



An Innovative Method in Development of Energy Projects: ESCO Model

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Increasing energy costs and carbon reduction goals as part of the 2053 net-zero emission targets are encouraging companies to develop green transition roadmaps and invest in renewable energy. Energy performance contracts (EPC) and their main actors, energy service companies (ESCO), are key to successful implementation of these projects. In this article, we review the ESCO models in the world and in Türkiye under the EPCs.

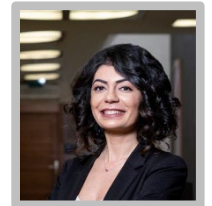
What are EPCs and ESCOs?

EPC is an innovative model used for development of renewable energy projects for self-consumption and energy efficiency purposes. In this model, the ESCO undertakes the construction, development and in some cases the financing of the project, while the costs are covered from the revenues or savings generated from the project. This self-payment mechanism renders the ESCO model appealing, particularly to industrial facilities and businesses with substantial electricity consumption.

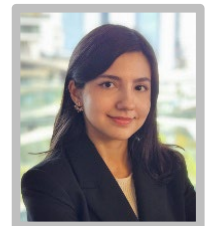
ESCOs provide energy expertise, financing, and technical support to project owners through EPCs, allowing project owners to realize their energy investments without shouldering significant liabilities. The most prominent feature of these contracts is that ESCOs take the technical risks from the project owner and provide performance guarantees.^[1] The service fee of ESCOs usually depends on the performance of the projects measured by energy savings or service levels and in this respect, they differ from traditional project contractors.



Mustafa Durakoğlu
Partner



Elif Dilek Yılmaz
Associate



Burcu Çirkinceli
Legal Intern

Legal Framework for ESCOs in Türkiye

The first regulatory framework on EPCs and ESCOs in Türkiye was introduced with the Energy Efficiency Law No. 5627 (Law).^[2] With the amendments made in the Law in 2018^[3], EPC is defined as *"a contract based on the principle of guaranteeing energy savings to be achieved after the implementation project and paying the costs incurred with the savings generated as a result of this implementation"*. Furthermore, ESCOs are defined as *"energy efficiency consultancy companies that are granted an authorization certificate to perform energy efficiency services within the framework of an authorization agreement with the General Directorate of Energy Affairs or authorized institutions"*.

Pursuant to Additional Article 1 of the Law, public administrations within the scope of general government and other public institutions and organizations are authorized to enter into EPCs for a period up to 15 years in order to reduce their energy consumption or energy expenses. The purchase of goods and services as well as construction works to be carried out in this context are not subject to the provisions of the Public Procurement Law No. 4734.^[4]

Following the amendments made to the Law in 2018, secondary legislation on the implementation principles of EPCs was enacted. Within this scope, the Presidential Decree No. 2850 on the Procedures and Principles Regarding Energy Performance Contracts in Public Sector published in 2020^[5] and the Communiqué on the Implementation of Energy Performance Contracts in the Public Sector published in 2021^[6] governs a range of matters related to the EPCs. These include, but are not limited to, tender procedures, guarantees, implementation period of EPCs, monitoring, measurement, and verification of savings, as well as the technical and financial qualifications expected from bidders.

In Türkiye, no specific legal framework has been established for the implementation of the ESCO model in the private sector. However, market participants have developed various models under the principle of freedom of contract.

ESCO Models

ESCO models vary depending on how risks and liabilities are shared between the parties. Typically, two fundamental contractual structures prevail: the "shared savings model" and the "guaranteed savings model". In the shared savings model, also known as the traditional ESCO model, the financing is provided by the ESCO. Subsequently, savings realized from the project are divided between the ESCO and the project owner throughout the contract term. While this model presents notable advantages to project owners due to the absence of upfront payment obligations and the ability to reimburse from project revenues or savings, it requires a robust borrowing capacity on the part of the ESCO.

In the guaranteed savings model, the financing is provided by the project owner. The project owner secures a loan from a financial institution, which is backed by an energy saving guarantee provided by the ESCO. If the guaranteed energy savings cannot be achieved for any reason attributable to the ESCO, ESCO compensates the project owner the difference between the guaranteed and actual savings.

The ESCO models implemented in Türkiye may exhibit distinct characteristics, differing from the abovementioned common ESCO models in various aspects. Their prominent features typically include the following:

- Financing

It is usually provided by the ESCO, either through its own equity or borrowed funds. In the guaranteed savings model applied in Türkiye, unlike practices observed globally, there are instances where ESCO both finances the project and provides performance guarantee.

- Project Site

Generally, the project site is owned by the project owner, but it is also possible for the ESCO to own the project site. In certain cases, the ESCO may search, identify and procure the project site on behalf of the project owner.

- Payments

The project owner pays a monthly service fee to the ESCO. This service fee generally covers the investment cost, financing costs, and operation and maintenance costs during the contract period. If the guaranteed savings model is in place and the ESCO fails to generate the guaranteed electricity amount, the service fee is reduced by the amount of electricity that cannot be generated.

- Sale of Excess Electricity

In some projects, the revenue generated from the sale of excess electricity to the authorized supply company belongs to the ESCO while in other projects, this revenue is transferred to the project owner.

- Ownership

The ESCO usually transfers the ownership of the asset to the project owner at the end of the construction period or operation period. In certain cases, the ESCO may retain ownership of the asset.

Conclusion

The ESCO model, primarily used in renewable energy projects for self-consumption and energy efficiency purposes, presents an advantageous project development framework for companies that desire to reduce their energy costs and carbon emissions while avoiding the technical and financial burdens of energy projects. This model is expected to contribute significantly to the green transformation of industrial facilities in Türkiye in the near future.