National Federation of Italian ESCos

connecting energies
raising efficiency
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Federesco is a National Federation representing and promoting the energy efficiency industry in Italy, it has been created in 2006 and it includes around 50 ESCos.
An Energy Service Company’ (ESCo) is « a natural or legal person that delivers energy services and/or other energy efficiency improvement measures in a user’s facility or premises, and accepts some degree of financial risk in so doing. The payment for the services delivered is based (either wholly or in part) on the achievement of energy efficiency improvements and on the meeting of the other agreed performance criteria ».

Activities of ESCos

ESCOs support and give tailored, overall solutions to professionals and operators in performing Energy efficiency measures.
Detecting all the data, including effective consumption, useful for the audit stage to better correspond to actual conditions.

Initial stage
Critical Analysis
Primary data detection

Performing all the data, including effective consumption, useful for the audit stage to better correspond to actual conditions.

Implementing all the data, including effective consumption, useful for the audit stage to better correspond to actual conditions.

Final stage
Performance Analysis
Monitoring achieved performances and actual consumption, once measures have been implemented.
The role of ESCos

- Strategic and operational approach on the entire energy chain in order to achieve maximum energy savings
- Cost recovery through energy savings
- Financial support—direct or indirect—for EE projects: Third-Party Financing (TPF)
- Guaranteed energy savings for the client
- EE interventions using few capital assets
- Design, realization and maintenance by qualified technical experts
- Consumption and management costs reduction
- Energy Management System development (ISO 50001)
Benefits

- Qualified technical competences
- Integrated proposals and management
- Reduced capital lock-up
- Lower consumption and charges
- Access to state incentives
- Monitoring and Energy Management System
Energy savings: the best energy source

- Cost effectiveness
- Emission reduction
- Financial incentives
- Reputation enhancement
The monitoring system has a fundamental role in the implementation of energy efficiency projects, especially on industry production cycle.

- Energy consumption control and management
- Services and supply contracts check
- Lump sum projects

- Compliance check of services and supply contracts

- Identification and implementation of optimization projects.
Monitoring project

- Collecting data related to electrical and thermal measurements
- Analysis of consumption data
- Receiving bills and storage
- Dashboards reporting and analysis
- Support guidelines for optimization

- Collection and display of consumption data through the creation of a historical database
- Receiving contracts, bills, etc..
- Reading and data interpretation (OCR)
- Archiving data with their metadata
- Visualization, navigation and alert on data consumption and expenditures
- Simulation of scenarios tariff plans, unit cost
- Analysis and predictive reports
- Optimization measured/calculated consumption in case of abnormal consumption
Energy management

The main objective is to support companies and organizations in realizing processes and systems useful to **improve energy efficiency**.

→ Monitoring and managing energy costs

→ Gaining higher income by technical solutions
Energy Management System

**ISO 50001** specifies requirements for establishing, improving and maintaining an **Energy Management System**.

Once assessed energy loss and waist, an EMS identifies eligible solutions to optimize energy use and to **transform energy costs in energy savings**.
Energy Management System

1. Establishment Monitoring
2. Production monitoring
3. Energy registration during the production
4. Modeling tools
5. Check
6. Response
7. Evaluation

Evaluations and checks of energy management can be helpful for companies for the identification of the changes to implement in order to reduce energy costs and consumption.
Esco model and EPC

According to the Energy Efficiency Directive 2012/27/EU (EED), Energy Performance Contracting "means a contractual arrangement between the beneficiary and the provider of an energy efficiency improvement measure, verified and monitored during the whole term of the contract, where investments (work, supply or service) in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement or other agreed energy performance criterion, such as financial savings." EPC projects may also include additional services related to efficient energy supply.
Third-Party Financing (TPF)

For the purpose of the Council Directive 93/76/EEC 'third-party financing” means the overall provision of auditing, installation, operation, maintenance and financing services for an energy efficiency investment, with recovery of the cost of these services being contingent, either wholly or in part, on the level of energy savings.”

A public or private subject willing to reduce energy consumption has thus to choose between the following two options:

**WITHOUT TPF**
- Identifies suppliers and allocates its own financial resources to carry out the intervention
- Initial costs are totally on the CLIENT

**WITH TPF**
- Identifies an ESCo detecting both suppliers and financial resources
- Initial costs are totally on the ESCo *

* depending on the availability banking
Third-party Financing (TPF)

TPF EXAMPLE

CLIENT’S SAVINGS

INVESTMENT RECOVERY FOR THE ESCo

ENERGY BILL BEFORE THE INTERVENTION

ENERGY BILL AFTER THE INTERVENTION

YEARS

-3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

LEVEL OF ENERGY EXPENSE

100%

95%

70%

0%
Risk management

- Due diligence of financing institution
- Standardised methodologies and results
- Technical commitment and guarantees from the ESCo
- Lack of financial resources by the ESCo side
- Clients are not willing to finance by equity
- Lack of financial guarantees both by ESCos and by client
Verification and validation of EE projects

Minimizing risks of failure of an intervention for a EE project intervention:

- Incorrect goals
- Design lacking
- Incorrect assessment of incentives
- Inadequate contractual schemes
- Risk management not provided
- Incorrect evaluation of possible future scenarios

In order to support the stakeholders of an energy efficiency intervention, it is necessary to have a third party having the following features:

- Independency and impartiality
- ISO/IEC 17020 certification
- Standard check list for each stage of the project
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- **EPC+ (Energy performance Contracting Plus)**: Small Medium Enterprises cooperation in order to optimize and simplify the supply of energy efficiency interventions through Energy Performance Contracting within the Small Medium Enterprise market.

- **Trust EPC South (Building Trust in Energy Performance Contracting in Southern European Countries)**: Raising interest and trust of financial institutions for supporting EPC within the tertiary sector in the Southern European Countries.

- **TransparEnSe (Increasing Transparency of Energy Service Markets)**: Improving the transparency and the reliability of the EPC market in Europe through the implementation of a European Code of Conduct for EPC.
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- **Board Energy H2020 e SET Plan** – Regulatory framework support and advocacy.

- **Energy Efficiency Network Europe** – Marketplace platform for international business opportunity exchange and cooperation.

- **European Utility Week** – Yearly EU event for qualified operators and best practices.

- **EU MERCI** – Esco Stakeholders’ representation.
EU guidelines: EC «Winter package»

COM(2016) 860

Putting energy efficiency first

A binding 30% EU-wide target for energy efficiency by 2030 aiming to reduce our dependency on energy imports, boost economy and create jobs, cut more emissions (cut CO2 emissions by at least 40% by 2030)

Efficient buildings, clarified ecodesign framework and measures, smarter finance.

Extension beyond 2020 of the energy savings requirement to 2030 (specified in Article 7).
Federesco Partners

Federesco has a wide range of partnerships with institutional bodies, banks and R&D institutes.

Among the most renowned:

- The National Agency for New Technologies (ENEA)
- GSE), state-owned company for RES promotion and support
- Intesa Sanpaolo
- Banca Prossima
- WWF Italia Onlus
Banking Scheme Agreement

Standardized approach

Check-up, Project design, Implementation Management

Energy efficiency

Final user with EPC

Contract with the ESCo Can ask for financing

E.S.Co.

Final user

Coherent but separate contracts

ESCo – Client Contract

Bank - Client Contract
Thank you for kind your attention

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