



Energy Efficiency

in Municipal Associations - EeMA

*SUSTAINABLE ENERGY ROADMAP FOR ASSOCIATION
OF MUNICIPALITIES IN SEE COUNTRIES*

Part 1

LET'S BUILD SUSTAINABLE ENERGY MUNICIPALITIES IN SEE COUNTRIES TOGETHER

Energy Efficiency

in Municipal
Associations
- EeMA

*SUSTAINABLE ENERGY ROADMAP FOR ASSOCIATION
OF MUNICIPALITIES IN SEE COUNTRIES* | **Part 1**

LET'S BUILD SUSTAINABLE ENERGY MUNICIPALITIES IN SEE COUNTRIES TOGETHER

Editors

M.Sc. Vesna Kolega, B.Sc.
M.Sc. Dubravka Bošnjak, B.Com.Sc.

Author

M.Sc. Vesna Kolega, B.Sc.

Associations of Municipalities – partners of the Project EeMA

Union of Municipalities of Montenegro
Project Coordinator, Ivana Lalević, B.A.
Association of the Units of Local Self Government of Republic of Macedonia
Project Coordinator, Aleksandar Arsovski, B.Sc.
Association of Kosovo Municipalities
Project Coordinator, Salvador Elmazi, B.Sc.
Association of Municipalities and Cities of Federation of Bosnia and Herzegovina
Project Coordinator, Jelena Bašić, B.Sc.
Association of Towns and Municipalities of Republic of Srpska
Project Coordinator, Predrag Pajić, B.Com.Sc.
Standing Conference of Towns and Municipalities in the Republic of Serbia
Project Coordinator, Aleksandar Popović, M.Sc.

GIZ - ORF EE and ORF MMS team

M.Sc. Dubravka Bošnjak, B.Com.Sc. Project Manager
Ilija Sazdovski, B.Sc. Country Coordinator, Macedonia
Avni Sfishta, B.Sc. Country Coordinator, Kosovo
Jasna Sekulović, B.A. Project Manager and Country Coordinator, Montenegro
Sanela Veljkovski, B.A. Country Coordinator, Serbia
Emina Durmo, M.A./LL.M., Adviser for Gender Equality/Gender Mainstreaming

Graphic and text design

Dario Pejčinović, Student
Tamara Čolović, Student

Published by the

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH
Open Regional Funds for South-East Europe – Energy Efficiency & Modernisation of Municipal
Services

Registered offices

Bonn and Eschborn, Germany
GIZ Regional office Sarajevo, Zmaja od Bosne 7-7a,
Importance Centar 03/IV
71 000 Sarajevo, Bosnia and Herzegovina
T+ 387 33 957 500 F + 387 33 957 501
GIZ-BosnienHerzegowina@giz.de
www.giz.de/regional-funds-southeasteurope

On behalf of the

German Federal Ministry for Economic Cooperation and Development (BMZ) and
Swiss Development Cooperation (SDC)

Responsible

Johannes Elle, B.Sc.

Disclaimer

The information, interpretations and conclusions in this brochure represent the opinions of the authors and do not necessarily reflect the position of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

FOREWORD

The countries in South-East Europe are in a challenging transition mode in many aspects. Thereby it is common sense that the leading objective is to develop stable and prosperous societies, which are a vital part within the European family.

Energy efficiency makes the big demands and the great opportunities of the term “transition” tangible. A rather inefficient use of energy in South-Eastern European countries will let the gap between them and the economically and socially successful societies in Europe widen. Adopting the approach of a more sustainable use of energy will be an important cornerstone in building a prosperous society on the progression towards the inner-circle of the European family.

Municipalities are playing a key role within the transition process towards prosperous societies. They represent the local communities on whose base the countries are built. At the same time, energy efficiency is a tangible local topic: Within the facilities of Local Governments, within the homes of families, within the work of local business, or in the streets of a municipality.

More and more municipalities in South-Eastern Europe have the will to enter a path towards “sustainable energy” and to engage themselves in a positive transition. Consequently, this topic becomes more and more important for their Municipal Associations: To exchange experiences of their members and to spread good approaches which are implementable immediately; and to advocate on practical ideas on how to improve framework-conditions for municipalities towards national law-makers and Governments.

The GIZ-implemented Open Regional Funds for South-East Europe (ORF) “Modernization of Municipal Services” and “Energy Efficiency” have been requested by South-Eastern European Municipal Associations out of the NALAS Energy Efficiency Task Force to support them strengthening their role in Sustainable Energy. The financing and commissioning Federal German Ministry for Economic Cooperation (BMZ) and the Swiss Development Cooperation (SDC) approved the ORF regional project “Energy efficiency in Municipal Associations”. In autumn 2014 the project started to implement four workpackages on peer-to-peer learning, replicable pilot projects, political lobbying capacities, and on the elaboration of roadmaps for the associations and municipalities on how to take action towards sustainable energy.

The Roadmap at hand has been elaborated within a discussion process between the involved Municipal Associations from South-Eastern Europe at a regional level. It is elaborated on base of their experiences of their past engagement, and it compiles deductions towards their future mission.

We are looking forward to this Roadmap being used as a guideline for further engagement of Municipal Associations and municipalities. Furthermore, we hope that it will serve as a fruitful input for further dialogue and reflection between relevant stakeholders in the South-Eastern European countries about how to develop their implementation structures for successful policies on sustainable energies, leading towards prosperous societies.

Johannes Elle
GIZ ORF EE

Christophe di Marco
GIZ ORF MMS

INTRODUCTION

Within the regional project “Energy efficiency in Municipal Association EeMA” cooperation between AoMs from SEE has been supported. All partners have expressed their readiness to strengthen their cooperation in the field of energy efficiency and renewable sources of energy, and thereby contribute to the reduction of energy consumption, the increase of energy efficiency and reduction of carbon emissions.

The purposes of regional cooperation are exchange of knowledge and experience related to the introduction of measures with regard to the strengthening of energy efficiency and reduction of CO₂ emissions. Promoting and increasing public awareness on energy efficiency and joint appearance at regional and international events will emphasise the role of AoMs. Promoting the role of Associations in the field of EE at the local level through providing assistance to member cities and municipalities is an asset.

The purpose of the Project is to assist and provide support in the organisation of the network, and assist the implementation of measures defined in the project concept. The project is implemented through four work packages, which include:

- Development of roadmaps for creating, implementing and increasing capacities of the local self-governments for local energy efficiency strategies/policies;
- Establishment of a mentoring and Peer to Peer facility between AoMs and municipalities involved in planning or implementing Energy Actions Plans;
- Development of pilot-projects for municipalities through AoMs support, utilizing practical experience for implementation of local policies based on a cost-optimization model; and
- Supporting policy dialogue between AoMs and central government.

Roadmaps and strategies are very often intended to guide implementation of changes, requiring support of all the parties involved. This Roadmap is a specialized type of strategic plan to outline activities that AoMs in SEE countries can undertake in order to proactively support the development of Sustainable Energy Municipalities in SEE countries, as well as the integration of gender mainstreaming in energy efficiency as a cross-cutting topic.

As a final result of the common work of all project partners, we have a *Sustainable Energy Roadmap for Association of Municipalities in SEE Countries*, divided into two parts. The first one focuses on challenges, barriers and benefits in the complex process of development of Sustainable Energy Municipalities in SEE countries. The second one is entirely dedicated to preconditions, requirements and advantages of joining the EU Covenant of Mayors initiative.

Herewith we would like to thank all who actively supported and gave input for the Roadmaps.

Vesna Kolega

Dubravka Bošnjak

CONTENTS

FOREWORD	3
INTRODUCTION	4
FIGURES	6
ABBREVIATIONS	7
VISION AND MISSION OF THE ROADMAP	8
METHODOLOGY OF THE ROADMAP	11
BENEFITS OF SUSTAINABLE ENERGY DEVELOPMENT IN SEE MUNICIPALITIES	13
BARRIERS AND CHALLENGES IN BUILDING SUSTAINABLE ENERGY DEVELOPMENT IN SEE MUNICIPALITIES	15
BRIEF PICTURE OF ENERGY EFFICIENCY SITUATION IN SEE COUNTRIES	16
Positive things	16
Less positive things	17
Best ways to improve energy efficiency situation	17
BEST WAYS TO FULFILL OBLIGATIONS FROM NATIONAL EE LAWS IN SEE COUNTRIES	19
Macedonia	19
Kosovo	20
Montenegro	21
Serbia	22
Bosnia and Herzegovina	23
Federation of Bosnia and Herzegovina.....	23
Republic of Srpska	24
CAPACITY BUILDING.....	25
Capacity building for AoMs	25
Capacity building for Municipal Administration	26
Capacity building of State authorities	28
KEY SUPPORT AND STAKEHOLDERS INVOLMENT	30
COMMUNICATION CHANNELS AND PUBLIC AWARENESS CAMPAIGNS.....	37
Energy Days in SEE Municipalities	41
FINANCIAL INSTRUMENTS FOR SEM DEVELOPMENT	42
FLAGSHIP EE PROJECTS IN SEE MUNICIPALITIES.....	46
GENDER EQUALITY IN SEE COUNTRIES.....	51
BEST WAYS TO DEVELOP SMART SEE MUNICIPALITY	54

FIGURES

FIGURE 1: AoMs in SEE Countries	8
FIGURE 2: Benefits of Sustainable Energy in SEE Municipalities	13
FIGURE 3: New jobs created through investing in different energy sectors	14
FIGURE 4: Barriers for SED in SEE countries –	15
FIGURE 5: Stakeholders of SED	16
FIGURE 6: Diagram on EE legislative obligations in Macedonia	19
FIGURE 7: Diagram on EE legislative obligations in Kosovo	20
FIGURE 8: Diagram on EE legislative obligations in Montenegro	21
FIGURE 9: Diagram on EE legislative obligations in Serbia	22
FIGURE 10: Diagram on EE legislative obligations in FBiH	23
FIGURE 11: Diagram on EE legislative obligations in Republic of Srpska	24
FIGURE 12: Municipal organisational structure	28
FIGURE 13: Public Awareness Campaigns in SEE countries	38
FIGURE 14: Available financial instruments in EU	42
FIGURE 15: An overview of international and national mechanisms used for EE projects implementation in SEE countries	43
FIGURE 16: International financial instruments for SEM development in SEE countries	43
FIGURE 17: DANUBE transnational programmes	44
FIGURE 18: Adriatic-Ionian transnational programmes	45
FIGURE 19: Mediterranean transnational programmes	45

ABBREVIATIONS

- AoM** - Association of Municipalities
- SEE** – South-east Europe
- SEM** - Sustainable Energy Municipality
- GE** - Gender Equality
- GM** – Gender Mainstreaming
- EE** - Energy Efficiency
- RES** - Renewable Energy Sources
- nZEB** - Nearly Zero Energy Building
- CoM** - Covenant of Mayors initiative¹
- LGA** - Local Government Authority
- SEAP** - Sustainable Energy Action Plan
- LEEAP** - Local Energy Efficiency Action Plan
- SUMP** - Sustainable Urban Mobility Plan
- SED** - Sustainable Energy Development
- SEA** - Sustainable Energy Ambassadors
- MEEAP** - Municipal Energy Efficiency Action Plans

¹ The Covenant of Mayors is the mainstream European movement involving local and regional authorities, voluntarily committing to increasing energy efficiency and use of renewable energy sources on their territories. By their commitment, Covenant signatories aim to meet and exceed the European Union 20% CO₂ reduction objective by 2020. After the adoption, in 2008, of the EU Climate and Energy Package, the European Commission launched the Covenant of Mayors to endorse and support the efforts deployed by local authorities in the implementation of sustainable energy policies. More information about CoM initiative on www.covenantofmayors.eu

VISION AND MISSION OF THE ROADMAP

Roadmaps exist for all kinds of policies, technologies and processes. Roadmaps and strategies are popular terms used to describe initiatives, suggesting direction and clarity. Roadmaps are sometimes defined as “a detailed plan to guide progress toward a goal”, or “a set of guidelines, instructions, plans, or explanations”, strategies as “a plan of action designed to achieve a specific goal” or “a plan, method, or series of manoeuvres or stratagems for obtaining a specific goal or result”. These definitions point to roadmaps and strategies as being detailed plans to achieve defined objectives. Roadmaps and strategies are also supposed to guide implementation of changes, requiring support of all the parties involved.

This Roadmap is a specialized type of strategic plan to outline activities that AoMs in SEE countries (Diagram below) can undertake in order to proactively support the development of Sustainable Energy Municipalities in SEE countries, as well as the integration of gender mainstreaming in energy efficiency as a cross-cutting topic.

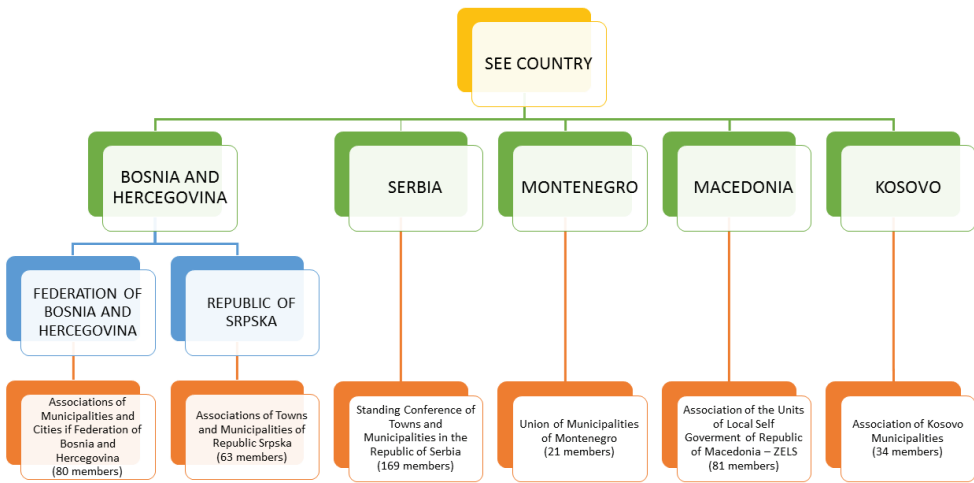


FIGURE 1: AoMs in SEE Countries

The Vision of the Roadmap is the development of Sustainable energy local governance in SEE countries including the application of Gender Equality (GE) principles as the right road to sustainable future.

The Mission of the Roadmap is to provide clearer understanding of local and regional context of energy efficiency sphere as well as the successful tools for developing Sustainable Energy Municipalities in SEE countries based on the EE, RES and environmental protection as an imperative of 21st Century. Furthermore, it can be stressed that Gender Equality is an essential factor in achieving sustainable change and is therefore one of the key values on which this Roadmap is based.

The main objectives of the Roadmap are to support AoMs in:

- Developing Sustainable Energy Municipalities in SEE countries
- Creating a Sustainable Energy Guidelines for its members as tool for improve energy efficiency in municipalities in SEE countries
- The process of Covenant of Mayors adhesion of municipalities in SEE countries
- Their capacity building in the field of sustainable energy
- Promoting energy efficiency as crucial topic for municipal development
- Strengthening and developing their roles to municipalities in SEE countries
- Strengthening knowledge and know-how in the field of sustainable energy
- Development of Sustainable Energy Action Plans
- Implementation of energy projects in municipalities
- Supporting its members in fulfilling obligations from relevant energy laws and by-laws in SEE countries
- Finding financial instruments for successful realization of sustainable energy projects in municipalities
- Providing wider support to their members to draw up, implement and monitor Local Energy Efficiency Action Plans, Sustainable Energy Action Plans and other strategic planning documents as well as to encourage its members to join the EU Covenant of Mayors Initiative and to fulfil the obligations deriving from the National Energy Laws
- Finding the best ways to involve municipal administration in adopting and promoting EE measures and projects
- Supporting capacity building of municipal administration regarding transposition of EU energy directives in national legislative framework
- Enabling municipalities to design and implement local policy documents and to increase level of the EE projects/measures implementation on the local level
- Supporting municipalities in the field of energy efficiency and renewable energy sources
- Giving directions which municipalities should follow in order to improve EE in SEE countries based on GE principles
- Introducing the best ways of energy developing to Mayors and municipal administration in SEE countries
- Helping Mayors to define the right path for addressing EE and to harmonize efforts for achieving national targets and fulfil commitment for reducing energy consumption and CO₂ emission
- Developing successful tool for sustainable energy development of municipalities in SEE countries
- Increasing the public awareness on the importance of SEM in SEE countries including GE perspective
- Providing motivation for GE oriented municipal administration based on for future energy development based on EE RES and environmental protection
- Strengthening of collaboration between AoMs and municipalities in SEE countries
- Strengthening of AoMs involvement in energy processes and activities on national levels

Energy Efficiency

in Municipal Associations - EeMA

- Strengthening cooperation between AoMs in SEE countries
- Establishing AoMs as Sustainable Energy Ambassadors in SEE countries
- Obtaining systematic, long term national/governmental support to SEM in SEE countries
- Establishing AoMs as catalysts of information flows regarding energy between national and local government
- Exchanging of best energy practices
- Finding the best ways to achieve Gender Equality objectives in primarily, energy sector but also in all other sectors of human lives and work

METHODOLOGY OF THE ROADMAP

This Roadmap is based on the following fundamental principles:

- Cover a longer period of time, long enough for sustainable change to take root and materialize
- High ambition level needed, well-supported within government and society, with clear targets
- Based on sound analysis of status quo, options, existing barriers
- Address the whole sector and all relevant issues, differentiated by sub-sectors
- Identify financial mechanisms to support SEM development
- Take into account changes in society, demographics and energy situation
- Integrate sustainable energy development with health, safety, access, comfort, waste and broader societal goals
- Gender mainstreaming as the precondition of sustainable energy development in SEE countries
- Include flexible, creative thinking beyond what has been tried before
- Include robust monitoring and evaluation processes
- Collaborate with all stakeholders to deliver success

Aiming to adjust to municipal needs in creative manner and based on the real situation in SEE countries this Roadmap will contain the following parts:

Part I

- Brief picture of energy situation in SEE countries: Bosnia and Herzegovina (Federation of Bosnia and Herzegovina and Republic of Srpska), Montenegro, Kosovo, Macedonia and Serbia
- Best ways to improve the energy situation in SEE countries based on GE perspective – by including the Gender Equality/Mainstreaming perspective as a cross-cutting topic in energy efficiency
- Analysis of National Energy Laws in SEE countries and temporary situation in municipalities in term of their structures and capacities in the field of EE as well as stage of preparation of municipal energy documents
- Best ways to fulfil obligations from National Energy Laws in SEE countries
- Best ways to improve capacity building at AoM, municipal and national the levels in SEE countries
- Identification of key supporters in SEE countries from municipalities, state authorities, media, scientific organizations, industry sector, NGOs and others
- Short overview about stakeholders' involvement and suggestions how to improve it
- Short overview about public awareness campaigns and proposals how to improve them and make them more attractive for the different target groups, considering the gender equality/mainstreaming aspect

- Short overview about the best communication channels for different target groups, considering the gender equality/mainstreaming aspect
- Overview about available financial mechanisms for sustainable energy projects in SEE countries
- The best practice sustainable energy projects in municipalities in SEE countries
- Best ways to become the SMART SEE municipality!
- Integration of Gender Mainstreaming in all municipal activities

Part II

- Get the most from joining Covenant of Mayors (CoM) initiative

BENEFITS OF SUSTAINABLE ENERGY DEVELOPMENT IN SEE MUNICIPALITIES

There are wide array of benefits that can be achieved as a result of sustainable energy development of SEE municipalities. Some are tangible and readily quantifiable, while others are less so and may be difficult to assign a monetary value, like the social cohesion and sense of civic pride that comes with the living in green, successful and sustainable municipality.

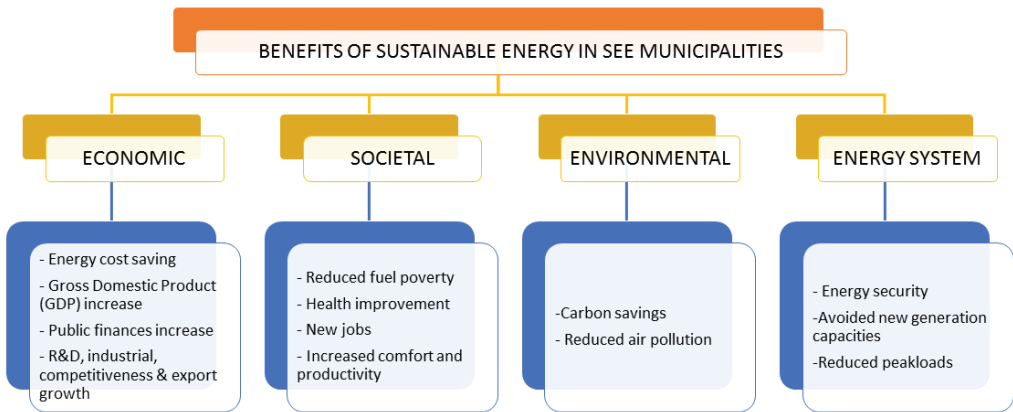


FIGURE 2: Benefits of Sustainable Energy in SEE Municipalities

Put simply, sustainable energy municipality improves the health and the wealth of its citizens!

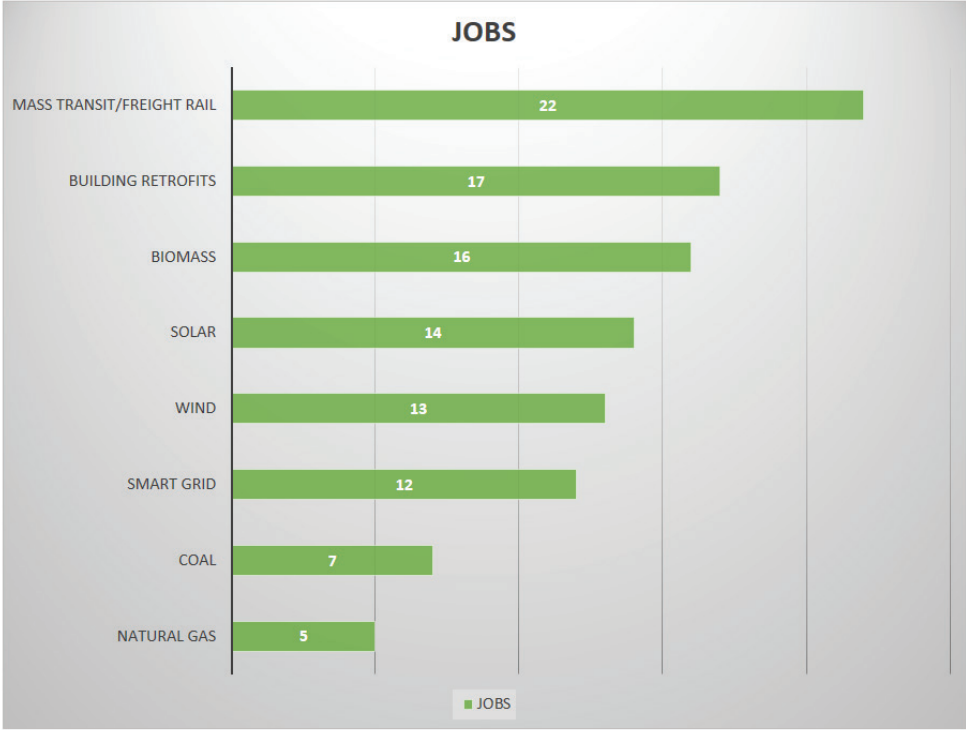


FIGURE 3: New jobs created through investing in different energy sectors

BARRIERS AND CHALLENGES IN BUILDING SUSTAINABLE ENERGY DEVELOPMENT IN SEE MUNICIPALITIES

Along with the benefits, come barriers and challenges for sustainable energy development and it is essential to assess the particular barriers affecting the sustainable energy progress in SEE countries.

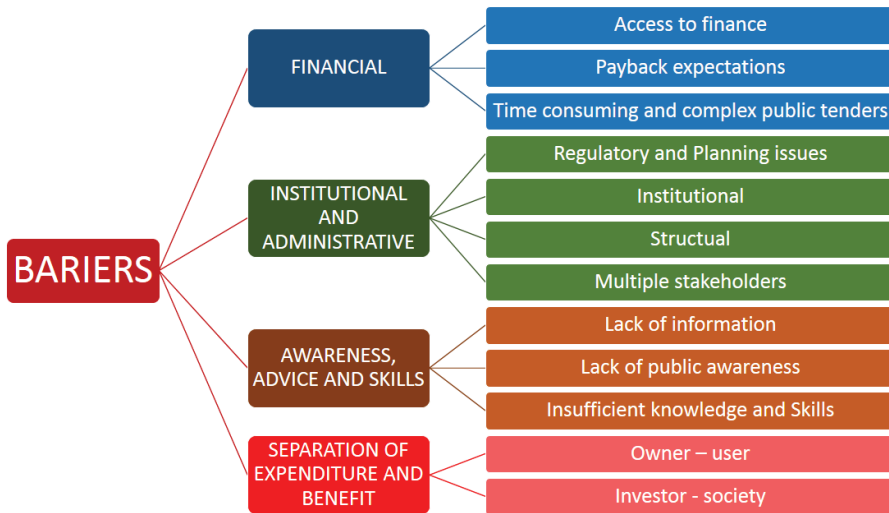


FIGURE 4: Barriers for SED in SEE countries

Actions to overcome these barriers should be „tailor made“ for different stakeholders. Accordingly, the policy mix will need to encompass a range of measures that, collectively, address all interested parties (AoMs, Municipal administrations, Local authorities, State authorities, investors, owners, developers etc.)

One of the really important barriers is an inadequate capacity building as well as really low state of Gender Equality at all levels including:

- Lack of Public awareness campaigns
- Lack of Sex disaggregated data
- Lack of Gender Responsive Budgeting.

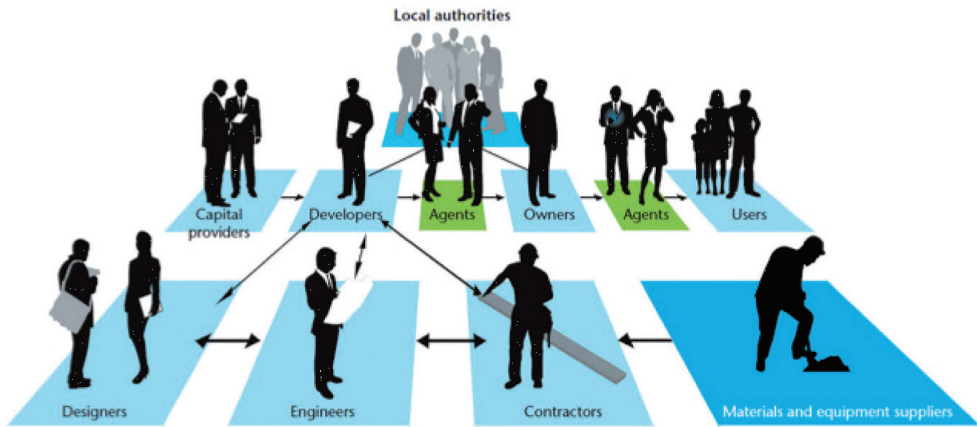


FIGURE 5: Stakeholders of SED

BRIEF PICTURE OF ENERGY EFFICIENCY SITUATION IN SEE COUNTRIES²

Positive things

Regarding current energy situation in the SEE countries the positive and affirmative things are the following:

- As the signatories of the Energy Community SEE countries are obliged to harmonize its legislation with the relevant EU legislation
- Available renewable energy sources
- Continues and successful reforms of energy sector in SEE countries
- The National Energy Laws and Strategies are adopted in the most of SEE countries
- International financial mechanisms are available
- 27 municipalities have signed CoM and created SEAPs
- 16 municipalities in Kosovo have approved their Municipal Energy Efficiency Action Plans (MEEAP)
- Saving energy has become the top country priority in Macedonia
- Building permits require EE elaborate in Macedonia
- Several initiatives to set up online information systems for energy consumption in public sector
- Adopted local energy plans through cooperation within different programs.

² Conclusions on energy situation were mostly based on numerous workshops with LGAs in SEE countries organised by GIZ

Less positive things

Less positive things regarding sustainable energy development and current energy situation in SEE countries are the following:

- The National Energy Laws are not fully implemented and enforcement is on pretty low level
- The EE and RES legislation was adopted through fast procedure and often all stakeholders were not asked for opinion - contributes to enforcement problems
- Lack of regional and local energy agencies in SEE countries
- Frequent changes of the legal acts
- Municipal authorities are not familiar with EE topics and long-term profitability of investments in the implementation of energy efficiency measures
- Insufficient public awareness on the importance of EE measures
- There are no EE and RES by-laws in all SEE countries
- The lack of financial resources for SEAPs implementation
- Delays in the construction of new electricity generation capacities from RES
- Unavailability and doubtful reliability of energy data at all levels is a huge obstacle for intensifying EE and RES projects implementation
- Unrealistic, socially oriented energy prices resulted in long payback period for EE and RES projects
- Weak capacities of EE and RES field in the local government units
- Low level of women energy experts in energy sector in SEE countries
- Lack of women on decision making positions at all levels

Best ways to improve energy efficiency situation

Best ways to improve the energy efficiency situation in SEE countries are:

- Promote benefits from implementation of EE measures
- Provide favourable business environment for investments in RES and EE measures establishment of regional and local energy agencies in SEE countries
- Support planned investments in RES power plants
- Better utilization of solar energy potentials in all SEE countries
- Develop wider cooperation with international organizations, banks and donors and business sector in RES and EE scope of work
- Encourage investment in EE and RES sectors
- Provide financial and logistic support to municipalities for RES and EE projects implementation
- Provide capacity building support on GM as cross-cutting issue in EE
- Raise awareness of all stakeholders (municipal administration, state administration, NGOs, citizens, etc.) about importance of EE, RES and GE in sustainable development of SEE countries

- Successful transposition of EE and RES EU directives into national legislation in SEE countries
- Build new RES electricity production capacities
- Utilize maximally technically and financially feasible RES and EE projects
- Continue with reforms of energy sector in the more efficient ways
- Establishment and successful work of EE funds in SEE countries
- Identification of available financial instruments for sustainable energy development in SEE countries
- Introduction and Implementation of Gender Responsive Budgeting (GRB)
- Encourage municipal collaboration with NGOs active in implementation of EE, women's rights and gender relevant projects
- Systematic capacity building for AoMs, municipal administration and state authorities
- Continuous educational and awareness raising activities with focus on gender mainstreaming objectives
- Promotion of public transport as the most energy sustainable way of transportation, also through demonstration of GM implementation exemplary benefits in this regard
- Joining CoM initiative

BEST WAYS TO FULFILL OBLIGATIONS FROM NATIONAL EE LAWS IN SEE COUNTRIES

Generally, all SEE countries were adopted national EE laws but the enforcement and lack of by-law documents are the main problems for successful development of Sustainable Energy Municipalities in SEE countries.

Official Internet sites with most important EE legislation acts and relevant flow chart for each SEE country were presented below.

Macedonia

<http://www.economy.gov.mk/regulativa/zakoni/index.1.html>

<http://www.ceprosard.org.mk/EN/Dokumenti.aspx>

<http://www.energetskaefikasnost.mf.edu.mk/>

<https://www.energycommunity.org/portal/page>

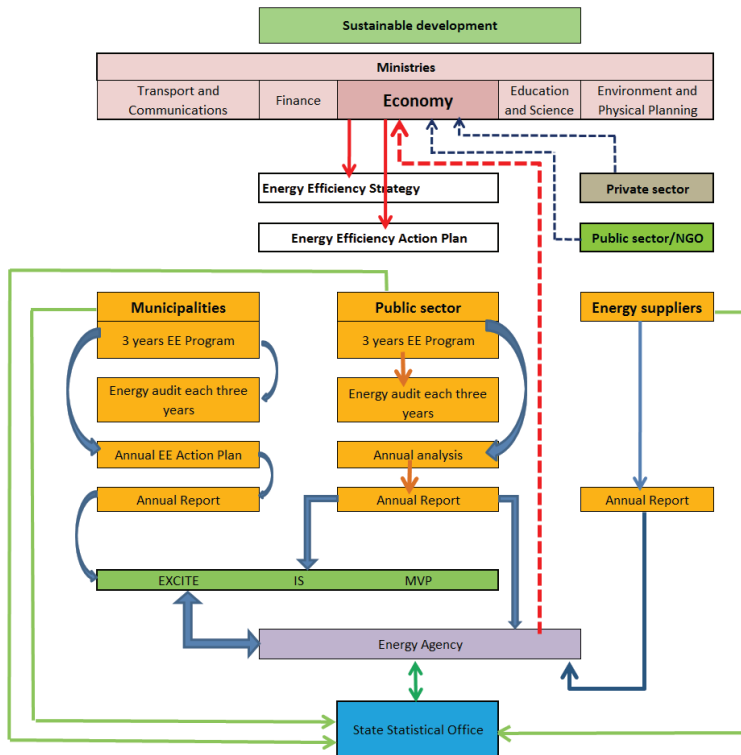


FIGURE 6: Diagram on EE legislative obligations in Macedonia³

3 Information flow between local and state level in energy efficiency field in the Republic of Macedonia, GIZ

Kosovo

www.kuvendikosoves

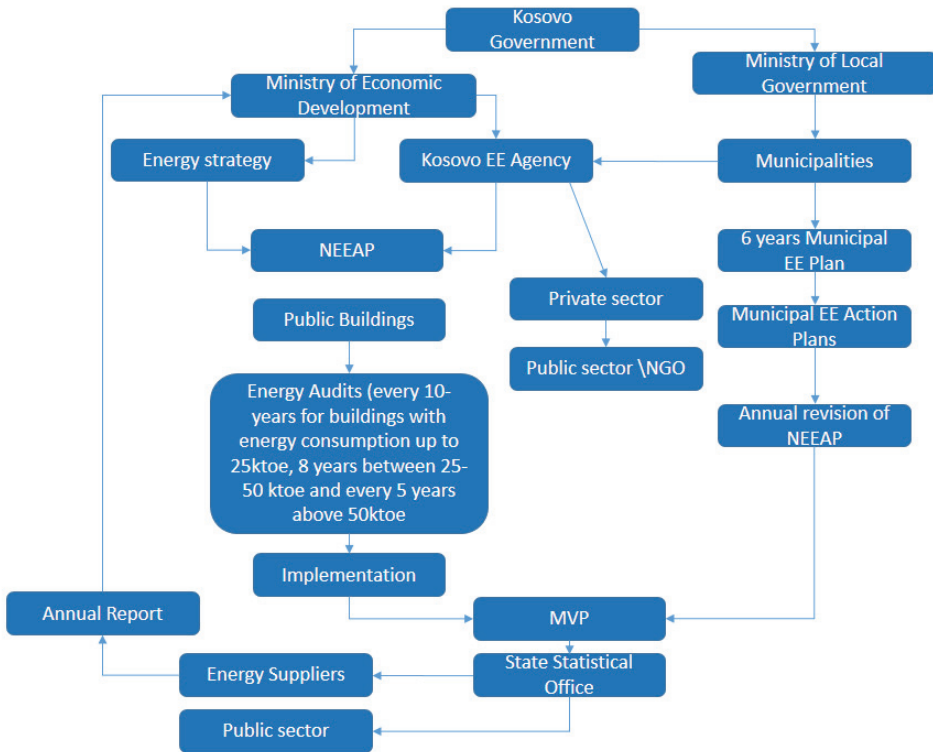


FIGURE 7: Diagram on EE legislative obligations in Kosovo

Montenegro

www.energetska-efikasnost.me

<http://www.oie-res.me/>

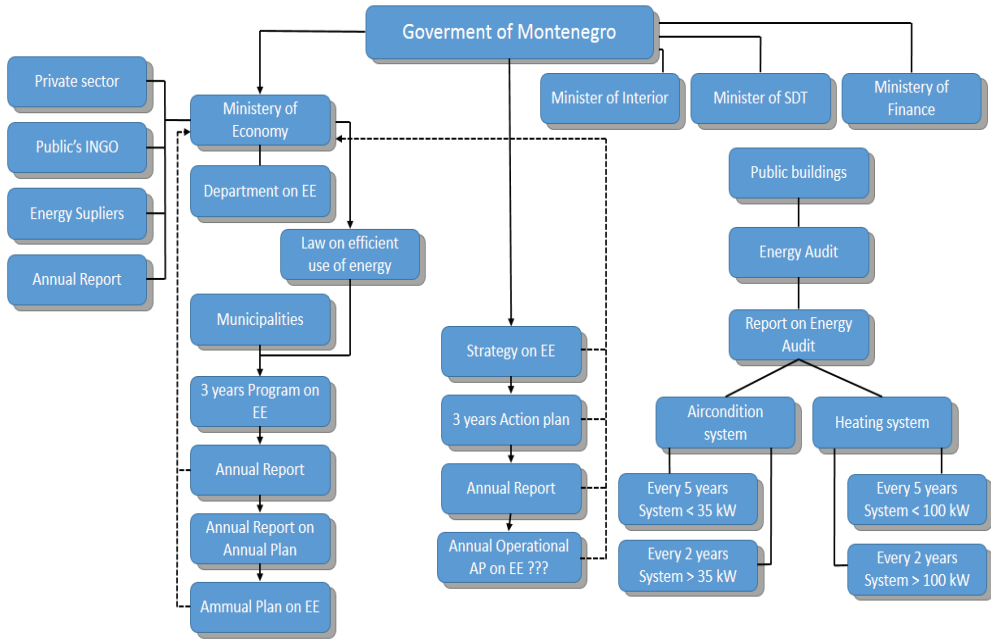


FIGURE 8: Diagram on EE legislative obligations in Montenegro

Serbia

<http://www.mre.gov.rs/latinica/dokumenta-efikasnost-izvori.php>

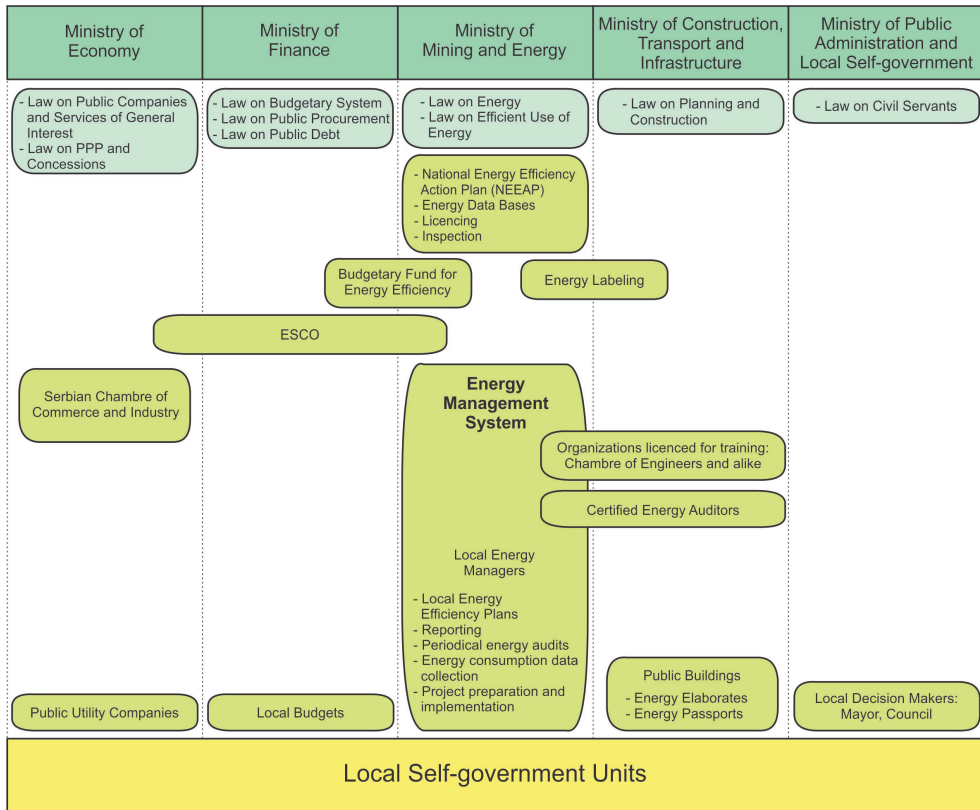


FIGURE 9: Diagram on EE legislative obligations in Serbia

Bosnia and Herzegovina

Federation of Bosnia and Herzegovina

<http://www.sogfbih.ba/index.php?lang=ba&sel=242>

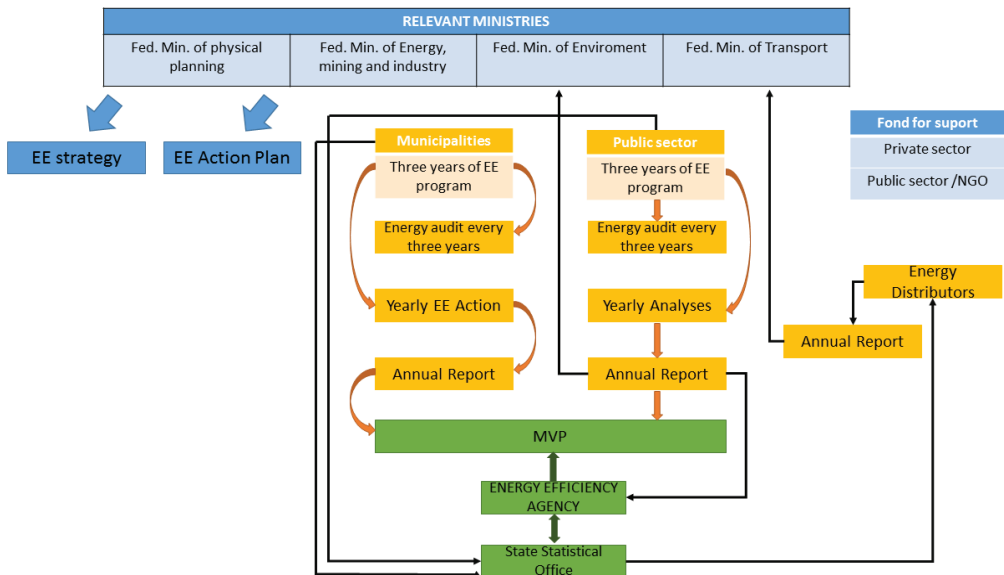


FIGURE 10: Diagram on EE legislative obligations in FBiH

Republic of Srpska

<http://ekofondrs.org/>

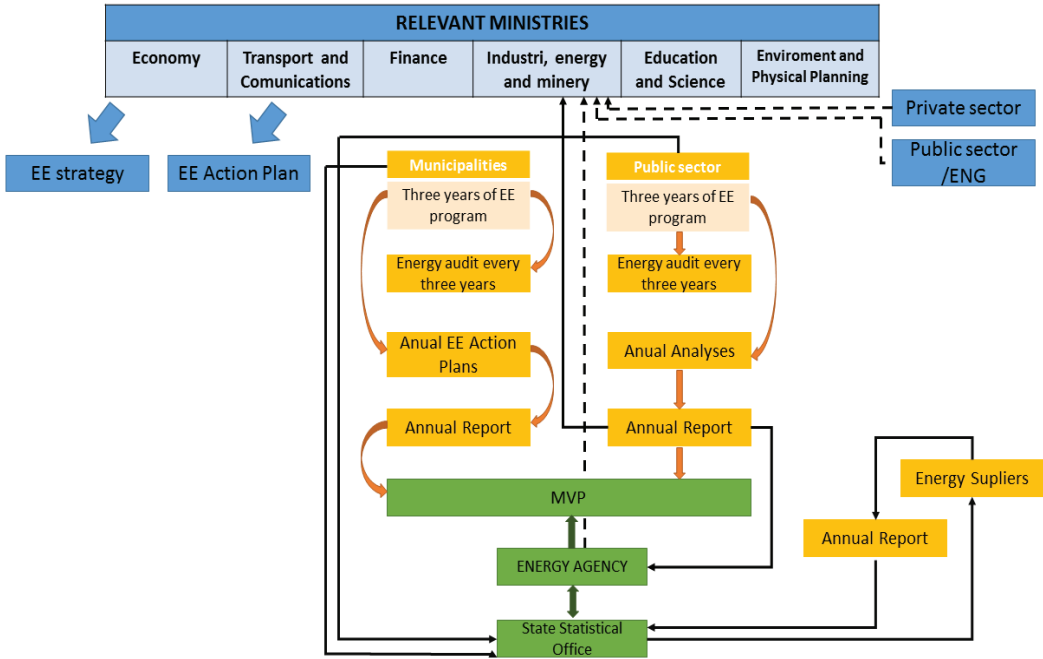


FIGURE 11: Diagram on EE legislative obligations in Republic of Srpska

It can be concluded that in all SEE countries, EE legal framework was successfully established but the sub-laws and enforcement procedures are still missing.

CAPACITY BUILDING

One of the main important prerequisite for development of Sustainable Energy Municipalities in SEE countries are capacity building on 3 different levels:

- Associations of Municipalities
- Municipal Administration
- State Authorities.

Capacity building for AoMs

The other important prerequisite is the establishment of conceptual framework of multilevel governance to straighten relationships between municipalities, regions and national governments in order to improve sustainable energy development.

The main task of AoMs for development of Sustainable Energy Municipalities in SEE countries is to provide continuous organizational and technical assistance to the regional and municipal administrations. It could be said that the modern energy orientated AoM can be some kind of a consulting company that have an answer to any question that LGA can have and that can solve any concrete energy problem and give guidelines in very short time. In fact, if there are no regional and local energy agencies in SEE countries, AoMs should temporarily and partially take over their roles, but it can be stressed that it is a really difficult task that requests legislative, technical and financial capacity buildings.

In order to support municipalities in developing on sustainable energy principles and to meet the obligations arising from the new energy legislation, AoM scope of work should include the following areas:

- Information, advice and education on sustainable energy management at municipal level including GE perspective
- Professional support in the identification, initiation, implementation and control of municipal energy projects
- Professional support in sustainable energy planning of municipalities
- Support in providing national and international financing mechanisms for EE and RES projects implementation.

First step in establishing energy capable AoMs in SEE is educational training for their employees that should include areas listed in the table below. Trainings should be organized by experienced experts for different fields.

TABLE 1: Thematic units for AoM education

THEMATIC UNITS	TASKS
1. RELEVANT ENERGY LEGISLATION	EU ENERGY LEGISLATION
	NATIONAL ENERGY LEGISLATION
	MUNICIPAL ENERGY DOCUMENTS AND ACTS
	MUNICIPAL OBLIGATION ACCORDING TO CURRENT LEGISLATION
2. SUSTAINABLE ENERGY PLANNING	3 YEARS EE PROGRAM METHODOLOGY
	YEARLY EE PLAN METHODOLOGY
	SEAP METHODOLOGY
3. ENERGY AUDITS AND CERTIFICATION	METHODOLOGY ACCORDING TO NATIONAL LEGISLATION
4. INTERNATIONAL FUNDS AND PROGRAMS - ORGANIZATION, REGISTRATION AND REPORTING	EC programs: 7th Framework Programme, Horizon 2020, COSME, ect.
	GIZ, Swiss Energy Agency for Development and Cooperation, World bank, GEF, UNDP, USAID, IEA, UNIDO, etc.
	Technical assistance programs (IEE MLEI, ELENA, EEE-F)
	Transnational programs
	CROSS BORDER COOPERATION PROGRAMS
5. INTERNATIONAL NETWORK AND ORGANIZATIONS	Covenant of Mayors
	ICLEI, EUROCITIES, FEDARENE, etc.
6. GENDER EQUALITY/MAIN-STREAMING	GENDER EQUALITY IN ENERGY SECTOR: BEST PRACTICE, OBJECTIVES, METHODOLOGIES

Capacity building for Municipal Administration

The development of Sustainable Energy Municipality requires strong, energy oriented municipal administration based on an efficient organisational structure consist of multidisciplinary experts.

In accordance with the number of inhabitants and consequently number of municipal employees, Department for energy or energy manager should be appointed by taking into account the GE perspective.

The main objectives of municipal Department for energy, also including the GE perspective, should be the following:

- Energy development of municipality on the principles of sustainability in all sectors of energy consumption
- Economic development of municipality through the improvement of energy efficiency in all sectors of energy consumption and the implementation of energy projects in municipality
- Energy development based on the security and diversification of energy supply of municipality
- Significant reduction of energy consumption and associated CO₂ emissions
- Economic development of municipality through increased investment in energy efficiency, renewable energy and sustainable construction projects
- Significantly increasing the share of energy produced from renewable sources
- Successful transformation of municipality in an environmentally sustainable municipality.

For municipalities bigger than 50 000 inhabitants, very good idea is the establishment of an advisory professional body (representation of both sexes in the professional body should be secured; minimum 40% of generally underrepresented sex) of prominent representatives of scientific and educational institutions in the fields of:

- Energy planning
- Architecture, civil engineering and physical planning
- Traffic and communal infrastructure.

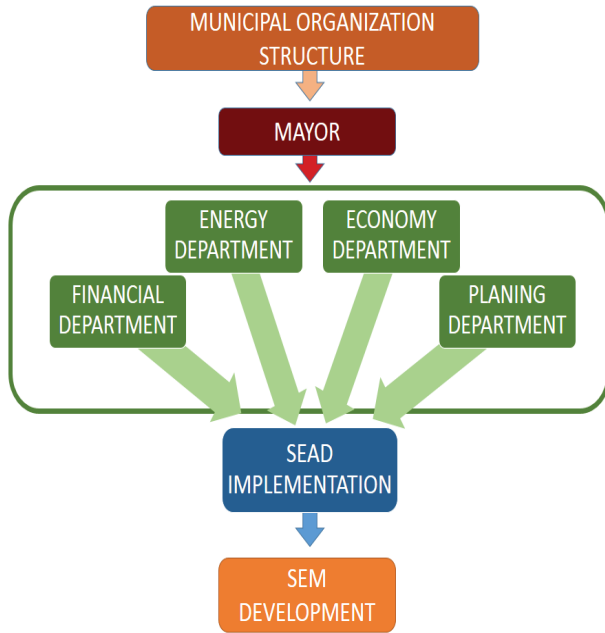


FIGURE 12: Municipal organisational structure

Capacity building of State authorities

Capacity building of State authorities should aim to multilevel governance as one of the most significant driver for sustainable development no all levels. LGAs are increasingly initiating sustainable energy actions action but these initiatives have been largely decoupled from national policy frameworks. This has limited the resources available to LGAs to support sustainable energy development. The solution is multilevel governance approach as framework to explore linkages between national, regional and local policies and to explore the strengthening of multilevel, regional and local governance to more effectively address the problem of energy and environmental protection. A multilevel governance framework calls for the narrowing or closing of the policy “gaps” between levels of government via the adoption of tools for vertical and horizontal cooperation. The vertical dimension of multilevel governance recognizes that national governments cannot effectively implement national energy strategies without working closely with regional and local governments as agents of change. A multilevel governance approach also recognizes that local governmental authority to act in areas related to climate change is often “nested” in legal and institutional frameworks at higher scales. A two-way relationship exists between local and national action on climate change as each can enable or constrain the other.

The horizontal dimension of multilevel governance acknowledges the opportunity for learning, information transmission and cooperation between municipalities or regions and national governments. Horizontal governance activities can give business, research and environmental non- governmental organizations influence in the policy dialogue process. The

horizontal dimension of multilevel governance is also associated with improving coordination across national line ministries to implement cross-cutting programmes, such as those required in many sustainable energy policies. Horizontal relationships at the sub-national level can also exist in the form of national and transnational networks and coalitions⁴.

It should be stressed that multilevel governance approach in SEE countries is difficult and complex task that will definitely not be easy to achieve. Numerous LGAs in SEE do not possess the necessary professional, administrative and financial means to plan and implement energy efficiency measures or renewable energy projects and support schemes on the national level are underdeveloped or not sufficient and these LGAs should strengthen their capacities for developing Sustainable energy Municipality. Similar is also true for application of GE/GM measures. Energy transition encompasses a reorientation of policy from demand to supply and a shift from centralized to distributed generation based on renewable energy sources, significant increase of overall energy efficiency but also – in a broader sense, a democratization of energy. This means public wind farms, solar parks that can involve ownership of many citizens or municipal utilities which can benefit citizens directly financially or through creation of value locally that minimizes capital outflows from a region or local community⁵.

4 Corfe-Morlot, Jan et al, Cities, Climate Change and Multilevel Governance, OECD Environmental working Papers, No 14, 2009

5 Julije Domac, et al, Energy transition of South-east European Local Governments, GIZ, 2014

KEY SUPPORT AND STAKEHOLDERS INVOLMENT

The success of this Roadmap depends heavily on a coordinated commitment by a wide body of stakeholders responsible for its delivery, extending well beyond the traditional energy community. To ensure that these stakeholders make the necessary commitment, it is important that they gain an early shared understanding of their own roles and opportunities.

In so doing, it may also be useful to consider or check that approach with regard to the following principles:

- **Inclusiveness** – with participation from LGAs, national authorities, industry, construction, suppliers, academia, etc.
- **Collaborative** – in using the collective expertise from all parties to define objectives and methods
- **Consensus building** – seeking shared understanding and consensus on Roadmap and commitment to work to its implementation
- **Forward looking** – towards ongoing partnership and networking of stakeholders
- **GE/GM** - important principles to which partners should adhere

Key stakeholders in SEE countries can be divided into 2 main categories:

- Influential international stakeholders
- National stakeholders – detailed stakeholders mapping for each SEE country

Some of the most influential international stakeholders who can support Sustainable energy development of SEE municipalities and help to fulfil the objectives of this Roadmap are the following:

- German International Cooperation (GIZ): Open Regional Funds for South East Europe⁶
- Swiss Energy for Development and Cooperation (SDC)
- NALAS - Network of Associations of Local Authorities of South-East Europe⁷
- EC Directorate General for Environment
- EC Directorate General for Energy⁸
- International Financial Institutions: WBIF, EBRD, KfW, World Bank/IFC, etc.
- ESDN – European Sustainable Development Network⁹
- SEE.NET - South East Europe Network for Energy and Transport¹⁰
- European Federation of Agencies and Regions for Energy and the Environment FEDARENE¹¹
- European Association of local authorities in energy transition - Energy Cities¹²

6 More information on www.giz.de

7 More information on www.nalas.eu

8 More information on http://ec.europa.eu/dgs/energy/index_en.htm

9 More information on: <http://www.sd-network.eu>

10 SEE NET is initiated and created within the scope of the EC funded project "Networking and Capacity Building of environmental NGOs to Increase Energy Efficiency and Renewable Sources of Energy in Western Balkans" which is coordinated by regional partners Zelena akcija – FoE Croatia, Center for Environment, Bosnia and Herzegovina and Front 21/42, Macedonia; More information on: <http://www.see-net.net>

11 More information on <http://www.fedarene.org/>

12 More information on <http://www.energy-cities.eu/>

- Council of European Municipalities and Regions -CEMR¹³
- Network of major European cities: EUROCITIES¹⁴
- Network of European Metropolitan Regions and Areas - METREX¹⁵
- Sustainable Cities and Towns Campaign - ESCT Campaign¹⁶
- Cities Climate Leadership Group: C40¹⁷
- Local governments for sustainability: ICLEI¹⁸
- United Nations Development Programme – UNDP¹⁹
- SIDA – Swedish International Development Cooperation Agency²⁰

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH - As a federally owned enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development. The GIZ Open Regional Fund Southeast Europe – Energy Efficiency (ORF EE) supports regional cooperation among stakeholders with the capacity to drive the processes of reform in the energy sector and thereby contribute to achieving the national energy efficiency targets in their countries. Since 2008 numerous regional sub-projects with national energy ministries, towns and municipalities and civil society organizations have been implemented focusing on evidence based policy making, improving good governance in the energy sector and promoting energy efficiency on the municipal level with the focus on gender mainstreaming as one of the essential factor of overall GIZ policy.

The Swiss Government provides assistance to developing countries in the following priority areas: climate change (including forestry, land use, and reduction of greenhouse gas emissions); democracy; economic integration; education; employment; food security and rural development; gender; governance; health; migration; and water.

NALAS is a network of associations of local authorities of South-East Europe. It has 16 full members. There is a range of activities covered by six task forces dealing with various important fields. One of them is committed to energy efficiency and related topics. The Network is governed by a Skopje-based secretariat responsible for the overall coordination and the implementation of the activities including:

- Promoting EE procurement rules and regulations and establishing life cycle cost calculations in the economic assessment and in the decision making at the regional, national and local levels of government in SEE
- Strengthening the exchange of know-how and experience between municipalities

13 More information on <http://www.ccre.org/>

14 More information on <http://www.eurocities.eu>

15 More information on <http://www.eurometrex.org/>

16 More information on <http://www.sustainablecities.eu/>

17 <http://www.c40.org><http://www.c40cities.org/>

18 <http://www.iclei.org/>

19 <http://www.undp.org>

20 SIDA is responsible for organization of the bulk of Sweden's official development assistance to developing countries. SIDA also affirms respect of human rights, democracy and gender equality proclaimed by Universal Declaration of Human Rights on their missions

- Disseminating municipal best practice in promoting and using local EE and RE potentials in the NALAS knowledge centre and providing information on the access to national and international funding sources for EE and RES projects
- Facilitating technical and financial cooperation of municipalities with national and international partners

ICLEI is the world's leading association of cities and local governments dedicated to sustainable development including 12 mega-cities, 100 super-cities and urban regions, 450 large cities as well as 450 medium-sized cities and municipalities in 86 countries over the world. ICLEI promotes local action for global sustainability and supports cities to become sustainable, resilient, resource-efficient, biodiverse, low-carbon; to build a smart infrastructure; and to develop an inclusive, green urban economy with the ultimate aim to achieve healthy and happy communities. At the moment, there are no ICLEI members from South-East Europe countries, and having in mind that the ICLEI yearly full member fees are not too high, it should be taken into consideration, for primarily capital and bigger cities in SEE countries to become members of ICLEI. In that way, ICLEI can help to build urban resilience in these cities and support Sustainable Energy Development.

Since 1966, **United Nations Development Programme - UNDP** partners with people at all levels of society to help build nations that can withstand crisis, and drive and sustain the kind of growth that improves the quality of life for everyone. On the ground in more than 170 countries and territories, UNDP offer global perspective and local insight to help empower lives and build resilient nations.

One of the four main areas of UNDP support is Environment and Energy for Sustainable Development and through this sub-programme a numerous of successful sustainable energy projects have been implemented in SEE countries during the last 20 years.

FEDARENE is the premier European network of regions and energy agencies which implement, co-ordinate and facilitate energy and environment policies. It was created on the 8th of June 1990, by 6 regional authorities – Rhône-Alpes, Provence-Alpes-Côte-d'Azur, Wallonia, País Vasco, Aquitaine and Nord-Pas-de-Calais. Encouraged by different programs of the European Commission, these authorities wanted to make the voice of the regions heard in the debate on energy and environment policies at the European level. Today, FEDARENE has 65 members from all around Europe but only one from the South-East Europe.

The main FEDARENE objectives are the following:

- Facilitating the development of inter-regional partnerships and thereby encouraging the exchange of experience and the transfer of know-how and technology;
- Lobbying the European institutions on behalf of regional and local communities concerning relevant energy and environmental issues;
- Promoting the regional dimension in debates concerning energy and the environment by placing particular emphasis on demand and local supply and the pursuit of sustainable development;
- Helping regions develop their capacity to take action, and, amongst other things, assisting them in the creation of energy and/or environmental organizations.

Energy Cities, the association created in 1990 represents now more than 1 000 towns, cities and municipalities in 30 European countries.

The main Energy Cities aims are:

- Encouraging and strengthening local communities' roles and skills in the field of sustainable energy
- Representing local communities' interests and influencing the policies and proposals made by European Union institutions in the fields of energy, environmental protection and urban policy
- Developing and promoting communities' initiatives through exchange of experiences, the transfer of know-how and the implementation of joint projects.

In 2012, Energy Cities initiated a process aimed at making and debating proposals for accelerating the energy transition of European cities and towns. These proposals are based on innovative approaches, new ideas and ground breaking practices. Furthermore, they provide practical answers and link today's action to the long-term vision of a low energy city with a high quality of life for all.

One of the important key stakeholders for SEM are the energy agencies at local, regional and national levels that are really undeveloped in SEE countries.

TABLE 2: Energy agencies in SEE countries

SEE country	Name of energy agency	Official internet site
Kosovo	Kosovo Energy Efficiency Agency (KEEA)	http://mzhe.rks-gov.net
Bosnia and Herzegovina	No agency at any level	n/a
Montenegro	No agency at any level EE and RES department within the Ministry of Economy dealing with some energy agencies issues	http://www.energetska-efikasnost.me/ http://www.oie-res.me/
Macedonia	Energy Agency of the Republic of Macedonia	www.ea.gov.mk
Serbia	Provincial Energy Efficiency Centre Novi Sad Regional Euro-energy Centre Kragujevac Regional Energy Efficiency Centre Nis	www.peec.uns.ac.rs www.ept.kg.ac.rs mladens@masfak.ni.ac.yu

Furthermore, to implement reforms towards a sustainable use of energy, the involvement of relevant stakeholders, including Members of Parliament, is crucial. However, the communication and cooperation on energy policies between and within stakeholder groups is still in a developing stage, both on the national and the regional level in South East Europe.

That is why in 2011 the regional “Public Dialogue Initiative on the Sustainable Use of Energy in the South East Europe”²¹ was launched by the Council of Europe’s Network of the Schools of Political Studies. The main supporter of this initiative is the German Development Cooperation (GIZ) implementing the “Open Regional Fund for South East Europe Energy Efficiency (ORF-EE)” on behalf of the German Federal Ministry of Economic Cooperation and Development (BMZ).

Partners on this initiative are the Belgrade Fund for Political Excellence (Serbia), the School for Democratic Leadership (Montenegro), the Academy for Political Development in cooperation with the Society for Sustainable Development Design (DOOR) (Croatia), the Centre for Research and Policy Making (Macedonia), the Albanian School of Political Studies (Albania), the European Association of Schools of Political Studies in BH (Bosnia and Herzegovina) and the Prishtina Institute for Political Studies (Kosovo).

Good cooperation and exchange of best practices and lessons learnt between EeMa project and Public Dialogue Initiative will be of mutual benefit for all stakeholders in SEE countries. Furthermore, it is very important to establish good cooperation with all stakeholders that can support any kind of Gender Equality progress in SEE countries, in energy sector and beyond.

21 More information at: <http://publicdialogue-energy.com/>

TABLE 3: Stakeholders mapping in Republic of Srpska

	Key stakeholders	Primary stakeholders	Secondary stakeholders
State	<ul style="list-style-type: none"> • Municipalities • Min of Industry Energy and Minery • Min of Spatial Planning • Min of Finance 	<ul style="list-style-type: none"> • Fund for Environmental Protection and EE 	
Privat sector		<ul style="list-style-type: none"> • Banks • Chamber of Commerce 	<ul style="list-style-type: none"> • Development Agencies on Local and Regional level
Civil sector	<ul style="list-style-type: none"> • Donors 	<ul style="list-style-type: none"> • NGOs and Citizens 	

TABLE 4: Stakeholders mapping in FBiH

	Key stakeholders	Primary stakeholders	Secondary stakeholders
State	<ul style="list-style-type: none"> • Municipalities • Association Presidency 	<ul style="list-style-type: none"> • Min. of Spatial Planning • Fed. Min. of Transport • Fed. Min. Energy, mining and industry • Min. of Industry and Energy • Min. of Urban Planning 	<ul style="list-style-type: none"> • Fund for Environmental Protection and Energy Efficiency • Fed. Min. of Environment • Fed. Min. of Spatial Planning
Privat sector			
Civil sector	<ul style="list-style-type: none"> • Donors 	<ul style="list-style-type: none"> • NGOs and Citizens 	

TABLE 5: Stakeholders mapping in Serbia

	Key stakeholders	Primary stakeholders	Secondary stakeholders
State	<ul style="list-style-type: none"> • Association Committee for EE and Presidency • EE managers • Municipalities • Local Communal Enterprises 	<ul style="list-style-type: none"> • Min. of Construction, Traffic and Infrastructure • Min. of Minery and Energy 	<ul style="list-style-type: none"> • Min. of Agriculture • Min. of Finance • Min. of Economy • Min. of EALS • Min. of Environment • Min. for Trade Tourism and Telecommunications
Privat sector			<ul style="list-style-type: none"> • Companies (construction, light manufacturers and other materials) • Chamber of commerce • BANKS (loan providers)
Civil sector		<ul style="list-style-type: none"> • Pool of Experts • University and Academia • Chamber of Engineers 	<ul style="list-style-type: none"> • NGOs • Association of professionals

TABLE 6: Stakeholders mapping in Macedonia

	Key stakeholders	Primary stakeholders	Secondary stakeholders
State	<ul style="list-style-type: none"> • Min. of Economy • Min. of Finance • Min. of Transport and communications • Municipalities 	<ul style="list-style-type: none"> • Min. of Environment and Physical Planning • Energy Agency 	
Privat sector		<ul style="list-style-type: none"> • Chamber of Commerce • Energy Distribution Companies 	
Civil sector	<ul style="list-style-type: none"> • Donors 	<ul style="list-style-type: none"> • NGOs • Citizens 	

TABLE 7: Stakeholders mapping in Kosovo

	Key stakeholders	Primary stakeholders	Secondary stakeholders
State	<ul style="list-style-type: none"> • Collegium for public services and Sp. Planning • Municipalities 	<ul style="list-style-type: none"> • Min. of Spatial Planning, Min. of Trade and Industry • Min. of Economy and development and EE Agency 	
Privat sector		<ul style="list-style-type: none"> • American Chamber • Chamber of commerce • Alliance of Business 	<ul style="list-style-type: none"> • KEDS (Electricity Distribution Supply)
Civil sector		<ul style="list-style-type: none"> • GIZ and SDC • Alliance of NGOs KOSID 	<ul style="list-style-type: none"> • EU and USAID • AKERE • Association of Architects and Engineers

TABLE 8: Stakeholders mapping in Montenegro

	Key stakeholders	Primary stakeholders	Secondary stakeholders
State	<ul style="list-style-type: none"> • Min. of Economy • Min. of Sustainable. Development and Tourism 	<ul style="list-style-type: none"> • Mun. Departments for Energy Management • Min. of Finance • Min. of Interior 	
Privat sector		<ul style="list-style-type: none"> • Chamber of Architects and Engineers 	<ul style="list-style-type: none"> • Business Alliance
Civil sector	<ul style="list-style-type: none"> • Media • Universities 	<ul style="list-style-type: none"> • Citizens • Environmental NGOs 	<ul style="list-style-type: none"> • YIHR

COMMUNICATION CHANNELS AND PUBLIC AWARENESS CAMPAIGNS

Establishment of communication channels and continuous information/education activities for public awareness rising are prerequisites for successful implementation of this Roadmap as well as for setting solid grounds for SED of SEE municipalities. It is necessary to ensure full awareness of all stakeholders and efficient promotion of this Roadmap.

To this end, communication strategy should be developed in order to contribute in fulfilling the following specific objectives:

- Objective 1:* to inform public about all important issues regarding development of Sustainable Energy Municipalities in SEE countries
- Objective 2:* to inform public about necessities of Gender Equality for successful sustainable development in SEE countries and educate them about the best ways to achieve it
- Objective 3:* to inform stakeholders and potential users at national, regional and local level about the possibilities for financing Sustainable energy projects
- Objective 4:* to ensure continuous transparency of Sustainable energy projects implementation
- Objective 5:* to coordinate all communication activities between AoMs and stakeholders in all SEE countries

A lot of information already exists on different levels, and numerous EE promotion campaigns have been taking place in all SEE countries.

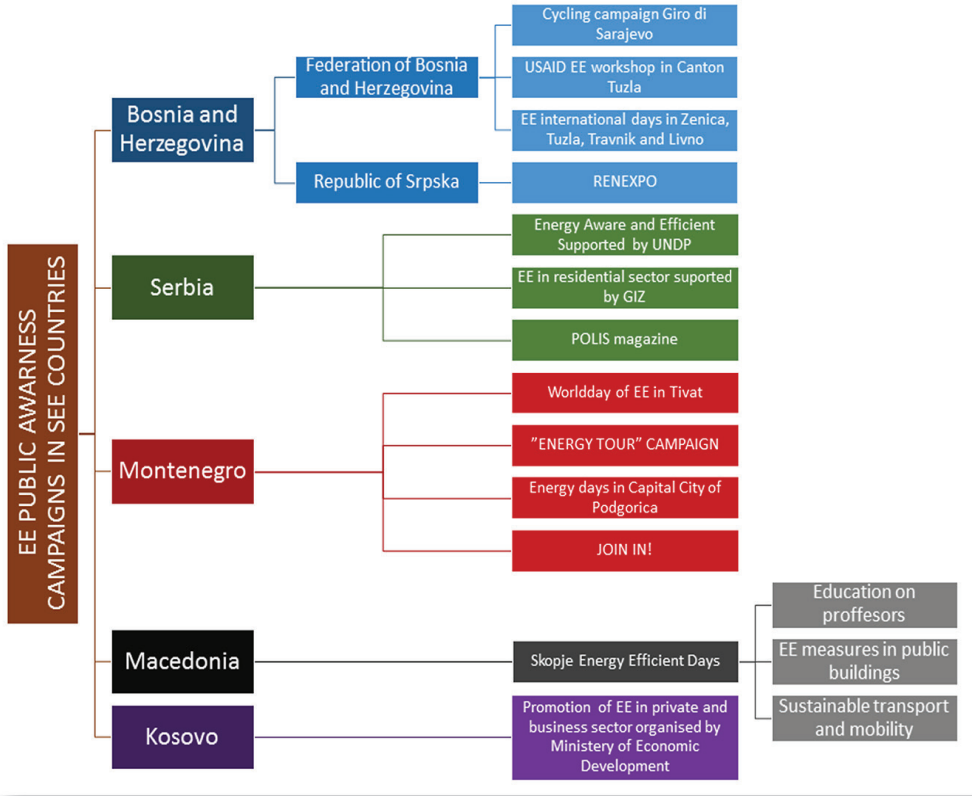


FIGURE 13: Public Awareness Campaigns in SEE countries

6 simple rules for AoMs to provide successful public awareness campaign:

1. Include information about EE in any other relevant ongoing public awareness campaign
2. Avoid too technical language!²²
3. Clearly explain terms and definitions
4. Use more than one communication channel (printed and online)
5. Ask for feedback and/or call to action at least in form of “like it” and “share it”
6. Be aware of Gender Equality principle and carry it out whenever you can!

²² Energy units as PJs are very useful for experts to measure energy savings but ordinary people do not have a clue what does it mean.

Planning campaign – golden rules on right balance between quality, costs and time:



If you want high quality and low costs – you need time!

If you have little time and little budget – you will not get quality!

If you can accept high costs, you can get good quality in short time!

ONLINE campaign

ONLINE campaign has good balance between quality, costs and time!

Establishment of AoM Energy Information Portal is the first step!²³

Based on assumption that AoMs in SEE countries don't have enough financial resources, two further significant items of an **ONLINE** campaign can be applied:

- Keep it simple and short and cooperate with campaigns of other stakeholders
- A link to their websites is quickly done and cost-saving

People like to test their knowledge (quiz-duel is one of the most spreading apps nowadays). For this reason – if they don't know the right answer - they may ask for more information.

The information campaign may be turned from **bring the information to the people** into **people are asking for information!**

The quiz allows correcting existing myths/legends, misbeliefs about different aspects of energy!

The quiz will support the general goal - More visitors on the AoM Energy Information Portal!

- A quiz can guide citizens to SE issue, while they can playfully test their knowledge
- Citizens can ask for more detailed information or descriptions of realized examples (case studies)
- They can spread the information by using the function "send to a friend"

²³ Some AoMs already have it.

Online-Media makes it possible to find out, if a strategy is successful – by counting and analysing the number of clicks on the buttons. So the strategic important last step of any communication process – the evaluation – is included in the action without any special costs (like other feedback processes).

The counter will make it possible to measure, how many times it has been asked for detailed information by downloading PDF-files from AoMs websites. Counting also those, who were guided/linked from a communal website to the quiz, will show the success of the cooperation between AoMs and general public.

Energy Days in SEE Municipalities

Organization of Municipal Energy days proved very successful tool to public awareness rising.

Activities of Energy days are numerous and may include:

- Set up of promotional posters in various parts of the city, the organization of promo - informational TV and radio broadcastings based on GE perspective
- Organization of open days of energy efficient buildings through interaction with the already realized examples of best practice
- Organization of the *One day a week without a car* campaign
- Realization of thematic promo - informational campaigns to raise public awareness about energy efficiency in buildings with topics such as:
 - How to build an energy efficient house - the principles of sustainable construction: proper orientation and shape of building, thermal insulation of the external envelope, energy efficient glazing
 - EE measures in households – switch off household appliances from the mains after use (stand-by mode), thermostatic valves, saving indoor lighting, A+++ energy class household appliances
 - Use of RES in households - solar systems for hot water preparation, installation of photovoltaic systems, installation of heat pumps, pellet boilers
- The implementation of educational activities and programs such as seminars or workshops on climate changes and energy consumption for the target groups of citizens:
 - Activities in kindergartens: distributing picture books, organizing playrooms on energy efficiency topic
 - Lectures on the application of renewable energy sources for elementary and secondary schools pupils, artistic and literary expressions on the subject of climate change and energy savings
- Organization of expert meetings, seminars, conferences on the topic of energy efficiency, renewable energy sources and environmentally friendly fuels;
- Organizing exhibitions and trade fairs with the latest environmental technologies in the field of energy efficiency, eco-innovations and renewable energy sources.

It is important to stress that GE/GM principles should be included in development and distribution of promotional and public awareness raising materials, and taken into account when implementing any type of events.

FINANCIAL INSTRUMENTS FOR SEM DEVELOPMENT

Some financial instruments used in EU Member States which can be equally successfully applied in SEE countries.

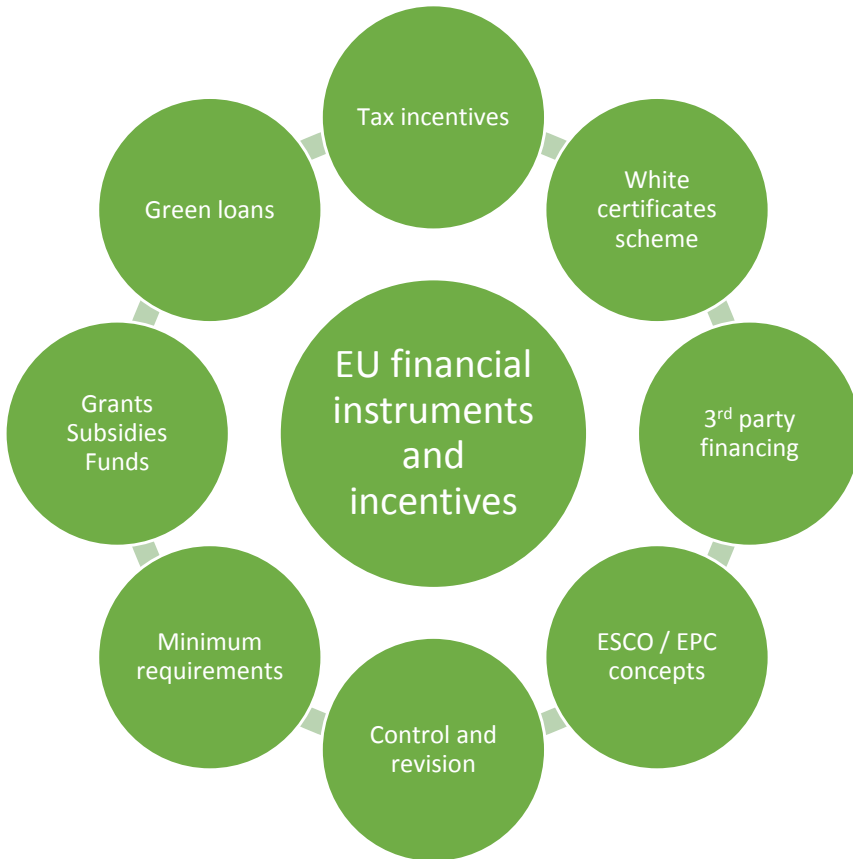


FIGURE 14: Available financial instruments in EU

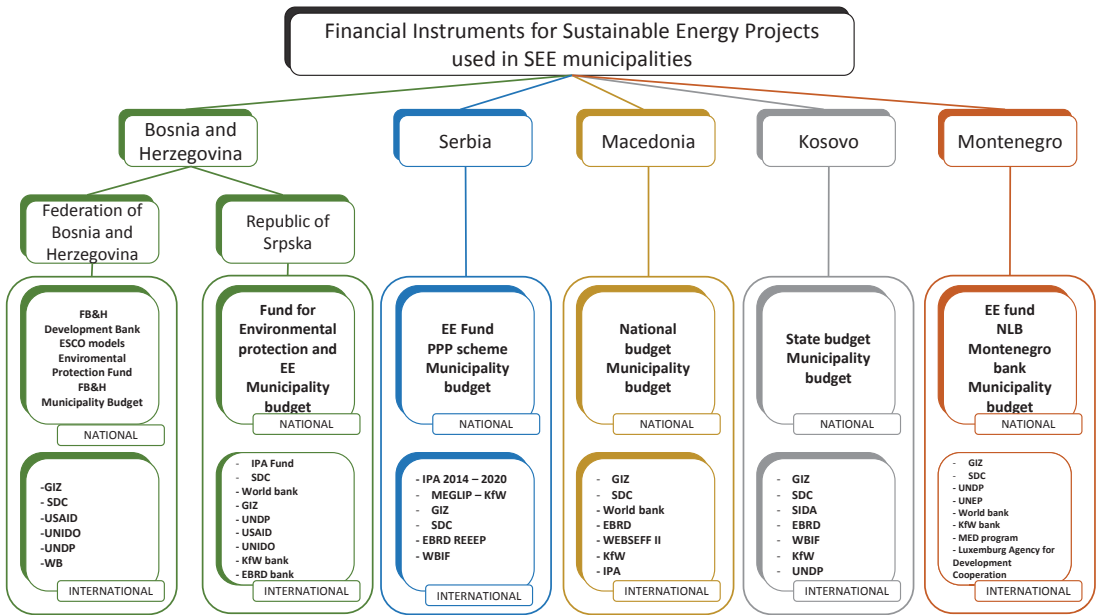


FIGURE 15: An overview of international and national mechanisms used for EE projects implementation in SEE countries

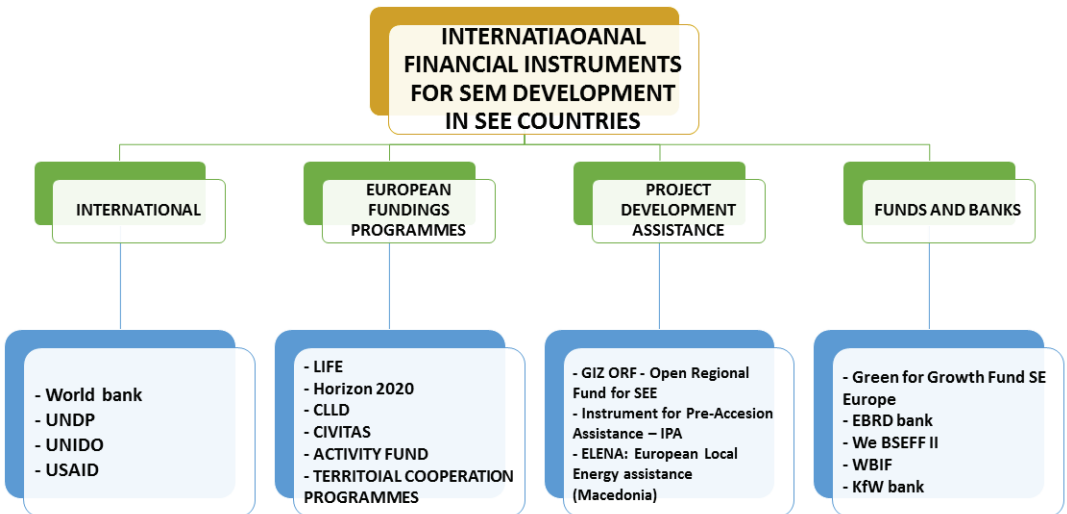


FIGURE 16: International financial instruments for SEM development in SEE countries

European Territorial Co-operation programmes (2014-2020) is important instrument of EU Cohesion policy for encouraging regional cooperation, with an total amount of 10,2 billion €. The first level of implementation is Regional Development Agency (ARR), and the second Joint Technical Secretariat (JTS).

European Territorial Co-operation programmes (2014-2020) consist of:

- Interregional programmes
 - Interreg Europe IVc
 - Urbact III
- Transnational programmes
 - Central Europe
 - Danube
 - Adriatic-Ionian
 - Mediterranean
- Cross-border programmes

SEE countries are eligible to apply to DANUBE, Adriatic-Ionian and Mediterranean transnational programmes as well as to different cross-border programmes.

Danube transnational programmes

Geographical area: Germany, Czech Republic, Slovakia, Ukraine, Moldova, Romania, Bulgaria, Hungary, Austria, Slovenia, Croatia, Serbia, Montenegro and Bosnia and Herzegovina.



FIGURE 17: DANUBE transnational programmes

FLAGSHIP EE PROJECTS IN SEE MUNICIPALITIES

KOSOVO

Peja Municipality

Project: **Biomass heating for Primary school Preparimi in Drelaj**

Financing: Sida – Swedish International Development Cooperation Agency and CNVP²⁴ Foundation

Brief description:

Firewood and classical stoves were replaced with modern technology biomass heating system. Mobile wood chipper, produced by LINDDANA TP (type TP160) in accordance with EC Directive 2000/14/EC, is designed for stationary wood chipping in form of branches with the diameter of about 16 cm. The machine is equipped with a lifting point that is used while lifting the machine with a crane or with a fork lift truck. The capacity of machine is 59 kW, weight in kg 585, RPM 540 with maximum pressure till 150 bars. Storage for automatic supply of wood chip boiler has been placed behind the school in the vicinity of the furnace with an opening to ensure the ventilation for the wood materials. Considering the fact that renewable energy remains unestablished concept in Kosovo, the key thing for implementation of this case study was certainly implementation of adequate and proven technology for biomass heating installations. As a municipality run project, showing economic feasibility due to the lower price of wood chips and more efficient, this concept represents a show case of renewable energy in Peja municipality.

Drenas Municipality

Project: **Photovoltaic Public Lighting in “Fehmi Lladrovci” square**

Financing: Municipal budget with support of Austrian Development Agency (ADA)

Brief description:

Public lighting in Fehmi Lladrovci” square (82 bulbs on 18,751.30 m²) was been replacing with photovoltaic system as well as expanding on 3110 m² additional area. The project is in the second phase of implementation at the moment and should be finished during year 2015.

City of Pristina

Project: **Co-generation in Pristina central heating system**

Financing: European Commission (13 825 mil. €), German Bank for Development (11 mil. €), Government of Sweden (1,8 mil. €), Government of Luxembourg (1.5 mil. €), Municipality of Prishtina (2 mil. €)

Brief description:

The aim of the project is to improve central heating system in Pristina replacing oil fuel with steam extrusion of Kosovo B Power Plant. The project will have 3 phases: rehabilitation, cogeneration and expansion of the network and will cost more than 30 mil. €.

²⁴ CNVP (‘Connecting Natural Values & People’)- a Netherlands based foundation, is a legacy organization of SNV (Netherlands Development Organization) in the Balkans. Established through a legal demerger, CNVP will continue the SNV forestry and rural development programme in the Balkans and beyond.

MACEDONIA

Berovo Municipality

Project: *Biomass heating for primary school in village Dvorishte*

Financing: National Association of Private Forest Owners in Macedonia (NAPFO), Municipality of Berovo, CNVP Macedonia and UNDP-GEF SGP Macedonia

Brief description

The project initiated by NAPFO as pioneer in wood chips production in Macedonia, included advanced biomass system with boiler of 95% energy efficiency in primary school in village Dvorishte. The project implementation started in December 2011 and ended on 31 May 2013 and the total investment was around 47 000 €.

Karposh Municipality

Project: *Subsidy model for construction of energy efficient buildings*

Brief description

Karposh is the first municipality in Macedonia that created and successfully implemented five-year-long Program for Energy Efficiency (2008-2012) and one of the very few cities and municipalities in South-east Europe that developed and officially adopted *Rulebook for construction of buildings*. Main roles of the Rulebook are twofold: besides stipulated building requirements, it also contains a procedure that defines a subsidy model aimed at fostering energy efficiency in terms of thermal insulation properties. According to the Article 12 of the Rulebook, 20% refund in communal tax costs could be achieved if installed thermal insulation exceeds minimum requirements stipulated in the Rulebook by 10% and if renewable energy sources are utilized for at least one purpose in the same building.

MONTENEGRO

Old Royal Cetinje Municipality

Project: *Beautiful Cetinje*

Financing: UNDP, municipal budget

Brief description

Project implementation started in 2011, launched and financed by UNDP, with cooperation and involvement of local government Cetinje. Project deals with economic revitalization of the Old Royal Capital through urban reconstruction of the cultural heritage with energy efficient considerations, provision of vocational trainings and support to small businesses and encouragement of green design ideas and innovations in the overall urban development.

The achieved results are the following:

- Reconstructed the main city square – King's Nikola square: the square is tiled, replaced by urban mobilier and lighting
- Retrofitted the Music Academy building (former British Embassy) - made thermal insulation of the facade and roof, as well as replaced heating installations and facade windows and doors
- Retrofitting the old hospital "Danilo I"- replacement of external doors and windows,

replacing the roof with thermal insulation, thermal and hydro insulation of the floor and facade repair.

Municipality of Tivat

Project: *Sustainable Energy Development of the Municipality of Tivat*

Brief description

Draft Decision of municipal land development of the Municipality of Tivat includes communal fee reduction of the amount of 150 Euro/m² for all investors who anticipate the possibility of solar systems installing in buildings for water heating, space heating or cooling.

Furthermore, Municipality of Tivat signed the Agreement with NLB Montenegro bank to establish special account of 15 000 Euros for subsidy to the households for thermal insulation and replacement of external doors. Public lighting replacement through ESCO concept as well as establishment of Car Free Days is in the pipelines.

Capital City of Podgorica

Project: *Sustainable Energy Development of the Capital City of Podgorica*

Brief description

Sustainable Energy Development of the Capital City of Podgorica was based on the following sustainable energy projects:

- Relocation of traffic network from the Zone I of the City
- Setting up of specific infrastructural solutions which contribute to speeding up traffic participants (roundabouts)
- Organizing educational-promotional campaigns, tribunes and workshops (Renewable Resources Day, Energy days of Podgorica, etc.)
- Building and reconstruction of buildings owned by Capital City, in accordance with the low-energy standards
- By the 50% -50% (Capital - Citizens) system of financing, thermal insulation of outer layer of collective residential buildings is done
- Conceptual design for the reconstruction of sidewalks and cycling facilities in certain parts of the City has been developed
- Within landfill "Livade", activities are conducted related to the production of electricity and hot water from landfill biogas as well as electricity production from solar panels.

BOSNIA AND HERZEGOVINA

Different municipalities in FBiH and RS

Project: *The Beacon Scheme program*

Brief description

The Beacon Scheme program was officially launched in year 2005 and since 2009 has been financed by the Federal Ministry of Justice and the Ministry of Local Government of the Republic of Srpska. The Beacon scheme focused on identifying, rewarding and promoting best practices of local communities in Bosnia and Herzegovina implemented by Association of Municipalities and Cities of the Federation of BiH and the Association of Municipal-

ities and Cities of RS. For the past seven years, the program Beacon Scheme was attended by more than 70% of municipalities in BiH, and 41 Beacon awards have been allocated. The awards were assigned to the field of energy efficiency in buildings, recording and asset management community and the achievement of strategic goals through cooperation with non-governmental organizations. Beacon status in the field of energy efficiency in buildings belonged to the municipalities of Tuzla and Gradiška.

Municipality of Zenica, FBiH

Project: *Biomass heating plant in Nemila*

Brief description

Nemila is traffic, economic and population center of the northern part of the municipality of Zenica with about 19,000 inhabitants. In year 2011, Municipality of Zenica and Czech Development Agency signed a Memorandum of Understanding on the implementation of project "The use of renewable energy sources for the central heating system in Nemila", which meant the construction of biomass heating plant and accompanying infrastructure in Nemila for the period 2011-2013. The Government of the Czech Republic cofinanced project with the amount of 1.48 million EUR, and Municipality of Zenica invested about 2 million EUR. The project was implemented in the period 2011 to 2013 and was successfully completed in October 2013.

Municipality of Gradiška, Republic of Srpska

Project: *New heating system on biomass*

Brief description

One of the Gradiška's biggest EE projects is reconstruction of city district heating system implemented by private-public partnership of city public utility company Toplana and company IEE Ltd from Banja Luka. The main aim of the project, started in January 2014 is an efficient utilization of biomass for heating of around 2000 consumers (mostly households and services) in the city of Gradiška.

SERBIA

Different municipalities in Serbia

Project: *Serbian Energy Efficiency Project 1 (SEEP1 – Design and Supervision Support for Implementation of the Energy Efficiency Improvements in Public Buildings in Serbia)*

Financing: Loan by the World Bank

Brief description

The Serbian Energy Efficiency Project 1, implemented in the period 2005-2008, involved energy efficient refurbishment of 28 public buildings in Serbia (12 hospitals and 16 schools). The major goal of the project has been implementation of the energy efficiency improvements in public buildings in Serbia and the verification of the energy and cost savings as well as CO₂ emission reductions achieved through implementation of the energy efficiency measures. Significant energy consumption savings have been achieved for all refurbished buildings with annual savings in the range of 15% to 63% and an average of 40% over entire project. Associated annual CO₂ emission reductions varied from 15% to 64% with an average of 42%. The simple payback period was about 7.5 years.

Municipality of Varvarin

Project: **Modernization of Public Lighting System**

Financing: Part of a "Small Scale Investment Program" of GTZ-Project "Modernization of Municipal Services", financed by the German Federal Ministry of Economic Cooperation and Development (BMZ)

Brief description

The main objectives of the project started in year 2007 were:

- to achieve savings in electricity and maintenance and consequently savings in municipal budget
- to improve the quality of service
- to make energy/CO₂/budget savings visible to the general public in order to promote energy efficiency measures
- to enable constant monitoring of the system performance by municipal staff.

Project included replacement of 435 obsolete lamps with mercury bulbs with high pressure sodium light sources as well as installation of an advanced street lighting monitoring system (on-line presentation of street lighting system parameters i.e. Energy Clock).

GENDER EQUALITY IN SEE COUNTRIES

Gender equality is an essential factor in achieving sustainable change and is therefore one of the key values on which this Roadmap is based.

Gender-differentiated procedures and consistent efforts to ensure that women and men enjoy equal opportunities are among the features that should define the energy sector in SEE countries²⁵.

Developing approaches to overcoming gender inequality calls for knowledge of imbalances in gender relations²⁶. Knowing about the impacts of change approaches is equally essential. Sound knowledge management helps to expand this know-how, placing special emphasis on processing good practices.

The relation between women and men in SEE countries has been significantly impacted by recent history and the governance responses entailed in post-conflict reconstruction, state-building, and accession to the EU²⁷. While the overarching legal and policy framework on gender equality is in place, in practice, women do not enjoy de facto equal rights. National Gender Action Plans receive limited attention; they are insufficiently budgeted and weakly implemented²⁸.

The nexus between gender in/equality, energy, environment and climate change has remained unexplored in SEE countries. The only publication available is the gender section of Macedonia's Third National Communication on Climate Change, prepared in the framework of the country's progress reporting on the United Nations Framework Convention on Climate Change (UNFCCC) in 2014. This section is exceptional for the region. It provides a thorough overview on gender and climate change in Macedonia. The document contains Gender and Climate Change Indicators as well as a Proposed Action Plan on Gender and Climate Change Adaptation and Mitigation. From the 42 proposed gender-responsive actions, 11 are of immediate relevance for energy efficiency.

SEE countries are characterized by persistent inequality between women and men, and they face comparable challenges related to the discrimination of women (high female unemployment and inactivity rates; unpaid care work provided almost exclusively by women; low representation of women in decision-making; highly gendered occupational and educational profiles; high incidence of domestic violence). Respective reform processes share relatively similar dynamics. To some degree, activities operate in an overarching environment where EU-directives aim at greater equality between the sexes. At the same time, dynamics in these transition economies are characterized by the quest for a new national identity, which is generally backed by a reversion to traditional – and highly stereotyped and unequal – gender norms and values. As a result, relations between female and male citizens are continuously contested, negotiated, and newly defined, as is their relation vis-à-vis the State. Ensuing challenges are particularly evident in heavily disputed areas like energy governance, and in the current state of Gender Equality. Dynamics are additionally impacted by the ongoing economic and financial crisis.

25 GIZ Gender Strategy, March 2012

26 GIZ Gender Strategy, March 2012

27 Dolly Wittberger, PhD, ORF Energy Efficiency - Gender Assessment, December 2014

28 Dolly Wittberger, PhD, ORF Energy Efficiency - Gender Assessment, December 2014

The main challenges to improve Gender Equality in EE sector in SEE countries are the following:

- Too few people, including few women, who understand the direct impact of energy and energy inefficiency on them, and who know how to act on this fact in concrete terms
- Too few EE experts with gender expertise and too few gender experts who are knowledgeable on EE issues
- Lack of implementation of gender policies, and lack of gender mainstreaming interventions in general - in particular in the energy sector
- Women's limited representation and participation in the energy sector (policy making, employment, education/studies/training, civic engagement)
- Lack of awareness and sensitization efforts for gender equality aspects in the energy sector, including in EE
- Lack of solid energy data and particularly lack of information on the gendered dimension of energy provision, use, sources, poverty, and inefficiency (at the level of data, analysis, studies)
- Lack of gender-sensitive pilots and therefore lack of experience in showing how to address energy poverty and energy efficiency issues in a practical and gender-responsive way
- Studies on energy poverty, e.g. "Energy Poverty in Macedonia" (Analytica, 2013) are gradually emerging; however, the differentiated impact on, and implications for, women and men are not taken into consideration. Sex-disaggregated data on energy poverty is lacking
- Brain-drain (young experts, including the few female experts, leaving the country)
- Women are almost exclusively made responsible for providing unpaid care work (household, child-, sick-, and elderly care), which is an under-use of human capacity and resources, and heavily contributes to the time burden on women
- More favourable employment conditions for women

Recommendations to improve Gender Equality in energy sector in SEE countries:

- Increase national compliance with the obligation to collect sex-disaggregated data (even though analysis, interpretation, and follow-up are weakly developed)
- Gender equality as requirements in application documents of EU financing mechanisms (e.g. IPA II, European Territorial Co-operation programmes Horizon 2020, CIVITAS, Elena, etc.).
- Monitoring of GE in projects, development of policies, strategies, implementation of events, etc.
- Application of Gender Responsive Budgeting (GRB)
- Gender focal points or gender equality experts as mandatory employees in public institutions and organizations
- Existence or employment of strong female technical expertise in public institutions
- Use the fact that economic crisis and high youth unemployment pushing girls into innovative, modern and marketable, i.e. technical, fields of study as an economic survival mechanism into gender advantages
- Public awareness activities on GE issues

It can be concluded that fulfilling the Gender Equality objectives is challenging but bridgeable, as demonstrated throughout this Roadmap. Simple approaches as listed make it possible. Also, through the provision of support by international organizations such as the GIZ, UN, SIDA, etc., but also by national GE/GM Agencies/Institutions GM in EE is possible, more so, based on the existence of GE relevant policies and strategies, it is very much feasible. This has been demonstrated by numerous organizations and projects in the region. Hence, there is no justified reason for the EE sector to be exempt from this.

BEST WAYS TO DEVELOP SMART SEE MUNICIPALITY

Action that should be taken aiming to establish SMART SEE municipality are divided into 6 main categories:

- Strategic
- Legislative & Regulatory
- Technical
- Fiscal/Financial
- Communication/Capacity Building
- Research and Development

S T R A T E G I C	Establish support across the political spectrum for establish SMART SEE municipality
	Establish an independent committee to monitor and report progress of SMART SEE municipality development on an ongoing basis, including making recommendations for improvements and periodic updates
	Undertake systematic appraisal of barriers to SEM development in each segment and develop policy responses to address each barrier
	Establish objective to eradicate fuel poverty through energy performance improvements to the buildings stocks in SEE municipality
	Develop holistic cross-policy targets that integrate with and deliver on goals in related fields, e.g. sustainable urbanization, resource efficiency, sustainable construction, sustainable mobility, LED public lightings, etc.
	Establish a wide stakeholder group as a forum for consultation, policy formulation and feedback on practical issues and barriers to SEM development including GE principles
	Demonstrate leadership through accelerated EE measures on public properties (public buildings, public vehicles, public lightings, etc.) as the best examples to private properties (households, commercial buildings, private vehicles, etc.)

L E G I S L A T I V E	Identify trigger points and develop respective national EE legislation to encourage SEM development
	Develop and enforce Energy Efficiency Regulations at municipal level including GE as a cross-cutting issue
	Facilitate the upgrade of all public buildings to higher energy performance levels
	Develop national strategies concerning local deployment of low/zero carbon technologies to ensure that a positive environment for SEM is established
	Facilitate the upgrade of public lightings to higher energy performance levels
	Mandate improvement of least energy efficient building stock to higher energy performance level, e.g. through restrictions on sale or rental of buildings in lowest energy performance categories
	Develop and enforce Monitoring and Verification System for SEM development

T E C H N I C A L	Develop standards that are progressively and regularly strengthened in response to experience and new technological solutions
	Analyse potential for district heating systems to provide efficient, low carbon energy
	Ensure proper monitoring and enforcement of compliance with building codes
	Develop packaged solutions that can be readily replicated in similar building types
	Introduce quality standards/certification systems for installers & products (including packaged solutions)
	Ensure proper monitoring and enforcement of compliance with public lightings standards
	Implement high-tech solution in traffic sector (intelligent traffic lights, traffic flow meters, etc.)

F I N A N C I A L	Secure sources of finance for SEM development and mechanisms that effectively leverage private capital
	Factor in monetary value of co-benefits (e.g. health, employment, etc.) in public funding decisions
	Develop funding vehicles, tailored to specific market segments, that provide a simple (“one-stop-shop”) and commercially attractive source of finance different EE measures
	Develop mechanisms to encourage EE measures implementation via third party financing, e.g. ESCOs, EPCs
	Strengthen energy/carbon pricing mechanisms to provide the right economic signals
	Remove fossil fuel subsidies to eliminate perverse incentives that discourage investment
	Consider “bonus-malus” mechanisms, e.g. property taxation systems (which reward high energy performing buildings while penalizing poorly performing ones) and energy pricing

C A P A C I T Y	Establish publicly accessible databases demonstrating energy performance of renovated buildings and information on how to undertake deep renovation
	Gear up skills and training programmes covering the key professions and disciplines
	Establish knowledge and experience-sharing networks across SEE countries
	Encourage development of local supply chain industry for maximizing macro-economic benefits and to minimize embedded CO ₂ emissions
	Develop promotional and dissemination activities that sensitize public to undertake EE measures, taking into account the GE perspective
	Inform and communicate regularly and publicly on progress of SEM development
	Engage all the stakeholders in all phases of SEM development

R & D	Support research, development and demonstration projects into new & improved technologies and techniques to SEM development
	Engage R&D stakeholders in all phases of SEM development

21 STEPS TO SMART SEE MUNICIPALITY

1.	Make public statement to be SMART SEE municipality
2.	Build successful organizational structure including GE principles
3.	Benefit from international endorsement and support
4.	Benefit from encouragement and examples of other pioneers
5.	Benefit from joining CoM and SEAP development
6.	Identification of concrete measures to improve energy situation in municipalities
7.	Reduction of costs through energy efficiency and modern energy technologies
8.	Useful tools made available for SMART SEE municipalities
9.	Strengthening of municipal economic development
10.	Cooperation among municipalities aiming to sustainable energy development
11.	Opportunity for citizen participation
12.	Strengthen the local economy by local works - local contractors
13.	Savings in energy consumption and therefore costs through energy efficiency – re-circulated into the local economy
14.	Case studies/ learns from one municipality to another: Exchange of experiences and best practices
15.	Tools available to help monitoring CO ₂ emissions on municipal level
16.	Development of know-how in SMART SEE municipalities
17.	Economy development through creation of new (green) jobs taking into account the GE perspective and addressing the underrepresentation of women in EE
18.	Continuous education and information public awareness campaigns: Knowledge is the power and GE perspective is the only right road to sustainable future!
19.	Identification of financial instruments for implementation of EE measures
20.	Improvement of living standard in SMART SEE municipalities through reduction of energy costs
21.	Improvement of overall quality of life in SMART SEE municipalities through SEM development including GE principles

