

# Bulgaria Case study – Energy-efficient reconstruction of street lighting system



<b>Country</b>	Bulgaria
<b>Sector</b>	Buildings and public infrastructure
<b>Year</b>	2010 - 2020
<b>Narrative description</b>	<p>Before the intervention of Dobrich municipality, the street lighting system was old, contained toxic chemicals and harmful filaments and was very inefficient, resulting in high energy costs for the municipality. After the intervention with the change to high-pressure sodium vapour lamps and LED in the street lighting system, substantial energy and financial savings could be leveraged for the municipality. Furthermore, the new system depreciates at a much slower rate, does not burn out quickly, doesn't contain harmful chemicals and filaments and also gives off less heat. Their brightness can also be adjusted when pedestrians walk by for example.</p> <p>GHG emissions reduced: 3,798 t/y Energy savings: 2,260 MWh/y</p> <p>Financial aspects / cost of realisation / benefits: Investment cost of 1 million EUR Annual return on investment: 8,9% over 10 years</p>
<b>Responsible authority</b>	Municipality of Dobrich
<b>Relevant legal basis</b>	Municipal council decision to use municipal budget and 25% national grant for public lighting renovation, a grant put in place through the 2004 Energy Efficiency Act and the Energy Efficiency and Renewable Sources national fund
<b>Policy Type</b>	Public intervention & subsidy

# Bulgaria Case study – Energy-efficient reconstruction of street lighting system



<b>Governance Level/ Target audience</b>	Local
<b>Objectives</b>	The project for the energy-efficient reconstruction of Dobrich streetlighting system was implemented step-by-step with municipal budget and 25 % national grant for public lighting renovations. The key objective was to change existing lamps with new high-pressure sodium-vapour lamps (6350 lamps - 50,70,100, 150W and 1000 LED - 24 and 36 W). Also, the municipality changed part of the existing cable network and renewed the commutation equipment. As additional optimization of the existing system, new lines with LED were also developed.
<b>Summary of reasons for success</b>	National grant for public lighting renovation from Bulgarian government was key for municipality to undertake investment and obtain a quick win & reap a low hanging fruit in implementing energy efficiency measures; Recommendation for SE Europe countries to put in place similar national funds for supporting such measures in municipalities
<b>Replication potential</b>	Measure can be scaled up and replicated to municipalities across the EU, and can also be taken a step further with involvement of an ESCO through Energy Performance Contracting: see for example the work done by the EU Intelligent Energy Europe programme funded "Streetlight EPC project": <a href="http://www.streetlight-epc.eu/">http://www.streetlight-epc.eu/</a>
<b>Relevant website</b>	<a href="https://www.pilsetumerupakts.eu/zi%C5%86as-un-pas%C4%81kumi/zi%C5%86as-un-pas%C4%81kumi/zi%C5%86as/1440-covenant-of-mayors-cities-help-your-peers-replicate-your-cost-effective-good-practices.html">https://www.pilsetumerupakts.eu/zi%C5%86as-un-pas%C4%81kumi/zi%C5%86as-un-pas%C4%81kumi/zi%C5%86as/1440-covenant-of-mayors-cities-help-your-peers-replicate-your-cost-effective-good-practices.html</a>