



The European ESCO Market: Recent Trends, Market Sizes, Barriers and Drivers and the Remaining Market Potential

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Content

- Overall picture of the EU ESCO market
- Development between 2010 and 2014
- EU level drivers
- Structural changes
- Remaining barriers
- Example markets
- Future expectations



European market development: 2010-2014 market changes

- During the past ca. 3 years most of the European ESCO markets **have grown in size and/or developed their complexity**. Thus the average European ESCO market has improved.
 - more ESCOs;
 - more projects;
 - entered areas where they were not working before (household, even transport)
 - higher level of institutionalization.
- Development is **also** observed in case of the **non-EU countries**.



European market development: 2010-2014 market specificities

- **Few mature markets:** DE, CZ, FR, AT. Even these can expect to go through significant growth in the future.
- The ESCO sector was able to **kick-off in** several typical **non-ESCO countries**, such as Denmark and Spain.
- **Decrease or deterioration** of the ESCO sector was **rare** during the observed period (observed in HU, maybe AT?, maybe SE?).
- Large differences between national markets – success lessons are only partially transferable
- The geographical distribution of ESCOs and projects is uneven also within countries. For example underdeveloped in the east of Germany (exc. Berlin) while well-developed in the west. In Austria, a few regions and cities such as Styria, Salzburg, Tyrol and the city of Vienna, are leaders in using ESCO projects.



EU market support

- Directives: ESD, EED (EPBD indirectly)
- EU EPC campaign
- IEE and FP7/H2020 projects (incl. Eurocontract, ChangeBest, Permanent, Transpare**ense**, EESI, EESI2020, Combines)
- JRC and IFI capacity building (workshops, reports, networks)
- prEN15900 standard
- Energy efficiency funds, incl. European Energy Efficiency Fund (EEE-F),



Market structure development: 2010-2014

ESCO associations, public ESCOs, facilitators

- **ESCO associations exist** in 11 EU and 3 non-EU countries (AT, BE (2), CZ, FR (several), DE (several), IT (several), PT, RO, ES (several), SE, UK + CH + Ukr + Armenia)
- **Plans for ESCO association** in 4 +2 countries (SK, SI, ES, NL, CH (a new one), + TR)
- several organizations with **similar functions** (ESCO Club (PL), the Bulgarian WEC Committee, the ESCO network in Denmark, DEEM group in Hungary, the National ESCO Action Group in Ireland)
- There are many ESCO markets with **public ESCOs**. The role may be:
 - To act as one of the ESCOs
 - Or as a mediator: e.g. BE



Market structure development: 2010-2014

Structural content

- Structural development is common as a process towards maturation:
 - the markets are becoming demand driven,
 - increasing number of policies acknowledge and support the ESCO solution,
 - facilitators gain importance in selected countries as an effective means to mediate between client and suppliers;
 - the number of ESCO associations is growing,
 - model contracts, standards and/or intensive information dissemination are developed and carried out by third parties/ market facilitators;
 - participation of a wide array of companies, including consultants, small enterprises, large ESCOs, utilities, etc., indicating an open and competitive market.



Market structure development: 2010-2014

ESCO associations, public ESCOs, facilitators

Facilitators help potential clients to understand the complexity of an ESCO option, help with the procurement process, then assist in carrying out a project (find suppliers, decide between offers, monitor, assess the results, etc.)

Facilitators are usually:

- **national (or local) energy (efficiency) agencies** (e.g. Motiva (FI), SEAI (IE), the Graz Energy Agency (AT))
- **(private) energy audit companies,**
- **legal advisors and private facilitators** (e.g. CH)
- **EPC procurement advisors** (CZ).
- rarely the **government** (Ministry for Energy and Natural Resources (TR))
- International Financing Institutions (in neighbouring countries)

Market structure development: 2010-2014

contract types

- The most commonly used contract type is still the chauffage contract (heat/energy supply contract).
- There are only a few countries, where EPC dominates, e.g. in Austria or the Czech Republic. Even in Germany, where EPC enjoys significant popularity, only 8-10% of the market is covered by EPC.
- Two trends:
 - clarity has increased in regards the meaning and content of existing contracts, either because of the creation or the dissemination of standardized contract models or guides or because of the introduction of definitions/standards (e.g. standardized contracts in the RE:FIT programme in the UK, the EPC standard in Norway, certification and standards in Austria, etc.).
 - more flexibility was allowed in the contracts or the contracting process than before (e.g. Denmark, UK), and so called “negotiated procedure” is followed (Belgium).



Market structure development: 2010-2014 contract types

New/innovative contracts:

- Integrated Energy Contracting (IEC) : energy efficiency and energy supply measures are combined under an EPC project.
- smartEPC to integrate energy, maintenance, comfort and building value performance contracting (BE) .
- EPC+ is an ESCO contract model combined with state grants and forfeiting, primarily for panel houses (LV)
- "Function agreements" or "comfort agreements" "chauffage" contracts, based on the provision of an agreed level of comfort or function (SE)



European market development: 2010-2014

Remaining barriers (1)

The list of barriers has not changed significantly since 2010 throughout Europe.

1. Legal and political barriers

- erratic and unpredictable legislation
- lack of official and/or generally accepted ESCO definition and/or certification scheme and/or standards
- contradicting interpretation of legislation (lack of acceptance of the ESCO concept by the public financier)
- Procurement related barriers

2. Low level of/lack of institutionalization and project tools

- lack of facilitators
- lack of proper measurement and verification practices



European market development: 2010-2014

Remaining barriers (2)

3. Financial barriers

- accounting of EPC projects as loans by public authorities (e.g. Overlap with EUROSTAT methodology ESA 95)
- liquidity and creditability of the public administrations are limited
- low awareness and motivation of banks
- strong aversion to loans
- high transaction costs

4. Market and partnership problems

- lack of trust by the clients
- lack of well-established partnerships between ESCOs and sub-contractors
- the legacy of failed projects

Example market: Austria

The ESCO market (in particular EPC) is well developed according to most experts. Emerged in the mid-1990s, then decent market development, but slowing down in recent years.

- By 2013: over 1800 buildings completed (mostly by EPC). Typically bundled pools.
- Over 50 ESCOs, of which ca. 10-20 offer EPC.
- Regions differ much in ESCO development.
- Association of Austrian Energy Contractors (2005), facilitation is well known.
- Typical client: federal buildings. Renovation programs halted: slow-down of ESCO market.
- A development potential: private sector clients.
- *Main barriers:*
 - In-house expertise (esp. in public sector, which conceived as competition)
 - High transaction costs (small project sizes).
 - No or limited focus on energy costs.
- *Key drivers:*
 - Governmental leadership and support at national and federal level;
 - Facilitators;
 - Bundling of projects, thus economies of scale;
 - Dissemination of success examples;
 - Quality labels for ESCO and their services

Example market: Denmark

One of the most energy efficient countries. ESCO market was dormant for long (alternative EE measures dominated), and boomed in recent years.

- ESCO activity practically zero in 2005; few (4-5) ESCOs in 2007, 10 by 2010, and 15-20 in 2013.
- Lead by municipal demand: over 30 municipalities involved or planned ESCO project in 2013 (representing about one-third of all municipalities).
- EPC with guaranteed savings is the most common contract type (often municipality pays using a preferential bank loan).
- Flexibility in the contracts (negotiation after winning the tender, quitting by client is easy) has increased trust.
- *Main barriers:*
 - In-house knowledge (considers ESCO as a competitor and can do the projects alone, high perceived risks).
 - Lack of trust by many potential clients still remains
 - *Key drivers:*
 - Success examples (have shown to be quicker and reach a higher level of energy saving)
 - High trust in the model
 - Lack of liquidity problems of municipalities (capable of taking loans);
 - Relief of budgetary limitation for ESCO projects between 2009-2012;
 - Particularly flexible ESCO contracts;

Example market: Hungary

The ESCO market used to be exemplary, but has deep-dived in recent years (mostly since 2009-2010).

- From ca. 30 ESCOs (in 2009) decreased to 6-7 companies in 2014.
- EPC is very rare.
- Specialty: EPC is offered to households even on market basis (
- A development potential: the legal framework (i.e. an energy efficiency supportive approach) could significantly improve market conditions.
- *Main barriers:*
 - Competition with State Funds (esp. in the public sector). Sometimes ESCO & State Funds were connected. However, the publication started to be erratic, and projects were delayed waiting for these. Market based projects were/are ignored.
 - Corruption
 - Unexpected and unprepared legislative changes, uncertain market conditions.
 - Lack of trust as a result of failed projects.
- *Key drivers:*
 - The ESCO companies carry out strong promotion activity, by now mainly focused on private sector (less corruption)
 - A few facilitators

Future expectations

Underlying factors:

- EU and national policies: focus on EE and ESCO, with increasing success;
- Barriers are constantly being removed in some countries (targetted policy development);
- Natural development due to increased demand, mainly after a kick-start due to multiplied demand (e.g. after large scale public sector order);
- Indirect stimulation, e.g. energy management obligations, audit, housing standards, EEO etc. combined with financing/management needs of clients;
- Interest by banks is slowly growing (still problem with financial products);
- Self-promotion, support by associations and facilitators.

Overall, a **further growth** is expected.

ESCO Market Reports of 2014

In 2014 the JRC prepared two ESCO market reports:

- The **European ESCO Market Report 2013**, presenting the information on the latest ESCO market developments in EU28 and EU enlargement and neighboring countries, and the
- **ESCO Market Report for Non-European Countries 2013**, reviewing the latest ESCO market developments in Asia, Africa, North and South America, Australia and Oceania.

The reports are available on the web:

<http://iet.jrc.ec.europa.eu/energyefficiency/publications/all/339>

<http://iet.jrc.ec.europa.eu/energyefficiency/publication/esco-market-report-non-european-countries-2013-0>



THANK YOU FOR YOU ATTENTION!

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Backup slides




	number of ESCOs* in		market size*	
	2010	in 2013	in 2010	in 2013
Austria	over 50	over 50	n/a	€15-20 m
Belgium	10-15	10-15	n/a	€5 m
Bulgaria	few	7-12	€6 million	€33 million (?)
Croatia	2	10	€10 million	€100 million
Cyprus	0	0	n/a	0
Czech Republic	8-10	20	€2-4 million	€10-20 million
Denmark	10	15-20	€8-25 Million	€140-150 million
Estonia	2	2 (3?)	n/a	n/a
Finland	8	5-8	€4 million	€10 million
France	100	350	€4-5 billion	€75-100 m for EPC, €3.2 b/year for all
Germany	250-500	500-550	€1,7-2,4 b/a	€3-4 billion, of which €150 million is EPC
Greece	2	5	n/a	0
Hungary	30	10	n/a	n/a
Ireland	15	ca. 30	n/a	n/a
Italy	100-150	50-100	€275 M in 2008; €387 M in 2009	€500 million
Latvia	5	8	€1-1.5 million	€2-3 million /year



	number of ESCOs* in		market size*	
	2010	in 2013	in 2010	in 2013
Lithuania	6	3-5	n/a	n/a
Luxembourg	3-4	3-6	0	0
Malta	0	0	0	n/a
Netherlands	50	50	n/a	n/a
Poland	3 to 10	30-50	€5 - €10 million/year (current value)	EUR 10-25million (2011) (annual turnover)
Portugal	10 to 12	100	€10-30 million	n/a
Romania	14	15-20	ca. €50 million	n/a
Slovakia	5	6-8		n/a
Slovenia	2-3	5-6	n/a	€3million
Spain	15	20-60	€100	€300-400 m/yr
Sweden	8		€60-80 million	€60-80 million
United Kingdom	20	30-50	€400 million	n/a
Other European countries				
Norway	5	10	€25 million	n/a
Switzerland	76 (7-10?)	6	€170-350 m/ year (?)	

	number of ESCOs* in		market size*	
	2010	in 2013	in 2010	in 2013
Albania	0	0	n/a	n/a
BiH	n/a	5	n/a	n/a
FYR Macedonia	1	0	n/a	n/a
Kosovo	0	0	n/a	n/a
Montenegro	0	0	n/a	n/a
Serbia	10	3-5	n/a	n/a
Turkey		30 (?)	n/a	n/a
Armenia	n/a	11	n/a	n/a
Belorussia	n/a		n/a	n/a
Georgia	0	0	n/a	n/a
Moldova	0	0	n/a	n/a
Russia	n/a	up to 100	n/a	€ 100 million/ year
Ukraine	n/a	ca. 30	n/a	€ 100 million/ year
Armenia	n/a	11	n/a	n/a
Belorussia	n/a		n/a	n/a



region/group	Champions in Western Europe	EPC leaders	Eastern European success stories	Scandinavia	Southern Europe
example countries	IT, UK, FR	DE	HU, Baltic	SE, DK, NL	ES, PT, GR
status	large markets, still slowly growing	large markets	small-medium markets, decreasing	medium, fast growth	small-medium, stagnating, but sometimes growing
driving factors	<ul style="list-style-type: none"> - political commitment - white certificate systems or other driving national policies 	<ul style="list-style-type: none"> - strong promotion - political commitment - good examples and focus on information dissemination 	<ul style="list-style-type: none"> - only EU requirements, but with a minimalist approach - local political commitment and support mechanisms have dried up 	<ul style="list-style-type: none"> - climate awareness - customer demand - ability to keep creditworthiness by clients - political support and dissemination of demo-projects 	<ul style="list-style-type: none"> - economic collapse and a need for cost savings, - search by the construction sector for new businesses - strong political support in terms of legislation and leadership through renovation of public buildings
trends in the future	still some level of grows, but it is unclear whether this can be sustained in the future	continues to grow, even quickly and provides an example, as well as conscious know-how dissemination to other countries	if the conditions do not change, and awareness does not grow locally, the markets will further decrease	continuous string growth. Until recently other EE measures were dominant, but lately EPC has been discovered as a suitable solution	depending on the success of the running projects (i.e. not many fails), a large growth may be seen. However, even a few and small failures may have detrimental effects