fYR MACEDONIA

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1. OVERVIEW OF THE REGION

Characteristics of the Region

The Former Yugoslav Republic of Macedonia (fYR Macedonia) is located in the central Balkan peninsula in Southeast Europe. It is one of the successor states of the former Yugoslavia, from which it declared independence in 1991.

It is a landlocked country that is geographically clearly defined by a central valley formed by the Vardar River and framed along its borders by mountain ranges. The terrain is mostly rugged. There are 1,100 large sources of water among which around fifty ponds and three natural lakes. The climate is transitional with three main climatic zones: temperate Mediterranean, mountainous, and mildly continental.

The fYR Macedonia covers an area of 25,713 km^2. The population of the region is 2,061,044 inhabitants. Population density calculated on the basis of land area is 82.7 inhabitants/km^2. The country's capital is Skopje and the total population in the Skopje region is 609,140 inhabitants, with population density of 335 inhabitants/km^2. There are eight non-administrative units – statistical regions that are formed by grouping the municipalities as administrative units of lower level; Vardar region (7.5% of the total population in 2012), East region (8.7%), Southwest region (10.7%), Southeast region (8.4%), Pelagonia region (11.3%), Polog region (15.4%), Northeast region (7.5%) and Skopje region (29.6%). All data in the above paragraph is according to the fourth edition of the State Statistical Office, ("Regions of the Republic of Macedonia, 2013", as at 30.06.2012).

The Former Yugoslav Republic of Macedonia is a parliamentary democracy with an executive government. The Assembly is made up of 120 seats and the members are elected every four years. The role of the President of the Republic is mostly ceremonial, with the real power resting in the hands of the President of the Government (Prime Minister). The members of the executive government are chosen by the Prime Minister and there are ministers for each branch of the society (in total 23 members).

The country suffered severe economic difficulties after independence (1991) and during the transition to a market economy. According to Eurostat data (as at 15.11.2013; http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tec00114), Macedonian PPS GDP per capita stood at 35% of the EU average in 2012. Refer to the State Statistical Office ("Regions of the Republic of Macedonia, 2013", p. 45), the gross domestic product in 2011 was €3,632 per capita. The maximum share of GDP comes from sector: Mining; manufacturing; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities, and for 2011 it was 18.7% (http://www.stat.gov.mk/OblastOpsto_en.aspx?id=7). In the year 2012, the employment rate was 39%, with the highest observed rate in the Skopje region (38%) and the lowest observed one in the Northeast Region (24.6%), ("Regions of the Republic of Macedonia, 2013", p. 32).

According to the data of the State Statistical Office, at risk of poverty rate in the fYR Macedonia in 2011 was 27.1% (http://www.stat.gov.mk/PrikaziSoopstenie_en.aspx?rbrtxt=115, table T-01: Poverty and social exclusion indicators). Within this

framework, 26.9% of the population can't afford to keep their home adequately warm i.e. suffer from fuel poverty (http://www.stat.gov.mk/PrikaziSoopstenie_en.aspx?rbrtxt=115, table T-07: Materially deprived persons in relation to certain items, 2011).

Within the Government, the ministry responsible for the energy sector is the Ministry of Economy. Part of the responsibilities related to energy belong also to the Ministry of Environment and Physical Planning as well as to the Ministry of Transport and Communications. For the purposes of providing support to the Government in the implementation of the energy policy, and Energy Agency has been formed. Government of the Former Yugoslav Republic of Macedonia in 2010 adopted "Strategy on energy development in the Republic of Macedonia until 2030". The main objective of this strategy is to provide a reliable and good quality energy supply to the consumers, (Ministry of Economy of RM, 2010).

Energy demand and supply of the Region

Most of the data in this Country report, if not differently indicated, origin from the State Statistical Office of Republic of Macedonia. Energy Statistics 2000 – 2010 (2012).
Total primary energy production of the fYRoM in 2010 is 19.4 TWh[1],[2] (*Figure 1*).

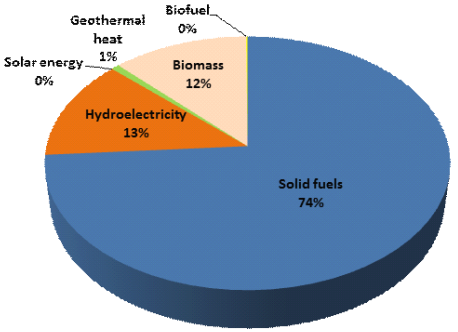

Figure 1 – Total primary energy production in fYRoMin 2010 (Energy statistics 2012: T-01.1)

The total energy demand (gross inland consumption[3]) in the region in 2010 is 34.5 TWh (*Figure 2*).

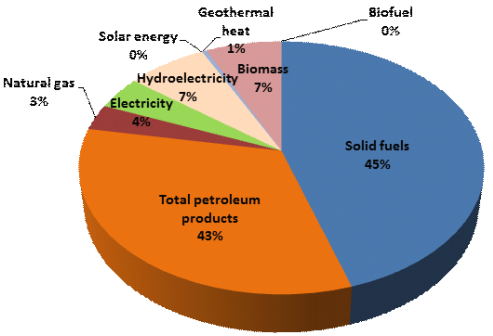

Figure 2 – Total energy demand in fYRoM in 2010 (Energy statistics 2012: T-01.6)

Final energy consumption in the region for all sectors (manufacturing, construction, transport, household use, services and agriculture etc.) adds up to 21.5TWh in 2010 (*Figure 3*).

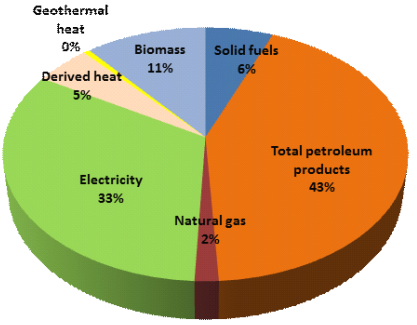

Figure 3 – Final energy consumption in fYRoM in 2010 (Energy statistics 2012: T-01.7)

Presented data shows that petroleum products (43%) and electricity (33%) contribute the most to total final energy consumption. Final energy consumption in the region in 2010 for the three main sectors is: industrial sector with 6.3TWh, domestic sector with 6.5TWh and the transport sector with 5.5TWh. Other sectors consume 3.2TWh.

The energy dependency (calculated as the ratio between the net import of energy and the total energy demand in the region), which

indicates the extent to which the country relies on imports to meet its energy needs is 44%, (Energy statistics 2012: T-01.3). The share of energy sources for electricity production can be seen in *Table 1*. 66% of electricity is generated from public thermal power stations.

Energy Source	GWh/ (in 2010)
Total	**7.258**
Renewable electricity	2.429
Public thermal power station	4.802
Autoproduction thermal power stations and CHP plants	27

Table 1 – Gross electricity production by type of plant in fYRoM in 2010, (Energy statistics 2012: T-02.18)

The share of electricity from renewable sources in total electricity production is 33.5% and in gross national electricity consumption[4] is 28% *Figure 4* shows the proportion of renewable energy production according to the source. Due to the hydrological conditions in the region, hydroelectricity is the most harvested among the renewable sources, following by biomass whilst solar power offers a minimal contribution.

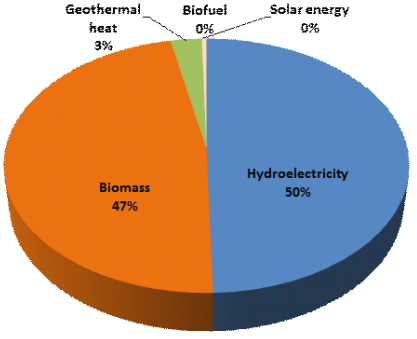

Figure 4 – Renewable energy production by source, in fYRoM in 2010, (Energy statistics 2012: T-01.12)

Two additional parameters that provide indicators of the energy demand and consumption of the region are gross inland production per capita which is 16.8MWh and final energy consumption in households per capita which is 3.14MWh, in 2010.

The average value of CO_2eq emissions per capita for the year 2000 (according to the official census data) is 7.16 t CO_2-eq/capita, (Atanasovska, 2010). According to the WB data (http://data.worldbank.org/indicator/EN.ATM.CO_2E.PC) this value is 5.2t CO_2-eq/capita, for the period 2009-2013. Comparing the above value with 9.2 t CO_2-eq/capita in the EU-15 in 2011 (GHG trends and projections in the EU-15), the emissions are lower which may reflect the overall economic situation in the country.

GHG emissions by each per sector (agriculture, waste, transport, industry, heating and electricity) are integrated in order to project the total national GHG emissions over the period 2008-2025 (*Figure 5*). The total GHG emission factor in 2010 is slightly over 15000 ktCO_2-eq and for electricity is slightly over 9600 ktCO_2-eq. The above projected values stand for so called baseline scenario which is based on the existing thermal power plants with domestic lignite and it is the most destructive environmental scenario for the development of the Macedonian power system (Atanasovska, 2010). This kind of thermal power plant with domestic lignite produce 74% of total primary energy production in the region (*Figure 1*).

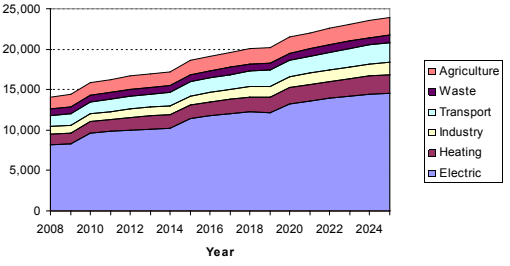

Figure 5 – Projection of the total GHG emissions – baseline scenario

GHG emission factor for electricity from the grid in 2010 is 1.32kgCO_2-eq/kWh. This factor is significantly above EU-27 average electricity emissions factors, (0.38 kgCO_2-eq/kWh in 2008, http://www.eea.europa.eu/data-and-maps/figures/trends-in-energy-ghg-emission).

2. CURRENT SITUATION: TARGETS RELATED TO ENERGY POLICY

Targets set for the region are presented in the National Document "First energy efficiency action plan (EEAP) of the Republic of Macedonia by 2018", developed pursuant to the Directive 2006/32/EC. This EEAP covers the period 2010 – 2018 and sets the total national indicative target for energy savings of at least 9% of final inland energy consumption by 2018 compared to the average final inland energy consumption registered in the period 2002 – 2006. National indicative energy savings targets for 2018 are 199.78ktoe, (*Table 2*) which is 12.2% of average energy consumption for the last five years (1636ktoe). The short term set target for 2012 was 4.04% of the average energy consumption (66.10ktoe).

National indicative energy saving targets for 2018	**ktoe**
Total	**199.78**
Residential	40.51
Commercial and services	24.19
Industry	90.45
Transport sector	44.63

Table 2 – National indicative energy saving targets (First energy efficiency action plan of the Republic of Macedonia by 2018)

These targets (*Table 2* and *Figure 6*) should be achieved through set of comprehensive Energy Efficiency Improvement (EEI) program and measures. Different EEI measures are anticipated for the different sectors. The most efficient ones in the residential sector are Adoption and enforcement of Building Energy Codes and EE Retrofits in existing buildings, (50% of the energy savings in this sector). For the commercial and services sector, again Adoption and enforcement of Building Energy Codes and EE Retrofits of Hospitals participate with 46% in corresponding energy savings. Cogeneration and Clean Development Mechanism take more than 71% of the total energy savings in industry sector. In the sector of transport, renewal of the national road vehicle fleet and Promotion of sustainable urban transport systems should provide 65% of energy saving in the sector (for more details refer to tables 1.1.1; 1.2.1; 1.3.1 and 1.4.1 in the EEAP 2011).

Potential savings of 57.1% in residential buildings and 28.6% in commercial and public buildings in 2020 have been identified refer to above listed EEI.

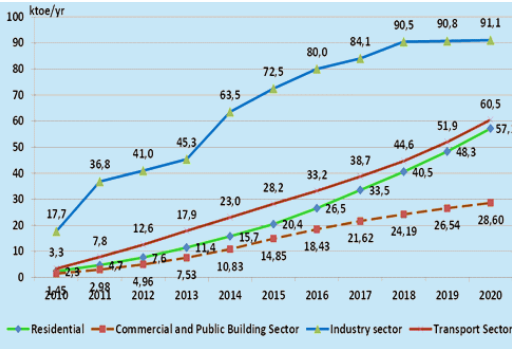

Figure 6 – Goals in potential of energy savings according to the Strategy of EE, up to 2020

Total GHG current emissions (in ktCO_2-eq) from all sectors can be seen in *Figure 7*. This indicates that energy production generates 74% of GHG emissions for the Region.

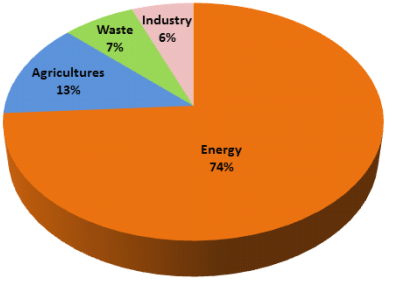

Figure 7 – Total GHG current emissions for 2013

Projection of the GHG missions from all sectors in the period 2008 – 2025 can be seen in *Table 3*.

Scenario	2008	2025
Baseline scenario	14040	23947
First mitigation scenario	13904	20348
Second mitigation scenario	12645	16743

Table 3 – Projection of the GHG emissions 2008 – 2025 in $ktCO_2$-eq, (Atanasovska, 2010)

The first mitigation scenario is the variant of utilising the capacity of the gas pipeline for electricity generation in two gas. Combined Heat and Power (CHPs) that would replace the lignite-fired plants from the baseline scenario. The second mitigation scenario, besides CHPs, assumes reduction in electricity needs by about 2,000 GWh, which is a result of the liberalisation of the electricity market for large industrial consumers. Furthermore, it assumes that at the end of 2025, the cumulative effect of the progressively increasing utilisation of renewable energy sources (small hydropower, wind, and biomass) for electricity generation would annually generate 180 GWh. The anticipated GHG reduction target in 2020 is 20% for the first mitigation scenario and 30% for the second mitigation scenario (*Figure 8*.)

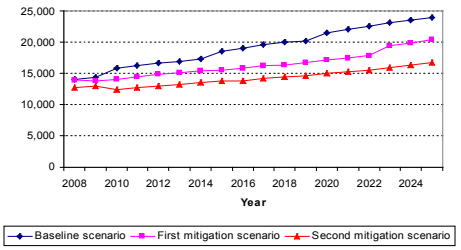

Figure 8 – Projection of the total GHG emissions, for all three scenarios, 2008 – 2025, ($ktCO_2$-eq)

Other Regional targets, barriers and drivers

The Strategy for Development of the Energy Sector in Macedonia is mostly based on the conclusions from the analysis of the situation in the energy sector of Macedonia (SWOT–strengths and weaknesses – *Table 4*) as well as the other comparative (benchmark) analysis. (Strategy for energy development in the Republic of Macedonia until 2030, (2010)).

STRENGTHS
Strategic geographic location
Unutilised potential of renewable energy sources
New legislation and bodies in accordance with the European regulation and the Athens memorandum
Strengthened activities in the areas of energy efficiency and renewable energy sources
WEAKNESSES
Long term lack of strategic planning
Weak economic power of the state for investments in the energy sector
Weak geopolitical location
The country is poor with domestic energy resources and largely depends on energy imports
Unfavourable combination of energy sources
Insufficient and obsolete electricity generation capacities
Low energy efficiency in the generation, transmission, distribution and utilisation of energy
Incomplete secondary legislation for energy efficiency and RES
High electricity consumption in the residential sector
Insufficient capacities

Table 4 – SWOT analysis in the energy sector

The lack of National Regulations on energy performance of buildings has been an obstacle for the improvement of buildings in fYRoM for many years, together with education for certification of energy controllers. National Regulations were delivered in July 2013 which should lead to an improvement in the energy performance of buildings in the long term.

The fYR Macedonia has participated/is participating in the following projects which represent good practice and can boost development in the field:

- *RENA* – Regional Environmental Network for EU Accession – financed by EU to enhance regional cooperation in the Western Balkans and Turkey in the field of environment in the prospect of EU accession; (http://www.renanetwork.org/)
- *LOCSEE* – Low Carbon South East Europe - to strengthen the capacity and knowledge of public authorities and other institutions dealing with the climate change in the SEE (South East Europe) countries and to develop a systematic cross-sectorial approach for creation of low carbon policies in SEE. The partnership comprises 17 partners from the SEE region; (http://www.locsee.eu/)
- *BUILD UP SKILLS MK* - Building capacities in the construction sector- supported by Intelligent Energy Europe to define the path that needs to be followed in the country in the next seven years for the upgrade of skills and qualifications of the building workers in the practical application of EE and RES measures as the national energy targets for 2020 could be met; (http://www.buildupskills.mk)
- *UNDP project - Energy efficiency in building sector* – financed by Austrian Development Cooperation to contribute to the processes of reducing the energy consumption in residential and public buildings, regulate energy losses and greenhouse gas emissions, and increase the Macedonian's energy independence. Within this project "Energy Efficiency in Public Buildings: Guideline for Energy Efficiency Retrofits, (2011)" was published; (http://www.eeportal.mk/en/About/1/Project-info/24)

In the above listed projects Macedonian beneficiaries include the: Ministry of Environment and Physical Planning, Ministry of Economy, Association of Local Self Government Units (ZELS), Economic Chamber, Energy Agency, Civil Engineering Institute "Macedonia", Faculty of Electrical Engineering and Information Technologies and Association for business and consultancy "Kreacija".

Tables 5, 6 and *7* present the share of renewable energy sources (RES) and the final energy consumption (FEC) for the lowest limits (LL) and the highest limits (UL) for the target year 2030. The percentage share of RES in the country, in 2030 will be between 21.1% and 27.7% with average value (realistically achievable) of nearly 25%, (Strategy for energy development in the Republic of Macedonia until 2030, (2010)). This target is in line with the EU_27 MS national targets in 2020 which average values is 21.5% (Directive 2009/28/EC, Annex I).

Scenario	**2030 LL**	**2030 UL**
Electricity from RES	3898	5301
Heat from RES	3183	3445
Biofuels	1700	1900
TOTAL RES	8781	10646
Final energy consumption	41710	38560
RES share (%)	**21.1%**	**27.6%**

Table 5 – Share of the RES in the FEC (GWh)

Scenario	**2030 LL**	**2030 UL**
Hydro power plants	3430	4410
Wind power plants	360	720
Photovoltaic	28	56
Biomass	50	70
Biogas	30	45
Total electricity from RES	**3898**	**5301**

Table 6 – Electricity from RES, (GWh)
Table 7. Heat from RES, [GWh]

Scenario	**2030 LL**	**2030 UL**
Biomass	2540	2630
Solar energy	83	155
Geothermal energy	560	660
Total heat from RES	**3183**	**3445**

Table 7 – Heat from RES, (GWh)

It is necessary to reduce the energy import dependency (in total 15.2TWh or 44%) by improving the energy efficiency in the production, transmission, distribution and utilisation of energy and by higher energy production from RES and other domestic resources (*Figure 9*). Also, it is necessary to increase the share of natural gas in the energy consumption and reduce the relative share of electricity (*Figure 3*).

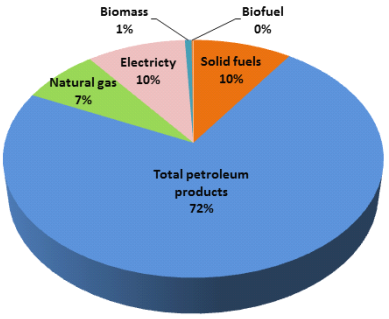

Figure 9 – Net import by energy commodities (Energy statistics 2012: T-01.2)

Innovative strategies/initiatives

Unique sectorial collaboration within the frame of the EUbuild Energy Efficency project, (http://www.eubuild.com/eng) has led to Association of Turkish Building Material Producers being launched. The main objective is to contribute the development of the financial instruments and mechanisms in order to build up the market for energy efficient products and methods in the partner countries, (Albania, Montenegro, Bosnia and Herzegovina, Serbia, fYRoM and Turkey).

Another project, MARIE - Mediterranean Building Rethinking for Energy Efficient Improvement, objective is to co-construct a Mediterranean strategy for the energy efficiency of buildings ("MEDBEES"). This is based on a supply and demand analysis for energy renovation and will encourage and facilitate the energy renovation of Mediterranean buildings. More ongoing projects for energy efficiency at fYRoM can be found the web page of the Energy Agency (http://www.ea.gov.mk).

Emerging technologies

Improvement of energy efficiency in the construction of new buildings and in the improvement of existing buildings by integrating energy efficient ecological materials in an environmentally friendly way is a current trend in Macedonia.

Electric vehicles are being promoted for mobility in Macedonia, which will establish a sustainable energy, energy efficiency, healthy environment, zero emission of CO_2 and other greenhouse gases. Dissemination of information regarding this issue was done on the "International EV conference in Macedonia – Electric vehicles new trends in mobility" (June, 2013) and accompanied leaflet was published (http://www.eusew.eu/upload/events/851_11218_elektromobilnost%20macedonia.pdf).

3. CASE STUDY: KARPOSH MUNICIPALITY, SKOPJE

The municipality of Karposh is a compound part of the City of Skopje, one of the ten municipalities of Skopje. It consists of 14 unites called local communities, out of which 12 are urban and two are rural. It is the fourth biggest municipality in the City of Skopje with more than 59,666 inhabitants covering an area of 35km^2.

The Municipality of Karposh is a pioneer in the country in application of the energy efficiency policies at the local level. Besides the Municipality many other stakeholders including Governmental institutions, citizens of Municipality of Karposh, NGOs, Association of Local Self Government Units (ZELS), business sector, as well as, international stakeholders are involved in activities.

As a first initiative the "Program for energy efficiency 2008-2012" was issued And within the framework of this program the following activities were carried out:

1. reconstructed public facilities – 10 primary schools and 3 kindergartens applying EEM, (*Figure 10*);
2. reconstructed 4 residential buildings with collaboration with "Habitat Macedonia", applying EEM, (Q≤100 kWh/m^2 per year);

3. construction of 63 new buildings according "Regulation on energy efficiency measures", (Q≤70 kWh/m^2 per year).

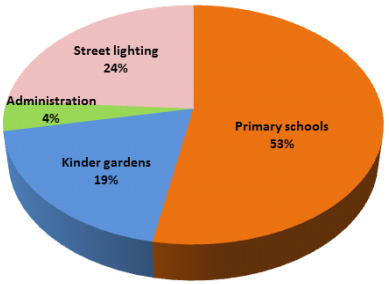

Figure 10 – Annual energy consumption – 2007, (Data base of Municipality of Karposh)

The Municipality of Karposh is one of the first users of the software tool for energy monitoring Ex-CITE, (*Figure 11*). The data is being updated monthly.

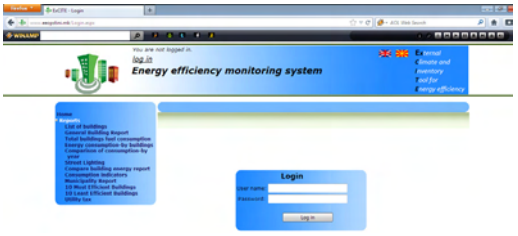

Figure 11 – External Climate and Inventory Tool for Energy efficiency application (ExCITE)

Ex-CITE is a software tool developed within the framework of the above cited UNDP project to strengthen the capacities of the local government units comprising the databases for climatological parameters and the inventory data. It is an internet application that connects processes of entering data for buildings, street lighting, energy consumption and energy expenses on the one side and climatologically data needed for calculating energy performance on the other. It offers a standardised format of reporting on the energy consumption of public buildings.

The new "Program for Energy efficiency 2013 – 2015) was issued in July 2013.

Objectives and methods

All interventions, measures and methods applied in the Municipality are thoroughly describe in the "Catalogue for energy efficiency facilities in Municipality of Karposh", published in August 2013, (http://www.karpos.gov.mk/). 13 public facilities (10 primary schools and 3 kindergartens) were retrofitted and some of the applied EEM are: thermal insulation of walls and facades; new floor and roof insulation; replacement of windows and doors with EE frames; cleaning and replacement of the heating system etc. Four residential buildings were reconstructed with full thermal insulation of walls and replacements of carpentry with EE windows. These buildings are only part of the 165 buildings that should be retrofitted within the next three years in the frame of the new "Program for Energy efficiency 2013 – 2015". The 63 new buildings are constructed according to the issued "Regulation on energy efficiency measures" with Q≤70 kWh/m2 per year).

Long term focus

Considering the long term focus the following activities are anticipated:

- application of the new "Program for energy efficiency 2013 – 2015". The total number of planed projects is 15 and the anticipated projects budget is about €12.The projected energy saving in 2015 in the street lighting is 26.5%, in primary schools is 50% and in the kindergarten is 33.9% (in reference to 2007);
- drafting of local environmental action plan;
- energy efficiency and using of renewable sources of energy in the kindergartens and primary schools in the Municipality of Karposh;
- new energy efficient facades of over forty existing buildings in the Municipality of Karposh, with inhabitants' participation;
- establishing of public-private partnership in the field of infrastructure for construction of natural gas, geothermal waters, photovoltaic and technical water networks.

Outcomes

As a result of the applied energy efficiency measures within the "Program for energy efficiency 2008 – 2012", there has been a reduction of the energy consumption in the

buildings under Municipality governance from 9,819 MWh/per year in 2007 to 7,443MWh/ per year in 2012, i.e. 25.2%. This equates to a reduction of CO_2-eq for 2,381 t. The energy savings in the street lighting was 8.7%, in primary schools was 32% and in the kindergarten was 4.2% (in reference to 2007).

The second important outcome is "Regulation on energy efficiency measure" (2012) which provides 40% to 70% less consumption of energy in comparison with the same buildings construct/retrofit without applications of EEM. Application of this regulation is mandatory for the Municipality of Karposh.

In general, application of the energy efficiency policy at the Municipality level was acknowledged as pioneering and a successful activity in the fYRoM which brought together different local stakeholders and different funding schemes.

Drivers for further realisation of such type of programmes include:

- increased competence and responsibility for the municipality due to the process of decentralisation;
- funds available for local self-government from the EU (IPA) 2008;
- the Mayor of Municipality of Karposh signed EUInitiative Covenant of Mayors 2012, for 20% reduction of CO_2-eq until 2020.

Perceived barriers include:

- international perception of instability of the region;
- unstable economic conditions for development;
- lack of interest of the local banks to invest in the retrofitting programmes;
- possible territory reorganisation of the City of Skopje.

4. CONCLUSIONS

The Municipality of Karposh represents typical building urban stock in fYRoM. The age of the existing building stock and traditional type of construction, entire environmental, economic and social conditions can be found in most of the urban areas in the country which give possibility to transfer this "good practice" into other municipalities in the region.

It is important to emphasise that the outcomes achieved to date are based mostly on the available Municipality's capacities. The Unit for Energy Efficiency (EE) exists within the frame of the Municipality and its experts are working on the application of the EE policy. Funding is mostly based on Municipality budget, as well as through grants from EU or other international institutions. In the future, transfer of this positive experience is feasible through training programmes (for the Municipalities in the country) and through twinning projects (or other available instruments) across the wider region.

FOOTNOTES

1. (1toe = 12MWh, http://www.bp.com/conversionfactors.jsp)
2. Biomass = Wood Fuel + Wood Waste and Other Solid Waste.
3. It is a balance category calculated as: primary production + imports + variations of stocks – exports.
4. Gross national electricity consumption is a sum of net import and total electricity production.

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This publication is a section of the book
"Smart Energy Regions"
Published by The Welsh School of
Architecture, Cardiff University,
Bute Building, King Edward VII Avenue,
CARDIFF, CF10 3NB, UK.
Publication date: May, 2014; ISBN: 978-1-899895-14-4.

The COST Action TU1104 Smart Energy Regions brings together over 70 researchers from European institutions to investigate the drivers and barriers that may impact on the large scale implementation of low carbon technologies in the built environment. The book "Smart Energy Regions" is the outcome of the Working Group 1 of the Action and collects analysis and case studies from 26 European countries. For more information about the Action and COST please visit www.smart-er.eu and www.cost.eu.

ESF Provides the COST Office through an EC contract

COST is supported by the EU

RTD Framework Programme

COST DESCRIPTION

THE ORGANISATION OF COST

COST - European Cooperation in Science and Technology is an intergovernmental framework aimed at facilitating the collaboration and networking of scientists and researchers at European level. It was established in 1971 by 19 member countries and currently includes 35 member countries across Europe, and Israel as a cooperating state.

COST funds pan-European, bottom-up networks of scientists and researchers across all science and technology fields. These networks, called 'COST Actions', promote international coordination of nationally-funded research.

By fostering the networking of researchers at an international level, COST enables break-through scientific developments leading to new concepts and products, thereby contributing to strengthening Europe's research and innovation capacities.

COST's mission focuses in particular on:
- building capacity by connecting high quality scientific communities throughout Europe and worldwide;
- providing networking opportunities for early career investigators;
- increasing the impact of research on policy makers, regulatory bodies and national decision makers as well as the private sector.

Through its inclusiveness, COST supports the integration of research communities, leverages national research investments and addresses issues of global relevance.

Every year thousands of European scientists benefit from being involved in COST Actions, allowing the pooling of national research funding to achieve common goals.

As a precursor of advanced multidisciplinary research, COST anticipates and complements the activities of EU Framework Programmes, constituting a "bridge" towards the scientific communities of emerging countries. In particular, COST Actions are also open to participation by non-European scientists coming from neighbour countries (for example Albania, Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Jordan, Lebanon, Libya, Moldova, Montenegro, Morocco, the Palestinian Authority, Russia, Syria, Tunisia and Ukraine) and from a number of international partner countries.

COST's budget for networking activities has traditionally been provided by successive EU RTD Framework Programmes. COST is currently executed by the European Science Foundation (ESF) through the COST Office on a mandate by the European Commission, and the framework is governed by a Committee of Senior Officials (CSO) representing all its 35 member countries.

More information about COST is available at www.cost.eu.

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This publication is supported by COST.