



Reconstruction of Public lighting – Rijeka, Croatia	
<b>Keywords</b>	Energy efficiency, Public Lighting, energy
<b>Pictures</b>	 
<b>Objectives</b>	The main objective is to replace old inefficient Public lighting with new, more efficient.
<b>Description</b>	<p>To replace old lights with new ones that have lower power and improved characteristics, and to replace old mercury bulbs with new, more efficient, sodium bulbs. Their prerogatives are longer life time. Mercury bulbs can last for about 16 000 hours while sodium bulbs can last for about 32 000 hours, what automatically saves costs of public lighting maintaining.</p> <p>The light has power regulation implemented and that decreases illuminance and the use of electricity during night hours when the traffic is not so intense. With reduced use of electricity, CO<sub>2</sub> emission is also diminished.</p>
<b>Results / Achievements</b>	<p>For example in only one city area (Gornja Vezica) it has been replaced 80 lights. Power of 400 W. Half of the lights are working the whole night (10 hours ) and other 40 lights are working part time (3 hours).</p> <p>Before reconstruction:  <math>40 \times 3 \text{ hours} \times 365 \text{ days} \times 425 \text{ W} = 18\,615 \text{ kWh/year}</math> (part time)  <math>40 \times 10 \text{ hours} \times 365 \text{ days} \times 425 \text{ W} = 62\,050 \text{ kWh/year}</math> (whole night)  <b>TOTAL = 80 665 kWh/year</b></p> <p>After reconstruction:  <math>80 \times 3 \text{ hours} \times 365 \text{ days} \times 275 \text{ W} = 24\,090 \text{ kWh/year}</math>  <math>80 \times 7 \text{ hours} \times 365 \text{ days} \times 170 \text{ W} = 34\,748 \text{ kWh/year}</math>  <b>TOTAL = 58 838 kWh/year</b></p> <p>The price of electricity: 0,47 kn (tax not included)  1 € = 7,3 kn  <b>SAVING: <math>80\,665 - 58\,838 = 21\,827 \text{ kWh/year} \times 0,47 = 10\,259 \text{ kn}</math> ( apx. 1 425 €/year)</b>  <b>The use of electricity is diminished for 27%.</b>  <b>Life time of lamp is extended for 100% and saving obtained is about 4 300 € for the period of 8 years – life time of sodium bulb.</b></p>
<b>Friendly advice for replication</b>	Energy savings obtained, CO <sub>2</sub> emission reduced, money saved
<b>Online information</b>	<a href="http://www.energo.hr">www.energo.hr</a>
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