



Development of ESCO market and policies in the countries of South-Eastern Europe, Eastern Europe & Kazakhstan

Oleg Dzioubinski
UNECE Sustainable Energy Division

UNECE/ESCAP Inter-regional Workshop on Energy Efficiency Investment Projects Pipeline
23-24 April 2014, Bangkok, Thailand





Financing Energy Efficiency Investments for Climate Change Mitigation (FEEI) Project

Long-Term Objective:

Promote an investment environment for self-sustaining energy efficiency and renewable energy projects to be developed and financed to reduce greenhouse gas emissions

Extracts from FEEI Project Documents:

“One of the best ways to address the issue of financing energy efficiency investments is through the creation of specific intermediaries called ESCOs...”

“...the most powerful instrument to trigger the realisation of energy efficiency investments is through creation of ESCOs...”

“ESCOs are important...particularly for dealing with small scale energy efficiency investments.”





Energy Efficiency and Renewable Energy Policies

Regional Analysis of Policy Reforms to Promote Energy Efficiency and Renewable Energy Investments

- A wide-ranging regional assessment, including analysis of policy framework, existing barriers and case studies to overcome the barriers
- Provides recommendations to develop & implement policy reforms to support market formation and foster a favorable climate for investments in EE and RE

Policy seminars, workshops, International Fora: Energy for Sustainable Development

Network of energy efficiency managers

- National Participating Institutions (NPIs) and National Coordinator (NCs) in the project participating countries

Publication Development of Energy Service Companies Market and Policies

<http://www.unece.org/index.php?id=34290>

http://www.unece.org/fileadmin/DAM/energy/se/pdfs/eneff/publ/Dev_ESCO.pdf





Development of ESCO market and policies

Step 1: Draft information prepared and sent to the NCs/NPIs for feedback and comments

Step 2: Comments, updates and corrections received from NCs/NPIs and incorporated into final document

Step 3: Publication on Development of ESCO market and policies in the FEEI participating countries prepared and issued in December 2013





Development of ESCO market and policies

12 FEEI participating countries:

- European Union countries
- South-Eastern European countries
- Countries of Eastern Europe and Central Asia

Overview of ESCO market development :

- *Existence of ESCO in the country*
- *Types of contracts signed*
- *Types of projects implemented*
- *Existing legislative & regulatory framework*
- *Compliance with EU regulations*
- *Existing barriers and challenges to ESCO success*
- *Success factors*





FEEI: European Union countries

Country	Bulgaria	Croatia	Romania
Existence of ESCO	Enemona SA, Energy Efficiency Systems Ltd +150 companies carrying out energy audits	HEP ESCO, EETEK Holding Plc and several other companies for providing of energy services	Energy Serv S.A, SE-GES, EnergobitESCO, SERVELECT, Krobath Romania SRL, Cothec Energetikai Uzemelteto SRL, Energy Services Group, Luxten Lighting, ENEAS S.R.L
Types of contract	EPC	EPC	oriented to EPC
Types of projects	EE projects in industrial sector, public buildings (municipal and state), RE projects (small HPP, solar and biomass power stations)	Electricity and heat energy services in private and public sectors, lighting, modernization/reconstruction of existing plants or buildings	Variable speed flow control, lighting revamp, daylight sensors, compressed air efficient use, power grids optimal reconfiguration, heat recovery, heat pumps for heat recovery, on-site cogeneration systems in the industry
Regulatory framework	National Energy Strategy (2002), National Long-term EE Programme 2005-2015, First National EE Action Plan for 2008-2010, Second EE National Plan for 2011-2016, National Programme for Renovation of Panel Residential Buildings from 2005-2020, Condominium-Project Building Act (2009), National Strategy for Financing of Buildings Insulation for EE Improvement for 2005-2020	Act on Efficient Utilization of Energy in Final Consumption (OG 152/08, 55/12) and Ordinance on Contracting and Implementation of Energy Services in Public Sector (OG 69/12), Energy Efficiency Master Plan for Croatia (for 2008-2016 period), Retrofitting programme for public sector buildings (04/2012–12/2013)	National Strategy for Energy Efficiency (2004), Law 372/2005 on energy performance of buildings, Romanian Electricity Law (2007), Energy Strategy for 2007-2020 (2007), National Action Plan for Energy Efficiency (2008), National Programme for Increasing EE and RE Utilization in Public Sector for the period 2009-2010 (2008), Second EE National Action Plan (2011)





FEEI: European Union countries

Country	Bulgaria	Croatia	Romania
Compliance with the EU	EU member state, introduction of the National Energy Efficiency Action Plans required by the EU Directive on EE and Energy Services; Participant of the Energy Community Treaty (2007)	EU member state, compliance with the EU Directives (2010/31/EU) on the energy performance of buildings and EU Directive (2006/32/EC) on energy end use efficiency and energy services; Participant of the Energy Community Treaty(2007)	EU member state, introduction of EU Directives 2005/32/EC, 2006/32/EC, 2009/28/EC, etc. into internal legislation; Participant of the Energy Community Treaty (2007)
Barriers	Frequent amendments to existing legislation, corruption, lack of awareness and lack of capacities at the municipal level, lack of financing of EE projects by commercial banks	Unsolved ownership relations, relatively long duration of procedures, lack of ESCO companies and lack of enough good prepared projects	Lack of internal expertise of local banks to evaluate EE projects, restricted capacity to develop fully bankable project proposals
Success Factors	Operation of BEEF (providing financing for ESCOs), ministries/ departments and municipalities can plan funding for performance of ESCO services within their annual budgets, contracts with guaranteed results in Bulgaria are legally regulated in the Energy Efficiency Act (EEA) and the special Ordinances	1 st and 2 nd National Energy Efficiency Action Plan (NEEAP), Physical Planning and Building Act as a basis for adoption of regulations on energy performance of buildings, mandatory energy certification of buildings (from 2010), Retrofitting programme for public sector buildings (04/2012-12/2013)	NEEAP established a specific measure for promotion of EPC (chapter: “Promotion of development for ESCO”), local commercial banks started move into EE market, financing mechanism of the National Programme for Increasing EE and RE Utilization in Public Sector for the period 2009-2010 can be used to support contribution to ESCO development





FEEI: Countries of South-Eastern Europe

Country	Albania	Bosnia and Herzegovina	Serbia	FYR of Macedonia
Existence of ESCO	No ESCO	Few ESCO-type companies	New ESCO oriented activities	No ESCO
Types of contract	N/A	Guarantees on energy savings and simple payback time	N/A	N/A
Types of projects	N/A	Installation of mini-heating systems, boiler exchanges, establishment of tri-generation plants	N/A	N/A
Regulatory framework	National Energy Strategy (2003), Energy Action Plan (2007), Energy Efficiency Law (2005), First National EE Action Plan (2011)	No energy efficiency law, no specialized agency for EE and RE	Energy Law (2004), Energy Sector Development Strategy by 2015, Implementation Programme of the Energy Sector Development Strategy by 2015 for the period 2007-2012	Energy Law (2006), Strategy for Energy Development until 2030, National Action Plan (2009), Energy Law (2011) Energy Efficiency Strategy until 2020, National Energy Efficiency Action Plan 2010-2018
Compliance with the EU	Ratification of Energy Community Treaty (2006)	Contracting Party to Energy Community Treaty	Contracting Party to Energy Community Treaty, assistance of the EU in establishment of Serbian Energy Efficiency Agency (SEEA) via the European Agency for Reconstruction (EAR)	Stabilization and Association Agreement between the EU and FYR of Macedonia, ratification of Energy Community Treaty (2006)





FEEI: Countries of South-Eastern Europe

Country	Albania	Bosnia and Herzegovina	Serbia	FYR of Macedonia
Barriers	Complex non-transparent regulations, legislation is more declaratory than operational, low tariffs, lack of experience of financing EE and RES projects (by commercial banks), lack of appropriate and accessible financial resources, low awareness	Absence of decisional competences in energy matters, lack of coordination between the entities, no EE legislation in place, lack of awareness and capacities to develop EE projects	No dedicated energy efficiency law, no support mechanism in place for ESCO activity, absence of public funding dedicated to EE projects, low electricity and heat prices, no financial incentive for EE, lack of awareness on EE and ESCO potential, lack of financing by local banks	No specific EE law, lack of experience in ESCO projects by local banks, low tariffs for energy, lack of clarity of legal procedures regarding ESCO projects, lack of contract and tender templates, lack of M & V practices, lack of expertise for preparing ESCO projects
Success Factors	Adoption of the NEEAP, introduction of obligation for energy audits, establishment of EE Fund. Albanian-EU Energy Efficiency Centre may have potential to serve as ESCO.	Compliance with EU regulation as a driver for development of energy regulatory framework, Law on EE has been proposed on entity level	Energy Law foresees new responsibilities for municipalities: energy balancing, energy strategic planning and establishment of local energy markets, energy price liberalization has started, adoption of the EE Law, establishment of the Serbian Energy Efficiency Fund.	Elaboration of municipal Local EE Programmes and Action Plans, consideration for creation of the EE Credit Line by the local banks, by- laws on energy audit and energy performance of the buildings have to be adopted.





FEEI: Countries of Eastern Europe and Central Asia

Country	Belarus	Kazakhstan	Moldova	Russian Federation	Ukraine
Existence of ESCO	“BelinvestESCO”, “Vneshenergосervice”, Center of New Technologies “Connectikum”	No ESCO	ESCO-Voltaj, number of ESCO-type companies	ENEFCO, H2O-Technology, GPB-EnergyEffect, Energoprofit, FNESCO, FRESKO, CESKO, NESCO, Invest ESCO ENEFCOM, FESCO, SBERENERGORESURS	UkrESCO, ESCO-Rivne, Energy Alliance, Aitikon, KyivESCO, OdesaESCO, around 130 ESCO-type companies
Types of contract	BOOT	N/A	Fee-for-service	Shared saving	BOOT, “turn-key” concept
Types of projects	Co-generation plants in large industry	N/A	Installation of heat-meters and modern high efficiency boilers in industrial sites, thermal insulation of buildings, application of new industrial high-efficiency technologies	Street lighting, heating, controlled systems, compressed air systems, district heating, projects in municipalities	Co-generation stations, compressed air systems, heat supply systems, cooling, and equipment modernization in small and medium enterprises, projects in municipalities, the first pilot EPC will be implemented in Dnipropetrovsk (by EBRD)





FEEI: Countries of Eastern Europe and Central Asia

Country	Belarus	Kazakhstan	Moldova	Russian Federation	Ukraine
Regulatory framework	Law on Energy Saving (1998), Concept of Energy Security (2007), Strategy for Development of Energy Potential (2010), National Programme on Energy Saving for the period of 2011-2015, National Programme on Development of Local, Renewable and Unconventional Energy Sources in 2011-2015	Law on Supporting the Use of Renewable Sources of Energy, Energy Sector Development Programme until 2030, Programme for the Development of the Electricity Sector up to 2030, State Programme for industrial-innovative development of Kazakhstan for 2010-2014, new Law on Energy Saving and EE (2011)	Energy Law (1998), Law on Conservation (2000), Law on Renewable Energy Sources (2007), Law on Energy Efficiency (2010) National Programme of Energy Conservation for 2003-2010, Energy Strategy until 2030.	Energy Strategy for period up to 2030 (2009), Law on Energy Saving, Increasing of EE and Introduction of Changes in Selected Legislative Acts of the Russian Federation (2009), decree of the President on measures to increase the energy and environmental efficiency of the Russian economy (2008), Federal Programme Russian Federation on Energy Efficiency and Development of the Energy Sector (2013-2020)	Energy Strategy until 2030 (2005), Law on Energy Saving (1994), Comprehensive State Programme of Energy Saving (1997), State Programme of Reform and Development of the Housing and Communal Sector for 2004–2010 (2004), State Targeted Economic Programme on Energy Saving for 2010-2015
Compliance with the EU	Not a member of Energy Community, ENP Annual Action Programme (2007) aimed at providing support to implementation of a comprehensive energy policy	Signed MOU (road map cooperation on enhancing energy security and industrial cooperation) between EU and Kazakhstan	EU Moldova Action Plan (2004) under the Partnership and Cooperation Agreement, Contracting Party to Energy Community Treaty	Russia-EU Energy Dialogue (overall cooperation on energy saving, rationalization of production and transport infrastructures, investment possibilities and relations between producer and consumer countries)	Ukraine-EU Action Plan set up a Technical Assistance and Information Exchange Instrument (TAIEX) programme, development of joint instrument (Road Map), Contracting Party to Energy Community Treaty





FEEI: Countries of Eastern Europe and Central Asia

Country	Belarus	Kazakhstan	Moldova	Russian Federation	Ukraine
Barriers	Lack of legislation on energy services, state monopoly on production and transport of energy, absence of budget planning for more than one calendar year, differentiation of tariffs for private and state owned companies, subsidized energy tariffs for building sector, lack of awareness about ESCO potential	Absence of energy efficiency agency and action plan for EE in place, availability of natural resources precluded development of awareness on relevance of EE projects, limited experience and lack of institutional and financing mechanisms for implementation of EE investment projects	Absence of secondary legislation to guarantee implementation of regulatory framework (e.g. support to development of ESCOs), low level of awareness among population and policy makers	No action or implementation plans have been developed, absence of operational dedicated credit lines by national funds, not completed process of privatization and liberalization in the energy sector, availability of resources provides no incentives to increase of EE lack of interpretation and guidelines from the Ministry of Finance of Russia to customers, providers of energy services and the Federal Treasury on the issue of planning expenditures budget on energy service contracts and payment, accounting, budget and tax accounting operations carried out within the framework of energy service contracts	ESCO market is hindered financially, high interest rates on loan, absence of legislative incentives, lack of a liberalized energy market, information on ESCOs is very scarce, absence of budget planning for more than one calendar year, lack of possibility to receive local guarantees, insufficient support for servicing energy saving measures





FEEI: Countries of Eastern Europe and Central Asia

Country	Belarus	Kazakhstan	Moldova	Russian Federation	Ukraine
Success Factors	Draft Law on Electricity where activities of ESCO are to be regulated, establishment of International Energy Center (UNDP supported project), awareness raising and dedicated trainings	Plans to develop a new state program “Energy efficiency 2020”, state support for enterprises in the purchase of energy-saving technologies and equipment.	Draft of a national energy efficiency action plan 2012-2014 and a national renewable action plan 2012-2020. In 2013, the Energy Efficiency Fund was established. A Revolving Fund has been created, which partially serves to help the ESCOs’ operation	Introduction of EPC in the law which is linked to the budgetary legislation, EE regulation in construction industry and housing sector, introduction of energy audit (on voluntary basis) and “energy passport”, support for energy-saving technologies, introduction of tax incentives	Existence of the State Agency on Energy Efficiency and Energy Saving





Thank you for your attention!

Oleg Dzioubinski

Economic Affairs Officer

UNECE Sustainable Energy Division

+41 22 917 2360

oleg.dzioubinski@unece.org

<http://www.unece.org/energyefficiency.html>

