

Energy concept summary

Title of the energy concept: Reconstruction of outdoor lighting system in the Car Base in Avtokomanda and Gjorche Petrov

Topic area choice and topic marking in blue:

- () **Building** e.g. Insulation, change of windows, Low-energy-buildings
- () **Electrical energy** e.g. **Light**, Compressed air, Electrical drives, Cooling machines, Load management
- () **Heat** e.g. Heating, Process heat, Heat recovery, Air conditioning, Combined heat & power
- () **Renewable energy** e.g. Solar technology, Wood-fired plants, Biogas, Geothermal energy
- () **Management** e.g. Energy buying, Contracting, Emission trade, Energy data management systems



Company: JSP SKOPJE
 Branch and NACE-Code(s): Urban and suburban passenger land transport 4931
 Products/Services: Bus transport of passengers
 No of employees: 1250
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Energy concept description:

- We would like to improve lighting system and to reduce energy consumption
- Current situation is characterised with low level of illumination in two Car bases under general standards and low efficient lamps.
- Taking into consideration many reports that draw attention to insufficient light in both Car basis, which is the reason for many bus accidents during the operations, the awareness for necessity to take action have been increase. Second, in accordance with action plan of the Company, lighting system is marked as the area where is possible to reduce energy consumption. Unfortunately due to limited financial resources we are not in position to treat this issue in total but decision have been taken to act in phasis, starting from outdoor lighting.
- There are two possibilities to improve this situation, to build new system which is more expensive solution, or to make reconstruction of existing lighting system. Decision was in favor of reconstruction of existing lighting system.
 The new technology like LED lamps offer us a possibility to rich required standards for illumination of bus bases and to reduce operational costs.
- Realization of this Project will improve working conditions in both bases and will result with reduction of energy consumption and operational costs.



Bus Base in Gyorche Petrov

Results:

Energy saving potential [kWh/a]: 118.160 kWh/a
 Energy source: Electricity
 Cost reduction potential [Euro/year]: 6.077,92 €/a
 CO₂- saving potential [t/a]: 70

Investment costs [Euro]: 69.385 €
 Pay-back time [Years]: 11.41
 Chance of implementation:
 (X) high () middle () low