PRIMARY ENERGY SAVING

Section 1. Measures aimed at energy saving at the stage of energy generation

61. Electricity is produced by heat and power plants, hydroelectric stations and by other installations. The production of both electricity and heat showed significant changes during the last years.

62. At the same time, specific consumption of fuel for power generation at heat and power plants showed a decline. It was caused by the increase of heat share produced by the plants, which had a positive impact on the overall efficiency of energy production (see Table 6).

Table 6. Specific consumption of fuel per unit of produced energy (toe/toe) and the share of electricity in the total volume of generated energy (%).

	Undertaking	2008		2009		2010		2011	
		S.C.	Share	S.C.	Share	S.C.	Share	S.C.	Share
1.	CHP-1	1,4789	24.51%	1,5055	26.96%	1,2973	22.32%	1,2653	20.17%
2.	CHP-2	1,3838	32.32%	1,3584	32.80%	1,3788	32.41%	1,3659	32.61%
3.	CHP-Nord	1,2250	19.19%	1,1976	18.22%	1,1959	17.70%	1,1825	18.78%
4.	CT “Termocom”	1,0771	0.00%	1,0734	0.00%	1,0725	0.00%	1,0659	0.00%
5.	Weighted Average	1,3382	25.13%	1,3194	25.57%	1,3041	24.80%	1,2930	25.14%

63. The fluctuant demand for heat forced the CHP to generate it in a regime different from co-generation; hence, the production of electricity dropped, negatively impacting the country energy supply security.

64. Based on the emerged situation and on the country plans in the area of energy transformation, this NEEAP suggests the following specific measures intended to improve energy efficiency at the stage of energy generation and supply:

- a) Create the legal and normative framework, including:
 - 1) Approve the draft Heating Law (2013);
 - 2) Transpose the European Directive on co-generation;
 - 3) Develop the secondary legal framework on co-generation;
 - 4) Update Government Decision No. 189 dated 20 February 2003 on the approval of the Concept regarding the renovation of the Republican Heat Supply System; develop and approve the plan aimed at upgrading the heating plants into co-generation power plants;
 - 5) Introduce schemes to support the production of power in co-generation mode;
 - 6) Implement Government Decision No. 983 dated 22 December 2011 on the “Corporate, institutional and financial restructuring of the district heat supply system from the Municipality of Chisinau”.
- b) develop a feasibility study for the introduction of trigeneration mode within industrial undertakings (pilot-projects supported by international financial institutions);
- c) install recording devices within the heating sector and install individual heat points at heat distribution points/stations;
- d) develop own local (district) energy efficiency plans;
- e) prepare annual reports based on the templates developed by the AEE;
- f) introduce, upon case, energy management;
- g) consider the possibility to introduce voluntary agreements.

Section 2. Energy Operators’ Own Plans

65. Transmission system operators may have their own investment development plans.

66. Transmission system operators will be suggested to indicate the measures aimed at improving the energy efficiency in their investment plans or, upon case, to develop their own plans with the aim to improve energy efficiency in the short-, medium- and long-run, having stated the measures, deadlines and the financial resources available for this purpose.

67. By the end of each year, the transmission system operators shall submit a filled-in report on the basis of a questionnaire developed by the AEE, regarding the taken measures, faced challenges and suggested solutions. This action is important for monitoring the energy consumption, serving as basis for the subsequent planning activities.

68. Due to the introduction of Energy Management and Energy Audit, the transmission system operators will be advised to hire Energy Managers and/or, upon case, to contract Energy Auditors' services.

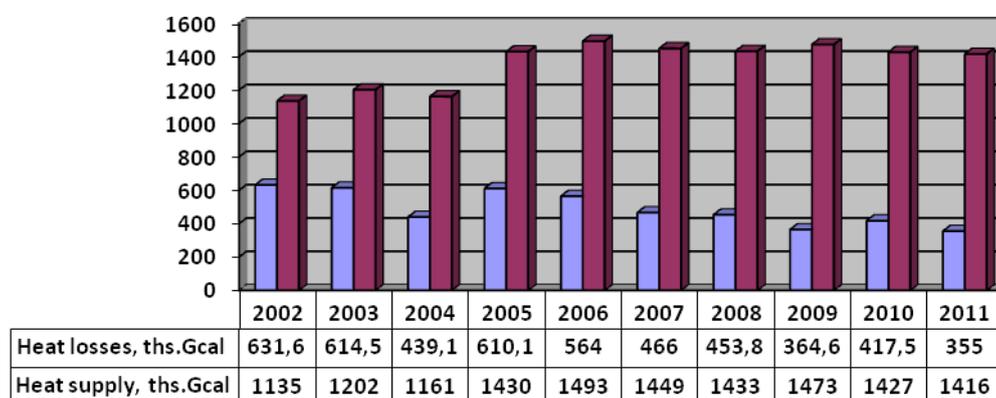
Section 3. Promotion of High-efficiency Co-generation

69. Promotion of high-efficiency co-generation represents a priority measure of the Government agenda. The new Heating Law and amendments to other legislative acts are expected to be passed in 2013. The updated legislative and normative framework will comprise a new support scheme/mechanism for the energy produced in co-generation mode.

Section 4. Restructuring and upgrading the district heat supply systems

70. Government Decision No. 189 dated 20 February 2003 introduces the Concept on developing the republican heat supply system by having installed several mini-CHPs across the country. Subsequently, 36 plans were developed by the local governments concerning the heat supply of urban settlements. Formerly, the territory of the Republic of Moldova was supplied by circa 36 district heat systems; currently it has got only 12 partially renovated systems and two systems (Chisinau and Balti) with up to 80 % coverage of the population of these cities. Concurrently, the heat losses in networks amounted for 21% in 2009 (see Figure 1).

Figure 1. Heat losses in networks



71. For the purpose of this NEEAP it is suggested to update this Concept, based on the state policy on co-generation and employment of renewable energy sources.

Section 5. Measures aimed at power savings during distribution and transmission

72. Losses in the power distribution grids were reduced dramatically with approximately 322% or 3.2 times for RED Nord-Vest; with 287% or 2.9 times for RED-Nord and with 213.7% or 2.1 times for RED Union Fenosa during 2001-2011. Thus, in 2011, the losses in the distribution grid were equal to: 9.89% for RED Nord;

12.39% for RED Nord-Vest; 13.1% for RED Union Fenosa, relative to 12.5% – the allowable losses for computing the tariff (in % to the electricity entered into the distribution networks).

73. Losses of power and energy in the electricity transmission sector amount for circa 4.2% relative to the allowable level of 3% approved by the National Energy Regulatory Agency.

74. The measures aimed at power savings during its distribution and transmission comprise the following actions:

- a) Ministry of Economy shall devise a development programme for the power transmission system as per the National Energy Efficiency Programme (NEEP) approved by Government Decision No. 833 dated 10 November 2011;
- b) The distribution operators, in co-operation with Ministry of Economy and the Agency for Energy Efficiency, shall develop their own energy efficiency programmes to cut the losses in the power distribution grids as per the target set by the NEEP – 0.52-0.82% annually;
- c) Programmes approved by the operators and/or the reports prepared as per the template developed and distributed in advance by AEE, will be submitted to the AEE and ANRE;
- d) Programmes will contain measures to be taken, including the estimated cost and the coverage source, deadline and the forecasted/expected energy savings;
- e) Annually, the energy supplier, including the retailers, and/or the distribution network operators shall submit statistical end-users data, using the template developed by the AEE.

Section 6. Other measures on primary energy savings

75. In the Republic of Moldova, the major share in the transport sector is held by road transport and rail transport; the former is dominant in passenger transporting, and the latter – in cargo transporting; while the share of fluvial and air transports is insignificant in both cases.

76. Concurrently, the Republic of Moldova imports 99% of the consumed liquid fuels. Also, the fuel consumption shows upward trends. Thus, during 2011, the volume of imported oil products amounted to 625 thousand tonnes, or 9.2% more relative to 2010; the volume of imported gasoline during the same period recorded an increase of 3.8% relative to 2010, amounting to 193.0 thousand tonnes; the total volume of imported diesel equalled to 353.6 thousand tonnes relative to 309.1 thousand tonnes imported in 2010, recording a 14.4 % increase; the volume of liquefied gas imported in 2011 recorded a 16.9% increase relative to the previous year, making up 78.1 thousand tonnes in comparison with 66.8 thousand tonnes imported in 2010.

77. The diesel production amounted to 3.636 thousand tonnes out of the oil extracted on the Moldovan territory, or 4.3 % less than the volume of diesel produced in 2010. The share of domestic production on the market remains insignificant (circa 1.0%).

78. The Republic of Moldova envisages replacing 10% of the total consumed liquid fuels with biofuels. As for the inland transport infrastructure, Government Decision No. 85 dated 01 February 2008 on the approval of the Strategy of inland transportation infrastructure for 2008-2017, outlines clear development goals and objectives for the aforementioned period and suggests measures aimed at refurbishing and upgrading the road infrastructure.

79. Thus, the main objective is to create an efficient system to meet the mobility needs of citizens and to facilitate trade on domestic and international markets. The short-term objectives envisage the renovation of the existing road and railroad transport infrastructure; and institutional commitments that provide for a stable framework for the infrastructure renovation and continuous maintenance.

80. The Strategy suggests the following short-term actions and costs:

- a) Develop and implement the Road Renovation Plan – the total investment amounts to 34 032 million MDL (US\$2,836 million) for a ten-year period (renovation of national road network – 13 548 million MDL (US\$1129 million); renovation of local road network – US\$947 million; periodical and routine maintenance of the whole road network – 9 120 million MDL (US\$760 million);
- b) Develop and implement the Railroad Renovation Plan for a three-year period, covering 350 km of railroad, assessed in the amount of 785 million MDL, to be financed from the state budget;
- c) Create the Road Fund, having allocated the amount of 1 079 780.0 thousand MDL for 2013. The Fund represents a stable financing framework for the maintenance of transport infrastructure;
- d) Develop and implement the Railroad Restructuring Plan. Moldova does not have power-driven railroads, having operated Diesel locomotives; therefore it is forced to buy diesel fuel in very large quantities.

81. The legal framework suggested for financing of road maintenance will enable the retrieval of at least part of the fees paid for fuels, having contributed in this way to the financing of inland transport infrastructure maintenance.

Title III
PRIMARY ENERGY SAVINGS IN END-USE SECTORS

Chapter 1
REVIEWING THE TARGETS AND ACCOMPLISHMENTS
RELATING TO PRIMARY ENERGY SAVINGS

82. This NEEAP provides for reducing the primary energy consumption in all national economy sectors with approximately 1.8 percentage points annually during 2013-2015 relative to the baseline 2009.

83. The calculated energy savings resulting from the implementation of relevant measures are displayed in Table 7 below:

Table 7. Energy savings objectives resulting from the implementation of relevant measures per sector set according to the Bottom-Up approach.

	Sectors	2014		2016	
		Energy savings, ktoe	%	Energy savings, ktoe	%
1	Energy transformations	34	62.83	74	30.78
2	Industry	16	29.28	27	11.05
3	Transport	0	0	0	0
4	Public (services)	4	7.58	13	5.42
5	Households	0.2	0.31	126	52.74
	TOTAL	52.2	100	240	100

84. Savings shown in Table 7, computed as per the BU approach, ensure a 12%-coverage of the objectives determined in Table 2, estimated as per the TD approach. This gap is due to the fact that the computations displayed in Table 7 take into account only the foreseen direct investments.

85. Since this NEEAP is focused more on the establishment of the regulatory and institutional framework, which would support and encourage the savings, the other savings would be achieved by the private sector, local governments and civil society.

Chapter 2

LIST OF STRATEGIES IMPACTING THE END-USE ENERGY DEMAND

86. There are several national strategies and policies stating the objectives aimed at making the energy use more efficient, which are displayed in Table 8.

Table 8. Objectives set as per the Strategies in place.

	Strategy/Policy	2015	2020
1	National Energy Efficiency Programme 2011-2020		
	Making the overall primary energy use more efficient (baseline year 2009)		20
	Reduce the greenhouse gas emissions in comparison with the baseline (1990)		25
2	National Development Strategy “Moldova 2020”		
	Reduce the energy intensity, %		10
	Reduce power losses in the transmission and distribution networks, %	13	11
	Reduce the natural gas losses in the transmission and distribution networks, %	20	39
	Reduce heat losses in the transmission and distribution networks, %	2	5
	Reduce the greenhouse gas emissions (in comparison with 1990), %		25
	Reduce the energy consumption within buildings, %		10
	Share of renovated public buildings, %		10
3	Energy Strategy till 2030		
	Making energy use more efficient by 2020		20
	Making energy use more efficient by 2016	9*	
	* intermediary target by 2016.		

Section 1. National Development Strategy “Moldova-2020”

87. Approved by Law No. 166 dated 11 July 2012, the Strategy outlines the midterm and long-term quantitative objectives. Thus, it is proposed to cut the energy intensity with 10% by 2020. In the electricity sector (transmission and distribution) it is proposed to cut losses with 13% by 2015 and with 11% by 2020.

88. The energy use within buildings is expected to be lowered with 10% by 2020, concurrently, 10% of public buildings are to be renovated in the long-run.

Section 2. National Energy Efficiency Programme 2011-2020

89. Similar to the aforementioned Strategies, this Programme, approved by Government Decision No. 833 dated 10 November 2011, stipulates the reduction of greenhouse gas emissions with 25% in comparison with the level recorded in 1990. Also, the Programme lays down the national objective to make the overall use of primary energy more efficient with 20% by 2020.

90. The Programme comprises measures to be taken in all national economy sectors, which, in fact, reflect the requirements set by the European Directives on energy efficiency and renewable energy sources, including:

- a) Creation of energy services market;
- b) Setting the supporting mechanisms/tools;
- c) Labelling the energy-related products;
- d) Ecodesign;
- e) Setting the energy performance minimum requirements for buildings;
- f) Promotion of co-generation, etc.

Section 3. Midterm and Long-term Budget Expenditure Strategy

91. The Midterm and Long-term Budget Expenditure Strategy covers expenditures in the energy field for 2013-2015 earmarked for the electricity sector, heat sector, natural gas supply sector, energy efficiency and employment of renewable energy sources, building and strengthening the energy sector capacities.

92. Thus, the draft Energy Sector Expenditure Strategy for 2013 – 2015 envisages financing the actions in the area of energy efficiency and employment of renewable energy sources as it is shown in Table 9.

Table 9. Estimated Expenses for energy efficiency and renewable energy sources, 2013-2015

Programme/Sector	Estimates (thousand MDL)		
	2013	2014	2015
Energy efficiency and renewable energy sources, including:	174032.9	191145.7	52723.8
Energy Efficiency Fund	159360.3	175751.1	45278.1
Capacity building in the area of energy efficiency and renewable energy sources	12439.4	12166.5	4221.2

93. The draft Strategy supports the institutional capacity building necessary to ensure proper sector operation, with the allocation of the corresponding financial resources. These capacities include:

- a) Setting and strengthening the AEE institutional capacity with 11 units of personnel and with the following budget: 2013 – 1765.5 thousand MDL; 2014 – 2304.75 thousand MDL; 2015 – 3004.85 thousand MDL;
- b) Setting the financial tools – the Energy Efficiency Fund aimed at financing the energy efficiency projects and employment of renewable energy sources with the budget displayed in Table 9;

- c) Training of Energy Managers and setting an energy management system in the public sector;
- d) Training and authorising Energy Auditors, Energy Evaluators, and Energy Inspectors, etc.

Chapter 3

MEASURES AIMED AT ENHANCING ENERGY EFFICIENCY IN END-USE SECTORS AND PRIMARY ENERGY SAVINGS

94. Below we presented the measures aimed at enhancing energy efficiency in end-use sectors: energy transforming sector, constructions, public transportation, etc.

95. Savings for each of the defined measures have been estimated based on the Recommendations on the measuring and estimating methods provided by Directives 2006/32/EC and 2012/27/EU on energy efficiency.

96. The calculation method for measuring energy savings separately for each measure and the deviations from the methods recommended by the corresponding Directives are described in the tables below.

97. Reports on energy savings achieved and action implementation shall be submitted in the National Plan monitoring Matrix.

Section 1. Measures aimed at enhancing energy efficiency in the energy transforming sector.

98. Power transmission and distribution own energy efficiency programmes.

Title of energy efficiency measure		Own energy efficiency programmes for power transmission and distribution
Energy efficiency measurement index		E1, E 1.1, E1.2
Description	Category	Programmes
	Timeframe	Starting: March 2013 Ending: December 2014
	Purpose, brief description	Ministry of Economy will undertake the measures necessary to encourage the development of own energy efficiency programmes by Operators (RED Nord, RED Nord-Vest, and RED Union Fenosa) aimed at cutting the losses in the power distribution grids. Ministry of Economy will develop a programme for the development of the electricity transmission system pursuant to the NEEP 2011-2020 approved by Government Decision No. 833 dated 10 November 2011.
	End-user's goal	Reduction of energy losses in power transmission and distribution grids. Planning the medium-term and long-term investments by the operators concerned, taking account of the requirements set by the legislation in force, and optimization of power transmission and distribution service through the reduction of energy losses.
	Target group	Power distribution and transmission operators.
	Applicability	Own energy efficiency programmes of energy sector operators will have a beneficial impact on the whole "production-consumption" chain both at the local and national levels.
Information for implementation	List and describe the energy savings action the measure is based on.	The proposed actions include: 1. Operators of distribution grids, in co-operation with the Ministry of Economy and the Agency for Energy Efficiency, will develop their own energy efficiency programmes aimed at cutting the losses in the power distribution grids (pretty often these measures can be identified in the investment programmes of the operators). 2. Ministry of Economy will prepare a development programme for the electricity transmission system. 3. The own energy efficiency programmes approved by operators will be submitted to the AEE. 4. Programmes will comprise energy efficiency measures to be taken, the estimated cost and coverage source, the deadline and savings estimated for the

		<p>duration of the programmes.</p> <p>5. Operators will fill-in and submit to the AEE, every three years, standard forms/templates with data on energy consumption. The templates will be devised by the AEE in accordance with Article 23(1) of the Energy Efficiency Law No. 142 dated 02 July 2010, and distributed to operators in advance.</p>
	Budget and funding sources	<p>Budget resources the energy sector programmes for 2013 – 2015 are intended for power transmission operators only, sub-programme “Energy sector development”:</p> <p>2013 – 60094.0 thousand MDL; 2014 – 117684.0 thousand MDL; 2015 – 329128.8 thousand MDL.</p>
	Implementing body	Power distribution and transmission operators.
	Monitoring authority	AEE
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings: Pursuant to the NEEP 2011-2020, the percentage target for energy savings in the distribution grid varies between 0.52 and 0.82 p.p. annually. The energy savings were computed on the basis of the worst case scenario – 0.5 p.p. annually. Savings were computed relative to 2009 (baseline).</p> <p>Monitoring method – BU – method based on standard forms filled-in and submitted to the AEE every three years.</p>
	Savings achieved in 2015	<p>The forecasted energy savings amount to 5.81 ktoe.</p> <p>Reduction of energy losses by:</p> <p>circa 1,5 p.p. in 2015 relative to 12,5% in 2011 upon the power distribution within the grid; circa 0.5 p.p. in 2015 relative to 4.2% in 2011 upon the transmission of power.</p>
	Energy savings to be achieved by 2016	<p>The forecasted energy savings amount to 9.58 ktoe.</p> <p>Reduction of energy losses by:</p> <p>circa 2,5 p.p. in 2016 relative to 12,5% in 2011 upon the power distribution within the grid; circa 0.8 p.p. in 2016 relative to 4.2% in 2011 upon the transmission of power.</p>
	Energy savings impact expected to be achieved by 2020	<p>The forecasted energy savings amount to 16.56 ktoe.</p> <p>Reduction of energy losses by:</p> <p>circa 4.5 p.p. in 2020 relative to 12,5% in 2011 upon the power distribution within the grid; circa 1.2 p.p. relative to 4.2% in 2011 upon the transmission of power.</p>
	Assumptions and risks	<p>The calculation of savings is based on the worst case scenario. Savings have been computed relative to the baseline 2009, although they could be larger once the consumption increases.</p> <p>The major risk is associated with the lack of funds to cover the corresponding investments.</p>
	Overlaps, multiplying effects, synergies	In order to avoid the richness of programmes and plans, the energy efficiency activities could be provided as a

		<p>separate chapter in the existing investment programmes of the operators, having submitted the standard forms to the AEE every three years.</p> <p>This action would complement the energy efficiency measures taken at the production level and encourage their implementation at the end-user level.</p>
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99. Keeping records on end-use of natural gas.

Title of energy efficiency measure		Keeping records on end-use of natural gas
Energy efficiency measurement index		SG1
Description	Category	Obligatory notification
	Timeframe	Starting: January 2013 Ending: December 2014
	Purpose, brief description	Keeping records on end-use of natural gas with the implementation of up-to-date technologies.
	Final goal	Informing, measuring and invoicing on the basis of real consumption. Increase the end-user awareness on the natural gas consumption.
	Target group	End-users of natural gas.
	Applicability	Nation-wide
Information for implementation	List and describe the energy savings action the measure is based on.	Develop and implement a plan aimed at installing devices to meter the use of natural gas by all categories of end-users, having applied up-to-date technologies.
	Budget and funding sources	Suppliers' own budgets.
	Implementing body	Ministry of Economy, suppliers.
	Monitoring authority	Ministry of Economy, AEE.
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings –TD: as of June 2012, approximately 13-15% of the total number of households did not have individual metering devices, while the non-household sector was provided with metering equipment 100%. It is proposed to ensure all the households with metering equipment by 2016; therefore a plan for metering all consumers is needed (Law No. 123-XVIII dated 23 December 2009, Article 51 (1)).</p> <p>Pursuant to the energy balance, the use of natural gas in 2010 amounted to 1033 ktoe, of which the population used 294 ktoe. Approximately 15% or 44.48 ktoe of the total volume of natural gas used by the population has not been metered. This figure served as basis to estimate the savings.</p> <p>Monitoring method – BU: collecting the data on consumption from the annual reports submitted by natural gas suppliers.</p>
	Savings achieved in 2015	Estimated - 0.74 ktoe for 2013-2015.
	Energy savings to be achieved by 2016	Estimated - 1.24 ktoe for 2013-2016.
	Energy savings impact expected to be	Estimated - 2.47 ktoe for 2013-2020.

	achieved by 2020	
	Assumptions and risks	The installation of metering devices depends directly on the funds available for these measures and on the inclusion of this cost in the tariff approved for suppliers.
	Overlaps, multiplying effects, synergies	The installation of meters may be combined with the certification of buildings, especially when natural gas represents the primary source for heating. It is proposed to introduce certification of buildings and check the heating systems during the same period.

100. Setting the normative framework and the monitoring system for the heating sector.

Title of energy efficiency measure		Setting the normative framework and the monitoring system for the heating sector
Energy efficiency measurement index		ET 1, ET1.2.-ET-3
Description	Category	Regulation
	Timeframe	Starting: January 2013 Ending: December 2015
	Purpose, brief description	The goal pursued through the implementation of this measure is to cut the energy use at the source of generation and in end-users. The measure envisages setting forth the regulatory framework for the heating sector, to promote high-efficient co-generation depending on the useful heat demand. The measure comprises several actions, such as: drafting the law, transposing the Directive on co-generation, developing studies, methodologies, creating the database for monitoring the use of heat and its planning, etc.
	Final goal	Setting clear rules for the heat market. Promoting the production of heat in co-generation mode.
	Target group	Heat producers, transporters, distributors and users.
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	The legal framework will set favourable conditions for the development of the heating sector. The following activities are proposed in this regard: <ol style="list-style-type: none"> 1) setting a database and an atlas to show the heat generation potential, including from renewable energy sources, and capacities to be installed in territories; 2) drafting the Heat Law with partial transposition of the Directive on Co-generation. The transposition of the aforementioned Directive implies operating amendments to the Electricity Law No. 124 dated 23 December 2009; 3) developing the secondary normative framework on co-generation; 4) updating Government Decision No. 189 dated 20 February 2003 on the approval of the Concept

		<p>regarding the refurbishing the republican system for heat supply;</p> <p>5) developing and approving plans on heat production in co-generation mode. As of 2003, 36 such plans were developed, which need to be upgraded;</p> <p>6) developing a database to monitor the use of heat and estimate the investments necessary in the heating sector;</p> <p>7) introducing support schemes for the energy produced in co-generation mode.</p>
	Budget and funding sources	<p>The amount of 17608.7 thousand MDL is foreseen for developing studies from the direct support to the budget, distributed by years as follows:</p> <p>2013 – 5442.2 thousand MDL;</p> <p>2014 – 12166.5 thousand MDL.</p>
	Implementing body	Ministry of Economy, Ministry of Regional Development and Constructions, AEE
	Monitoring authority	Ministry of Economy, Ministry of Regional Development and Constructions, AEE
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings. No estimates for the energy savings have been carried out because the regulations set conditions for sector development only. Nevertheless, the estimates of energy savings have been reflected in the description of measures comprised by the NEEAP, as follows:</p> <p>for heating sector transmission operators - own energy efficiency plans;</p> <p>for end-users – energy performance of buildings, which implies certification on new buildings and the ones undergoing major renovation.</p> <p>Monitoring method – BU: Setting a database to evaluate the heat use and the potential for heat production from renewable energy sources and in co-generation mode, etc.</p>
	Savings achieved in 2015	n/a
	Energy savings to be achieved by 2016	n/a
	Energy savings impact expected to be achieved by 2020	n/a
	Assumptions and risks	The legal framework itself does not suggest measurable energy savings; however, it creates conditions to promote co-generation, which sets forth at least 10% of savings relative to heat produced by heating plants.
	Overlaps, multiplying effects, synergies	An important element for the enforcement of the new normative acts would be corporate/institution reorganisation of the heating sector and regulation of debts. These are also some pre-requisite conditions necessary to ensure smooth function of sector operators and to guarantee high-quality services to end users.

		<p>The new law enforcement would not be possible without:</p> <ol style="list-style-type: none"> 1) amending the Regulation on heat supply and use, approved by Government Decision No. 434 dated 9 April 1998 (Q II 2013); 2) amending Government Decision No. 267 dated 12 March 2003 on optimizing the procedure for the installation of natural gas fired-boilers in flats, individual houses and social facilities (Q II 2013); 3) repealing Government Decision No. 1224 dated 21 December 1998 on the approval of temporary Rules for the operation of housing, maintenance of residential blocks and adjacent land plots in the Republic of Moldova (Q II 2013); 4) drafting a government decision on the approval of a Regulation on rendering and settling the dwelling services, utilities and non-utility services for the housing stock, metering the flats and setting terms for their disconnection/reconnection to the heating and water supply systems (Q II 2013). <p>Also, it is necessary to develop and pass the following legislative acts:</p> <ul style="list-style-type: none"> Law of dwellings; Law on energy performance of buildings, etc. <p>In order to promote co-generation, it is recommended to employ the option of attracting private investments and setting Public-Private Partnerships.</p>
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101. Heating sector own energy efficiency programmes.

Title of energy efficiency measure		Own energy efficiency programmes in the heating sector
Energy efficiency measurement index		ET 1, ET1.2.-ET-3
Description	Category	Programmes and obligatory notification
	Timeframe	Starting: January 2013 Ending: December 2015
	Purpose, brief description	<p>The purpose of this measure is to optimise the heat production. The actions included in this measure relate to the energy efficiency of the district heating system from Chisinau Municipality, which holds 84.6% of the total heat supplied to the users throughout the country. However, the measures are intended for the heat suppliers holding together 15.4%.</p> <p>The purpose of these programmes is to mobilise the efforts and plan cautiously the heating system effectiveness, reduce the production and operation costs; improve the services rendered, etc. The main activities will include refurbishing and upgrading of heating plants to co-generation plants; replacing the existing heating points with individual heating points; installing further equipment to register the use of heat at the property defined border, etc. At present, 5% of the total</p>

		distribution points are not equipped with devices recording the use of heat. The NEEP 2011-2020 proposes to install 100% heat metering devices by 2016.
	Final goal	Optimising the heat production and distribution. Making the heat production more efficient and improving the quality of heat supply services. Reducing the losses of heat up to 12% by 2020.
	Target group	Heat producers and distributors
	Applicability	Local application
Information for implementation	List and describe the energy savings action the measure is based on.	<p>The following concrete activities are proposed:</p> <ol style="list-style-type: none"> 1) upgrading and reconstruction of 69 km of main heat and distribution networks, which exceeded the operation term of 25-30 years (207 km by 2020); 2) upgrading 26 km of heat networks within the neighbourhoods/districts from own sources and 235 km - from foreign investments (86 km from own sources and 725 km from foreign investments by 2020); 3) replacing the thermal insulation for 18 km of underground heat networks and in crossing channels (39,0 km by 2020); 4) installing ball valves on the main heat networks and within the neighbourhoods/districts; 5) upgrading the pumping stations of the main heat networks (replacing the network pumps at pumping station No. 8 in 2012 (0,9 million MDL) and reconstruction of the pumping station ПНСН-5 in 2014 (0.62 million MDL, of which 0.32 million MDL from Termocom own resources); 6) installing 1643 individual heating points (143 from supplier's own resources) for the housing stock of Chisinau during the NEEAP implementation (4928 heating points by 2020, of which 428 from supplier's own resources). Overall, this measure envisages to eliminate by 2020 364 central heating points and 204 km of hot water networks; 7) automating the heat supply system („LOVATI” and „MONITOR”); upgrading the power equipment of JSC “Termocom” (upgrading the distribution plant of 6 kV up to ST 15, SP 12, ST500 and SP15, replacing the cells with oil-based circuit breakers by cells with vacuum-based breakers at SP10, heating plant South, SP3, reconstruction of the distribution plant de 0.4 kV. Overall, 22 such projects are planned to be implemented by 2020.
	Budget and funding sources	JSC “Termocom” investments in the total amount of 4951.64 million MDL: 2013-2015 – 1741.45 million MDL;

		2015-2016 – 1087.04 million MDL; 2016-2020 – 2123.29 million MDL. Own coverage resources 406.54 million MDL, or 8.65% of the total investment needed. Swedish International Development Cooperation Agency (SIDA) – 320 million MDL (20 million EUR).
	Implementing body	Operators (JSC “Termocom”).
	Monitoring authority	Ministry of Economy, AEE
Energy savings	Monitoring/measuring approach of resulting savings	The TD method combined with the BU method has been applied for the following actions: It is planned to cut <i>losses within the network</i> from 20.1% in 2011 to 12% in 2020. In 2011, JSC Termocom supplied 141.68 ktoe to end-users. This presumes an annual reduction of 1.34 p.p. By 2020 it is expected to achieve 21.31 ktoe of heat savings.
	Savings achieved by 2015, ktoe	Total savings – 7.1 ktoe, including heat savings resulting from the reduction of losses within the network - 7,1 ktoe (1,34 p.p. annually).
	Energy savings to be achieved by 2016, ktoe	Total savings – 11.84 ktoe, including heat savings due to the reduction of losses within the network – 11.84 ktoe.
	Energy savings impact expected to be achieved by 2020, ktoe	Total savings – 21,35 ktoe, including savings due to the reduction of losses within the network – 21,35 ktoe.
	Assumptions and risks	As JSC “Termocom” plans to make investments of only 8.65% from own sources, the shortage of funds represents high risk for the implementation of its own energy efficiency programme. Some investments are covered by the tariff.
	Overlaps, multiplying effects, synergies	The individual heat points enable to cut the heat cost with at least 5-10%, and as a result of integration with the horizontal heat internal supply system and thermal retrofitting of buildings – with more than 30%.

Section 2. Measures aimed at enhancing energy efficiency in the industrial sector

102. Upgrading and renovating the industrial sector

Title of energy efficiency measure		Upgrading and renovating the industrial sector
Energy efficiency measurement index		I.1, I. 1.1, I. 1.2, I. 1.3
Description	Category	Energy saving mechanisms
	Timeframe	Starting: January 2013 Ending: December 2015
	Purpose	Support the funding tools for energy efficiency projects within the sector by setting a credit line (grant component - 5-20%) for the industrial sector. Credits are provided for investments into energy saving technologies or for employment of renewable energy sources.
	Brief description	The industrial sector of the Republic of Moldova still uses energy-intensive technologies and machineries, which do not meet the contemporary environmental and performance

		requirements. New technologies are economic-efficient and environment-friendly.
	Final goal	Reduction of energy intensity in the industrial sector, which is 3-4 times higher relative to the level registered in EU Member States; implementation of state-of-the-art technologies; upgrading the domestic item production lines; setting new jobs; by default, conservation of mineral and energy resources of the country for the next generations. Upgrading the industrial sector in a way to ensure that its outputs are competitive on international markets.
	Target group	Undertakings from the industrial and commercial sectors.
	Applicability	Nationwide; envisages the development of the country whole industrial sector.
Information for implementation	List and describe the energy savings action the measure is based on.	<p>The measure envisages to take the following actions:</p> <ol style="list-style-type: none"> 1) continuous monitoring of energy use and technological parameters based on up-to-date measuring and control systems; 2) replacing the old production lines with new energy-efficient and higher-productivity technologies; 3) automating the industrial processes; 4) cutting the heat losses; 5) using secondary energy resources in technological processes; 6) installing advanced equipment for heat generation, with lower GHG emissions and lower negative effects; 7) making the lighting devices more efficient and providing high-quality lighting at the working places depending on the specific lighting requirements of technological processes; 8) sizing the electric motors in accordance with the required load and using modern devices for motor starting, controlling and adjustment; 9) implementing low-cost local co-generation plants; 10) refurbishing and replacing low-efficiency boilers; 11) providing thermal insulation of steam and hot water pipelines; 12) switching from power-based heating to fuel or biofuel-based heating; 13) thermal retrofitting of administrative and production building envelopes (having installed Low-E windows, doors, isolation of floors, walls, ceilings, etc.); 14) installing control, recording and measuring devices; 15) installing heat-recovery devices within the ventilation systems; 16) redeveloping air compressing systems; 17) installing solar collectors, heat pumps, etc.; 18) installing absorption or cooling systems through evaporation; 19) introducing energy management systems.

	Budget and funding sources	EBRD credit line: 2012 (April) – 2014 – MoSEEF II – 352 million MDL (22 MEUR)
	Implementing body	MoSEEF project and industrial sector undertakings
	Monitoring authority	Ministry of Economy, AEE
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings – TD combined (extrapolation) with BU. Savings have been calculated based on MoSEEF I experience and outcomes. Thus, MoSEEF I provided loans to 40 undertakings to implement 90 projects. These undertakings hold a share of 5.31 ktoe in the volume of 82 ktoe (in 2009) used by the sector.</p> <p>Having extrapolated these figures for MoSEEF II, we have come up with savings of 15.9 ktoe for this NEEAP, and estimated savings of 47.75 ktoe by 2020.</p> <p>Monitoring method – BU: revisiting MoSEEF I, MoSEEF II outcomes and other supporting tools; setting a database to assess the use of energy; collecting the forms filled-in by the industrial sector undertakings by the end of each year.</p>
	Savings achieved in 2015	Energy savings – 15.9 ktoe.
	Energy savings to be achieved by 2016	Energy savings – 26.5 ktoe.
	Energy savings impact expected to be achieved by 2020	Energy savings – 47.75 ktoe.
	Assumptions and risks	Loans are available for those that have their own contribution. Long-term estimated savings (47.75 ktoe by 2020) will be achieved provided enough funds are available to finance the energy efficiency projects. Credit lines are intended to create precedent and experience for local banks, so that the latter could take over the energy efficiency project crediting practice in the future, when the donors' funds are depleted.
	Overlaps, multiplying effects, synergies	Setting the Energy Efficiency Fund would have a multiplying effect, which, just like MoSEEF I and II, would provide loans. The EEF would come up with some additional new financial products and expand the sector coverage area and the variety of measures.

103. Introduction of Energy Management System and best practices in the industrial sector

Title of energy efficiency measure		Introduction of Energy Management System and best practices in the industrial sector
Energy efficiency measurement index		I.1, I. 1.1, I. 1.2, I. 1.3
Description	Category	Energy saving mechanisms
	Timeframe	Starting: January 2013 Ending: December 2013 Activity launched at the end of 2011.
	Purpose	To provide support to undertakings from the industrial sector aimed at introducing the Energy Management System (EMS) and the best practices, which do not impose large costs and/or involve low costs. This activity implies conducting trainings, providing technical assistance with the involvement of national experts, employing tools to foster the adoption of relevant decisions and their enforcement.
	Brief description	The Moldovan industrial sector offers a substantial energy saving potential, other than that associated with the technologies and/or machinery used, but to larger extent originating from poor energy management, limited awareness of energy performances and shortage of expertise in terms of efficient exploitation, design and investments. The Energy Management System suggests a reliable and proved framework, which guarantees sustainable energy performance and continuous improvements.
	End-user's goal	Energy savings and cutting the GHG emissions in the industrial sector through continuous implementation of best practices and best available technologies. Ensure embedding of energy efficiency into the daily management, procurement activities, and investment decisions taken by industrial sector undertakings.
	Target group	Industrial sector undertakings and other large end-users.
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	The measure foresees the following activities: 1) conducting training courses for undertaking employees on implementing the Energy Management System ISO 50001 and optimising the energy system; 2) implementing the EMS pursuant to ISO 50001 at industrial sector undertakings and at other large energy end-users; 3) implementing energy efficiency projects based on the introduction of the EMS: metering, refurbishing and replacing the boilers; adjusting the combustion; insulation of pipelines for hot water circulation, efficient design, efficient cooling systems; heat exchangers, optimising the compressed air systems, etc.; providing foreign technical assistance aimed at developing and implementing EMS and other energy efficiency projects; 4) disseminating and fostering the EMS

		implementation results and best practices.
	Budget and funding sources	n/a
	Implementing body	Ministry of Economy with the assistance provided by UNIDO, involving undertakings from the sector.
	Monitoring authority	Ministry of Economy, AEE
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings – TD combined (extrapolation) with BU: Savings are estimated based on the documents developed by UNIDO and current results reported by the programme.</p> <p>Monitoring method – „Bottom-Up”: Analysis of outcomes achieved by industrial undertakings involved in the UNIDO Programme; Collection of data and annual review of baseline and energy performance indicators set as integral part of the EMS.</p>
	Savings achieved in 2015	n/a
	Energy savings to be achieved by 2016	n/a
	Energy savings impact expected to be achieved by 2020	n/a
	Assumptions and risks	<p>The industrial sector has recorded substantial energy losses due to poor energy management, limited awareness of energy performance, inefficient exploitation, poor maintenance, inefficient procurement procedures, etc., regardless the technologies and machinery in place.</p> <p>The country industrial sector presents great opportunities to cut the energy use and associated costs, which do not imply capital costs or involve low costs, which could be omitted.</p> <p>EMS and ISO 50001 guarantee acknowledgment by the undertaking leadership and their focus on energy performance and costs associated with the integration of energy efficiency in any procurement and/or investment decision. This will impose also an increasing demand for loans from financial institutions to be channelled for implementing energy efficiency projects.</p>
	Overlaps, multiplying effects, synergies	<p>The measure involves synergies and multiplying effects with projects supported by MoSEEF, which acquired experience and contributed to the mitigation of risks perceived by local banks in funding the energy efficiency projects.</p> <p>Implementation and broad dissemination of EMS would increase the number of decisions regarding investments in energy efficiency in the industrial sector, with a subsequent increasing demand for commercial financial means.</p> <p>There are synergies with the EEF in terms of supporting</p>

		<p>the development of energy efficiency projects and preparation of project proposals/files accepted by banks (identified in the course of EMS implementation), as well as of other financial products such as bank guarantees.</p> <p>EMS implementation introduces data collection discipline, monitoring and analysis, which, along with offering tangible benefits to undertakings, streamlines, from the technical point of view and makes more efficient in terms of costs, the task of monitoring and verification of energy performance at the level of subsector, sector and country, in general.</p>
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104. Development of energy services market for the industrial sector

Title of energy efficiency measure		Development of energy services market for the industrial sector
Energy efficiency measurement index		I.1, I. 1.1, I. 1.2, I. 1.3
Description	Category	Energy saving mechanisms
	Timeframe	Starting: January 2013 Ending: December 2013 Activity launched at the end of 2011
	Purpose	To strengthen and build capacity of national experts and service providers capable to implement EMS according to the new standard ISO 50001; train the trainers to provide trainings and technical assistance to undertakings and to other large energy users.
	Brief description	The EMS and standards (ISO 50001 that replaced EN16001) represent a new experience for the Republic of Moldova and for the market of energy services providers. This measure will ensure a team of national experts and service providers with the expertise and experience necessary to establish the supply side and implement the best EMS available in the industrial and other sectors.
	Final goal	Expanding and strengthening the quality of energy services rendered to the industrial sector and to other sectors on the Moldovan market. Supporting the development of the national services market and energy products for the industrial sector.
	Target group	Undertakings from the industrial sector and other large energy users.
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	The measure will envisage the following activities: <ul style="list-style-type: none"> 1) trainings for national experts, including on-the-job trainings with the involvement of international experts; 2) technical assistance provided to undertakings by national experts who successfully completed the training courses organised by UNIDO Programme.
	Budget and funding sources	GEF: 2013 – 4.8 million MDL (0.3 MEUR)
	Implementing body	Ministry of Environment, UNIDO, national experts and energy services providers

	Monitoring authority	Ministry of Environment, AEE
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings – TD combined (extrapolation) with BU: Savings resulting from: Training programmes (taken into account for the previous measure); Technical assistance provided to undertakings (savings to be estimated based on programme results, funds available for the selected measures, etc.)</p> <p>Monitoring method – „Bottom-Up”: Annual reviews of EMS and implemented projects.</p>
	Savings achieved in 2015	n/a
	Energy savings to be achieved by 2016	n/a
	Energy savings impact expected to be achieved by 2020	n/a
	Assumptions and risks	<p>The industrial sector has recorded substantial energy losses due to poor energy management, limited awareness of energy performance, inefficient exploitation, poor maintenance, inefficient procurement procedures, etc., regardless the technologies and machinery in place.</p> <p>The country industrial sector presents great opportunities to cut the energy use and associated costs, which would involve foreign expertise, trainings for the undertaking employees and corresponding tools.</p> <p>The supply side on the energy services market has got essential shortfalls in terms of expertise, using and fostering the best practices and technologies to match/meet the energy efficiency needs, constraints and capacity/ability of domestic undertakings.</p> <p>The Government should promote this measure as a priority; intensify the documentation of economic benefits and competitiveness; increasing the number of available funds to finance energy efficiency would stimulate the development of service providers and expand the range of services rendered.</p>
Overlaps, multiplying effects, synergies	<p>The measure involves synergies and multiplying effects with projects supported by MoSEEF and EEF. An energy efficiency market in place would stimulate the involvement of experts and service providers in more active implementation of the EMS.</p> <p>EMS is applicable and grants benefits to other sectors as well. Availability of qualified entities on the national market would be beneficial and relevant for other sectors as well, having granted larger potential on the market afterwards with higher impact.</p>	

Section 3. Measures aimed at enhancing energy efficiency in the construction sector

105. Drafting the legal framework on energy performance of buildings

Title of energy efficiency measure		Drafting the legal framework on energy performance of buildings.
Energy efficiency measurement index		C1, C1.1., C1.2., C1.3., C1.4., C1.5., C1.6., C1.7., C1.8., C1.9
Description	Category	Regulations
	Timeframe	Starting: January 2013 Ending: December 2015
	Purpose, brief description	Setting the legal framework to promote the energy performance of buildings. This measure will envisage the transposition of the Directive on the energy performance of buildings and approximation of the existing framework with the new Directive. This activity falls under the competence of the Ministry of Regional Development and Constructions. The AEE will be involved in certification committees and monitoring activities of energy savings achieved by the sector. Transposition of Directive was launched in 2009, within an international project supported by the EBRD, resulting in the development of the following draft legal acts: <ul style="list-style-type: none"> Law on the energy performance of buildings; Regulation on the energy performance of buildings; Regulation on regular inspection of heating and air conditioning systems; Methodology for the calculation of the energy performance of buildings; Methodology on regular inspection of heating and air conditioning systems and on periodic reports. The aforementioned activities will be defined and approved during 2013, although the regulations and technical norms will be developed in 2014.
	Final goal	To reduce the specific use of energy (at the level of energy efficiency class B) in the construction sector and, respectively, cut the emissions of CO ₂ . To improve the quality of constructions and set new jobs (approximately 150 jobs during the first two years). To set legal and regulatory conditions for the adjustment of relevant standards aimed at ensuring the implementation of the Directive on the energy performance of buildings. To set the financing tools aimed at supporting the energy efficiency measures in the construction sector.
	Target group	Constructions and residential sectors
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	The measures suggested for the purposes of this NEEAP will set forth the legal framework, outline minimum requirements for the energy performance of buildings, set conditions for capacity building, and ensure users' awareness through energy performance contracts and through regular inspection

		<p>reports of heating and air conditioning systems. Additionally, it is proposed to implement the following activities:</p> <ol style="list-style-type: none"> 1) To launch the MoREEF crediting line in the amount of 35 MEUR for the energy efficiency projects in the residential sector; 2) To devise a plan aimed at adjusting the EU standards in the area of energy performance of buildings; 3) To train and authorise experts in the area of energy performance of buildings; 4) To train and authorise 50 experts to carry out regular inspection of heating and air conditioning systems; 5) To issue 500 energy performance contracts; 6) To inspect 100 heating and air conditioning systems (heating systems with P>20 kW and air conditioning systems with P>12 kW). <p>If the legal framework enters into effect in the second half of 2013, the minimum energy performance requirements would become applicable in 2014 or 2015. The annual increase rate of newly-built areas equals to 32.4 thousand m², both public and private property. Their use would make up approximately 0.558 ktoe. The introduction of minimum energy performance requirements (Class B: 121 kWh/m²/year in flats and 104 kWh/m²/year in public institutions), even for the worst case scenario (-30%) would result in avoiding the over-consumption with 0.167 ktoe during the implementation of this NEEAP.</p> <p>The new minimum requirements will be applied also to constructions subject to major renovation (25% of the value or area of building envelope), while their annual renovation rate is below 1%.</p>
	<p>Budget and funding sources</p>	<ol style="list-style-type: none"> 1. International Project “Improve the energy efficiency regulatory framework in constructions” financed by the EBRD Shareholder Special Fund in the total amount of 4.48 million MDL (EUR280 thousand). 2. Draft law developed by the International Project "Moldova: Consultancy services provided to the Ministry of Regional Development and Constructions”, financed by the Shareholder Special Fund in the total amount of 4.066 million MDL (EUR 254 150). <p>3. Direct budget support during 2013-2015 – 6.5379 million MDL distributed as follows:</p> <p>a) training of Energy Evaluators and Energy Inspectors for the purpose of this measure:</p> <ul style="list-style-type: none"> ✓ 2013 – 777.5 thousand MDL; ✓ 2014 – 760.4 thousand MDL. <p>*These figures will not be taken into account for the final calculation of the budget necessary for the implementation of this NEEAP since the allocated budget resources cover the training of Energy Managers and Energy Auditors.</p> <p>b) Certification** of buildings:</p> <ul style="list-style-type: none"> 2013 – 200 buildings – 2 million MDL;

		<p>2014 – 300 buildings – 3 million MDL.</p> <p>** These figures will not be taken into account because of their recurrence in other measures dealing with the energy auditing of public buildings.</p> <p>4. MoREEF credit line – 560 million MDL (35 MEUR) for investments in the residential sector.</p>
	Implementing body	Ministry of Regional Development and Constructions
	Monitoring authority	Ministry of Regional Development and Constructions, Ministry of Economy, AEE
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings – BU for 2015 and TD for 2016 and 2020.</p> <p>The energy saving potential of buildings makes up 30-50%. For 2015, the calculation has been carried out based on the annual growth rate of newly-built spaces, which is equal to 32.4 thousand m²/year; average consumption – 200 kWh/m²/year and cutting the consumption with 30% in case of using the minimum energy performance requirements. For 2016 and 2020, the calculation has been carried out taking into account the upward trend of energy consumption with the deduction of 30% (the worst-case development scenario).</p> <p>Monitoring method – BU, carried out based on the national record-keeping system of energy performance certificates issued and registered in accordance with the current legislation.</p>
	Savings achieved in 2015	Savings calculated based on the proposed measures – 0.167 ktoe for the newly-built spaces only.
	Energy savings to be achieved by 2016	Savings estimate – 126.4 ktoe.
	Energy savings impact expected to be achieved by 2020	<p>Savings estimate* - 270.6 ktoe relative to the baseline 2009.</p> <p>*Jointly with the power consumption in buildings, which share amounts to 23.4%, these savings would ensure reaching, by 2020, 11.5% of the national target of 20%.</p>
	Assumptions and risks	<p>Credits provided by the local banks are expensive and will be allocated to high-income households only.</p> <p>The lack of legal framework in the residential sector enabling the prompt adoption of decisions within associations is a risk. Thus, the Law on Condominium requires amendments, and it is imperative to adopt the Housing Code.</p> <p>The associations of owners of privatised dwellings are not recognised as subjects of lending. Should the associations be recognised as a single subject for lending, one potential barrier for loan repayment would be those approximately 22% of households, association members, finding themselves below the poverty threshold.</p>
	Overlaps, multiplying effects, synergies	MoREEF credit line will provide credits to individual households, associations of tenants, cooperatives and condominiums. Also, loans will be granted to energy service entities to implement energy efficiency measures in the residential sector.

106. Promotion of nearly zero-energy buildings

Title of energy efficiency measure		Promotion of nearly zero-energy buildings
Energy efficiency measurement index		C2, C2.1
Description	Category	Regulation
	Timeframe	Starting: January 2014 Ending: December 2015
	Purpose, brief description	Directive on the energy performance of buildings stipulates the development of national plans to increase the number of nearly zero-energy buildings. To this end, it is suggested: <ol style="list-style-type: none"> 1) developing the scope of work for conducting a feasibility study on the nearly zero-energy buildings; 2) developing a feasibility study on the nearly zero-energy buildings.
	Final goal	Reduction of energy consumption per m ² , having covered a substantial part out of renewable energy sources. Increasing the number of nearly zero-energy buildings.
	Target group	Constructions sector
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	The rule of introducing nearly zero-energy buildings is applicable as of 2018. Since the newly-built public spaces make up only 0.05% of all constructions put into operation annually (2000-2010), the impact for 2018-2020 is negligible. The ratio of public buildings undergoing major renovation and falling under the incidence of this provision is to be set forth by the next NEEAP. Other buildings should comply with this provision as of 2020.
	Budget and funding sources	Own sources
	Implementing body	Ministry of Regional Development and Constructions
	Monitoring authority	Ministry of Regional Development and Constructions, Ministry of Economy, AEE
Energy savings	Monitoring/measuring approach of resulting savings	Monitoring method – BU, carried out based on the national record-keeping system of energy performance contract issued and registered in accordance with the current legislation.
	Savings achieved in 2015	This is not applicable since the rule of introducing nearly zero-energy buildings (below 50 kWh/m ² /annually) enters into effect as of 2018.
	Energy savings to be achieved by 2016	This is not applicable since the rule of introducing nearly zero-energy buildings (below 50 kWh/m ² /annually) enters into effect as of 2018.
	Energy savings impact expected to be achieved by 2020	Savings calculated – 0.32 ktoe for two years. The annual renovation ratio has not been taken into account.
	Assumptions	Introducing the rule of nearly zero-energy buildings for public buildings as of 2018 and for other sectors as of 2020.
	Overlaps, multiplying effects, synergies	Provisions relating to nearly zero-energy buildings are comprised by the Law on the energy performance of buildings.

Section 4. Measures aimed at enhancing energy efficiency in the public sector.

107. Energy management at the level of Local Governments

Title of energy efficiency measure		Introducing energy management at the level of Local Public Authorities
Energy efficiency measurement index		ME1- ME1.8
Description	Category	Regulation/planning and management
	Timeframe	Starting: January 2013 Ending: January 2015
	Purpose, brief description	Implementing the Energy Efficiency Law No. 142 dated 02 July 2010
	Final goal	Introducing energy management at the level of Local Public Authorities (district and municipal councils, ATU Gagauzia). Monitoring energy consumption, planning measures and financing pursuant to the priorities set forth.
	Target group	Local public authorities of level II
	Applicability	Nationwide (35 administrative-territorial units).
Information for implementation	List and describe the energy savings action the measure is based on.	Introducing energy management at the level of Local Public Authorities implies the implementation of a series of measures: <ul style="list-style-type: none"> 1) developing the software for the monitoring of energy consumption for Local Public Authorities (district and municipal councils and ATU Gagauzia) and the software User Manual; 2) employing Energy Managers in 32 district councils, ATU Gagauzia and two municipalities; 3) training of 35 Energy Managers; 4) organising regular training and professional development courses for the Energy Managers employed by district and municipal councils and ATU Gagauzia; 5) developing and approving the structure and template for LEEPs and LEEAPs; 6) developing and approving LEEPs and LEEAPs; 7) annual reports prepared by district and municipal councils and ATU Gagauzia on the basis of the template devised by the AEE; 8) developing and adopting Sustainable Energy Action Plans (SEAPs) for the towns that joined the Covenant of Mayors.
	Budget and funding sources	The total budget for the implementation of these measures amounts to approximately 32.4 million MDL (US\$2.7 million). <ul style="list-style-type: none"> 1. Regional Programme SYNENERGY/USAID – 10.8 thousand MDL (US\$90 thousand) for: <ul style="list-style-type: none"> training of 35 Energy Managers; developing the template for LEEPs and LEEAPs; developing the software for monitoring energy consumption; providing assistance to prepare 35 LEEPs and LEEAPs; developing handbook and guidelines regarding the

		<p>plan development for Local Public Authorities.</p> <p>2. USAID/LGSP Project – 21.6 million MDL (US\$1.8 million) for the energy efficiency component. This would include technical assistance provided to circa 33 towns (district centres) for plan development, etc.</p>
	Implementing body	Ministry of Economy, AEE
	Monitoring authority	Ministry of Economy, AEE
Energy savings	Monitoring/measuring approach of resulting savings	TD combined with BU at the time of installing the energy consumption monitoring system.
	Savings achieved in 2015	See the calculations under the measure - EEF financial tool.
	Energy savings to be achieved by 2016	See the calculations under the measure - EEF financial tool.
	Energy savings impact expected to be achieved by 2020	See the calculations under the measure - EEF financial tool.
	Assumptions	The planning itself does not result in savings. Measures comprised by LEEPs and LEEPA will be financed out of the local budgets and the financial tools in place - EEF and NFRD.
	Overlaps, multiplying effects, synergies	SEAPs developed pursuant to the Covenant of Mayors is valid for Signatories only. They will cover the period up to 2020. AEE will provide guidelines to the Signatories in devising the plans.

108. Ensure efficient energy consumption in the public sector

Title of energy efficiency measure		Ensure efficient energy consumption in the public sector
Energy efficiency measurement index		EEF 1
Description	Category	Energy savings mechanisms and other combinations
	Timeframe	Starting: September 2013 Ending: December 2015
	Purpose, brief description	Improve energy efficiency and employ renewable energy sources in the public sector with financial coverage from the EEF and other sources. In 2013, 80% of the EEF financial means are earmarked for the public sector.
	Final goal	Reduction of energy consumption and accumulation of funds based of energy savings resulting from the implementation of energy efficiency measures. Reduction of costs for energy and energy resources incurred by Local Public Authorities and affiliated institutions.
	Target group	Local Public Authorities
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	It is suggested to implement the following activities: <ol style="list-style-type: none"> 1) implement projects in the area of energy efficiency; 2) finance projects in the area of energy efficiency feasible from the economic, technical and environmental points of view; 3) ensure country-wide rational energy consumption; 4) reduce the greenhouse gas emissions.

	Budget and funding sources	2013 – 159 360.3 thousand MDL 2014 – 175 751.1 thousand MDL
	Implementing body	Ministry of Economy, EEF
	Monitoring authority	Ministry of Economy, AEE
Energy savings	Monitoring/measuring approach of resulting savings	Calculation method for energy savings – BU: Savings have been calculated based on the experience of employing the amount of 23.5 million MDL by the AEE during 2011. The estimated primary energy savings would equal to 258 toe annually. Monitoring method – BU, carried out based on record-keeping of projects implemented out of EEF financial resources.
	Savings achieved in 2015	Energy savings – 3.61 ktoe
	Energy savings to be achieved by 2016	Energy savings – 12.9 ktoe
	Energy savings impact expected to be achieved by 2020	Energy savings – 32.5 ktoe
	Assumptions	Other funding sources from donors will be identified during 2013-2015 to be channelled to the implementation of priority actions comprised by LEEPs and LEEAPs.
	Overlaps, multiplying effects, synergies	Complementary: MoSEEF I and MoSEEF II; NFRD.

109. Optimising the street public lighting system

Title of energy efficiency measure		Optimising the street public lighting system
Energy efficiency measurement index		P ₁ -P ₂
Description	Category	EE mechanism
	Timeframe	Starting: January 2013 Ending: December 2015
	Purpose, brief description	Optimising the power consumption in settlements of the Republic of Moldova through the implementation of efficient lighting systems in case of rebuilding or upgrading the public lighting system.
	Final goal	Optimising the power consumption in settlements of the Republic of Moldova. Implementing the legal framework, and energy efficiency projects.
	Target group	Local Public Authorities
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	The measure envisages carrying out the following actions: <ol style="list-style-type: none"> 1) developing proposals aimed at restricting the use of incandescent light bulbs in the public sector; 2) reflecting this measure in LEEPs and LEEAPs; 3) conducting energy audits of the lighting systems in place; 4) replace the existing light fittings with more efficient ones; 5) monitoring energy consumption after the completion of street lighting projects.

	Budget and funding sources	GIZ, NFRD, EEF, MSIF.
	Implementing body	Local Public Authorities with the MF and AEE support
	Monitoring authority	AEE
Energy savings	Monitoring/measuring approach of resulting savings	Calculation method for energy savings – BU: Savings have been calculated based on the investment need per light fitting and the allocated investments. Monitoring method – BU: Monitoring carried out based on the energy audits and Local Public Authorities reports.
	Savings achieved in 2015	Calculated energy savings – 51.6 toe
	Energy savings to be achieved by 2016	Estimated energy savings – 129 toe
	Energy savings impact expected to be achieved by 2020	Estimated energy savings – 258 toe
	Assumptions and risks	We presume that the volume of allocations from the State Budget would be maintained at the level of 2012. Respectively, this NEEAP would require the total amount of 4 635 thousand MDL to implement the proposed energy savings.
	Overlaps, multiplying effects, synergies	It is proposed to include them in LEEPs and LEEAPs as priority measure.

Section 5. Measures aimed at enhancing energy efficiency in the transport sector

110. Optimising the street public lighting system

Title of energy efficiency measure		Optimising the street public lighting system
Energy efficiency measurement index		AE7-AE 7.6
Description	Category	Obligatory notification and compulsory measures
	Timeframe	Starting: January 2013 Ending: December 2015
	Purpose, brief description	Setting the legal and normative framework regarding tire labelling.
	Final goal	Optimising the use of fuels in the transport sector. Setting rules and guidelines for the Local Public Authorities in the area of procurement and management of transportation means.
	Target group	Local Public Authorities, motor vehicle drivers, road transport fleets.
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	Activities envisaged for the transport sector are as follows: 1) developing and adopting the regulatory framework on tire labelling; 2) developing and circulating recommendations for the Local Public Authorities on the procurement of transportation means focusing on the efficiency of

		<p>fuels used;</p> <p>3) developing rules for tire imports pursuant to Classes C1, C2, and C3;</p> <p>4) developing programmes aimed at optimising the circulation of transportation means on settlement central streets;</p> <p>5) developing guidelines on transportation means procurement for public authorities, having observed the energy efficiency criteria.</p>
	Budget and funding sources	Administrative sources of the authorities involved in the development of the aforementioned documents, state budget support.
	Implementing body	AEE, Ministry of Transportation and Road Infrastructure, Local Public Authorities, Public Procurement Agency
	Monitoring authority	AEE, Ministry of Transportation and Road Infrastructure
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings – TD: Energy savings have been calculated based on consumption of liquid fuels by the transport sector and of those used by the population pursuant to the energy balance.</p> <p>Monitoring method – BU: Monitoring is carried out based on the review of regulations.</p>
	Savings achieved in 2015	n/a
	Energy savings to be achieved by 2016	n/a
	Energy savings impact expected to be achieved by 2020	n/a
	Assumptions	Energy savings will be calculated after the implementation of the current NEEAP, achieved due to the regulation enforcement and upgrading the inland transport infrastructure.
	Overlaps, multiplying effects, synergies	The Republic of Moldova pursues the goal to replace 10% of the total liquid fuels used with biofuels. Government Decision No. 85 dated 01 February 2008 on the approval of the Strategy of inland transport infrastructure for 2008-2017 comprises a programme aimed at redevelopment and upgrading of road infrastructure in the total amount of US\$2,836 million for the following 10 years.

Section 6. Horizontal and Inter-sectoral Measures

111. Updating and adopting the legal framework necessary to ensure the implementation of the Energy Efficiency Law No. 142 dated 02 July 2010

Title of energy efficiency measure	Updating and adopting the legal framework necessary to ensure the implementation of the Energy Efficiency Law No. 142 dated 02 July 2010	
Energy efficiency measurement index	G1, G2, G3	
Description	Category	Regulations

	Timeframe	Starting: January 2014 Ending: December 2014
	Purpose, brief description	Approximation with the new Energy Efficiency Directive 2012/27/EU; adoption and implementation of regulations aimed at enforcement of the Energy Efficiency Law.
	Final goal	Developing the energy services market; promoting advanced and environment-friendly technologies and, as a result, reducing the energy intensity and GHG emissions. Setting legal and regulatory conditions, and adjusting the relevant standards to ensure the implementation of DES.
	Target group	Local Public Authorities, AEE, Ministry of Economy, Academia
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	Activities suggested for the purpose of this measure: <ol style="list-style-type: none"> 1. Updating and adopting the legal framework necessary to ensure the implementation of the Energy Efficiency Law No. 142 dated 02 July 2010. 2. Updating the NEEP for 2011-2020, depending on the achieved progress as it is set forth in Chapter I of the NEEP. 3. Adjusting the European standards to ensure proper implementation of Law No. 142 and DES. Likewise, this measure is preconditioned for the energy sector budget support, representing a necessary criterion for the application of new requirements resulting from the transposition of European Directives. 4. Building the energy sector institutional capacities in order to design and enforce energy efficiency policy (AEE and General Energy Safety and Efficiency Division of the Ministry of economy). 5. Implementing the Communication Energy Efficiency Strategy: workshops; conferences; exhibitions; guidelines and brochures, etc. 6. Supporting the crediting lines for the industrial sector launched by the EBRD.
	Budget and funding sources	Total budget for: <ol style="list-style-type: none"> 1. Adopting and updating the energy efficiency legal framework and employing renewable energy sources makes up (direct budget support): <ul style="list-style-type: none"> 2013 – 30 321.1 thousand MDL; 2014 – 17 490.0 thousand MDL. 2. Staff training and capacity building: <ul style="list-style-type: none"> General Energy Safety and Efficiency Division of the Ministry of economy and AEE; SIDA Project on technical assistance for capacity building in order to ensure sustainable energy management for 2013-2015, the total value – 1.8 MEUR, distributed as follows: <ul style="list-style-type: none"> 2013 – 12 166.5 thousand MDL; 2015 – 4 221.2 thousand MDL. <p>GEF-UNIDO Project “Reduction of GHG emission</p>

		<p>through improving energy efficiency in the Moldovan industrial sector”:</p> <p>2013 – 0.9 million MDL (\$US75 000);</p> <p>AEE: The draft energy sector expenditure strategy for 2013-2015 foresees the following costs for this action (Government Activity Programme):</p> <p>2013 – 1 535.5 thousand MDL;</p> <p>2014 – 1 555.4 thousand MDL;</p> <p>2015 – 1 795.0 thousand MDL.</p> <p>3. The costs of communication foreseen in the draft energy sector expenditure strategy for 2013-2015 amounts to:</p> <p>2013 – 2 332.4 thousand MDL;</p> <p>2014 – 608.3 thousand MDL;</p> <p>2015– 748.4 thousand MDL</p> <p>4. EEF for all sectors – 520 107.6 thousand MDL.</p> <p>5. Financial tools:</p> <p>MoSEFF II – 352 million MDL (22 MEUR) for energy efficiency projects and employment of renewable energy sources in the private sector;</p> <p>MoREEF – 560 million MDL (35 MEUR) for energy efficiency projects and employment of renewable energy sources in the residential sector.</p>
	Implementing body	Ministry of Economy, AEE, MoSEEF, MoREEF, EEF
	Monitoring authority	Ministry of Economy, AEE
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings – BU: Calculated on the basis of annual reports provided by central public institutions and by those subordinated to the central specialist bodies, including the annual reports on financing lines.</p> <p>Monitoring method – BU: Monitoring carried out based on the review of implemented projects and enforcement of the adopted regulation. TD method combined with BU since 2014, concurrently with the implementation of the monitoring system.</p>
	Savings achieved in 2015	The legal framework itself does not generate any direct energy savings; however, it creates conditions fostering energy savings.
	Energy savings to be achieved by 2016	For energy savings see the measures for the public and industrial sectors.
	Energy savings impact expected to be achieved by 2020	For energy savings see the measures for the public and industrial sectors.
	Assumptions and risks	
	Overlaps, multiplying effects, synergies	No energy savings have been estimated for this measure in order to avoid repetitions of computations and coverage sources.

112. Promotion of energy services companies

Title of energy efficiency measure		Promotion of energy services companies (ESCs)
Energy efficiency measurement index		S1
Description	Category	Energy services
	Timeframe	Starting: January 2013 Ending: December 2015
	Purpose, brief description	<p>This action foresees drafting and/or amending the legislative and normative framework in place to promote the development of ESCs.</p> <p>This action will be accompanied by the awareness campaign targeting the potential recipients of energy services, and by the training of potential providers of energy services.</p> <p>Greater attention will be given to Local Public Authorities in terms of their awareness and training on how to prepare and unroll public tenders pursuant to the energy efficiency principles.</p> <p>The action itself would not result in immediate energy savings, the latter being achieved after the adoption of appropriate regulations only; however, it would be crucial for setting and operation of energy services market and guaranteeing energy savings through the conclusion of energy performance contracts.</p>
	Final goal	Setting the legislative and normative framework to involve third parties in the sector, and set forth new energy services.
	Target-group	Local Public Authorities, energy-intensive undertakings, other entities.
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	<p>For the purpose of this measure the following actions will be taken:</p> <ol style="list-style-type: none"> Drafting the regulation on energy services companies would ensure the conditions for their operation on the market: <ul style="list-style-type: none"> ESCs would have the mission to guarantee financing, to fund the third parties, and to secure more advanced maintenance and operation level for energy systems; In the private sector, these services would secure the quality of implemented projects, proper operation and maintenance of energy systems; In the public sector, the ESCs interventions would contribute to the reduction of energy losses in the lighting system, in the heating supply networks, within buildings, etc. Drafting the package of documents necessary for the conclusion of energy performance contract (contract template; additional necessary acts). Identifying and notifying the potential recipients of services about the stages and advantages of energy performance contracts. This measure, by itself, does not result in energy savings; however, it would foster interest for services provided by ESCs through energy

		<p>performance contracts.</p> <p>4. Training and advising the potential energy services providers (building companies; design firms; entities dealing with manufacturing and installation of efficient technologies, etc.). This action will be focused on clarifying the energy performance contract procedures and contents, etc.</p> <p>5. Suggesting amendments to the legal framework in place related to public procurement procedures and Local Public Authorities financing to overcome the barriers to ESC market development. The purpose of this action is to allow financing the energy efficiency measures at the account of energy savings, and to pick up technologies and materials based on price-quality criterion.</p> <p>Actions comprised by this NEEAP would enable setting the conditions for energy services development, creating new jobs, promoting advanced technologies, identifying financing sources for end-users (financing the third parties), etc.</p>
	Budget and funding sources	<p>Support provided by strategic partners: USAID SYNENERGY.</p> <p>Own administrative resources to cover the training of energy services providers and to raise awareness of users.</p>
	Implementing body	AEE
	Monitoring authority	Ministry of Economy
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings – BU to be estimated after the implementation of regulatory requirements.</p> <p>Monitoring method – BU: Based on LEEAPs, and on annual reports prepared by district councils and submitted to the AEE.</p>
	Savings achieved in 2015	n/a
	Energy savings to be achieved by 2016	n/a
	Energy savings impact expected to be achieved by 2020	n/a
	Assumptions	We assume that after the enforcement of regulatory requirements part of energy efficiency projects will be implemented with the ESCs support.
	Overlaps, multiplying effects, synergies	<p>Drafting the regulation would support the enforcement of the Energy Efficiency Law No. 142 dated 02 July 2010.</p> <p>The Regulation will cover the detailed procedure and tools for devising energy performance contracts.</p> <p>This measure will help the Local Public Authorities identify the energy efficiency project coverage sources, and serve as attractive tool for the private sector.</p> <p>There is a risk of non-implementation of energy services</p>

		during the first years, particularly, by the public sector, due to the reduction of budget allocations proportionally to the savings of means resulting from the project implementation. These provisions would deprive the Local Public Authorities from the financial savings, which could have served as coverage resources for the energy performance contract. In this context, the corresponding financial legislation might need amendments.
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113. Labelling the energy-related products and setting the ecodesign framework

Title of energy efficiency measure		Labelling the energy-related products and setting the ecodesign framework
Energy efficiency measurement index		PIE 4 – PIE 4.4; PE 1, PE 1.1
Description	Category	Regulation
	Timeframe	Starting: January 2013 Ending: December 2014
	Purpose, brief description	Regulation of the market for energy-related products by setting the corresponding legal framework. This action is intended for the transposition of the framework Directive and the implementing/delegated documents. Setting the ecodesign framework and, upon case, setting the conditions with regard to ecodesign requirements applicable for energy-related products.
	Final goal	Reduction of energy consumption through the introduction of corresponding regulations.
	Target group	Consumers, distributors and suppliers of energy-related products.
	Applicability	Nationwide
Information for implementation	List and describe the energy savings action the measure is based on.	Setting the legal framework for the market for energy-related products, including: <ol style="list-style-type: none"> 1) developing the Law on labelling the energy-related products and the technical regulations, having transposed the delegated acts and relevant Directives of the EU; 2) checking the economic operators in terms of their compliance with the requirements set for labelling the energy-related products. The shops and/or distribution points will be visited, at least, once a month to check the availability of labels and energy-related information; 3) testing the energy-related products in an accredited European laboratory. Upon importing such products from another country, it is recommended to consider and accept the test results of energy-related products in the country of origin; 4) identifying the possibilities to introduce tax incentives and customs facilities for energy-related products with high energy efficiency (Classes A+++ - A). Increasing the import duties on energy-intensive products;

		<p>5) developing regulations on ecodesign;</p> <p>6) setting energy performance requirements for the plants and appliances manufactured in and/or imported to the Republic of Moldova;</p> <p>7) increasing the import duties on incandescent light bulbs by 20% annually and applying zero-rate tax on energy-efficient light bulbs.</p>
	Budget and funding sources	EU and the Global Environment Facility.
	Implementing body	Ministry of Economy, AEE, Ministry of Environment
	Monitoring authority	AEE, Ministry of Environment
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings – TD: Calculated based on the imports of energy-related products.</p> <p>Monitoring method – BU: Monitoring is based on Customs Service data.</p>
	Savings achieved in 2015	<p>Energy savings:</p> <p>14.33 ktoe – resulted from the introduction of tax incentives and customs facilities for energy-related products with high energy efficiency (Classes A+++ - A);</p> <p>1 ktoe – resulting from the increase of import duties on incandescent light bulbs by 20% annually and applying zero-rate tax/fee on energy-efficient light bulbs.</p>
	Energy savings to be achieved by 2016	<p>Energy savings:</p> <p>23.8 ktoe;</p> <p>1.6 ktoe.</p>
	Energy savings impact expected to be achieved by 2020	<p>Energy savings:</p> <p>43.84 ktoe;</p> <p>3 ktoe.</p>
	Assumptions	n/a
	Overlaps, multiplying effects, synergies	n/a

114. Setting the normative framework for energy audit promotion

Title of energy efficiency measure		Setting the normative framework for the energy audit promotion
Energy efficiency measurement index		AE7.1-AE 7.6
Description	Category	Regulation
	Timeframe	Starting: January 2013 Ending: December 2014
	Purpose, brief description	Introduction of new services for energy auditing, setting new jobs (100) and registers for monitoring.
	Final goal	Provide support to the public and private sectors aimed at optimising the energy consumption. Introduce the regulation and setting the tools necessary for the private sector to render energy auditing services.
	Target group	Authorised Energy Auditors
	Applicability	Nationwide
Information	List and describe the	The measure resides on the following actions:

for implementation	energy savings action the measure is based on.	<ol style="list-style-type: none"> 1) training and authorizing 100 Energy Auditors (30 - in 2012, 30 - in 2013, and 40 - in 2014); 2) setting an electronic register and a hard-copy register for energy auditing; 3) setting an electronic register and a hard-copy register for Energy Auditors; 4) conducting energy auditing for the public sector; 5) developing guidelines for all sectors of the national economy. <p>The suggested activities will be unrolled with the support provided by SIDA Project entitled “Technical assistance to strengthen the capacity to ensure sustainable energy management” for 2012-2014 (total value – 1.8 MEUR).</p>
	Budget and funding sources	EEF, ESBS
	Implementing body	AEE, Local Public Authorities, Ministry of Economy
	Monitoring authority	AEE
Energy savings	Monitoring/measuring approach of resulting savings	<p>Calculation method for energy savings – BU: to be estimated after the introduction of regulation and based on the implemented projects.</p> <p>Monitoring method – BU: Monitoring is carried out based on the recorded energy audits.</p>
	Savings achieved in 2015	n/a
	Energy savings to be achieved by 2016	n/a
	Energy savings impact expected to be achieved by 2020	n/a
	Assumptions	Energy savings will result only after implementing the recommendations proposed by energy auditing reports.
	Overlaps, multiplying effects, synergies	The actions foreseen by LEEPs and LEEAPs will require performing energy audits depending on the available financing resource.

Title IV PUBLIC SECTOR

115. The public sector intends to play an exemplary role aiming at the promotion of efficient energy consumption. This desideratum is confirmed by Article 18 of the Energy Efficiency Law No. 142 dated 02 July 2010.

Chapter 1 LOCAL ENERGY EFFICIENCY PROGRAMMES AND PLANS

116. Pursuant to the aforementioned Law, district councils, municipalities and People's Assembly of ATU Gagauzia shall develop, coordinate and approve their own energy efficiency programmes and plans.

117. The Local Energy Efficiency Programmes (LEEPs) are developed for a three-year period that matched the NEEAP duration. The LEEP will serve as basis for the next NEEAPs.

118. The Local Energy Efficiency Action Plans (LEEAPs) represent a list of priority actions for one year to be reflected in the local budget and/or to be financed from other sources identified and approved by the Local Public Authorities. The LEEAPs will be based on LEEP and determine the priority for implementation depending on the available resources and on the cost-efficiency reports.

119. In addition, pursuant to the NEEP 2011-2020, the Agency, jointly with the Ministry of Economy and with other relevant Central Public Authorities, shall provide support to the Local Public Administration Authorities in fostering energy efficiency and employing renewable sources, having carried out the following activities:

- a) developing the energy efficiency guidelines intended for the Local Public Administration Authorities, comprising Local Energy Efficiency Programme and Local Energy Efficiency Action Plan templates;
- b) setting a standard database for the monitoring and efficient energy consumption at the national and district levels;
- c) developing handbooks and guidelines for Local Public Authorities with the support provided by development partners;
- d) organising trainings for Local Public Authorities on developing and preparation of Local Energy Efficiency Programmes and Local Energy Efficiency Action Plans;

Chapter 2 LOCAL CAPACITIES FOR ENSURING ENERGY MANAGEMENT

120. Pursuant to the Energy Efficiency Law, district and municipal councils and People's Assembly of ATU Gagauzia shall employ Energy Managers to monitor the

energy consumption in the field and develop Local Energy Efficiency Programmes and Local Energy Efficiency Action Plans.

121. The Agency, jointly with the Ministry of Economy, shall ensure:

- a) guidance to the Local Public Authority Councils referring to the development of Terms of Reference necessary to hire Energy Managers;
- b) Energy Managers training on developing Local Energy Efficiency Programmes and Local Energy Efficiency Action Plans;
- c) Energy Managers notification about the new rules, amendments, standards;
- d) guidance to Energy Managers on how to identify and access the financing sources to cover the planned measures;
- e) advice to Energy Managers on how to show the energy efficiency priority measures in the local budgets, etc.

122. Also, the Energy Managers shall get consulted by the Territorial Development Agencies, currently involved in the implementation of a series of projects with the support provided by GIZ and USAID.

Chapter 3

THE ROLE OF PUBLIC SECTOR IN THE IMPLEMENTATION OF THE DEPB.

123. The implementation of the Law on the energy performance of buildings will be compulsory, first of all, for the public sector. Thus, the Agency for Energy Efficiency, jointly with the line Ministries and Local Public Authorities, shall ensure:

- a) the introduction and supporting certain programmes aimed at refurbishing the public property buildings and social facilities;
- b) sustaining the construction of passive buildings or of energy efficient or nearly zero-energy buildings;
- c) improving the drinking water supply and treatment systems;
- d) using, upon case, renewable energy sources for heating the social facilities , etc.

Chapter 4

PUBLIC PROCUREMENT SPECIFIC MEASURES

124. The Agency, jointly with Central and Local Public Authorities, shall unroll the following activities:

- a) review the public procurement rules, having bound the Local Public Administration Authorities to adopt public procurement decisions based on energy efficiency criteria;
- b) develop and publish a handbook to be used by the Local Public Administration Authorities for assessment during the organisation of public

tenders, granting public work contracts, public service supply and/or rendering contracts etc.

Chapter 5

PROGRAMMES AIMED AT IMPROVING STREET LIGHTING

125. A priority measure for the public sector fostered by the present NEEAP is the introduction and support the programmes aimed at improving street lighting. For this purpose, the Agency shall:

- a) develop, jointly with other relevant central public authorities, proposals aimed at amending the legislation to prohibit incandescent light bulbs in the public sector;
- b) assist Energy Managers to plan actions and include them into the in LEEPs and LEEAPs;
- c) conduct energy audits, including at the expense of EEF resources;
- d) identify financing resources to replace the existing light fittings with energy efficient light fittings;
- e) monitor the project outcomes.

Chapter 6

SUSTAINABLE ENERGY ACTION PLANS

126. The Agency will provide support and advice to the communities that adhered to the Covenant of Mayors from Europe as well as to the settlements intending to adhere to this forum.

127. The Methodology for devising Sustainable Energy Action Plans (SEAPs) is similar to the one adopted by Moldova for the LEEPs; however, their duration is different. Pursuant to the Covenant of Mayors, the Signatory shall develop SEAPs by 2020 relative to the LEEPs that have to be adopted every three years.

128. Relatively a small number of towns benefit from regional project support, e.g. CIUDAD (Chisinau, Ocnita), MODEL (Drochia), 4 East Mayors, etc. The Leaders of these towns will be invited to share their experience with the new Signatories or with the settlements intending to adhere to the Covenant of Mayors from the EU.

Title V
ENERGY SERVICES MARKET

129. The development of energy services is an engagement resulting from the legal framework of the Republic of Moldova, being also a market requirement. In the absence of own funds, the involvement of third parties in the implementation of energy efficiency measures and, consequently, development of energy services market, has become a primary task.

130. The Agency has started the process of drafting the normative framework with the first step – studying the energy services market and the barriers to be eliminated in order to develop it, having benefited from the SYNENERGY Programme support financed by the USAID.

131. Subsequently, during 2013-2015, the development of energy services market would impose a series of actions detailed below:

Chapter 1
LEGAL FRAMEWORK AIMED AT
FOSTERING ENERGY SERVICES

132. Setting the legal and normative framework:

- a) developing and adopting the Regulation on energy services companies;
- b) amending the existing legal and normative framework to eliminate the administrative and financial barriers;

Chapter 2
SUPPORTING TOOLS

133. The Agency will develop the following supporting tools for the potential energy service providers and recipients:

- a) Handbook comprising the main features of the Energy Performance Contract;
- b) Energy Performance Contract sample/template;
- c) Practical guidelines for implementing an energy management system.

Chapter 3
ECONOMIC INCENTIVES

134. In order to stimulate the energy services market, the Agency will take the following measures:

- a) devising a study to identify the potential tax incentives and customs facilities, having conducted cost-benefit analysis;
- b) amending the relevant legal framework to introduce the tax incentives and customs facilities.

Chapter 4

TRAINING AND PROFESSIONAL DEVELOPMENT OF ENERGY SERVICE PROVIDERS

135. In order to guarantee a functional energy services market, the Agency will conduct awareness-raising and training actions intended for the market main actors. This measure implies professional education and training of energy service providers, consultants and recipients, as well as the implementation of the following activities:

- a) setting help-desk services by the AEE, which will provide guidance and assistance, upon case, to the market actors in the process of preparing and devising the energy performance contracts;
- b) developing a Handbook for the public sector and organising training sessions for Local Public Authorities;
- c) training the Energy Managers in charge with LEEPs and LEEAPs development;
- d) raising awareness and training the private sector;
- e) providing training on tools relating to energy management systems and optimising the steam systems;
- f) drafting a Handbook regarding the energy performance contracts for Energy Auditors and Consultants;
- g) publishing the list of energy services providers on the AEE web page;
- h) disseminating the information on available financial mechanisms for energy services.

Chapter 5

PILOT-PROJECT

136. Piloting a project with the implementation of an energy performance contract, comprising the following actions:

- a) identifying pilot-projects, relying on the following sources: LEEPs, LEEAPs, sustainable development plans developed by the communities, which have adhered to the Covenant of Mayors, international projects, etc.;
- b) granting assistance for the development and compilation of the package of documents relating to the energy performance contract;
- c) granting assistance to prepare financing application/request if financing is covered from sources other than those belonging to energy services companies. Commercial banks and the existing funds (MoSEEF, MoREEF, EEF, etc.) may serve as financing sources.

Title VI

PROVIDING ADVICE AND INFORMATION

137. During 2013-2015 it is suggested to organise a series of actions aimed at providing advice and information linked with Chapter III “Energy efficiency measures” of the NEEAP intended to facilitate:

- a) collaboration and communication amongst the main actors, target-groups and strategic partners;
- b) dissemination of information and data on the market;
- c) setting the capacities involved in the implementation of relevant measures.

138. The main measures relating to advice and information result from the National Energy Efficiency Programme 2011-2020, draft Energy Sector Expenditure Strategy for 2013-2015 and the Matrix of Energy Sector Budget Support. The measures are targeted to implement the main three Directives relating to energy services, labelling energy-related products and energy performance of buildings.

Chapter 1

THE MAIN ACTORS RESPONSIBLE FOR INFORMATION AND ADVICE

139. Information and advice represent indispensable activities of the public institution involved in the governing process. Public institutions in charge with the sector shall make available relevant information to the market participants intended for different target-groups for the successful implementation of measures comprised by the NEEAP and, consequently, fulfilment of energy efficiency objectives.

140. The information and advice process implies the vertical involvement of all public institutions, based on their competences and authorities assigned by law.

141. The Agency for Energy Efficiency shall coordinate, monitor and provide support to all public institutions involved in the communication and awareness-raising process.

Section 1. National Actors

142. The main actors in charge with information and advice at the national level are the line ministries and the institutions under their subordination, including, but not limited to:

- a) the Ministry of Economy shall communicate about new policy initiatives, amendments, strategies, etc. relating to energy efficiency, national targets and regional context;
- b) the Ministry of Regional Development and Constructions shall communicate about policy initiatives and amendments in the area of energy performance of buildings, having provided information about the minimum requirements for energy performance of buildings for newly-constructed buildings and for those undergoing major renovation, for construction materials and engineering systems, etc.;

- c) the Ministry of Transport and Road Infrastructure shall communicate about the initiatives in the area of transport and performance requirements for transport, etc.;
- d) the Ministry of Environment shall communicate about policy in the area of environment protection and rational use of natural resources, waste management, hydro-amelioration, water resources management, water supply and sewerage/sanitation, state environment control, hydro-meteorology and monitoring of environment quality etc.;
- e) the Moldovan Academy of Sciences shall communicate about innovations and technologies in the energy sector, etc.;
- f) the Ministry of Education shall contribute to the dissemination of information for the teaching staff, learners and students, and participate to public awareness campaigns.

Section 2. Regional Actors

143. The main actors in charge with information and advice at the regional level are:

- a) The Territorial Agency for Regional Development: Centre, South, North;
- b) Regional Consumer Protection Agencies: Centre, South, North.

144. The relevant regional agencies will contribute to the dissemination of information, reflecting the energy efficiency measures in the regional and local plans; training the local entities to ensure proper management of energy resources.

Section 3. Local Actors

145. The main actors responsible for advice and awareness-raising events at the local level are as follows:

- a) district and municipal councils and ATU Gagauzia shall develop and approve local energy efficiency programmes and action plans, inform city halls, town halls and community halls about the energy efficiency targets, regional plans;
- b) Local Public Authorities shall inform the economic operators and population about the opportunities to achieve energy savings, proposed and unrolling projects aimed at mobilizing the community efforts, etc.

146. The public authorities and/or the institutions under their subordination shall include advice and information activities in their plans, having communicated them to the wide public as follows:

- a) the measures/actions they foster;
- b) target-group;
- c) deadlines;
- d) expected performance;
- e) available financial resources;
- f) available supporting tools;

- g) contacts for additional information and advice, etc.

Chapter 2 TARGET-GROUPS

147. The target-groups for advice and information are as follows:

- a) public institutions involved in the implementation of the NEEAP. Each hierarchically superior institution will inform the others about the new rules, regulations, laws, etc., and about the available financial tools;
- b) business environment that represents the interests of different economic sectors tackled by the NEEAP;
- c) civil society – energy users, owners of dwellings and associations of such owners, etc.
- d) education institutions. Greater attention will be paid to informing the teachers, learners and students.

Chapter 3 TOOLS AND MEANS FOR ADVICE AND AWARENESS-RAISING EVENTS

148. Tools and means for information and advice may vary from one group to the other. For the civil society, as a separate group, it is envisaged to diversify the means based on the population age.

149. Thus, information can be disseminated through the following means:

- a) organising topic-related events (seminars, trainings for market actors, conferences, round-tables, contests, etc.) on energy efficiency indoors, energy-related products, services, etc.;
- b) updating web pages, portals, blogs and setting forums, which represent the main environment for disseminating the information, especially for young people;
- c) developing specific products (brochures, handbooks, presentations, explanatory notes; guidelines, etc.) disseminated during the events, via the e-mail, etc.;
- d) launching topic-related spots (TV, Radio);
- e) Media products (articles, press releases, interviews, etc.).

Chapter 4 STRATEGIC PARTNERS FOR ADVICE AND AWARENESS-RAISING ACTIVITIES

150. The strategic partners for advice and awareness-raising events are as follows:

- a) Academia;
- b) energy and service providers;
- c) non-governmental organizations;
- d) donors;

e) existing funds, etc.

Chapter 5
PUBLIC AWARENESS-RAISING ACTIONS PLANNED FOR 2013-2015.

	Action	Start	End	Responsible	Units	Funding	Comments
1.	Organise the Annual Ceremony “ECO-ENERGETICA”	2012	2015	AEE/Ministry of Economy	3	UNDP	Annually. AT provided by UNDP up until 2015
2.	Introduce the “Green Hour” in school curriculum	2013	2015	Ministry of Education/AEE			TBD. It is suggested one hour per month for the beginning.
3.	Organise the Exhibition Mold-Energy	2013	2015	Moldexpo	3	Private sector	Annually
4.	Provide trainings for AEE, Ministry of Economy, Ministry of Regional Development and Constructions	2013	2015	Ministry of Economy		SIDA Project, UNIDO	TA provided by SIDA, UNIDO
Section 1. Energy Services							
5.	Publish articles and brochures on energy services	2013	December 2015	AEE	3 articles, 500 brochures	USAID, 10000 MDL	AT provided by USAID
6.	Training courses for Energy Managers/ industrial sector	2013	2015	AEE	105	GIZ	AT provided by GIZ
7.	Training courses on Energy Management System – EN ISO 50001	2013	November 2014	Ministry of Environment	20	GEF, UNIDO	GEF, UNIDO
8.	Training courses on the steam optimisation system in the industrial sector	November 2013	2015	Ministry of Environment	20	GEF, UNIDO	GEF, UNIDO
9.	Conducting training on system optimisation for providers of steam systems	March 2013	2015	Ministry of Environment	20	GEF, UNIDO	GEF, UNIDO
10.	Trainings for Energy Auditors	2013	2015	AEE		SIDA	AT provided by SIDA (2012-2014)
	Trainings for Energy Auditors	2013	2015	AEE		National Budget	Included in the MTBF
11.	Trainings for Energy Inspectors	2013	2015	Ministry of Regional Development and		20 000 MDL	Energy sector budget support

				Constructions			
12.	Trainings for Energy Evaluators	2013	2014	Ministry of Regional Development and Constructions		20 000 MDL	Energy sector budget support
Section 2. Labelling the Energy-related Products							
13.	Publishing articles about energy efficiency classes set for energy-related products	2013	December 2015	AEE	3	USAID,	Technical assistance
14.	Publishing the brochure on labelling energy-related products	2013	2015	AEE	1000	USAID	Technical assistance
Section 3. Energy Performance of Buildings							
15.	Publishing articles on energy performance certificates	2013	December 2013	Ministry of Regional Development and Constructions	2	EBRD	Technical assistance
16.	Publishing articles about regular inspection of heating and air conditioning systems	May 2013	December 2015	Ministry of Regional Development and Constructions	2	EBRD	Technical assistance
17.	Publishing brochures on energy performance contract for end-users	January 2013	December 2015	MRDC	1000	EBRD	Technical assistance
18.	Organising seminars and forums about the transposition of PEC Directive	2013	December 2015	Ministry of Regional Development and Constructions	3	EBRD	Technical assistance
19.	Organising seminars for the top management of undertakings on implementing the Energy Management System in the industrial sector	January 2013	June 2013	Ministry of Environment, AEE	2	GEF, UNIDO	Technical assistance
20.	Conducting training courses for undertaking employees on	September	September 2014	Ministry of Environment,	4	GEF, UNIDO	Technical assistance

	implementing the Energy Management System EN ISO 50001	2013		AEE			
21.	Conducting training courses for undertaking employees on optimising the steam system	March 2013	September 2013	Ministry of Environment, AEE	4	GEF, UNIDO	Technical assistance

