

Responses to Clarifications no. 2

to Request for Proposal RFP/BLR/Green Cities/384/2018 for the implementation of works and supply of the equipment for the street lighting modernization in Novogrudok

1. **Question:** Is it necessary to carry out a survey of lighting poles structures, a cable network with an infrastructure, or is there already a certain conclusion (document) from the customer?

Answer: Survey of lighting poles structures, cable network with infrastructure is not necessary. See para 7 of Responses to Clarifications no. 1 to the Request for Proposals RFP/BLR/Green Cities/384/2018 and para 4 of the Minutes of the pre-bid conference in Novogrudok dated July 11, 2018.

2. **Question:** Is it necessary to order geological and geodetic surveys or is there already a certain conclusion (document) from the customer?

Answer: It is not necessary to conduct geological and geodetic surveys for the development of design specifications and estimates.

3. **Question:** The cost of developing design specifications and estimates depends on the design assignment and technical specifications, as well as the results of the survey. In what terms will this initial information be provided?

Answer: The following source information will be provided to the Bidders 7 calendar days prior the deadline for the submission of proposals through publishing the amendment to the Request for Proposal on the UNDP website and mailing it to potential Bidders:

1. Design assignment approved by the Novogrudok RUE "Housing & Utilities";
2. Technical specifications issued by: State Motor Vehicle Inspectorate, Novogrudok Rayon Power Networks of RUE "Grodnoenergo", power supplier.

The above listed technical specifications will be provided, if they are required for the performance of works according to the laws of the Republic of Belarus.

See para 9 of Amendment no. 1 to Request for Proposal RFP/BLR/Green Cities/384/2018 and para 4 of the Minutes of the pre-bid conference in Novogrudok dated July 11, 2018.

4. **Question:** The period of 60 days for the execution of design work, clearance of design specifications and estimates and obtaining a positive opinion of the Gosstroyexpertiza is not real. Obtaining a positive opinion of the Gosstroyexpertiza should not be included in the period of development of design specifications and estimates.

Answer: The terms of development and clearance of design specifications and estimates and obtaining a positive opinion of Gosstroyexpertiza were extended up to 120 days from the signing of contract.

See para 5 of Amendment no. 1 to Request for Proposal RFP/BLR/Green Cities/384/2018.

5. **Question:** The Technical specification for equipment requires the impact protection rating of the luminaire (IK) not lower than IK09. We consider the requirement for keeping the impact energy at 10 J surplus. We suggest considering possible and sufficient impact protection rating of IK08 (5 J)

Answer: This requirement was clarified and specified in Amendment no. 2 to Request for Proposal RFP/BLR/Green Cities/384/2018. The impact protection rating of the luminaire (IK) is changed to IK08.

6. **Question:** The Technical specification for equipment specifies that the luminaire should be designed to include a built-in dustproof and waterproof filter for smoothing the pressure in the luminaire housing. Actually the luminaire should be designed to include a built-in dustproof and waterproof filter for smoothing the pressure in the LED-module of the luminaire housing. We consider technically impractical to place the dustproof and waterproof filter (pressure compensator) in the compartment intended for the power supply in the luminaire housing, especially if the connections and the driver have a class of dust and moisture protection IP65 and higher.

Answer: This requirement is excluded from the Technical specification for equipment according to Amendment no. 2 to Request for Proposal RFP/BLR/Green Cities/384/2018.

7. **Question:** The Technical specification for equipment specifies that the luminaire should be designed to allow a replacement of the LED module, secondary optics of the luminaire, and other functional

components without full or partial dismantling of the luminaire housing. Please clarify, this requirement means maintainability of the luminaire in the post-warranty period?

Answer: This requirement is excluded from the Technical specification for equipment according to Amendment no. 2 to Request for Proposal RFP/BLR/Green Cities/384/2018.

8. Question: The street lighting control system is designed to control 400 luminaires to be purchased, as well as for the inventory of the operated luminaires specified in Annex 3. Different physical principles of the light sources will not allow the luminaires to be controlled as required by the Terms of Reference. Modernization of the lighting control cabinet with universal equipment will solve this problem, but it will also require dividing the streets according to the class of luminaires into exclusively diode and gas-discharge ones.

The exchange of information and the transmission of control commands is carried out according to the principle: The upper level (segment controller) - The lower level (luminaire controller). In the absence of a lower level, the required function can not be realized.

In other words, it is impossible to organize the exchange of information between the luminaire and the control cabinet in the absence of a device providing this connection.

To operate the previously installed LED luminaires, you will need to re-equip them (driver analysis, installation of a controller, etc.), while maintaining the warranty obligations, as well as the technical possibility of such re-equipment, should be discussed separately.

Answer: Prior to the planned replacement of the existing inventory of LED, mercury and sodium discharge luminaires, the control system for existing LED, mercury and sodium discharge luminaires supplied by the Contractor within the framework of this tender will operate in a limited mode.

The street lighting control system equipment installed in the street lighting control cabinets (to control 400 luminaires to be purchased, as well as for the inventory of the operated LED, sodium and mercury discharge luminaires) specified in the Technical specifications for equipment, as well as the incorporated software, must and CAN provide the minimum required set of functions specified in the Technical specifications for equipment:

- The possibility of real-time monitoring of the main parameters of input and output electric power lines (voltage, frequency, current load monitoring);
- The possibility of real-time monitoring of the status of individual functional units in the control cabinet, storing information about the monitored parameters for a certain period of time, regardless of the presence of external supply voltages, and transferring this information to the main PC-based dispatcher workstation via communication channels;
- The possibility of operating in an automatic mode according to a pre-set street lighting system operating schedule;
- The possibility of local (manual) and remote (using the main PC-based dispatcher workstation) control;
- Switching on, switching off operating modes, monitoring of the technical condition of street lighting control cabinet units;
- Switching on/off and/or adjusting the power consumption of each phase separately according to a pre-set schedule;
- Timely signalling of technical malfunctions and emergency situations arising during the operation of the street lighting control system.

The Contractor shall guarantee the operation of equipment only within the framework of the Terms of Reference of Request for Proposal RFP/BLR/Green Cities/384/2018, namely, providing a complete set of control system functions for 400 LED luminaires to be purchased, and the minimum required set of functions mentioned above - for the existing street lighting inventory.

At the same time, testing full set of functions of the street lighting control cabinets designed for the existing street lighting inventory, which will provide the minimum required set of functions in the future under the UNDP contract, during the pre-commissioning of equipment shall be carried out with the help of a part of the supplied LED-luminaires.

9. Question: The street lighting control system is designed to control 400 luminaires to be purchased, as well as for the inventory of operated luminaires specified in Annex 3 and shall include street lighting control cabinets. Do we understand correctly that it is necessary to supply a certain number of control cabinets for street lighting? Please clarify the number of street lighting control cabinets required for delivery.

Answer: The quantity is determined by the Bidder to ensure the operation:

- 1) 400 LED luminaires purchased under this Terms of Reference,
 - 2) 772 existing LED luminaires, specified in Annex 3 to the Terms of Reference;
 - 3) 653 existing DNaT type sodium discharge luminaires, specified in Annex 3 to the Terms of Reference;
 - 4) 354 existing DRL type mercury discharge luminaires, specified in Annex 3 to the Terms of Reference.
- See the updated Technical specification for equipment in Amendment no. 2 to Request for Proposal RFP/BLR/Green Cities/384/2018.

10.Question: The Technical specification for equipment specifies that the controller integrated into the luminaire housing shall have a built-in real-time clock with an astronomical calendar and memory for operation for at least 365 days without communication. Without communication with which device should the luminaire controller work for at least 365 days or store information in memory for at least 365 days?

Answer: This requirement is excluded from the Technical specification for equipment according to Amendment no. 2 to Request for Proposal RFP/BLR/Green Cities/384/2018.

At the same time, according to Amendment no. 2, a corresponding change in the technical requirements for the segment controller was made. The segment controller should have built-in backup memory for operation without communication with the central control software for at least for 365 days.

11.Question: The technical requirements for the segment controller in the Technical specification for equipment specify that automatic updating of firmware and settings of remote equipment, programming by protocol (OTA) shall be provided. Is this the only acceptable protocol for automatic hardware updates? Are other update protocols allowed?

Answer: This requirement is amended in accordance with Amendment no. 2 to the Request for Proposal RFP/BLR/Green Cities/384/2018 and is stated as follows, without specifying a specific protocol:

“Automatic updating of firmware and settings of remote equipment, programming shall be provided”.

12. Question: The Terms of Reference specifies the PLC control protocol for the lighting (control over the supply wires). We suggest you consider the project of modernization of street lighting in Novogradok with the use of lighting equipment operating under the RF protocol (radio signal).

Answer: The use of radio channels for the street lighting control system is not considered. Technical solutions providing the use of PLC or GSM channels for controlling and transmitting data from LED luminaires are allowed. See para 2 of the Minutes of the pre-bid conference in Novogradok dated July 11, 2018.

See also the amended Technical specification for equipment in accordance with Amendment no. 2 to Request for Proposal RFP/BLR/Green Cities/384/2018.

03.08.2018