

*“Renewable Energy Services –  
The Future Challenge Conference”*

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**BioSoLESCo**



EIE-07-264 Bio-Sol-ESCo

## ESCO activities in the European Union

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**KAPÉ  
CRES**

CENTRE FOR RENEWABLE  
ENERGY SOURCES AND SAVING



**INTELLIGENT ENERGY  
EUROPE**



## Content

- European Status
- ESCo market
- Opportunities
- Barriers
- Greek ESCo market – Recent Developments



## 2007-2010: overall EU picture

- Slow growth, but still huge potential even in most developed markets
- Significant differences among national markets:
- cumulative number: ca. 650-1040 companies
- DE, IT, FR still the largest markets



## 2007-2010: overall EU picture

- typical: public sector activities, bundling for economies of scale; but more and more importance to other sectors
  - Traditionally the public sector (buildings) is in primary focus (trustful, large systems, short payback time, open for outsourcing, often augmented by governmental aid);
  - Industrial sector is more important in certain countries (Italy, Finland, Ireland, Slovenia);
  - Residential buildings (multifamily buildings) sector is starting up in some countries (e.g. Germany, Estonia, France, Italy, Norway, Hungary), including some deep retrofits.
  - "low hanging fruits" have been addressed (public lighting, HVAC, control systems renovation);
  - CHP (and DH in NMSs) still plays a major role;
  - Deep retrofits (e.g. building insulation), not commonly done by ESCOs (done in combination with incentives!).

**ESCOs invest in the projects that offer appropriate profit at an acceptable level of risk.**

(Source: JRC)

A general review of the **ESCo markets** of the European Member States demonstrates that **diversity exists among the countries** in what concerns:

- ESCo market development
- Type of used contracts
- Policies and Regulations
- Public funding or other Government support for ESCOs
- Rules relating to the provision of private finance of ESCOs

In many MS the ESCO market is well developed in:

- Ⓢ public administration buildings
- Ⓢ hospitals and schools



**Public sector**

- Ⓢ in industry
- Ⓢ in hotels
- Ⓢ and other type of buildings such as hypermarkets, shops and bakeries



**Private sector**

Also many ESCo projects are in the area of Street lighting, CHP, heat production, EE.

in the majority of MS there are no public ESCOs

(source: CA ESD Support for Energy Service Companies (ESCOs) ,Technical Summary Report TSR04)

The **type of contracts** used in each member state for implementing ESCo projects **ranges** from the most well known schemes like **EPC** and **TPF**, to country specific schemes like **heat supply contracts** and the **chauffage contract**.

Significant differences exist between countries in the field of developing **policies** for the ESCO market:

- Some MS have no policies in place for ESCOs
- Some have only a few specific programs (e.g. ordinances, agreements and support schemes)

Many governments are unsure **how**, and **to what degree** to intervene in that market due to both limited experience with ESCOs and the complexity of the ESCO service.

In most of the countries no legal format has been adopted for ESCo operations, and the constitution can be any of the recognised formats in the country's law.

The majority of MS consider **ESCO registers** to be useful in stimulating the ESCO market.



## Public funding

In about half of the MS, public funding is available for EE projects developed by ESCOs.

In different MS there are different approaches for public funding of ESCOs. Some examples include:

- ✓ non-repayable direct investment grants
- ✓ grants for interest on loans
- ✓ Soft loans
- ✓ Assumptions of liability financial guarantees

Generally, **no financial support is given to the creation** of ESCOs.



## Government support for ESCOs

Communications and promotional information programs by public bodies have been mentioned as valuable inputs in the promotion of ESCOs.

Some good examples highlighted were:

- ✓ creation of competence centres
- ✓ information days
- ✓ guidelines and awareness campaigns

About half of MS governments have promotional measures for ESCO services, whilst the other half have only limited or no promotional activities.



## Project financing

**Project financing is a crucial parameter for the development of the ESCo market.**

In some countries, **where large ESCos exist** the financing of the projects is done by the company's own capital.

Large companies with financial means to finance projects → limited role of banks

In other countries **with no ESCo market developed** yet or with **only small ESCos** active in the market

→ It is necessary to have financial institutions willing to finance the projects.

Unfortunately, in many of the countries the financial institutions are **not familiar** with the concept of ESCo projects, thus they provide **conservative lending practices**, resulting this way in the **lack of commercially viable project financing**.



## Barriers

- ✘ Long public procurement procedures, where the assessment may not be based on energy savings criteria but only on price
- ✘ Lack of clear rules how to treat ESCo projects within public budgeting
- ✘ Complex administrative procedures in the public sector, with regulations that are not suitable for EPC
- ✘ Unfavorable procurement procedures
- ✘ Lack of standardized documents and established processes

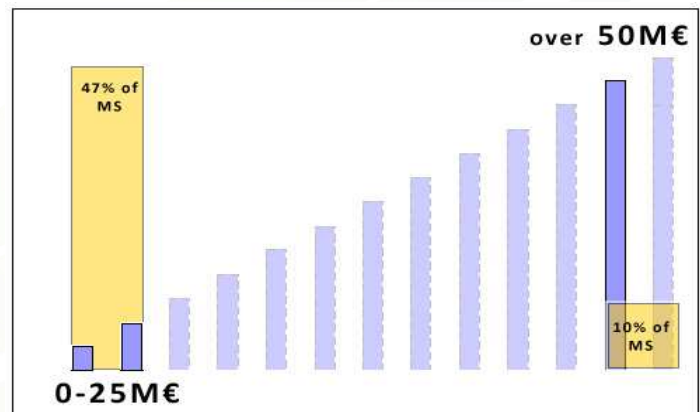


## ESCo Market

Some figures:

- 3 EU Member States have more than **40 active ESCOs** with an **annual market above 200 million EUR**.
- On the other hand, in most MS, the market is still **poorly developed**. For example → in almost half of the countries the annual ESCO market is **below 25 million EUR** and there are only a couple of active ESCOs.

The approximate size of the ESCO market in MS varies from 0 - 25M€ (in 47% of MS) to greater than 500 M€ (10% of MS).



(source: CA ESD Support for Energy Service Companies (ESCOs), Technical Summary Report TSR04)



## BioSoLESCo

**Database on biomass/solar ESCo operation →**  
ESCo operations with a clear focus on biomass and/or solar technologies throughout EU27

- Up until now: **229 ESCo operations** with **34** of them being characterized **as best practice examples**
- **Search criteria:**
  - Country / Region
  - Area (e.g. public sector, industry)
  - Current technology (e.g. oil, pellets, solar collectors)
- **Database available at:**  
[http://www.biosolesco.org/biomass\\_solar.htm](http://www.biosolesco.org/biomass_solar.htm)

# Database

BioSolESCo - Expanding biomass and solar heating in public and private buildings via the energy services approach

**Country:** Germany (selected), Please pick a country, Bulgaria, Croatia, Finland, France, Germany, Greece, Irish Republic, Italy, Poland, Slovenia, Spain, Sweden, United Kingdom

**Areas:**  service,  public sector, community/municipality,  public sector, province/region,  public sector, state,  trade,  industry,  other

**Current Technology:**  oil,  electric,  district heating,  geothermal,  air source heat pump,  wood chips,  logs,  pellet,  solar collector

**Previous Technology:**  oil + solar collector,  electric + solar collector,  geothermal + solar collector,  wood chips + solar collector,  logs + solar collector,  pellet + solar collector,  other

**62 projects found!**

Altenwohnanlage	GBM Mieterservice Vahrenheide GmbH
Altenzentrum in Hesse	OVE Energie GmbH & Co. KG
Baumwelt HKS Wohnbau GmbH	GWS AG für Wärme und Strom
Bayerischer Staatsbad Bad Reichenhau	KWA AG
Berufsschule Passau	SUDWARME Gesellschaft für Energielieferung AG
Braunerei Rothau	Energiecontracting Heidelberg AG
Braunschweig Gymnasium und Sporthalle	Wärmetechnik Quedlinburg GmbH & Co. KG
Bruder-Grimm- & Aug.-W.-Mende-Schule	KEWOG Energie und Dienste
Bundesamt für Straßenwesen (BASt)	WISAG Energiemanagement GmbH & Co. KG
Deutsche Oper Berlin	MVU Energiedienstleistungen GmbH Berlin
Ernst-von-Harnack-Schule	KEWOG Energie und Dienste
FEZ-Berlin GmbH	MVU Energiedienstleistungen GmbH Berlin
Fremdenverkehrs-gemeinde Schlechund	EnergieAgentur Berghamer & Partner
Gasthaus Krone	Stadtwerke Konstanz
Gemeinde Feldkirchen Z	MVU Energie AG

**Name:** Berufsschule Passau **Region:** Segeberg

**Website:**

**Previous Technology:**

**Current Technology:** pellet

**Provider:** SUDWARME Gesellschaft für Energielieferung AG **Area:** public sector, commune/municipality

[http://www.biosolesco.org/biomass\\_solar.htm](http://www.biosolesco.org/biomass_solar.htm)

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## Greek ESCo market Recent Developments

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# Legislation

- Law 3855/2010, Key measures & Conditions, “Measures to improve end-use energy efficiency, energy services and other provisions”.
- Adoption of measures to develop the energy services market by ESCOs
- Exemplary role to be played by public sector and
- a series of institutional measures to be developed to achieve the projected savings (system monitoring, availability of information, voluntary agreements, green public procurement)



# Legislation

Under Article 16 of 3855/2010 in an EPC the following should be regulated, in particular:

- Planning and management of energy project
- Methodology for assessing the savings and valuation of the resulting total economic benefit
- Purchase, installation and commissioning of the necessary energy equipment (such as electromechanical and electronic systems)
- Management, mode of equipment and its maintenance
- The total project cost
  - Cost of purchasing and installing the necessary equipment
  - Operating and maintenance costs
  - Financing costs
- The valuation process of the energy benefit
- Way of payments and payback



# Pilot Action

**Project Title: “Pilot implementation of energy interventions through energy performance contracting in public buildings and the wider public sector”.**

The project is part of the “**Building the Future**” program

## **Main Goal:**

This project aims to support the state for the development of the ESCO market where through selected pilot applications, at least in 5 buildings of public and wider public sector, will identify the technical, procedural and legal parameters and conditions for the implementation of energy performance contracting. Ultimately the projects aims the completion of the 5 pilot projects.



# Pilot Action Framework

The pilot action for the energy interventions through energy performance contracting in public buildings can be divided into four Actions.

## **Action 1:**

Identification of major energy consumers with significant potential for energy savings

## **Action 2:**

Technical description and preparation process of cooperation between the "Public body" and the "ESCO".

## **Action 3:**

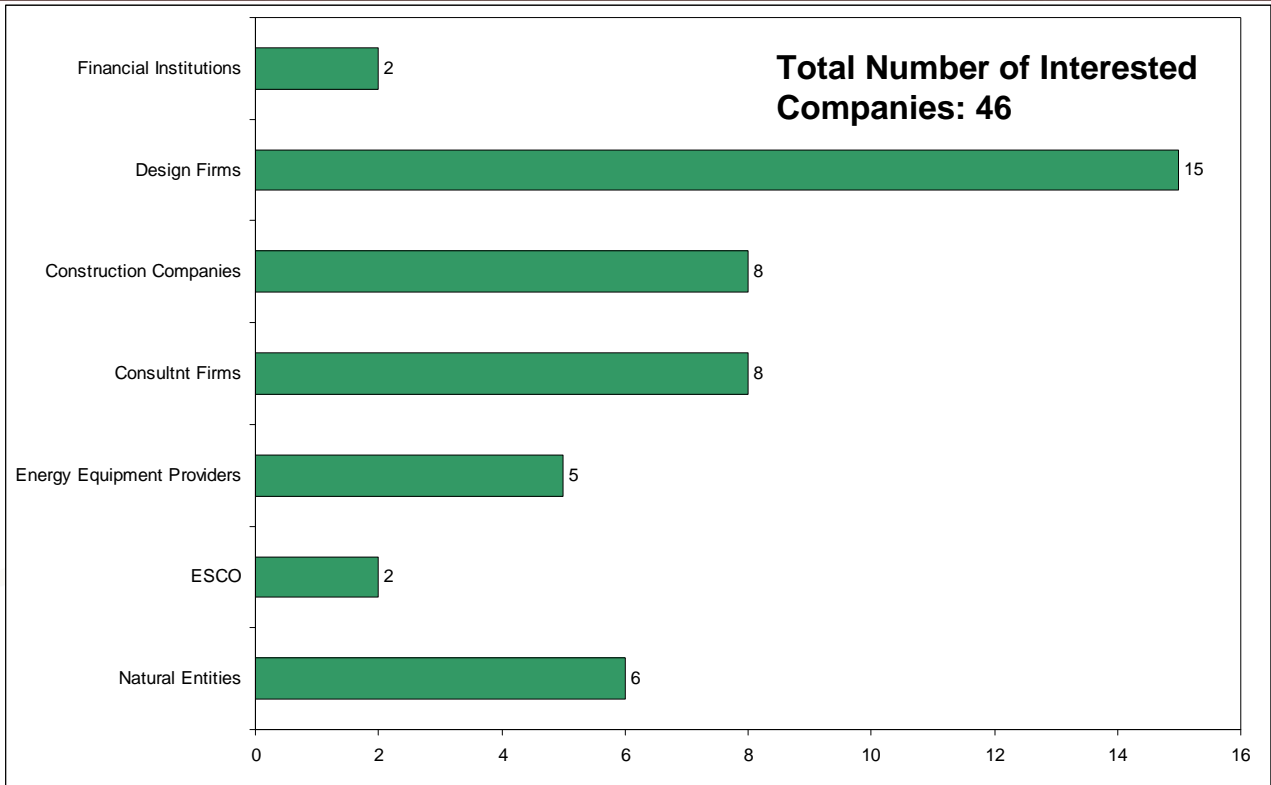
Follow up of the Contract Implementation

## **Action 4:**

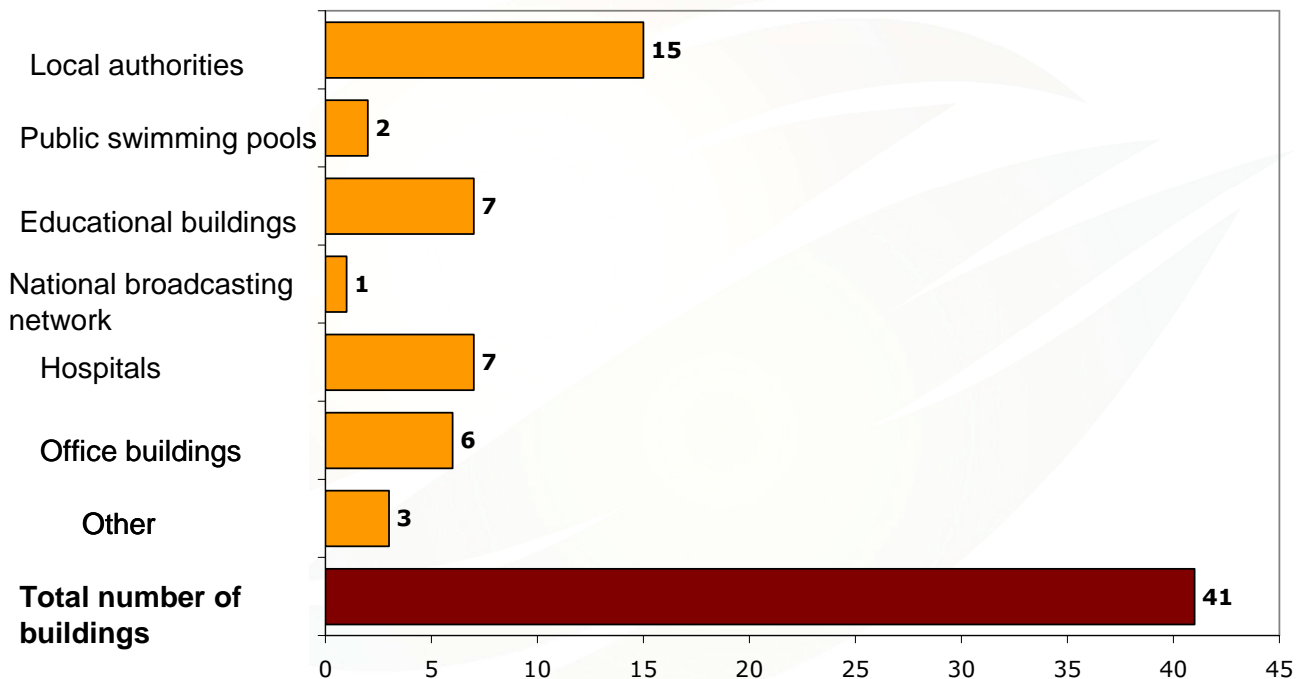
Assessment of results and demonstration activities



## ESCOs Expression of Interest



## Public Bodies' Expression of Interest





Thank you for your attention!!!

**George and Argyro**

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