

NATIONAL ACTION PLAN OF MONTENEGRO

for Energy Efficiency Measures in the Residential Sector



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NATIONAL ACTION PLAN OF MONTENEGRO
FOR ENERGY EFFICIENCY MEASURES IN THE RESIDENTIAL SECTOR

United Nations Economic Commission for Europe (UNECE)

Authors:

Wolfgang Amann, IIBW/Vienna

Đorđije Kalezić, Independent Planning Professional

Coordinating Team:

Gulnara Roll, UNECE

Sergii Yampolskyi, UNECE

Maike Christiansen, UNECE

IIBW – Institut für Immobilien, Bauen und Wohnen GmbH

PF 2, A 1020 Vienna / Austria

Tel. + 43 1 968 60 08

Mail: office@iibw.at

Internet: www.iibw.at

UNECE

Housing and Land Management Unit

Palais des Nations

CH-1211 Geneva 10 / Switzerland

Mail: housing.landmanagement@unece.org

Internet: www.unece.org/hlm/welcome

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**National Action Plan of Montenegro
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in the Residential Sector**

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LIST OF ABBREVIATIONS

AC	air conditioning
CEB	Council of Europe Development Bank
CFSSI	Montenegrin Fund for Solidarity Housing Development
DIGH	Dutch International Guarantees for Housing
DUP	Detailed Urban Plan
EE	energy efficiency
EEAP	Energy Efficiency Action Plan for 2010-2012
EP certificates	Energy Performance Certificates
EPBD	EU Energy Performance of Buildings Directive
GDP	gross domestic product
GHG emissions	greenhouse gas emissions
GIZ	Gesellschaft für Internationale Zusammenarbeit (German Development Agency)
GUP	General Urban Plan
IDP	internally displaced person
IMELS	Italian Ministry of Environment, Land and Sea
IPA	Instrument for Pre-Accession Assistance
LoEE	Law on Energy Efficiency
ME	Ministry of Economy
MF	Ministry of Finance
MEPUP	Ministry of Environmental Protection and Urban Planning (until 2008)
MLSW	Ministry of Labour and Social Welfare
MSDT	Ministry of Sustainable Development and Tourism
MSPE	Ministry of Spatial Planning and the Environment (until 2010)
MSSD	Mediterranean Strategy of Sustainable Development
NGO	non-governmental organization
NSSD	National Strategy of Sustainable Development (2007)
PPO	Physical Plan for Municipal Area (until legislative changes in 2008)
PPP	Public-Private Partnership
PUP	Spatial Urban Plans
SDC	Swiss Agency for Development and Co-operation
SME	small- and medium-sized enterprises
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNHCR	United Nations High Commissioner for Refugees
UTU	Urban Development and Technical Requirements

EXECUTIVE SUMMARY

In 2010, UNECE member countries have developed an *Action Plan for Energy-efficient Housing in the UNECE Region*, which provides a framework for Governments to increase energy efficiency in the housing sector and to address economic and environmental challenges more effectively at the national level¹.

The present *National Action Plan of Montenegro for Energy-efficiency Measures in the Residential Sector* is the first spin-off of this *Action Plan*. It aims at assisting the Government in enhancing its energy-efficiency policy for residential buildings through:

- Assessing the existing legal and institutional framework for energy efficiency in the housing sector.
- Identifying institutional/legal impediments, as well as priority areas for action.
- Recommending detailed actions for improving energy efficiency in the residential sector.

This *National Action Plan* focuses especially on the development of energy-efficiency measures for regularizing informal housing. In Montenegro, roughly one third of the population lives in informal buildings, i.e. buildings constructed without building permits and in some cases on squatted land.

A stakeholder analysis identified the Ministry of Sustainable Development and Tourism (line ministry), the Ministry of Economy, and the Ministry of Finance, as well as the Montenegrin municipalities, as the major potential drivers of this *Action Plan*. Consolidating housing and energy-related competencies are one of the key recommendations.

The authors reviewed a wide range of Montenegrin laws and by-laws on planning and construction, housing and property, as well as energy and energy efficiency. The *Action Plan* includes recommendations (a) to consolidate and comprehensively amend existing legal regulations and (b) to develop the legal basis for creating an institutional framework for effective utilization and wide application of measures to reduce energy consumption and increase energy efficiency in the residential building sector.

Montenegro has made good progress in translating EU regulations on energy efficiency into national law. Nevertheless, the legislation still needs to be harmonized with a number of EU directives in this area. This requires legal reforms and, more importantly, law enforcement. Therefore, the majority of the actions recommended in this document aim at facilitating the

¹ UNECE (2011): Action Plan for Energy-Efficient Housing in the UNECE region.
www.unece.org/fileadmin/DAM/hlm/documents/Publications/action.plan.eehousing.pdf

development of a financial and institutional framework for improved energy-efficient practices in everyday life.

As in other Central and Eastern European countries and EU candidate States, basic provisions for increasing energy efficiency in the residential building sector exist, but they have become outdated and do not meet current technical standards. Examples include creating owners' associations, setting up sound housing management schemes and enforcing energy-efficiency measures in regional planning, as well as when issuing building permission.

The following main policy areas to improve energy efficiency in the residential sector have been identified:

- Social policy action against housing poverty and energy poverty.
- Improvement of knowledge about energy efficiency and informal housing; improvement of knowledge transfer.
- Harmonization of national law with EU legislation on energy efficiency.
- Development of financing tools for energy efficient affordable housing and housing refurbishment.
- Capacity-building both at national and municipal level.
- Implementation and wide application of energy-efficiency principles in planning procedures.
- Creation of owners' associations and implementation of housing management schemes.
- Informal-settlement upgrading.
- Coordination and promotion of existing initiatives on energy efficiency.

The *Action Plan* identified over 50 targets and actions related to energy-efficiency infrastructure and legislation, financial infrastructure, energy performance standards and technology integration, access to affordable and energy efficient housing as well as capacity-building, education and awareness-raising.

The following actions are considered particularly important:

- Improve the statistical basis and develop a knowledge database on housing and energy efficiency.

- Develop a set of cost-efficient measures on financial incentives to improve energy efficiency in new construction and housing refurbishment.
- Create a business environment for housing management.
- Link informal settlement regularization with energy-efficiency measures.
- Strengthen mandatory energy and carbon performance requirements.
- Make installation of thermal solar panels obligatory.
- Focus on energy efficiency instead of renewable energy at the household level.
- Develop guidelines for solar and bioclimatic planning.
- Improve access to affordable and energy-efficient housing.
- Develop the existing “Sector for Energy Efficiency” within the Ministry of Economy to create a national Energy Agency.
- Develop a media and public-awareness campaign.

INTRODUCTION

In the 56-country region covered by the United Nations Economic Commission for Europe (UNECE), the building sector is responsible for over one third of the total final energy consumption. A significant part of this energy is used by the residential sector. The level of energy use in the housing sector is likely to increase further due to current demographic, economic and cultural trends, and is accompanied by even higher levels of greenhouse gas emissions. However, it is the building sector – and particularly the residential sector – that can generate some of the greatest energy savings when compared with other energy users (UNECE, "Green Homes").

The problem of high-energy consumption in buildings affects both developed countries and countries with economies in transition. Improvements in this area could generate economic and environmental benefits and significantly improve the quality of life in countries of the UNECE region. Energy efficiency in housing is therefore one of the obvious areas for policy intervention.

To address this issue, UNECE has drawn up an *Action Plan for Energy-efficient Housing in the UNECE Region*. The *Action Plan* provides a framework for governments to raise energy efficiency in the housing sector and to more effectively address economic and environmental challenges.

Since the approval of the *Action Plan* by the UNECE Committee on Housing and Land Management in 2010, UNECE has been helping countries with economies in transition strengthen their capacity in implementing the provisions of the *Plan*.

As part of this work, UNECE in cooperation with UNDP developed a project named *National Action Plan of Montenegro for energy-efficiency measures in the residential sector*. This project, funded by UNECE, was carried out in the framework of the Integrated United Nations Programme for Montenegro for the period 2010-2015.

Over the last decade, Montenegro has seen substantial economic growth accompanied by rapid urbanization and urban sprawl. Increased urbanization has resulted in large numbers of informal settlements. According to official sources, as many as one third of all Montenegrin households own informal construction.

The total number of informally built homes is estimated to range between 80,000 and 100,000. Nearly all Montenegrin households are connected to the electricity grid. As a result of the comparably energy-inefficient informal construction, the lack of incentives to invest in energy-efficiency measures, and the insufficient investment in power generation, Montenegro has to import up to one quarter of its electricity. In addition, the Initial National Communication

(INC) of Montenegro to the UNFCCC, completed in mid-2010, identified the energy sector as being the single largest source of greenhouse gas (GHG) emissions generated in the country. The INC highlighted the importance of energy efficiency for Montenegro, in particular, in the residential sector, as households account for 21 per cent of energy-based and 29 per cent of electricity-based emissions.

The Government has identified the residential sector as one of the priority areas for energy-efficiency action. However, the Government lacks the means (including legal, financial and institutional capacity) to implement the required policies.

The project "*National Action Plan of Montenegro for energy-efficiency measures in the residential sector*" aims to assist the Government in enhancing its energy-efficiency policy through:

- Assessing the existing legal and institutional framework for energy efficiency in the housing sector.
- Identifying institutional/legal impediments as well as priority areas for action.
- Recommending actions for improving energy efficiency in the residential sector.

The proposed *Action Plan* outlines priority policy areas, and sets out specific targets and the required actions to be taken.

1 CURRENT ENERGY-EFFICIENCY GOVERNANCE FRAMEWORK

1.1 POPULATION AND HOUSING IN MONTENEGRO

The statistical basis in Montenegro remains fragmented, as only the first general results of the Housing Census 2011 are available yet (Monstat 2011). The National Statistical Office, Monstat, is working on implementing European standards on statistics (including housing statistics) defined by Eurostat.

a) POPULATION AND INCOMES

Montenegro has a slightly growing population of around 625,000 inhabitants in approximately 195,000 households. The average household size of 3.2 persons is high compared to 2.5 of the EU-average (Monstat, Eurostat).

Average gross salaries have reached €715 per month, net salaries approximately €479 (2010). Average total household consumption is €765 per month (2010). Unemployment rates are around 20 per cent (WIIW, Monstat, Central Bank of Montenegro).

Household and income-related data are available from a labour-force survey and a household budget survey. From 2013 on, data will be available from EU-SILC (Statistics on Incomes and Living Conditions).

b) HOUSING STOCK AND HOUSING CONSTRUCTION

Montenegro has a housing stock of approximately 316,000 dwellings, of which around one third are holiday homes (Monstat); 350 dwellings per 1,000 inhabitants (without holiday homes) being still below the average of EU27 of around 450. The average floor space per capita is 25m², compared to 38m², the EU average. Montenegro is considered a “super-homeowner State” with an ownership rate of approximately 98 per cent (Monstat, Tsenkova 2005, Tsenkova 2009, OTB 2010, IIBW).

Housing construction reached 3,400 units in 2007 (Monstat 2009). This equals 5.5 completions per 1,000 inhabitants, which was similar to the EU27 average in that year. Construction decreased heavily until 2009, but recovered in 2010-2011.

c) INFORMAL HOUSING

Around 62 per cent of the population lives in urban areas. Both urban and coastal areas suffer from inordinate urbanization and settlement developments, resulting in uncoordinated land consumption and poor access to infrastructure.

Rapid urbanization greatly increased the gross domestic product (GDP) over the last years. But it also has had negative implications, including urban sprawl in former natural areas along the coast and around the capital, Podgorica. This rapid, unplanned urban growth has resulted in

large numbers of informally built houses. The informal housing stock in Montenegro is estimated to include 80,000-100,000 units in total, although there are no exact data. This issue is considered in more detail in section 1.6.

d) SOCIAL HOUSING

The Ministry of Labour and Social Welfare or the city of Podgorica provides a small number of dwellings for the households who need it the most, such as disabled persons, single mothers, refugees, internally displaced persons (IDPs) and low-income families. Some international organizations and non-governmental organizations (NGOs) have provided some necessity dwellings or municipality dwellings, for instance the Swiss Agency for Development and Co-operation (SDC), the office of the United Nations High Commissioner for Refugees (UNHCR) or HELP – Hilfe zur Selbsthilfe e.V.

In Montenegro, local governments are responsible for providing social housing and are obliged to use 1 per cent of their budget for this purpose. But this regulation is hardly ever adhered to owing to the budgetary constraints of many municipalities. However, the majority are now cooperating with the Montenegrin Fund for Solidarity Housing Development CFSSI (see section 1.7h). By doing so, they succeed in meeting their legal obligation by contributing land and infrastructure free of charge.

e) ENERGY CONSUMPTION IN THE HOUSING SECTOR

After the industry sector, private households are the second largest consumer of energy. No statistics are available on the status of thermal insulation of the housing stock, but overall thermal quality is deficient (both against the cold in winter and the heat in summer). According to a housing expert from the Ministry of Sustainable Development and Tourism, up to 70 per cent of the housing stock needs refurbishment.

On average, households spend €690 (nearly one gross monthly salary) per year on energy consumption. The most common heating facility in the central part of the country and in the coastal areas is electric air conditioning. In the mountainous north, most apartments have fireplaces and thus use solid fuel (wood).

f) HOUSING CENSUS 2011

Comprehensive results from the April 2011 housing census are expected by mid-2012. The census, which was conducted following regulations and recommendations of Eurostat and UNECE, will provide comprehensive data relevant for this *Action Plan*. But unfortunately it will not help to close the data gap on energy consumption of houses and informal housing.

1.2 STAKEHOLDER ANALYSIS

a) MINISTRY OF SUSTAINABLE DEVELOPMENT AND TOURISM (MSDT)

Concerning energy efficiency and housing, this Ministry is responsible for the legislative framework in urban development, regional planning, and housing and building construction. It also assures implementation through monitoring activities. These include approving urban planning documents proposed by municipalities, and issuing building permits for buildings of public interest (until 2011 even for housing with more than 4,000m²). It helps enforce the law through inspecting both construction sites and planning documents.

b) MINISTRY OF ECONOMY (ME)

This Ministry established a division on Energy Efficiency in 2009. This “Sector for Energy Efficiency” carries out tasks related to legislation, promotion and monitoring of implementation of energy-efficiency principles, often through partnership in specific projects funded by international donors. It mainly implements regulations as defined by the EU Energy Community. This is an inter-governmental body that was established in 2005 and brings together the European Community and some countries of South Eastern Europe. The “Sector on Energy Efficiency” - to some extent - acts as an energy agency. But no systematic cooperation with the international network of energy agencies has been established so far.

c) MINISTRY OF FINANCE (MF)

This Ministry assesses any proposed legal reform for its financial implications and funding. In this way, it has the final say on every new law as well as on any kind of subsidies or State guarantees. It is also responsible for legislation on property, ownership rights, land survey and cadastre.

d) MUNICIPALITIES

Municipalities have broad authority in regional planning and development (including for preparing spatial-planning documents) as well as in monitoring the implementation of legal acts through issuing building permits, and in enforcing the laws through inspecting construction sites. According to the new Law on Energy Efficiency, municipalities are also in charge of preparing and implementing local energy-efficiency programmes and plans. For execution of this task, additional regulations are under preparation.

1.3 EXISTING GOVERNMENT DOCUMENTS AND LEGAL REGULATIONS

As part of the political transition towards EU candidacy and eventual EU accession, Montenegro has adopted some new legal and strategic instruments to facilitate reforms in various sectors of the economy. The subject of energy efficiency in the housing sector can be divided into three partly overlapping fields: planning and construction, housing and property, energy use and energy efficient technology.

1.3.1 PLANNING AND CONSTRUCTION

Spatial-planning and construction legislation has undergone several changes over a relatively short period of time: two laws and two sets of general amendments on planning and construction were approved within six years, with possible additional changes in 2012. This sector is under the authority of the Ministry of Sustainable Development and Tourism.

a) LAW ON SPATIAL DEVELOPMENT AND CONSTRUCTION OF BUILDINGS (2008/11)

The Law regulates the system of spatial development, the manner of and requirements for construction of buildings, as well as other matters of importance for spatial development and construction. It therefore covers the scope of the building code as well as of regional planning legislation.

It provides the legal basis for implementing energy-efficiency guidelines into planning documents on all levels via Urban Development and Technical Requirements (UTUs). Following the latest set of amendments to the Law, municipalities are required to adopt their Local Spatial Plans before the end of 2012. In November 2011 such plans for 15 out of 22 municipalities were being prepared. The plans will provide comprehensive outlines for implementing energy-efficiency in new Detailed Urban Plans (DUP) and will provide the basis for issuing building permits.

The Law sets out the competencies for implementation and monitoring:

- Urban planning inspection for implementing all legally required contents of planning documents, both within plans and in their implementation through Urban Development and Technical Requirements (UTUs).
- State authority (i.e. Ministry) issues UTUs and building permits for buildings of general interest. Municipal authorities are responsible for all other structures. UTUs should offer guidelines for energy-efficient building design from the planning document.
- Licensed companies appointed by the investor monitor the implementation of specific urban planning requirements of energy efficiency into building design during the review of preliminary and detailed design for construction.
- Government authority (State or local level) issues building permits, based on a formal check of documentation provided by the investor.
- Building inspection monitors the construction process to assure compliance with the building permit and the Law.

On the other hand, analysis of the actual planning/construction practice shows that applying energy efficiency design to housing is still quite uncommon. The responsibility is split between each of the previously described levels of competency:

- At the planning stage, a very general set of guidelines is provided, which seems to be insufficient for implementation.
- At the UTU phase, viable energy-efficiency guidelines are often missing. Insufficient capacities of authorities in the process from UTU issuing to implementation monitoring is another challenge.
- At the design stage, since both designing and reviewing companies are appointed by the investor, applying energy-efficiency solutions depends on this investor.
- At the construction phase, the building inspection deals with basic procedural and structural on-site issues. Energy-efficiency issues are perceived as less important.

In the course of decentralization, over the past decade, more competences were transferred to municipalities in the field of planning and administration of construction. Efforts in capacity-building are required both within municipalities and state inspection in order to implement energy-efficiency solutions.

b) RULEBOOK ON PLANNING STANDARDS (2010)

This book, entitled *Rulebook on detailed contents and format of planning documents, as well as on criteria for land use, elements of urban regulation, and the standardized graphical symbols*, provides further regulations in spatial planning. It is an important by-law prescribing various steps towards facilitating the implementation of a long-term spatial development policy.

It governs detailed contents and formats of planning documents, as well as categories of and criteria for land use; elements of urban regulation; standardized graphical symbols and other components of national and local planning documents.

Concerning energy efficiency, the Rulebook regulates that a planning document shall:

- Define the requirements for construction, which shall both ensure a low level of energy consumption and encourage the use of renewable sources of energy for heating, cooling and ventilation of buildings.
- Provide an analysis of energy requirements of all consumers within the area covered by the plan. This analysis should respect the principles of energy efficiency and rational energy use and address possibilities for using renewable energy resources.

- Contain aspects of architectural design, building materials, solar geometry, adaptation to climate impacts of buildings, provision of necessary comfort, reduction of losses in energy infrastructure, transport efficiency, etc.

Planning documents contain large amounts of data on the physical, climatic and geological characteristics of the areas of concern. Experience shows that, in reality, however, this information is rarely considered when the plans are being implemented. The construction rules provide basic parameters on energy efficiency in buildings. But there are no specific requirements to be included in the UTUs, such as building orientation, insulation thickness, placement of outdoor air conditioning units, and usage of deciduous greenery for providing summertime shade.

The *Rulebook* mainly refers to green field developments. Its application is critical concerning informal settlement regularization, as existing settlements require a different approach (see section 1.6).

c) NATIONAL STRATEGY OF SUSTAINABLE DEVELOPMENT (NSSD) (2007)

The Ministry of Sustainable Development and Tourism is responsible for implementing the National Strategy of Sustainable Development (NSSD), with the objective of directing spatial planning along sustainable-development lines. The National Strategy is derived from the Montenegro Ecological State Development Directions (2002). It incorporates elements of modern strategic planning and establishes a stronger connection to relevant international processes. At the same time, it relies strongly on the Development and Poverty Reduction Strategy as well as on a set of sectoral strategic documents that have recently been adopted in Montenegro. It also represents one of the elements in the national implementation of the Mediterranean Strategy of Sustainable Development.

In the National Strategy of Sustainable Development, the following are the priority areas of activity:

- Management of water resources and demand.
- Rational use of energy.
- Increased use of energy from renewable sources, and mitigation of and adaptation to climate change.
- Sustainable mobility through appropriate management in transport.
- Sustainable tourism as a leading sector of the economy.
- Sustainable agriculture and rural development.
- Sustainable urban development.

- Sustainable management of the sea, coastal zones and marine resources.

1.3.2 HOUSING AND PROPERTY

a) PROPERTY LAW (2009)

Together with the Law on Obligatory Relations from 2008, the Property Law constitutes the country's Civil Code. In the area of housing, the Law contains provisions on property relations. These provisions define the legal constitution of condominium ownership, the use of residential buildings, special and common parts of residential buildings and ownership of such property, the use of specific and common parts of the building, the right to upgrade the building, as well as rules on mutual relations of the owners of a building. The Law partly defines the management of housing. Other related aspects are regulated in the Law on Housing and Maintenance of Residential Buildings (see below). The law is within the authority of the Ministry of Finance.

The establishment of owners' associations is crucial for implementing management and maintenance schemes in the housing stock. Despite their obligation to form owners' associations, only an estimated 30 to 40 per cent of multi-apartment buildings have them. And awareness of the usefulness for having such institutions, and of their management and financial relations, is still very low.

b) LAW ON HOUSING AND MAINTENANCE OF RESIDENTIAL BUILDINGS (2011)

This Law came into force in early 2011 and replaced the Law on Condominium Property. It governs the rights and obligations of condominium owners in terms of maintaining their buildings, particularly the common parts. It includes regulations on funding maintenance with a minimum fee of 0.20 €/m² per month, but does not give details about how these fees should be applied. Moreover, there are no regulations on setting up a reserve fund for an owners' association, even though this would be crucial for thermal refurbishment.

Three levels of maintenance (regular maintenance, necessary refurbishment, urgent works) are defined, based on the extent of intervention. Competences are defined accordingly, with the possibility for local authorities to carry out the most necessary maintenance, which subsequently would be charged to the tenants. Monitoring of the establishment of owners' associations and the implementation of maintenance schemes is assured through the introduction in 2012 of Housing Inspection Services. This service is to be established at national level. Close cooperation with the building inspection on the municipal level is intended. The Law is within the authority of the Ministry of Sustainable Development and Tourism.

c) NATIONAL HOUSING STRATEGY (2011)

The Strategy contains relevant studies and analysis of the housing framework and conditions, with a focus on specific target groups. It defines mid- and long-term objectives and priorities, such as:

- Increasing the availability of housing below the market level.
- Supporting the development of a rental sector.
- Improving management and maintenance of the existing housing stock.
- Creating the legal and institutional framework for the regulation of housing according to EU regulations.

Within these strategic goals annual plans for improving energy efficiency are listed. The National Housing Strategy is devised for the period from 2011 to 2020, with a Framework Action Plan for the period from 2011 to 2015.

1.3.3 ENERGY AND ENERGY EFFICIENCY

a) LAW ON ENERGY EFFICIENCY (2010)

This Law defines efficient use of energy, measures to improve energy efficiency and other issues important for increasing energy efficiency in different sectors, including the residential sector. It transposes into national law the EU Energy Performance of Buildings Directive, particularly the issuance of energy performance certificates, and other related EU directives, e.g. concerning energy auditing and energy labeling of household appliances (see section 1.4).

This Law introduces strategic and operative documents for the implementation of EE at national and local level and defines competencies, as follows:

- Energy-efficiency Strategy – adopted by the Government for a 10-year period
- Energy Efficiency Action Plan – adopted by the Government for a 3-year period
- Annual operational plan for improving energy efficiency in public administration institutions
- Energy efficiency programmes and plans for local governments.

The Law empowers the Government to set national indicative energy saving targets in terms of average or final energy consumption.

The harmonization with EU legislation is incomplete as some aspects are missing, in particular with regard to energy efficiency in the building sector, energy labeling or energy plans of municipalities. Relevant Rulebooks are being developed by the Government.

b) ENERGY-EFFICIENCY ACTION PLAN FOR THE PERIOD 2010-2012 (EEAP)

This is a comprehensive document drawn up on the basis of the requirements included in the Law on Energy Efficiency (see above) and related EU Directives. It includes indicative lists of examples of eligible energy-efficiency-improvement measures in the residential building sector, industry and transportation, along with cross-sectoral measures and horizontal measures. It emphasizes combining energy-efficiency measures and informal settlement upgrading with minimum energy standards and financial incentives. Several of these proposed measures are included in the present *Action Plan* (see target 2.3.3). A new Energy-efficiency Action Plan for the period 2013-2015 is to be adopted in 2012. It can be expected to include guidelines from this report.

1.4 IMPLEMENTATION OF EU DIRECTIVES AND INTERNATIONAL OBLIGATIONS

Housing related issues are not an EU competence. However, a growing number of EU regulations touch on housing issues, many of which relate to energy policy. Adapting to the EU regulations described below is part of Montenegro's EU accession process.

a) EU CLIMATE AND ENERGY PACKAGE

In 2008, the EU agreed on a climate and energy package, including a set of measures known as "20-20-20" targets with the aim of transforming the EU into an energy-efficient and low-carbon economy. By 2020, GHG is to be reduced by 20 per cent as compared to the 1990 levels, the use of renewable energy sources is to be increased to 20 per cent of total EU energy consumption, and energy consumption is to be reduced by 20 per cent compared with projected levels through improvements in energy efficiency.

All of these targets have strong implications for the housing sector. The 20-20-20 goals are to be implemented through a number of EU Directives. The most important in terms of energy efficiency in the residential sector are the following:

b) ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE (EPBD RECAST, 2010/31/EU)

The Directive is based on the EPBD from 2002 (2002/91/EC) and contains amongst others the following regulations:

- By 2020 all new buildings have to apply a nearly-zero-energy-standard (calculated on primary energy consumption), to be achieved with ambitious energy standards and under utilization of local renewable energy sources.

- Public buildings have to act as models by achieving these goals already by 2018. For all public buildings larger than 250m² an energy performance certificate has to be issued and posted visibly for the public.
- Obligation for thermal refurbishment: If structural measures concern more than 25 per cent of the building envelope or more than 25 per cent of the building value, then strict thermal standards and other requirements have to be met. This applies for all buildings, even for single family homes.
- Thermal requirements at optimal cost: Obligatory cost comparison (benchmarks) has to be applied. Different refurbishment alternatives have to be compared regarding life-cycle costs. This measure is intended to increase the quality standards of refurbishments, as life-cycle assessment favours refurbishment strategies with high investment costs and low future energy consumption costs.
- A system of sanctions has to be introduced, and the kind of sanctions has to be defined at the national level.
- Energy-efficiency indicators have to be published in all sale or lease advertisements.

The Energy Performance of Buildings Directive is a framework Directive. Details have to be developed and approved at the national level. This concerns, for instance, the specification of nearly-zero energy-standard. The Law on Energy Efficiency from 2010 (see above) has translated the 2002 Directive into Montenegrin law. It introduced, for example, the legal basis for energy audits and the issuance of energy performance certificates. This Directive was translated into Montenegrin legislation by the Decision of Ministerial Council 2009/05/MC-EnC and Decision 2010/02/MC-EnC. The recast Directive has not yet been transposed into national law.

c) RENEWABLE ENERGY DIRECTIVE (2009/28/EG)

The Renewable Energy Directive defines the shares of renewable energy in total energy consumption of any EU Member State, following the 20-20-20 goals described above. This Directive requires a consequent implementation of renewable energy in new construction and refurbishment.

d) OTHER RELATED EU DIRECTIVES

Other EU Directives with indirect impact on the residential sector being transposed into national legislation are the Directive on energy end-use efficiency and energy services (2006/32/EC), the Council Directive on energy labelling of household appliances (92/75/EEC) and eight implementing directives for different groups of appliances.

1.5 GOVERNMENT DOCUMENTS AND LEGAL REGULATIONS IN PREPARATION

Montenegro is rapidly reforming its laws, mainly driven by the EU integration process. The reforms listed below are to be integrated into a comprehensive approach as proposed in this *Action Plan* (see section 2).

a) LAW ON REGULARIZATION OF INFORMAL OBJECTS

Solving the issue of informal housing and informal settlements is a policy priority. Applying legal regulations is scheduled for 2012, details see section 1.6.

b) AMENDMENTS TO THE LAW ON SPATIAL DEVELOPMENT AND CONSTRUCTION OF BUILDINGS

Amendments are scheduled for 2012, amongst others regarding alternative planning standards for informal settlement upgrade.

c) BY-LAWS TO THE LAW ON ENERGY EFFICIENCY

By-laws and Rulebooks amongst others on EE implementation in the building sector are scheduled for 2012. These rulebooks will regulate closer minimal requirements, energy performance certification, energy audits and regular inspection of heating and AC systems.

d) LAW ON SOCIAL HOUSING

The Housing Policy Action Plan from 2005 proposed the development of such a Law (MEPUP, 2005). Related issues have been discussed and partly implemented in the context of the Law on Housing and Maintenance of Residential Buildings of 2010 (section 1.3.2b) and the Law on Housing Cooperatives from 2010. At this stage of development, EE measures in social housing are not yet discussed. Referring to international debates, regulations on PPP in housing may be considered.

1.6 INFORMAL SETTLEMENTS – CURRENT STATUS AND UPGRADE INITIATIVES

This *Action Plan* targets at provisions to combine thermal upgrade of buildings with regularization of informal settlements. For this reason, the current situation of informal housing in Montenegro and possible upgrade strategies need to be discussed in some details.

a) CURRENT STATUS

Montenegro suffers from massive informal construction, amounting to about one third of the housing stock (see section 1.1c). Informal settlements in Montenegro are characterized as follows:

- Large historically established settlements since the 1970s, with a boom in informal construction in the last two decades.

- Different degrees of informality: most are buildings on people's own land but without building permission, or with construction exceeding existing permits; in some cases squatting on public or private land in areas prone to natural disasters (landslides, high seismic risk) or forests.
- Mix of land uses and intensity of use: predominantly residential developments, in coastal areas with many small family hotels and retail businesses without building/occupancy permission; mix of high- and low-quality buildings.
- Informal settlements often have some specific positive aspects, such as a high level of self-organization, social integration, mix of uses, low car traffic, and a network of footpaths.
- Deficiencies in infrastructure for road access, parking, sewerage and waste disposal; many (private) roads are very narrow and steep often provided by the residents; public service companies (electricity, water, telephone) have provided infrastructure over time, with some financial contribution by residents.
- Informal construction usually has low energy standards, contributing heavily to overall low energy efficiency in the housing sector (see section 1.1e) .
- Absence of sufficient planning documents: cadastre maps are frequently imprecise and incomplete, and DUPs have been approved for only around 20 per cent of informal settlements. But this, however, is a precondition for obtaining a building permit. Existing planning standards are aligned for green field developments. Their applicability on existing (informal) settlements is problematic, e.g. regarding the required scale of road infrastructure or accessibility of parcels.
- In many cases, the dwellers are interested in keeping the status quo as regularization comes with payment obligations and building upgrade requirements.

After informal housing construction was legally classified as a criminal act in 2009, this activity has diminished considerably.

b) COMMITMENT TO INTERNATIONAL PROGRAMS AND DECLARATIONS

The challenge of informal settlements is widely recognized in international and national programmes for change and action. At the global level, the Habitat Agenda (1996), the United Nations Millennium Development Goals (2000), particularly Target 11 on slums, and the United Nations Declaration on Cities and other Human Settlements (2001) are of relevance.

An important step in the implementation of informal settlement upgrade strategies on a regional level was the Vienna Declaration on National and Regional Policy Programmes regarding

Informal Settlements in South Eastern Europe (2004). The signatory countries committed themselves to completing regional resolution of informal settlements by the year 2015. There is no further reference on energy efficiency in the Vienna Declaration (Amann/Tsenkova 2011, Tsenkova 2010).

The *Action Plan for Energy-Efficient Housing in the UNECE Region* (UNECE 2011) refers indirectly to energy efficiency measures in the course of informal settlement upgrading. UNECE has been focusing on the topic for several years, and produced the publication *Self-made cities: In search of sustainable solutions for informal settlements in the UNECE region* (UNECE 2009a).

c) LAW ON REGULARIZATION OF INFORMAL OBJECTS

A Law on Informal Settlements is now being prepared. Legal initiatives have been prepared in other Western Balkan countries, with different but mostly limited success. In Montenegro, different options are being examined, resulting in already numerous unofficial working drafts of the Law. A main challenge is the antagonism between regularizing individual buildings and regularizing settlements with upgraded infrastructure. Energy efficiency measures are relevant in both cases.

This initiative is of major importance, as roughly one third of Montenegro's population lives in informal buildings. The rationale for comprehensive intervention is driven by attempts to:

- Address public safety and earthquake vulnerability, as some informal settlements are situated in seismically highly active areas.
- Improve living conditions of residents through access to communal services (technical and social infrastructure).
- Improve conditions for tourism in the coastal region and ecologically sound development.
- Introduce an efficient legal framework for property development and a functioning real estate market (Amann/Tsenkova 2011).

d) NATIONAL STRATEGY ON INFORMAL HOUSING (2010)

The *Plan of Transformation of Informal Settlements into Formal ones* is within the authority of Ministry of Sustainable Development and Tourism. It provides a summary of the economic, social and environmental challenges associated with informal settlements and outlines the legal and fiscal measures to initiate the regularization. Consistent with the provisions in the planning framework, it focuses explicitly on alternatives to regularize settlements with existing planning documentation.

The National Strategy stipulates updated topographical and cadastre plans and a database of ortho-photo data on the location and types of illegally constructed buildings as preconditions for regularization for administrative procedures and subsequent entry into cadastral records.

Legalization will be possible if a building meets planning and construction requirements, e.g. seismic stability according to local conditions. The process shall be associated with the payment of communal fees, as well as fees for land lease or purchase of squatted land, and result in a retroactive occupancy permit, i.e. a consolidated building permit and a certification of the building as safe and in compliance with the building code.

On the financial side, the Strategy introduces provisions for a differentiated treatment according to the degree of informality (construction without building permit on a person's own land for their own housing purposes, for commercial use, illegal construction on squatted land etc.). Further, it proposes massive tax penalties for non-regularization, which, within a few years, would equal the communal fees. Payment of communal fees shall be facilitated with mortgage loans. Funding with low interest loans from international financing institutions was also considered (Amann/Tsenkova 2011).

1.7 CURRENT INITIATIVES ON ENERGY EFFICIENCY IN THE HOUSING SECTOR

a) PROGRAMME “1000+ HOUSING”

In 2010/11 the Government has put in place a Programme “1000+ Housing” programme financed by the Council of Europe Development Bank (CEB) to achieve a number of different goals: (a) to provide affordable apartments to low and moderate income households, (b) to provide affordable financing to these groups, and (c) to stimulate the private housing and construction industry to overcome the economic crisis.

One of the outcomes was improved ecological and energy efficiency standards in housing construction and real estate. The obligatory requirements for project application included a specification of the project’s energy performance as well as a list of environmental measures. Additionally, energy-efficiency measures (e.g. good energy performance, over-average heat insulation, energy efficient construction products, central heating with biogene energy sources, central water-heating system with solar panels, measures against overheating in summer, energy efficient and ecological utilities) were an evaluation criterion in the selection procedure (MSDT 2010). In total, the programme granted 433 low-interest loans for housing projects.

b) MONTESOL

Montesol is an ongoing project initiated by the United Nations Environment Programme (UNEP) and funded by the Italian Ministry of Environment, Land and Sea (IMELS) as donor. The local partner for implementation is the Ministry of Energy. One million US dollars are

available for interest-free loans for the installation of thermal solar panels in single-family homes, provided by registered companies with licensed experts. During the first few months, the public response to the programme has been poor, with few applications so far. According to participants, the reasons for the lack of interest were insufficient marketing, high-end technological requirements, and exclusion of the multi-apartment sector.

c) MUNICIPAL PROMOTION OF SOLAR THERMAL PANELS

Several municipalities promote investments in solar thermal collectors with reduced communal taxes. The initiative applies both for single-family homes and multi-apartment buildings. The public response is still poor. Investors appear hesitant to install such devices in condominium buildings because there is no support for maintenance or replacement of the devices at the end of their life cycle. Inadequate implementation of owners' associations and maintenance schemes (see section 1.3.2) are the main obstacles for decentralized energy generation on rooftops of multi-apartment buildings.

d) THERMAL REFURBISHMENT PROGRAMME

This programme in Podgorica features as a public-private partnership (PPP), where refurbishment costs are split between the municipality and the council of tenants (which is not a synonym for owners' association). At present, only works on insulating the façade of buildings are eligible to the programme. Also, no solid institutional framework is defined. It happened repeatedly that lack of consensus over funding within the council of tenants led to partial solutions or to the projects being abandoned.

e) UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP) PROJECTS

UNDP in Montenegro offers diverse activities in energy efficiency. Current pilot projects in Bijelo Polje, Zabljak and Bar apply a new approach to link seismic and energy auditing with informal housing regularization. The project is funded by the Government of Norway. Other UNDP initiatives target vocational training and energy plans of municipalities.

f) GIZ PROJECTS

The German “Gesellschaft für Internationale Zusammenarbeit” (GIZ) has conducted a number of projects on housing, planning, energy policy and legislation in Montenegro in the past. GIZ under the project “Advisory Services to Energy Efficiency” (ASE) has supported the development of the Law on Energy Efficiency and the development of rulebooks on energy efficiency in buildings. Also, GIZ has organized vocational training sessions in energy audits and energy performance certification. And the GIZ-ASE project supports activities in energy-efficiency promotion and awareness-raising campaigns.

g) IPA PROJECTS

Projects funded by the EU “Instrument for Pre-Accession Assistance” (IPA) emphasize municipal projects regarded as being of priority public interest in areas of infrastructure and communal services. Beyond basic infrastructure, some of the projects shall implement energy-management systems in the public sector (public buildings, street lighting, etc.).

h) CFSSI PROJECTS

CFSSI (Montenegrin Fund for Solidarity Housing Development) is organized as a PPP housing association with the Government, the Confederation of Trade Unions and the Employers Federation as shareholders. It was established to be the main provider of affordable housing in the country. In current projects, it has started implementing energy-efficiency solutions, starting with a housing project in Bar with 270 apartments with solar thermal panels for central supply of hot water. Monthly savings are estimated at between €20 and €30 per apartment. In the absence of sufficient legal regulations for maintenance of such devices by the owners association, the system will be operated and maintained by the communal water supply company.

i) OTHER INITIATIVES

Other initiatives include the first project with geothermal cooling in Montenegro, the “Atlas Capital Centre” with retail and residential use in Podgorica.

A few banks issue low interest loans for housing refurbishments, funded by the German KfW “Kreditanstalt für Wiederaufbau”. The bank service partly includes energy consulting.

1.8 EDUCATION AND TRAINING

a) GRADUATE EDUCATION

The Faculty of Architecture of the University of Montenegro in Podgorica conducts a two-semester course titled “Bioclimatic and energy efficient Architecture”.

b) VOCATIONAL TRAINING

The EEAP (see 1.3.3) offers a broad set of training targeting implementation of energy efficiency in housing.

The Sector on Energy Efficiency within the Ministry of Economy (see section 1.2b), together with GIZ (see section 1.7f), have introduced training for experts on energy auditing of buildings with more than 40 alumni. Subsequently, they will be licensed to issue energy performance certificates. The alumni of this training have founded the NGO called “Montenegrin Centre for Energy Efficiency” (CCEE) for further education and awareness-raising in energy efficiency.

1.9 OUTCOMES OF THE ASSESSMENT

The following main policy areas for improving energy efficiency in the residential sector have been identified:

- Social policy action against housing poverty and energy poverty.
- Improvement of the knowledge base on energy efficiency and informal housing; improvement of knowledge transfer.
- Implementation of EU legislation on energy efficiency.
- Development of financing tools for energy-efficient affordable housing and housing refurbishment.
- Capacity-building both on national and municipal level.
- Implementation and enforcement of energy-efficiency principles in planning procedures.
- Enforcement of owners' associations and housing management schemes.
- Informal-settlement upgrade.
- Coordination and promotion of existing initiatives in energy efficiency.

2 ACTION PLAN

2.1 GOALS

This *Action Plan* provides a framework for Government programmes, legal reform and on energy-efficiency projects in the residential sector. It is intended for helping the Government of Montenegro with energy-efficiency initiatives and with approaching international donors. It includes the following short- and long-term goals:

a) SHORT-TERM GOALS (UNTIL 2015)

- Promote consistent legal reform in energy efficiency in the residential sector.
- Support the EU integration process of Montenegro, in particular through promoting the implementation of the EU Energy Performance of Buildings Directive recast.
- Enforce EP certificates for all multi-apartment new construction, the entire public building stock (>250m²), and informal housing as a prerequisite for regularization.
- Increase public awareness of energy efficiency in the residential sector.
- Promote exchange of experience with other EU member states and candidate countries.
- Contribute to a consistent strategy to regularize all informal housing in Montenegro according to the Vienna Declaration.
- Contribute to a strategy to provide a consistent knowledge base (statistics, expert knowledge, studies).

b) MEDIUM TERM GOALS (2015-2020)

- Better performance in energy efficiency in the residential sector.
- Substantial contribution to the EU 20-20-20 goals by reducing greenhouse-gas emissions from the residential building sector.
- Strengthening the image of Montenegro as an ecological State in the field of energy efficiency in the residential sector.
- Proved reduction of energy poverty.

2.2 ENERGY-EFFICIENCY INFRASTRUCTURE AND LEGISLATION

This section focuses on organizational leadership and energy planning. It outlines the need to designate administrative bodies for improving energy efficiency in housing and for developing energy planning, management and monitoring capacities.

The *Action Plan for Energy-Efficient Housing in the UNECE Region* (UNECE 2011) highlights the following basic provisions:

- Establish national and local government structures responsible for energy practices and energy efficiency in housing.
- Design and implement action plans for energy efficiency in housing at the national and local levels.
- Build statistical indicators and databases for energy monitoring in the residential sector.

2.2.1 CONSOLIDATION OF LEGAL COMPETENCES AND HOUSING LEGISLATION

a) CONSOLIDATE LEGAL COMPETENCES

ACTION 1	Legal competencies in housing policies should be consolidated to avoid fragmentation, prevent overlaps between different ministries (MSDT, ME, MF) and increase efficiency.
ACTION 2	Housing policy should be concentrated in the Ministry of Sustainable Development and Tourism. This concerns laws on housing and property (parts of the Property Law, Law on Housing and Maintenance of Residential Buildings, Housing Cooperative Law, single regulations in other laws) and laws on planning and construction (Law on Spatial Development and Construction of Buildings). Laws on energy and energy efficiency shall remain in the authority of ME.
BUDGET	None
RESPONSIBILITY	Government

b) CONSOLIDATE HOUSING LEGISLATION

ACTION 1	Housing and property legislation should be consolidated to eliminate its current fragmentation, in particular with regard to laws on housing and property. Issues such as the establishment of owners' associations and regulations on housing maintenance and management should be regulated in one legal act and placed under the responsibility of one Ministry (see target 1.1.1b).
ACTION 2	Consideration should be given to shifting the legal authority for transposition of the EPBD into national law to MSDT.
BUDGET	None
RESPONSIBILITY	Government

2.2.2 IMPLEMENTATION OF A CONSISTENT LEGAL REFORM

a) AMEND THE LAW ON SPATIAL DEVELOPMENT AND CONSTRUCTION OF BUILDINGS AND BY-LAWS / RULEBOOKS (SEE SECTION 1.3.1A)

ACTION 1	Energy efficiency guidelines in plans (PUPs, DUPs) should be improved, either through by-laws or a Rulebook.
ACTION 2	Enforcement of energy efficiency provisions in the succession of plans (from PUPs to DUPs to project plans) and permission procedures should be improved with a set of measures described in this <i>Action Plan</i> .
ACTION 3	High quality development of “Urban Development and Technical Requirements” (UTUs) should be assured by introduction of a Rulebook. The Rulebook should cover proposals on energy efficiency, inter alia, issues such as obligatory use of solar energy, or application of solar planning principles (see target 1.1.1c). The procedure of implementing UTUs at all levels of planning and permission should be defined. This requires also capacity building in the municipalities.
ACTION 4	Energy efficiency measures should be an integral part of project documentation, building permits and permits of usage. Building permits shall only be issued if according thermal and energy standards are provided.
ACTION 5	UTUs shall contain a manual for simple measures of “solar planning” (see target 1.1.1c).
ACTION 6	Legal reform shall enforce regularization of informal settlements. On the one hand with comprehensive regulations in a new law (see target 2.2.2 e), and on the other hand with special provisions and exemptions in this Law. This mainly concern alternative planning standards for DUPs, to be defined within this Law and the Rulebook on Planning Standards.
BUDGET	Funds for capacity building
RESPONSIBILITY	MSDT

b) AMEND THE PROPERTY LAW AND BY-LAWS (SEE SECTION 1.3.2A)

ACTION 1	Regulations on the establishment of owners’ associations, on housing maintenance and management should be improved for better enforcement and consolidated in one single Law in the responsibility of one Ministry.
ACTION 2	Enforcement of the establishment of homeowners’ associations has to be improved.
ACTION 3	It should be assessed whether the procedure of establishing owners’ associations can be changed.
RATIONALE	In some European countries, the owners of one residential building represent a legal personality without additional procedure of formation. They are a legal body by nature. This could be integrated into Montenegrin law by merging the concepts of owners’ association and council of tenants. The advantage of such a reform would be an immediate enforcement of owners’ associations for the whole housing stock.

ACTION 4 A legal tool to enforce financial liabilities of the condominium owner towards the owners' association has to be implemented. It should concern payment obligations for housing management, maintenance and refurbishment. Such a tool is essential to establish financing schemes for EE measures. A possible model is a privileged lien.

BUDGET None

RESPONSIBILITY MF / MSDT

c) AMEND THE LAW ON HOUSING AND MAINTENANCE AND BY-LAWS (SEE SECTION 1.3.2B)

ACTION 1 Enforcement of housing maintenance requires the consequent establishment of owners' associations (see above), the establishment and empowerment of housing inspection and creating a business environment for housing management (see target 2.3.2).

ACTION 2 Housing inspection under this Law is to be implemented in 2012. (For further details on this target see 1.1.1d). The responsibility of housing inspection should be extended to cover EE measures in residential buildings, complementing energy audits and inspection of heating and AC systems already implemented under the LoEE. Housing inspection particularly should check the existence of valid EP certificates and certificates for heating and cooling appliances.

ACTION 3 Enforcement of housing management including its financial aspects (maintenance funding, accounting, supervision etc.) requires additional guidance (Rulebook).

ACTION 4 An important precondition for successful thermal refurbishment is setting up a reserve fund, related to every single residential building. Own equity of an owners' association facilitates decision making on investments in thermal refurbishment considerably. The legal establishment and enforcement of financial provisions within an owners' association is challenging. It requires functioning housing management schemes. Relevant amendments to the law and/or by-laws and Rulebooks should be developed based on European best practice.

ACTION 5 Collective energy generation in multi-apartment buildings (solar panels or biomass) will be a key measure to increase renewable energy production in the household sector (see target 2.4.5). Legal regulation is required regarding the collection of fees from the single tenants, sharing of costs for maintenance and for life cycle replacement. The issue is closely related to the enforcement of housing management schemes and maintenance fees.

BUDGET Costs for housing inspection; costs for development of a scheme to finance maintenance and refurbishment.

RESPONSIBILITY MSDT

d) AMEND THE LAW ON ENERGY EFFICIENCY AND BY-LAWS (SEE SECTION 1.3.3A)

ACTION 1 Legal competence of MSDT on EE measures in the residential sector should be strengthened, particularly in regards to transposition of the EPBD into national law.

ACTION 2 The EPBD recast from 2010 (see section 1.4b) requires transposition to national law. Implementation of regulations contained in the EPBD recast requires the development of

by-laws or Rulebooks.

ACTION 3 Transposing the EPBD recast, nearly-zero-energy standard should be defined on a national level. This definition should include country specifics, such as energy consumption for cooling or different climatic areas in Montenegro (see target 1.1.1a).

ACTION 4 The scheduled Rulebook on energy plans of municipalities is to be approved and implemented.

ACTION 5 A scheduled Rulebook on energy labelling is to be approved and implemented.

ACTION 6 EPBD regulates the requirements of application of EP certificates. Additionally to EPBD, submission of such a certificate and minimum standards of energy efficiency should be defined as a prerequisite for informal housing regularization (retroactive building permit or permit of usage).

BUDGET None

RESPONSIBILITY ME / MSDT

e) APPLY A COMPREHENSIVE APPROACH ON INFORMAL SETTLEMENT REGULATIONS (SEE SECTION 1.5A)

ACTION 1 A new Law on Informal Housing should not be approved before an assessment of different approaches to regularization of informal settlements has been carried out. The regularization approach of the current draft version of the Law differs from the approach proposed in the National Strategy on Informal Housing (see section 1.6d).

ACTION 2 Considerations should be given to applying cost efficient minimum standards of energy efficiency as precondition for housing regularization (see target 1.1.1c).

BUDGET See target 2.3.3

RESPONSIBILITY MSDT

f) CONSOLIDATE LEGISLATION ON AFFORDABLE HOUSING

RATIONALE In some EU countries, PPPs in housing not only contribute substantially to affordable housing provision and housing management, but are also at the forefront of EE implementation. An important aspect of PPP Housing schemes is institutional audit and control. This issue is not integrated into the existing Housing Cooperative Law.

ACTION A PPP Housing scheme could solve the issues of professional housing management (see target 2.3.2) and affordable new construction. Reforming legislation accordingly (consolidating the existing Housing Cooperative Law) could empower existing initiatives.

BUDGET None

RESPONSIBILITY MSDT / ME

g) INTRODUCE RENT REGULATIONS.

RATIONALE Montenegro is lacking residential rent regulations, including provisions on rent protection, limits of rent increase, treatment of energy costs from collective energy generation, duration of rent contracts, imposition of refurbishment costs to the tenant etc.

BUDGET None

RESPONSIBILITY MSDT / ME

h) CONSIDER ADDITIONAL REGULATIONS ON ENERGY EFFICIENCY IN HOUSING

ACTION 1 In the long run, rooftops will play an important role in decentralized electricity production (photovoltaic) with the requirement to feed surplus energy into the public grid. For this purpose, green electricity regulations, which are required similarly for small wind or hydro-power stations (feed-in tariffs), are to be introduced.

ACTION 2 The introduction of a contract saving scheme (“Bausparen”) could be beneficial for Montenegro and particularly for housing refurbishment (UNECE 2005, see target 1.1.1c). A draft Law on Contract Saving based on the Croatian model is under discussion (see target 1.1.1d) and should be introduced and implemented, considering European best practice.

BUDGET None

RESPONSIBILITY MSDT / ME

2.2.3 IMPROVEMENT OF THE STATISTICAL DATABASE

a) CONSOLIDATE ALL HOUSING AND ENERGY RELATED STATISTICS IN ONE PUBLICATION

ACTION 1 The knowledge base for housing policy in Montenegro should be improved. This could be achieved through bridging the existing gaps in housing statistics with a consolidation of all housing and energy related statistics from the Housing Census of 2011 (available by 2012/13), EU SILC (available by 2013), the Labour Household Survey and other sources.

ACTION 2 Such extraction shall result in a comprehensive special statistical publication on “Housing and Energy”, including housing data from the current Census, but also projections on the demographic development, analysis on housing and energy affordability, and cross-analysis between housing and income data.

ACTION 3 Subsequently (from 2013 on), a brief dataset on housing and energy should be issued on a yearly basis.

BUDGET Costs of assignment to Monstat

RESPONSIBILITY MSDT / Monstat

b) ADDITIONAL DATA COLLECTION

ACTION 1 Statistics on the energy performance of buildings should be collected through statistical registration of all EP certificates. Initially, this information will be fragmentary, but it can develop into an important data source over the years, including comprehensive information on living-space, typology and legal status of buildings.

BUDGET Costs of an additional survey

RESPONSIBILITY MSDT / Monstat

2.3 FINANCIAL INFRASTRUCTURE

This policy area outlines measures for creating the organizational and financial capacities for carrying out the comprehensive policies for improving energy efficiency in the residential

sector. It focuses on financial mechanisms to stimulate owners, tenants, the construction industry, technology providers and other stakeholders to invest in energy-efficient housing. The *Action Plan for Energy-Efficient Housing* (UNECE 2011) highlights the following basic provisions:

- Develop a system of subsidies for improved energy efficiency in housing.
- Improve tax incentives (tax credits, reductions, exemptions).
- Introduce systematized information portals on financial incentives.
- Stimulate development of energy efficiency practices within financial institutions.

Experience in all European countries shows that improving thermal standards in new construction and increasing thermal refurbishment of the existing housing stock besides non-financial mandatory measures (legislation) also requires financial incentives. If well designed, such initiatives create important outcomes in terms of economic development, environmental protection and welfare, in particular they:

- Impact on the construction and construction product industry.
- Impact on the labour market.
- Enhance economic potentials of household assets, e.g. by mortgaging the own house to start businesses.
- Reduce dependency on energy imports.
- Avoid potential follow-up environmental costs of inefficient energy use.
- Are in accordance with EU targets, avoiding possible penalty payments.
- Create public health benefits from increased living standards and better indoor climate.
- Impact on tourism.
- Position Montenegro as an ecological State.

Experience from Western European countries shows that incentive programmes may generate revenues to public budgets, which exceed State expenditures by far.

2.3.1 FINANCIAL INCENTIVES

a) DEVELOP FINANCIAL INCENTIVES

ACTION 1	Financial incentives should be developed in the most coherent way to avoid overlap between State and municipal initiatives, and to assure best possible effectiveness and greatest possible benefits in terms of national economy, environmental protection and welfare.
ACTION 2	For any new tool a cost-benefit-analysis should be done. Proper incentive systems should produce higher revenues for the public (VAT, other tax payments from increased economic activities, lower payment obligations for unemployment etc.) than public costs for subsidies or tax relief.
ACTION 3	Basically, payment obligations from beneficiaries to the public (e.g. soft loans) should be secured with mortgages in the first rank.
ACTION 4	No subsidies should be granted before regularization of an informal building has been completed. Otherwise the entirely unsatisfactory legal status quo would be further maintained (see target 1.1.1c).
BUDGET	None
RESPONSIBILITY	MF

b) USE FINANCIAL INCENTIVES ON COMMUNAL FEES TO STIMULATE ENERGY EFFICIENCY MEASURES

ACTION 1	Communal fees, charged in connection with the issuance of building permits, and the annual property taxes are main income sources of communal budgets and need to be further developed.
ACTION 2	The current insufficient payment practice of communal fees is to be improved, both for new construction, but particularly for the existing stock of informal buildings (see target 2.3.3).
ACTION 3	Rebates and instalment payment should be applied, both to increase the share of builders fulfilling their tax obligations and to stimulate defined construction activities. For communal fees, instalment payment (with moderate interest rate) is more cost effective than financing models with bank loans, both for the municipalities, but particularly for the beneficiaries.
ACTION 4	Rebates and instalment payment of communal fees are crucial tools for regularization of informal settlements (see target 2.3.3.)
BUDGET	Relief on communal fees
RESPONSIBILITY	Municipalities

c) MAKE AFFORDABLE MORTGAGE LOANS AVAILABLE

ACTION 1	Taking the presently high level of interest rates in Montenegro, the availability of affordable mortgage loans for energy-efficiency measures in new construction and refurbishment are urgently needed.
ACTION 2	Existing programmes of low interest loans (see section 1.7) with funding from international donors shall be further developed, if possible in coherence with this Action Plan.

ACTION 3 Beyond this, the supply of low interest loans for the residential sector shall be ensured on a regular basis. A benchmark for affordable interest rates is 6 per cent, as provided by contract saving sectors in several European countries (see UNECE 2005).

BUDGET

RESPONSIBILITY MF

d) INTRODUCE WELL-PROVEN FINANCING TOOLS FOR AFFORDABLE HOUSING AND ENERGY EFFICIENCY, E.G. CONTRACT SAVING

ACTION Contract saving shall be introduced in Montenegro, following best practice examples in the EU (see target h). To have an effect on the market, appropriate incentives are required. Contract saving (Bausparen) qualifies particularly well for refurbishment measures, taking the average sums of savings and low-interest loans. With savings of e.g. € 1,000 per year, after six years a total investment volume of ca. €20,000 is possible (own savings and low interest loan). In some European countries >50% of population have such saving contracts.

BUDGET Taking EU experience max. € 50-100 p.a. per contract

RESPONSIBILITY MF

e) INTRODUCE WELL-PROVEN FINANCING TOOLS FOR AFFORDABLE HOUSING AND ENERGY EFFICIENCY, E.G. HOUSING BONDS

ACTION 1 Refinancing sources of commercial banks should be improved to provide sufficient supply of affordable housing finance. A qualified model is housing bonds, to be issued by existing commercial banks or a special housing bank (Lawson et al. 2009, Lawson et al. 2010, Amann/Lawson/Mundt 2009).

ACTION 2 Issuance of housing bonds may be stimulated with some end user tax relief. Financing should be limited to non-commercial housing construction and refurbishment (including single-family homes).

BUDGET Taking EU experience ca. € 60-100 p.a. per € 10.00 re-financing (capital income tax relief).

RESPONSIBILITY MF

f) ADDRESS INTERNATIONAL DONORS FOR A FOCUS PROGRAMME ON ENERGY EFFICIENCY IN HOUSING REFURBISHMENT

ACTION 1 International financing institutions (IFIs) (e.g. CEB, EIB, World Bank, Dutch International Guarantees for Housing) may be approached for projects to allow for affordable financing of energy efficiency measures in the housing stock, similar to the CEB financed programme “1000+ Housing” (2010/11, see 1.7a) with a fixed interest rate of below 5 per cent p.a.

ACTION 2 IFI financing usually requires a State guarantee. In the case of “1000+ Housing” additional State subsidies were required. Such financing is appropriate for targeted projects, well defined in volume and time. It does not qualify for models of permanent provision of financing.

ACTION 3 Such a programme should target at comprehensive refurbishment projects with at least three thermally relevant measures (thermo-windows, solar heating/warm water, wall insulation, thermal insulation of the roof etc.). It should be linked to an EP certificate with the requirement to reduce energy consumption for at least 40 per cent, to be approved with a simulation or thermo-graphic measurement, conducted by a certified energy auditor. Such refurbishment projects will cost by at least € 15,000 per unit. Such strict requirements will limit participation to a few hundred. They may act as demonstration projects, which could be replicated.

ACTION 4 Basic mechanisms of programme execution of “1000+ Housing” may be applied. Exemplary on this programme were e.g. tender procedures, the integration of commercial banks, public relations and the high level of transparency.

BUDGET For “1000+ Housing”, State contribution was >30 per cent of the investment volume.
RESPONSIBILITY MF, MSDT

g) CONSIDER THE INTRODUCTION OF AN ESCO MODEL

ACTION 1 In several Northern European countries the model of Energy Service Companies (ESCO) has been successfully introduced. It is about financing thermal refurbishment measures with energy savings.

ACTION 2 Functioning of the model depends on savings potentials, which are, in fact, higher in countries with colder climate conditions.

ACTION 3 A feasibility study on the introduction of such an approach in Montenegro should be conducted, preferably with international donor support.

BUDGET Well qualified for donor support
RESPONSIBILITY MSDT

h) STRENGTHEN THE INVOLVEMENT OF COMMERCIAL BANKS

ACTION 1 The banking sector in Montenegro requires enhancement and strengthening. The programme “1000+ Housing” has shown that the sector could turn into a reliable partner in State initiatives on affordable housing and energy-efficiency finance.

ACTION 2 Commercial banks should be encouraged to provide long term financing for housing and energy-efficiency measures on favourable terms (see section 1.7i). Possible incentives are changes in the regulatory framework or financial benefits. Enforcement of mortgage legislation may contribute to increase the lending volume. The introduction of a contract saving scheme or housing bonds open new business opportunities for commercial banks (see above).

BUDGET Many measures without public costs
RESPONSIBILITY MF

i) CONSIDER THE INTRODUCTION OF A REFURBISHMENT CHEQUE

ACTION 1 Cash subsidies (grants) are a particularly strong incentive to consumers with very specific strengths. Introduction of such tools shall be considered as a priority.

ACTION 2 Example: Austria has introduced a “Refurbishment Cheque” as investment subsidy. Twenty per cent of approved (gross) investment costs are reimbursed (with a cap). It is administered partly by the banking sector. One success factor is its easy applicability for beneficiaries. The initiated investment volume exceeds public costs by a factor of about five. Hence, additional tax revenues exceed public expenditure by far.

BUDGET Additional tax revenues may exceed public costs

RESPONSIBILITY MF, MSDT

2.3.2 CREATING A BUSINESS ENVIRONMENT FOR HOUSING MANAGEMENT

DEVELOP HOUSING MANAGEMENT TO A BUSINESS CASE

ACTION 1 Developing housing management to a business case (see target 2.3.2) requires a sufficient and reliable financial basis. Taking international experience and Montenegrin purchasing power, a level of approximately 0.10 €/m² per month of housing management costs seems feasible, if the collection rate is close to 100% of all owners/tenants in one building. The Law on Housing and Maintenance of Residential Buildings (see section 1.3.2b) stipulates maintenance fees of 0.20 €/m² per month to cover small repairs and housing management. A gradual increase of this amount, connected with activities to increase the collection rate, will be necessary, to establish not only orderly housing management, but also financial sources for refurbishment.

ACTION 2 The introduction of professional housing management requires an enforcement of the legal regulations on owners’ associations and housing maintenance (see target 2.2.2 c). This includes the enforcement of maintenance fees and reserve funds on an individual building level.

ACTION 3 Implementation of professional housing management may be achieved with PPP Housing organizations (see target 2.2.2 h).

BUDGET None

RESPONSIBILITY MSDT, MF

2.3.3 ENERGY EFFICIENCY IN INFORMAL SETTLEMENT UPGRADING

a) LINK INFORMAL SETTLEMENT REGULARIZATION AND ENERGY-EFFICIENCY MEASURES

ACTION 1 The EEAP (see section 1.3.3b) emphasizes the combination of energy- efficiency measures and informal settlement upgrade with minimum energy standards and financial incentives. A combination of these two issues is promising. But some limitations have to be considered.

ACTION 2 Energy-efficiency measures should apply to settlements and individual buildings (see next targets).

BUDGET

RESPONSIBILITY

b) IMPLEMENT ENERGY EFFICIENCY MEASURES IN SETTLEMENT UPGRADE

ACTION 1 Settlement upgrade procedures should include a renewal of technical infrastructure, amongst others, electric power supply, to be implemented in close cooperation with the service providers.

ACTION 2	A specific quality of informal settlements in terms of EE is the presently low significance of car traffic, compensated with a dense grid of footpaths. This quality should be preserved in the upgrade procedure, e.g. by restrained development of road infrastructure, provision of sufficient parking space outside the settlements, strict limitation of parking on public space within the settlements, safeguarding existing customarily footpaths on private land with registered rights of way, provision of public transport etc.
ACTION 3	Other EE measures at settlement level are similar to those proposed for regular settlements: introduction of UTUs with strict EE requirements for plans at all levels (PUPs, DUPs) and permission procedures, “solar planning” (see target 1.1.1c), promotion of higher density of construction etc., but should be developed in close consultation with the local communities.
BUDGET	By implementing an operative communal fee levy it may become self-financing
RESPONSIBILITY	MSDT, municipalities

c) IMPLEMENT ENERGY-EFFICIENCY MEASURES IN BUILDING REGULARIZATION

ACTION 1	Minimum standards of energy efficiency, including the submission of an EP certificate, shall apply as prerequisite for housing regularization (see target 2.2.2e).
ACTION 2	Financial incentives for EE in housing refurbishment, as described in measure 2.3.1, may also apply in informal housing upgrade.
ACTION 3	Distinct programmes should focus on this housing sector to stimulate regularization. Financial incentives for energy efficiency measures may help to meet constructive requirements for retroactive building permits.
ACTION 4	Subsidies for energy efficiency measures should in no case be awarded BEFORE regularization. Otherwise, the legal status quo will be conserved (see target 2.3.1a).
BUDGET	See target 2.3.1
RESPONSIBILITY	MSDT, municipalities

2.4 ENERGY PERFORMANCE STANDARDS AND TECHNOLOGY INTEGRATION

This policy area comprises measures to ensure that existing and new residential buildings progressively meet higher technological standards. Effective measures have to refer to diverse climatic conditions in Montenegro, a reasonable cost-benefit relation and political feasibility. This section highlights the need to strengthen energy- and carbon-performance requirements for both existing and new homes, and to promote innovative solutions in both existing and new residential buildings. The UNECE *Action Plan for Energy-Efficient Housing* (UNECE 2011) focuses on the following basic provisions in this context:

- Improve the mandatory system of energy and carbon performance standards for new domestic buildings.
- Introduce mandatory energy certification for all residential buildings.
- Develop energy performance standards for existing housing.
- Ensure the enforcement of mandatory standards.

- Promote passive-house, zero-energy and carbon-neutral buildings solutions.
- Develop renewable energy generation capacities.

2.4.1 MEASURING ENERGY EFFICIENCY

APPLY EU STANDARDS AND BEST PRACTICE TO MEASURE ENERGY EFFICIENCY

ACTION 1	Transposition of the EPBD requires the definition and implementation of EP certificates, including definition of indicators for measuring energy efficiency (primary energy demand, CO ₂ emissions).
ACTION 2	A particular challenge is the definition of nearly-zero-energy-standard in national law, taking the specific geographical conditions in Montenegro.
ACTION 3	Tools and procedures of energy audit, including simulation models or thermo-graphic measurement on energy consumption before and after refurbishment should be developed and implemented in the near future.

BUDGET

RESPONSIBILITY

2.4.2 STRENGTHENING MANDATORY ENERGY AND CARBON PERFORMANCE REQUIREMENTS

a) INTRODUCE MANDATORY STANDARDS IN NEW CONSTRUCTION IN LINE WITH EU REGULATIONS

RATIONALE In the course of transposition of EU legislation, amongst others, the following actions have to be implemented for new construction:

ACTION 1	Obligatory issuance of EP certificates, mandatory publication of energy efficiency indicators in all sale or lease advertisements.
ACTION 2	Tightening of energy performance standards within building regulations (see section 1.3.1a) with gradual implementation of nearly-zero-energy-standard by 2020 (public buildings by 2018).
ACTION 3	Measures to increase the share of renewable energy, e.g. the mandatory installation of thermal solar panels for water heating (if technically possible, see target 2.4.5).
ACTION 4	A scheme of sanctions is to be developed and introduced. Possible sanctions range from exclusion from any future financial incentives (including reduced communal fees), tax penalties, refusal of usage permission, to sharpening of legal warranty rights etc.

BUDGET None

RESPONSIBILITY MSDT, ME

b) INTRODUCE MANDATORY STANDARDS IN REFURBISHMENT IN LINE WITH EU REGULATIONS

ACTION 1	The EPBD recast contains indirect obligations for thermal refurbishment (obligatory thermal standards in the case that more than 25 per cent of the building surface or the building value is concerned from rehabilitation, thermal requirements at optimal cost), which are to be implemented in the near future.
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ACTION 2 The public sector is to be obliged to a refurbishment rate of 3 per cent p.a. for its own building stock.

BUDGET Costs for public building refurbishment

RESPONSIBILITY Government, Municipalities

2.4.3 INCENTIVES TO INCREASE TECHNOLOGY STANDARDS

INCREASE TECHNOLOGY STANDARDS WITH NON-MANDATORY ACTIONS

ACTION 1 Subsidy programmes should be introduced for the implementation of ambitious energy standards (see target 2.3.1).

ACTION 2 Initiation of demonstration projects in international cooperation.

ACTION 3 Application of a set of simple measures in refurbishment to increase energy efficiency at low costs, e.g. regarding shading, positioning of air condition devices, use of household appliances.

BUDGET See 2.3.1

RESPONSIBILITY MSDT

2.4.4 LOW-ENERGY AND ZERO-CARBON TECHNOLOGY

a) INTRODUCE PASSIVE HOUSE STANDARD WITH DEMONSTRATION PROJECTS

ACTION 1 Residential, office or retail buildings in passive house standard should be promoted and realised as demonstration projects in international cooperation. Such project-cooperation is a key measure to make low-energy technology available in Montenegro.

ACTION 2 Refurbishment projects with low-energy standard should be realized as demonstration projects. If possible, such demonstration projects should also be located in regularized informal settlements.

ACTION 3 Communication of results is of particular importance for the effectiveness of demonstration projects and should be treated as a priority.

BUDGET Substantial costs

RESPONSIBILITY MSDT

b) START TRANSFORMATION OF THE ENERGY INFRASTRUCTURE

ACTION Decentralized renewable energy generation related to housing (photovoltaic, wind power, bio mass, small scale hydro power) shall be promoted as demonstration projects (see target 2.4.8).

BUDGET Substantial costs

RESPONSIBILITY ME

2.4.5 OBLIGATORY THERMAL SOLAR PANELS

PROMOTE INSTALLATION OF SOLAR PANELS

ACTION 1 An obligation to install thermal solar panels for hot water (if technically possible) will be a well visible action with high effectiveness. It should be implemented for new construction (both single-family homes, multi-apartment buildings and hotels) and with a transition

period of e.g. 10 years in refurbishment.

ACTION 2	First movers within a transition period should be rewarded with a subsidy.
ACTION 3	Installation and operation of such devices in multi-apartment buildings is problematic because of cost-coverage of maintenance, replacement after life cycle and levy of fees from the tenants.
ACTION 4	If enforcement of the existing regulations in the Law on Housing and Maintenance (see target 2.2.2 c) is not possible, an according <i>lex specialis</i> should be introduced to meet the requirements (e.g. only for new construction).
BUDGET	Small financial incentive for kick-off
RESPONSIBILITY	MSDT

2.4.6 HEATING AND COOLING WITH RENEWABLE ENERGY, PHOTOVOLTAICS

a) KEEP COOL WITH PREDOMINANT ELECTRIC AIR CONDITIONING

ACTION 1	At present, electric air conditioning devices are predominant for cooling and heating (supplemented in the mountainous north with solid fuel / wood, see section 1.1d). The advantages are low investment costs, simplicity of installation and flexibility. In a climate of mild winters, heating with air conditioning devices (including heat pumps) is competitive to other systems in terms of comfort, costs and even ecological performance. In the hot summers of Montenegro, there is hardly an alternative to electric air conditioning. Hence, alternative energy systems for energy efficient heating would always mean a duplication of technical systems.
ACTION 2	For these reasons it will be difficult to establish other heating and cooling systems than electric air condition devices, even though they are inefficient in energy consumption and seduce to energy-intensive consumer behaviour.
ACTION 3	Additionally, electric energy in Montenegro mainly derives from hydro power stations. The second most important energy source is wood. Oil, gas and coal are of minor importance for household energy consumption.
ACTION 4	Hence, not a switch in energy sources or technical devices is proposed, but rather the improvement of energy efficiency has the greatest potential for a turnaround in energy consumption for heating and cooling (for warm water it is different, see target 2.4.5).
ACTION 5	Any subsidy programme should exclude installation of low efficiency AC devices.
ACTION 6	Action to improve heating/cooling systems is particularly relevant in the course of informal settlement upgrade.
BUDGET	
RESPONSIBILITY	

b) PROMOTE IMPLEMENTATION OF PHOTOVOLTAIC IN THE MEDIUM TERM

- ACTION 1 The perspectives of photovoltaic depend on cost development of the devices, on feed-in tariffs and on the availability of smart grids.
- ACTION 2 Mainly because of the latter, the development of photovoltaic to substantial quantities seems to have a medium term perspective at best. Hence, short term political action should focus on other targets.

BUDGET

RESPONSIBILITY

2.4.7 FOCUS ON ENERGY EFFICIENCY

a) PRIORITIZE ENERGY EFFICIENCY OVER A SHIFT IN ENERGY SOURCES

- ACTION 1 Measures on energy efficiency have bigger potentials than a further shift to renewable energy sources (taking the already high share of renewable energy in the Montenegrin energy mix).
- ACTION 2 A growing focus on energy efficiency should be implemented through legal reform, financial incentives, capacity-building and awareness building as proposed in this *Action Plan*.

BUDGET

None

RESPONSIBILITY

MSDT, ME

b) IMPROVE TECHNOLOGY INTEGRATION IN ENERGY EFFICIENCY

- ACTION 1 All programmes including public subsidies should target at high quality devices and materials, as well as professional service provision.
- ACTION 2 Awareness building has specific significance in this respect (see target 2.6.3).

BUDGET

RESPONSIBILITY

MSDT, ME

c) COMMISSION THE DEVELOPMENT OF GUIDELINES FOR SOLAR PLANNING

- ACTION 1 Particularly potential to increase EE are seen in low-tech bioclimatic planning solutions and its promotion to big parts of population.
- ACTION 2 One such measure shall be guidelines for solar and bioclimatic planning with a particular focus on low-tech solutions to prevent from heat in summertime, to be introduced e.g. in by-laws to the Law on Spatial Planning and Construction of Buildings (minimal standards of construction) and as part of UTUs.
- ACTION 3 Such low-tech solutions could include e.g. simple measures for shading, vegetation to protect from direct sun, simple measures to increase efficiency of air condition devises etc.

BUDGET

Low costs

RESPONSIBILITY

MSDT

2.4.8 MEASURES ON THE ELECTRIC ENERGY GRID

FIRSTLY INCREASE EFFICIENCY, SECONDLY GO FOR EXTENSION OF FUNCTIONS

ACTION 1	Energy infrastructure should be modernized to improve its efficiency with a particular focus on improving its technical systems and reducing energy losses, both from illegal connections and obsolescence of the grids.
ACTION 2	Smart grids should be introduced only in the medium term.
BUDGET	Substantial costs
RESPONSIBILITY	ME, municipalities, service providers

2.5 ACCESS TO AFFORDABLE AND ENERGY-EFFICIENT HOUSING

This policy area is concerned with a broader reach of the policies in question so that the benefits of energy-efficient housing and knowledge of these benefits are not limited to a few areas or social groups but contribute to wider social and spatial integration, as well as housing affordability.

2.5.1 AFFORDABLE HOUSING ALTERNATIVES IN THE MULTI-APARTMENT SECTOR

PROMOTE AFFORDABLE MULTI-APARTMENT HOUSING AS MEASURE TO INCREASE EE AND PREVENT FROM ENERGY POVERTY

RATIONALE	<p>The major part of the formerly social housing stock in Montenegro has disappeared through privatisation.</p> <p>Several initiatives target affordable owner-occupied housing and affordable rental (or leasing) housing to some extent, e.g. CFSSI (see section 1.7h), the programme “1000+ Housing” or some newly established co-operatives.</p> <p>Affordable multi-apartment housing contributes in several aspects to energy efficiency: Higher population density can lead to energy efficiency due to economies of scale and low transaction costs. In some cases, the social housing sector has better thermal standards than the private sector. Rental housing is easier to maintain and refurbish than owner-occupied units or single-family homes. Social housing is an efficient measure to prevent energy poverty.</p>
ACTION 1	For these reasons, existing initiatives should be further developed. A more regular approach on affordable (rental) housing is recommended, taking reference to European best practice in PPP Housing, such as the social housing sectors in the Netherlands, Scandinavia or Austria, or USAID funded programmes in other SEE countries.
ACTION 2	Corresponding legislation may be considered (see target 2.2.2 h).
BUDGET	Substantial costs
RESPONSIBILITY	MSDT

2.5.2 ENERGY AFFORDABILITY AND SOCIAL INTEGRATION

a) DEVELOP A SOCIAL POLICY FRAMEWORK FOR ENERGY AFFORDABILITY

ACTION 1	Energy affordability should be developed under the leading role of the MSDT.
ACTION 2	A strategy to ensure energy affordability should be developed, including a definition of energy poverty, measures to keep electricity prices for households stable (after privatization of Elektroprivreda Crne Gore A.D.), a social aid scheme, responsibilities (State level, municipalities) etc.
BUDGET	Housing allowances are basically costly
RESPONSIBILITY	ME, MF, MSDT

b) IMPLEMENT SPECIFIC ENERGY EFFICIENCY MEASURES FOR LOW-INCOME HOUSEHOLDS

ACTION 1	Tariffication policy within LoEE already targets at vulnerable households.
ACTION 2	Low-income households should benefit from specific actions, e.g. advice on energy-efficient use of appliances, grants to purchase new energy-efficient major appliances etc.
ACTION 3	Energy poverty is a specific problem in single family houses. Any programme to improve EE through refurbishment of single family homes (see target 2.3.1) must be sensitive to energy poverty.
ACTION 4	Vulnerable households should have an alternative to move to affordable rental apartments.
BUDGET	
RESPONSIBILITY	MSDT, ME, MLSW

2.6 CAPACITY-BUILDING, EDUCATION AND AWARENESS-RAISING

This section highlights the need to provide capacity-building and education programmes to nurture an energy-aware culture and develop necessary skills. The UNECE *Action Plan for Energy-Efficient Housing* (UNECE 2011) focuses on the following basic provisions in the corresponding section:

- Make energy efficiency more visible for consumers;
- Strengthen public awareness campaigns;
- Develop educational programmes in energy efficiency;
- Support the transition of energy-efficiency products from research and development to commercialization.

2.6.1 CAPACITY-BUILDING IN ENERGY EFFICIENCY POLICY, RESEARCH AND IMPLEMENTATION

a) IMPLEMENT AN ENERGY AGENCY

ACTION 1	The existing Sector on Energy Efficiency in the ME is acting as a regulator and as an energy agency (1.2b). The combination of these two functions has advantages and disadvantages. In other European countries, the EE services are organized by public authorities and provided by independent energy agencies. The establishment of an energy agency makes sense if economic independence of such an organization is assured, i.e. if it works for a variety of clients. As this will hardly be the case in Montenegro (due to its small size), the present solution seems adequate, but the performance of the agency should be strengthened.
ACTION 2	The Sector (contingently under MSDT, see 2.2a) should strengthen its international cooperation and participation in the international network of energy agencies. Such cooperation would not only enable the transfer of know-how to Montenegro but could also facilitate the provision of funding for research and development.
ACTION 3	Communication and outreach should be strengthened, including the dissemination of outcomes of research studies and demonstration projects to the building industry, investors and the public should be part of these sector responsibilities.
BUDGET	Options for self-financing
RESPONSIBILITY	MSDT, ME

b) BUILD CAPACITIES IN ENERGY EFFICIENCY ON MUNICIPAL LEVEL

ACTION 1	Municipalities play a crucial role in implementing EE policies in the residential sector.
ACTION 2	Main challenges for energy efficiency policies at the municipal level are to develop the Urban Development and Technical Requirements (UTUs), transform them into planning documents at all levels (PUPs, DUPs), enforce them in project development via building permits and permissions of usage, in advisory services to investors and in building inspection (see below, target 2.6.1 d).
ACTION 3	MSDT should support municipalities by developing template UTUs which would address EE measures.
ACTION 4	Municipalities should be supported to implement small-scale demonstration projects with a focus on energy efficiency.
ACTION 5	MSDT should organize vocational training on this issue, possibly in cooperation with UNDP and/or GIZ.
BUDGET	Costs of training, additional municipal personnel
RESPONSIBILITY	MSDT / municipalities

c) BUILD CAPACITIES IN HOUSING MANAGEMENT

ACTION 1	In many European countries, housing management is a business case for commercial or PPP Housing organisations (see Amann et al. 2010). Professional housing management organisations are crucial for implementing energy efficiency measures in the residential sector (see target 2.3.2) and should be promoted.
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ACTION 2 A pilot PPP scheme for housing management on the cost coverage principle should be considered based on international best practice. A pilot PPP organization could be established in cooperation with a twinning partner from Western EU countries.

BUDGET None

RESPONSIBILITY MSDT

d) CONSOLIDATE INSPECTION, BUILD ADDITIONAL CAPACITIES

ACTION 1 Housing inspection is to be implemented in 2012. Close cooperation with building inspection on municipal level is intended. After a period of time (2 years) the performance of housing inspection shall be evaluated. Merging housing inspection with building inspection on municipal level is considered.

ACTION 2 Inspection is a core element of EE implementation and a precondition for effective sanctions.

ACTION 3 Inspection is provided on several administrative levels, e.g. in the context of building permission procedures on a municipal level (Law on Spatial Development and Construction of Buildings), or regarding the implementation of housing legislation on a governmental level (Law on Housing and Maintenance of Residential Buildings) (see target 2.2.2 c).

ACTION 4 Inspection in the context of EE in the residential sector, e.g. regarding household appliances, boilers or air condition devices, is not yet covered within the existing legislation and capacity-building.

ACTION 5 It is recommended to consolidate the whole range of required inspection, preferably on a municipal level. Such inspection will only become effective with sufficient capacities (personnel, training, instruction etc.).

BUDGET Budgetary surplus will exceed costs

RESPONSIBILITY MSDT, municipalities

2.6.2 RESEARCH, INNOVATION AND BEST PRACTICES

a) BUILD EXPERTISE

ACTION 1 Initiatives in the area of education are crucial. It should target on awareness building of end-users (see target 2.6.3) and on creating a knowledge base. The target group may be reached by educational programmes for schools.

ACTION 2 Creating a knowledge base on energy efficiency can be achieved through additional specialized under-graduate and graduate courses, as well as through vocational training, targeting professionals of the building industry (including small businesses) and related professionals.

ACTION 3 Capacity-building training sessions on energy efficiency in the housing sector should be organized in cooperation with relevant international organizations, including UNECE, UNDP, etc.

BUDGET Substantial costs, well qualified for donor support

RESPONSIBILITY MSDT

b) PROMOTION OF INNOVATION

ACTION 1 Many of the measures listed in this *Action Plan* require innovation.

ACTION 2 In Montenegro, the public sector (i.e. universities) is the main driver of innovation.

ACTION 3 Energy efficiency in the residential sector may become an important field of innovation in Montenegro. The Government should launch initiatives in the context of this *Action Plan*, targeting both academia and private sector.

ACTION 4 SMEs should play an active role in the commercialization of new technologies.

BUDGET Substantial costs

RESPONSIBILITY Government

c) BEST PRACTICE, DEMONSTRATION PROJECTS

ACTION 1 Stimulation of demonstration projects is an important leverage to promote technological leaps. In other countries this is typically a function of an Energy Agency. The Sector on Energy Efficiency in the ME (see target 2.6.1a) should increase activities in this field.

ACTION 2 Demonstration projects should also target at informal settlement upgrade projects.

BUDGET Substantial costs, well qualified for EU funded projects

RESPONSIBILITY MSDT

2.6.3 AWARENESS-RAISING

a) MAKE ENERGY EFFICIENCY MORE VISIBLE

ACTION 1 Many of the actions described in this Action Plan qualify for better visibility of energy efficiency in the residential sector. Their promotion and communication is of crucial importance.

ACTION 2 Understanding the energy performance of your own house or household devices can be easily improved.

ACTION 3 Examples of simple measures for implementation are described e.g. in 2.4.7c).

BUDGET Low costs

RESPONSIBILITY MSDT

b) MEDIA/PUBLIC AWARENESS CAMPAIGN

ACTION 1 The Government should initiate and development a public awareness strategy on energy efficiency in the residential sector.

ACTION 2 Target groups should be the media sector itself, the broad public (owners, tenants), investors, the building construction industry (including small businesses) and related professionals.

ACTION 3	Dissemination of relevant information to the broad public is required. Cost-efficient measures are e.g. internet information services or media partnerships.
ACTION 4	Locally active NGOs and donor organisations should be addressed for assistance in awareness building campaigns.
BUDGET	Low costs
RESPONSIBILITY	MSDT

ANNEX

INTERVIEW PARTNERS

Ministry of Sustainable Development and Tourism:

- Predrag Sekulić, Minister of Sustainable Development and Tourism
- Marko Canović, Deputy Minister, Housing Department
- Danilo Gvozdrenović, Deputy Minister, Construction Department
- Sanja Ljesković, Deputy Minister, Spatial Planning Department
- Ivan Đurisić, Legal Advisor

Ministry of Economy:

- Milorad Burzan - Sector for Energy Efficiency
- Bozidar Pavlović - Sector for Energy Efficiency

Municipality of Bar:

- Suzana Crnovršanin, Deputy Secretary for Spatial Development, Housing and Environment Protection
- Djuro Karanikić Head of Planning Department
- Zoran Radođičić, Chief Administrator

GIZ

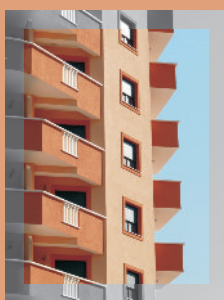
- Ralph Mueller-Khan
- Simon Bergmann

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NATIONAL ACTION PLAN OF MONTENEGRO for Energy Efficiency Measures in the Residential Sector

In 2010, UNECE member countries adopted an *Action Plan for Energy-efficient Housing in the UNECE Region*. The *Action Plan* provides a framework for governments to increase energy efficiency in the housing sector and to better address their national economic and environmental challenges.

The *National Action Plan of Montenegro for Energy Efficiency Measures in the Residential Sector* is the first spin-off of the *UNECE Action Plan*. It aims at assisting the Government in enhancing its energy efficiency policy for residential buildings through:

- Assessing the existing legal and institutional framework for energy efficiency in the housing sector.
- Identifying institutional and legal impediments, as well as priority areas for action.
- Recommending action for improving energy efficiency in the residential sector.

It specifically focuses on developing energy-efficiency measures in the context of regularizing informal housing. Informal housing is a serious challenge for Montenegro, with roughly one third of the population living in informal buildings.

The National Action Plan identifies over 50 targets and actions for creating: a financial and legislative framework; energy performance standards and technology integration; access to affordable and energy-efficient housing; capacity-building and awareness-raising.

You can find further information on our work on energy-efficient housing here:

www.unece.org/hlm/welcome