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APPENDIX 6

GUIDELINE FOR VERIFICATION OF QUALITY OF MAINTENANCE AND ILLUMINANCE LEVEL

TITLE OF THE CONTRACT: CONTRACT ON ENERGY SERVICE FOR IMPLEMENTATION OF ENERGY EFFICIENCY IMPROVEMENT MEASURES AND SAVINGS IN OPERATING COSTS OF PUBLIC LIGHTING

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1 Maintenance

1.1 Quality of maintenance

The quality of maintenance is evaluated based on the rate of functioning lamps (FL, see Appendix 4), i.e. the numbers of lamps, which are operating while being switched on in the Contracted Facility.

Another evaluation parameter is the response time to replace non-functioning lamps after a malfunction has been reported.

To be able to respond on time, the Contractor has to establish a reporting contact point (telephone / E-mail), to which citizens can report malfunctioning in the public lighting system 24 hours a day.

Additionally, the Contractor shall carry out regular inspections to control the functioning of the system (for the frequency of inspection tours, see the tender documentation).

The municipality will check, by random inspections, if the reports from the Contractor reflect the actual performance of maintenance.

1.1 Quality of equipment

The new installed equipment has to be of good quality so as to ensure good light quality and to avoid unexpected maintenance burden for the municipality after the end of the contract. Minimum requirements for protection categories are as follows:

- IP 65 for optical block (SRPS EN 60598),
- IP 44 for starting gear (SRPS EN 60598) and
- IK 08 for the luminary (SRPS EN 62262)

1.2 Reporting

The Contractor is responsible to document the performed maintenance and has to prepare reports to the municipality on a regular basis (for the frequency of reports, see the tender documentation).

To demonstrate the quality of performed maintenance, the reports to the municipality should include a table of the actual monthly energy consumption values on all the meters in the Contracted Facility (see Appendix 2, table 2/1).

The table also shows the expected energy consumption, which is calculated based on installed power (for the concrete meter) and the corresponding operating hours (see Appendix 3, Winning Bid).

A comparison of the two values gives the municipality the opportunity to check the quality of performed maintenance under the assumption that additional (legal or illegal in line with the law) consumption can be identified and neutralized. The Contracting Parties will agree on a specific assessment procedure reflecting the local conditions.

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1.3 Penalties

If the report to the municipality shows that the energy consumption is lower than calculated, malfunctioning of lamps is detected.

If the number of lamps functioning (LF) is below the contractually agreed level and the Contractor cannot provide evidence that the lower energy consumption is a result of improved energy efficiency:

- The Contractor has a certain number of days (specified in the tender documentation) to eliminate the malfunction.
- The municipality will impose penalties on the Contractor. The amount of penalties is two times the costs of maintenance per fixture per year for each fixture below the agreed number of lamps functioning.

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2 Illuminance level

Energy savings achieved within this project are the result of implementation of highly efficient components (e.g. lamp types). The savings usually cannot be achieved by reducing the illuminance level. The current illuminance level, i.e. the illuminance level for each street in the Baseline Period is defined in Appendix 2.

However, the Contracting Parties have to agree on the level of illuminance that is expected after the implementation of the energy saving measures.

Commonly, the illuminance level (illumination) will be improved with the new lighting system.

The minimum requirement shall be that the illuminance level in the Guarantee Period will be at least at the level of the Baseline Period, unless a reduction of the illuminance level has been contractually agreed upon for specific segments of the public lighting system (for streets / parts of streets / specific places).

In cases where the illuminance level is above the recommended level recommended in the standard SRPS EN 13 201, the Contracting Parties may agree upon a lower illuminance level, according to the standard.

In general, verification of the illuminance level is performed by calculation according to the methodology defined in SRPS EN 13201.

In cases of doubt about the illuminance level, certified institutes will be employed to measure the illuminance level in consistency with the Standard SRPS EN 13 201-4. Measured illuminance levels will be compared to the calculated illuminance values achieved for typical street profiles defined in the Contractor's Bid (Appendix 3), which is an integral part of the Contract.

If the illuminance level is below the agreed value, the measurement costs have to be borne by the Contractor, and if the illuminance level is equal to or higher than the agreed value, the municipality (the Client) has to bear such costs.

[enter the place and date of signing the Appendix]

For the Client:

For the Contractor:

(stamp and signature of the Authorized Representative)

(stamp and signature of the Authorized Representative)