Realised project street lighting: City of Wels, Upper Austria

Project background and objectives
This project was a continuation of the city of Wels' long-term ambition to refurbish 100% of its public lighting to LED technology.

The lighting system in the "Underpass Neustadt" in Wels was installed in the 1970s. 40 years later, refurbishment was required due to the age and high maintenance costs of the system.

The municipality was interested in installing LEDs in the underpass due to their long life span and low energy demand. Since the underpass lighting is in operation 24 hours per day, 7 days per week, it was a good candidate for refurbishment through EPC.

Project description
The main economic objective of this project was to reduce electricity consumption and maintenance costs.

The city of Wels has much experience with EPC and the city's energy utility (eww) has been active as ESCO for many projects in the region. The refurbishment took place in 2015 with eww as ESCO. The eww conducted a rough analysis which, after discussion with the city, was further developed to achieve the desired results.

Facts
- Population: 59,900 inhabitants
- Type of streets: underpass
- ESCO: eww
- Electricity cost savings: 1,700 €/year
- Maintenance cost savings: 1,500 €/year
- Reduction electricity consumption: 7,000 kWh/year
- CO₂ reduction: 2.1 tons/year
- Investment costs: 19,000 €
- Subsidies: 0 €
- EPC contract duration: 5.5 years

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<table>
<thead>
<tr>
<th>Streetlight data of the project</th>
<th>Before renovation</th>
<th>After renovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total installed electric capacity</td>
<td>1.9 kW</td>
<td>1.1 kW</td>
</tr>
<tr>
<td>Total number of lamps</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Number of lighting points (luminaires)</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Main lamp type</td>
<td>Fluorescent lamps (wet room)</td>
<td>LED (wet room)</td>
</tr>
<tr>
<td>Annual electricity consumption</td>
<td>16,800 kWh</td>
<td>9,800 kWh</td>
</tr>
<tr>
<td>Annual electricity costs</td>
<td>3,700 Euro</td>
<td>2,000 Euro</td>
</tr>
</tbody>
</table>

Results
According to the city of Wels, the most crucial aspect in an EPC project is finding a trustworthy partner. The project goals of achieving the best quality for the citizens (safety, comfort, no glare, good colour/temperature of light etc.) can only be reached with reliable partners.

The new lighting system was successfully refurbished and commissioned. A key aspect is to ensure good visibility, especially when entering the underpass from the north on sunny days.

Support by the facilitation service
The facilitation service provided support on various aspects throughout the project. This support was appreciated by the city of Wels and was said to have helped accelerate and ease the implementation of the project.

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Fotos: [www.fotoclubwels.org](http://www.fotoclubwels.org), Stadt Wels