



## FAQ on Streetlight EPC

Regional Partner: Carlow Kilkenny Energy Agency

<http://ckea.ie/faq-on-streetlight-epc/>

### Frequently asked questions on streetlight EPC

What is the meaning of the following terminology;

- **Baseline:**

Reference value that is calculated based on the energy costs and energy consumption which were incurred within a reference period (e.g. the last 3 years)

- **ESCO Client:**

Local authorities/public body (or company) in whose installations an ESCO project is carried out

- **ESCO contract:**

The basis for the cooperation between ESCO and client, regulates rights and obligations for both parties, mostly important the achieved savings, the contract duration and warranty issues.

- **ESCO:**

Specialised company that offers EPC services

- **Quality assurance:**

Guarantees assuring the agreed quality level of the ESCO's work (e.g. minimum savings, functionality of the system)

- **Refinancing of the investment:**

Is done with the achieved energy savings



## Frequently Asked Questions

- **What measures are typically implemented in a street lighting-EPC project?**

Replacement of lamps, retrofitting of existing installations, new control systems, system optimisation, retrofitting of poles, complete replacement of luminaires. Extending the street lighting system can be incorporated into the project, but cannot be financed by savings.

- **What size of investment is typical?**

This really depends on the project and its size. However, in many cases, a minimum investment of circa €50,000, otherwise the cost of preparing the project (including setting up the contract) represent too large of a proportion of the savings.

- **What impact does the EPC project have on the local authorities staff respectively the existing service provider?**

The EPC may result in new tasks for the staff previously in charge of some aspect of the street lighting system, such as data collection, quality control, the implementation of the measures and the revision of annual accounts.

- **How time consuming is an EPC project for the local authorities?**

Careful preparation and development are crucial for the successful implementation of an EPC project. At the beginning of the project, all concerned staff should be involved in order to ensure transparency and acceptance by all parties. Good planning of the project and clear requirements for the ESCO in terms of quality criteria are required.

- **How are the reference costs (baseline) determined?**

The “baseline” is the basis for calculating the ESCO’s fee. To prevent that factors which are out of the ESCO’s control (e.g. energy prices, change of operation times) act to its advantages or disadvantage, energy costs and energy consumption levels are compared to those of the reference year.

- **Is an EPC project possible for every street lighting system?**

In principle, it is possible to find technical and economically feasible energy savings for almost every street lighting system that is more than 10 years old. However, in order to be economically feasible, an EPC project must have a certain minimum size (e.g. investment costs in order of several 10,000 Euro).

- **When does an EPC project make less sense?**

Whether implementing energy efficiency investments with or without EPC is more advantageous depends, among other, on the following factors:

- the size of the project (for very small projects the achieved savings are not sufficient to cover the investment and contract preparation costs within a reasonable time frame)



- the availability of investment funds and personnel capacity
- the purchasing conditions for the lamps and luminaires

- **Who bears which risk?**

The ESCO bears the technical and financial risk for the successful implementation of the project, especially in relation to the guaranteed savings. In order to protect the local authorities from damages resulting from the ESCO's eventual economic difficulties, it is advisable to take precautions in this respect in the EPC contract.

- **As of when does the client benefit from the energy savings?**

Depending on the EPC contract, the local authorities may either benefit from lower energy costs as of the beginning of the project (this will most probably entail a longer contract duration) or only after the contract ends.

- **How long is the local authorities contractually bound to the ESCO?**

Typical durations of EPC contracts vary between 7 and 12 years, but – depending on the conditions – they can also be shorter or longer.

- **Can other measures such as the extension of the existing installation or the lighting of a new road be included in the EPC project?**

Yes. This has the advantage that the local authorities can benefit from the ESCO's know-how in this field. However, in these cases, a down payment is usually required because extensions cannot be financed by savings.

- **Who owns the street lighting installation when an EPC project is implemented?**

The local authorities remains the owner of the retrofitted facilities. (The NRA in Marked Networks and Motorway sites)

- **What happens at the end of the EPC contract period?**

At the end of the contract period, the local authorities can take over the ESCO's tasks again and benefit solely from the lower energy costs. Of course, the agreement may also be extended or amended.

- **How does a local authorities find a suitable ESCO?**

A list of ESCOs will be available at [www.ckea.ie](http://www.ckea.ie) and/or the "EPC Facilitation Service" CKEA will help you to identify potential ESCOs.



## Questions from Streetlight EPC Q&A session;

- **How long does setting up a project typically take?**  
From start until finish, the entire project usually takes from 2-3 years.
- **What are the key criteria (financial and non-financial) in tender procedures for selection of ESCOs?**  
In addition to economic criteria, quality criteria for the lamps are important and the quality of the guaranteed savings.
- **Is maintenance of public lighting a part of the same tendering procedure for EPC services?**  
In any case maintenance should be included in the contract as it is a very important part for total savings, however, there are a number of options how to include maintenance.
- **Should supply of electricity be including in tender process?**  
If it is included in the contract, the local authorities would not be allowed to change electricity suppliers for the whole duration of the contract (no possibility to change to a cheaper supplier). Current OGP framework will dictate this.
- **Who sets the savings level?**  
The savings level is determined by the rough analysis and measured before and after refurbishment.
- **What happens if the savings are not achieved/delivered?**  
The ESCO needs to pay compensation to the local authorities.
- **What happens if the savings are higher than estimated in EPC contract?**  
This needs to be defined in the contract. In Upper Austria, the revenue from extra savings most often goes to the local authorities. In any case, the local authorities ends up winning from any extra savings that are achieved, since they will end up with a more efficient lighting system at the end of the contract.
- **Will the project cost more (because of the cost of the ESCO)?**  
The added costs will probably be similar to those of hiring the services of a good planner. However, in most cases in the long run, the EPC project will help you save money (the ESCO in general has “better” conditions when buying lamps/luminaires).
- **How does a city/local authorities guarantee for payments (based on energy/costs savings) to ESCO?**  
Where a local authorities' credit rating is low, this can be done with bank guarantees. If a bank guarantee cannot be obtained, in some countries, the department (national) level might guarantee, otherwise the local authorities is not a good candidate for EPC (KO criteria).
- **Does an ESCO guarantee for whole public lighting systems or just luminaires if only luminaires where a part of reconstruction?**  
The ESCO only guarantees for their own installations (those parts that they have installed). The rest is the responsibility of the local authorities.



- What if the cost of electricity goes way up?**  
The contract guarantees energy savings. Therefore, any increase in electricity cost is the responsibility of the local authorities and is paid to the utility through the electricity bills.
- How is the cost of the infrastructure (poles, cabling, ducting) taken into account in an EPC finance model? Who pays for the new infrastructure?**  
When the ESCO calculates the total investment cost, it usually includes all costs that it has for the implementation of the project: material, installation, staff costs, etc. When a local authority wants to change other installation than the luminaires (switch boards, cabling, pillars, etc.), these costs can be considered in the project costs, but can most often not be financed through the energy savings. In these cases, the local authorities has the extra cost of financing these parts of the installations. Most likely under health and safety grounds or even in the case of moving away from traditional **ESB Network Infrastructure**.
- What happens if technology changes?**  
Nothing, because you have a contract guaranteeing the lighting level and savings (which will still be achieved, regardless of the development of technology).
- What happens if the ESCO goes bankrupt?**  
There is the possibility that ESCOs guarantee each other's EPC contracts. In case an ESCO goes bankrupt, the contract is taken over, under the exact same conditions, by another ESCO.  
Respective provisions could be foreseen in the EPC contract.
- How can you guarantee/calculate minimum maintenance for LED installation?**  
With the installation of an LED retrofit project the maintenance will be reduced but there will still be a maintenance contract required for general maintenance, cleaning etc. After the installation the warranties will cover the luminaire for 3 - 5 years, extended warranties are sometimes offered by the manufactures. The new maintenance schedule will be based on the LED installation and an annual general maintenance programme. A costing of the proposed maintenance plan would carried out at the early stage of the process.
- How can my SME/Electrical Contractor engage in the EPC process?**  
The CKEA through the "Facilitation Service" will assist potential SME's/Electrical Contractors to engage in the EPC process through workshops and guidebooks.
- What is the difference between EPRP (Energy Performance Related Payment) and EPC (Energy Performance Contracting)?**  
An EPRP is a performance related payment for energy efficiency projects that deliver savings and is usually a short term contract approximately one or two years. It is up to the installation companies to ensure the energy savings are being achieved. An EPC is a longer term contractual agreement (10 – 15years) where energy payments or shared savings are made over that period.
- How can my local authority introduce an EPC project?**  
CKEA has developed "Quick Check" documents through the Streetlight EPC project to establish at an early stage whether a project is feasible for EPC. These Quick Check can be found on our website and once completed can e-mailed to [admin@ckea.ie](mailto:admin@ckea.ie)





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