

# Lighting up Upper Austrian municipalities: 34 new contracting projects in 2 years

Benefiting from modern and efficient street lighting as well as guaranteed annual electricity and maintenance cost savings despite a tight municipal budget? Yes, it is possible, as shown by the 34 street lighting contracting projects that have been successfully implemented in Upper Austria in the past two years alone.

A total of 10.9 million Euro were invested in efficient LED street lighting and 34 municipalities are now benefiting from total annual cost savings of around 420,000 Euro. These investments were enabled and supported by the region's energy contracting programme (ECP). The regional energy agency of Upper Austria, OÖ Energiesparverband, manages this programme and supports municipalities in the project implementation. So far, the programme has facilitated the refurbishment of street lighting in 71 municipalities (almost 20 % of Upper Austrian municipalities)!

## The Energy Contracting Programme Upper Austria at a glance

The regional energy agency, OÖ Energiesparverband, supports and advises municipalities and manages the programme on behalf of the regional government.

Achievements in street lighting refurbishment in the past 2 years:

- 34 projects implemented
- 9,493 light points converted to LEDs
- 10.9 million Euro invested
- 1.7 million Euro in ECP funding
- Average contract duration: 10 years
- Total savings:
  - annually: 1,394,000 kWh electricity / 421 tonnes CO<sub>2</sub> / 420,000 Euro
  - over the contract duration: 13.9 GWh electricity / 4,200 tonnes CO<sub>2</sub> / 4.2 million Euro

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## Paying with savings

Energy contracting is a contractual arrangement between a client (e.g. a municipality) and a service provider, a so-called "Energy Service Company" (ESCO). Typically, the ESCO finances and implements the energy efficiency investment (in this case, the refurbishment of a street lighting system to LED technology). The savings are then used to cover the investment and capital costs (or part of them) over the course of a contract period. The main advantage of energy contracting compared to other models is that the ESCO guarantees a certain level of energy savings and is contractually liable for achieving it. After the end of the contract, the municipality continues to benefit from the efficient street lighting, and lower electricity and maintenance costs.

## Upper Austria's energy contracting programme

Establishing an energy contracting market requires a smart approach and extensive communication to build-up trust and know-how. Upper Austria was one of the first regions in Europe to implement a dedicated support scheme to overcome market barriers. The Upper Austrian ECP supports the implementation of energy contracting projects. The key to the programme's success is the combination of funding from the regional government and a comprehensive facilitation service (information and advice) by the OÖ Energiesparverband.

Financial support is granted to the energy contracting client. It goes towards reducing either the annual rates paid to the ESCO or the length of the contract. The level of funding is based on the savings guaranteed for the contract period. Up to 40 % of the savings are granted as subsidy (max. 75,000 Euro). In addition, a funding incentive of up to 15,000 Euro is available for avoiding light pollution through the use of special lights and lamps. These incentives can be combined with other subsidies (e.g. from the federal government). In Upper Austria, projects are often financed through a combination of several sources, such as through energy savings, with own funds and with subsidies.





71 Upper Austrian municipalities with ECP street lighting projects!



## Much more than guaranteed savings

Guaranteed energy savings are just one of the many advantages of contracting reported by the municipalities. Other benefits include, above all, the ESCO's expertise in project planning, the high-quality lighting achieved, increased safety for citizens and the flexibility of the contracting model (which allows for adapting it to the context of each project and municipality). There are currently 6 ESCOs in Upper Austria that have specialised in working with municipalities.

## Energy Contracting can take many forms!

The original financing model for contracting projects (i.e. the ESCO finances the project, the municipality pays monthly instalments, all investment costs covered by the savings) has developed significantly in recent years.

A large variety of financing options have already been applied on the basis of guaranteed savings, such as:

- The municipality pays the investment right away (because funds are available or it has access to cheaper loans than the ESCO). The ESCO guarantees the savings with a bank guarantee.
- The municipality finances part of the investment through a down payment at the start of the project. The rest is financed by the ESCO. This allows for the implementation of investments that are only profitable in the long term.
- The municipality pays loan instalments to a bank that is also involved in the project. This requires two contracts (for the financing and for the savings investment) and a bank guarantee from the ESCO.
- The municipality pays the ESCO monthly instalments that are lower than its previous electricity and maintenance costs. This gives the municipality a financial advantage as soon as the project starts but requires a longer contract duration.

## Important aspects of streetlight refurbishment

Experience from many street lighting projects shows the following to be key for successful project implementation:

- Clearly define lighting needs in advance (what lighting is required, where and when).
- Calculate and include actual maintenance costs. They can amount to up to 50 % of operating costs.
- Prioritise quality products, pay attention to the warranty periods for LED lamps and luminaires.
- If light pollution is an issue, use full cut-off luminaires and lamps with a colour temperature below 3,000 Kelvin.

## Project examples

Municipality	Langenstein		Ottenheim		Geboltskirchen	
	before	after	before	after	before	after
Installed capacity (kW)	14.5	5.0	40	15	8.5	4.7
Electricity consumption (kWh/year)	60,000	20,000	165,000	62,000	29,000	15,000
Costs electricity (€/year)	12,000	4,000	22,000	8,000	4,000	1,500
Costs maintenance (€/year)	13,000	2,000	18,500	11,500	7,000	1,300
Investment (€)	260,000		500,000		90,000	
ECP subsidy (€)	75,000 plus 15,000*		75,000		32,600	

\* for light efficiency; all figures rounded