

How to develop a market for Energy Service Companies (ESCOs) in Malta

Ing. Norman Zammit B.Elec.Eng. (Hons.), M.Sc. (Brunel), MBA (Chester), CIWFM, Eur.Ing.

President

Introduction

Facts:

- Malta energy mix consists of energy supplied from the Electrogas LNG station, the LNG converted BWSC plant and the interconnector. (There is also a fourth source that operates on diesel and to be used solely in case of an emergency). Total installed capacity of Delimara Power Station is 537.8MW.
- Malta targets to achieve 10% of its energy generation from renewable sources by 2020.
- EU target for full decarbonisation of energy sources by 2050.
- Malta is undergoing unprecedented economic growth.
- Growth in economic activity implies an increase in energy demand. This is confirmed from statistics for 2018 where a circa 4% in energy consumption is being noted.

The Energy Challenge

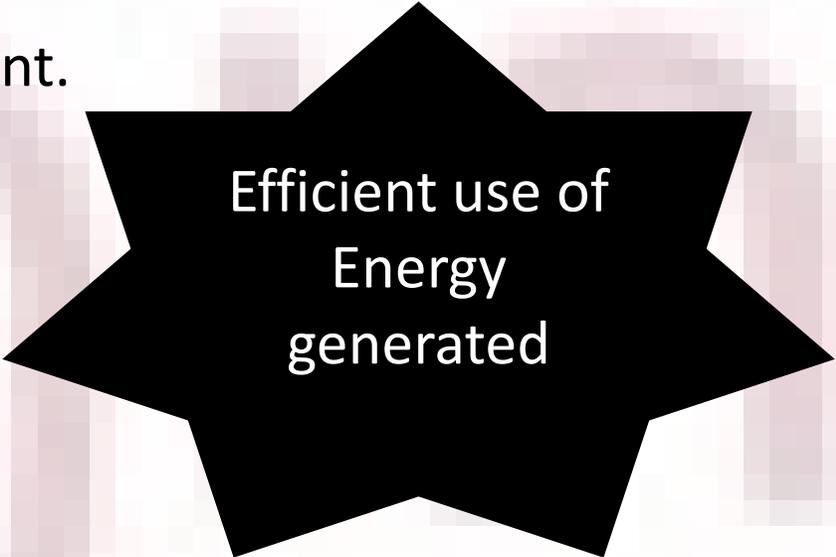
Facts:

- Increase in energy demand heightens the need for greater energy efficiency.
- Greater energy generation needs in a carbonised environment contribute toward climate change.
- Climate change has an impact of the environment.
- Economic considerations.
- Social Challenges.
- Creating sustainable development.

The Energy Challenge

Facts:

- Increase in energy demand heightens the need for greater energy efficiency.
- Greater energy generation needs in a carbonised environment contribute toward climate change.
- Climate change has an impact of the environment.
- Economic considerations.
- Social Challenges.
- Creating sustainable development.



Efficient use of
Energy
generated

What are defined as Energy Services?

Energy services include a wide range of activities such as:

- Energy analysis and audits.
- Energy management.
- Project design and implementation.
- Maintenance and operation.
- Monitoring and evaluation of savings.
- Property/facility management
- Energy and/or equipment supply.
- Provision of service (space heating, lighting, etc.)

Source: European Energy Research Platform (E3P) – Joint Research Institute

What are Energy Service Companies (ESCOs)?

An ESCO is a company that offers energy services which may include implementing energy-efficiency projects (and renewable energy projects) and in many cases on a turn-key basis. The three main characteristics of an ESCO are:

- ESCOs guarantee energy savings and/or provision of the same level of energy service at lower cost. A performance guarantee can take several forms. It can revolve around the actual flow of energy savings from a project, can stipulate that the energy savings will be sufficient to repay monthly debt service costs, or that the same level of energy service is provided for less money.
- The remuneration of ESCOs is directly tied to the energy savings achieved;
- **ESCOs can finance or assist in arranging financing for the operation of an energy system by providing a savings guarantee.**
- Covered by an Energy Performance Contract (EPC) as defined by directive 2012/27/EU

Why use ESCos?

- “Many organisations and firms have high potential to save energy through the adoption of efficiency measures, but they are unable to do so because of a lack of knowledge and capacity. ESCos address this deficit by bringing their expertise and know-how whilst taking over some of the risks as well as the rewards, whilst addressing the appropriate financial model.” - Dr. Kurt Weisgart : MED-ENEC Team Leader
- Energy Efficiency should there be viewed as a business proposition and not only as a technical solution or climate driven initiative since ultimately it would be driven by an investment decision. A joint investment between the Client and the ESCo.
- The business approach changes the outlook towards ESCos.

Which could be the practical barriers to Energy Efficiency industry and hence the existence of ESCos?

- Weak Government push towards energy efficiency.
- Lack of harmonisation in legislative frameworks across the EU.
- Information on Energy Efficiency products is heavily skewed towards the Industry
- Products offered are ahead of the learning curve of the market thereby causing uncertainty amongst potential partner investors.
- Supply of financing does not match the Energy Efficiency project peculiarities
- Innovation may not be the best way forward
 - Innovation projects are particularly vulnerable to developments in the external environment that are different from what was expected at design phase
 - There are risks that some proposed innovation might fail.

Which could be the practical barriers to Energy Efficiency industry and hence the existence of ESCos?

- The Energy Efficiency Industry is for the most part technical, fragmented and lacks a coordinated push.
- Stakeholders on the technical side are the best deal generators in developing markets. Is there a will for technically competent organisations to develop into ESCos?
- The product can be more sophisticated than the Client's requirements. Expectations need to be managed.
- Products offered should aim to ride on the back of a stronger investment driver otherwise the investment would be doomed to fail.

The financing aspect – what are the issues?

- Financial institutions such as banks, are demand driven enterprises. They expect scale and standardization. Volumes might lack to convince the institutions to support initiatives.
- Asset based lending (collateral) is the core of banking activity:
 - It is there for a reason: to reduce loan loss in case of default and to address the moral hazard of the borrower.
 - Desired properties: ability to be ring-fenced and isolated from the borrower; sufficient liquidation value if something goes wrong.
- Energy efficiency products (solutions) have to be structured to resemble standard lending not the other way around.
- The finance sector cannot be transformed to accommodate energy efficiency financing without the relevant provisions of the banking regulations.

Basic EPC and ESCos Models

- ESCos should be looked at from a much broader perspective than that of an organisation limited to the execution of an EPC contracts only.
- Diversification of activity of ESCos could be the key to their sustainability in a market as small as Malta.
- ESCos do not necessarily need to cover all the following activities to be defined so:
 - Development
 - Identification of Energy conservation measures
 - Engineering design
 - Financing structure (service not necessarily provided by and ESCo)
 - Construction and on-site supervision
 - Commissioning
 - Capacity building
 - Performance guarantees
 - Operation and Maintenance (Facilities Management)

Basic EPC and ESCos Models

ESCos are generally therefore classified as:

- Independent ESCos that concentrate on few geographical markets and/or target specific client market segments. In Malta, EPC companies operating in the sector of Renewable energy may be considered as ESCos.
- Building equipment manufacturers which have an extensive network of branch offices.
- Utility companies
- Other energy/engineering companies such as large engineering firms.

It is easier to start an ESCo as a subsidiary of a larger organisation or else an organisation would focus on addressing on some of the activities normally expected from an Energy Service Company.

Basic EPC and ESCos Models

In Malta, the Government incentives in the field of renewable energy created an opportunity for EPC companies to evolve. Furthermore, the targets contemplated for decarbonisation of energy generation shall create new opportunities in the field of renewables with alternative sources to solar energy becoming more in demand.

“Our biggest challenge is that we only have limited land for photovoltaic systems”

– Hon. Joe Mizzi – Minister for Energy and Water management

Opportunities of further research in this field and optimisation of building operations to save energy

– Engineering solutions to the problems of tomorrow.

Further Issues

The number of construction projects that are ongoing or envisaged to take place over the coming years, offer an opportunities to organisations to venture into various aspects of ESCos' activities.

The crucial element remains the securing of financing and the ownership of business risk.

Certain organisations might not be that comfortable to absorb the risk associated with the business venture.

Notwithstanding, the setting up of an ESCo in Malta should be a gradual process when it comes to growth in the expansion of operations. Support of larger organisations and diversification of the business are the only source of sustainability

Chant

Thank you

ENDING