ANNOTATION

"Development and modernization of heating supply system of Jizzakh city and introduction of modern technologies in development of heat energy".

<u>Justification</u>: Resolution of the President of the Republic of Uzbekistan dated December 02, 2019 No.RP-4542 "On additional measures to improve heating supply and financial recovery of heating supply enterprises".

<u>Project objective</u>: Determination of directions of development and modernization of heating supply system of Djizak city:

- determination of existing and project capacities of heat sources of Jizzakh.
- selection of the optimal scheme of heating supply and organization of resource-saving system of qualitative and uninterrupted heating supply of consumers, aimed at full satisfaction of needs of the population and facilities of the social sphere heating supply for heating and hot water;
- reconstruction and modernization of existing district heating boilers and/or construction of new local boilers, introduction of modern energy efficient and energy saving technologies and modern equipment to be installed at the new sources;
- reconstruction and rehabilitation of mains, distribution and house heating networks in order to improve the quality of heat supply with the use of modern technologies and insulation materials;
- introduction of a modern control and metering system for heating production and consumption;
- reducing heat production costs, effective and rational use of the raw and financial resources, improving the efficiency of the heat supply organization and, as a result, reducing the subsidy component in the local budgets;
 - evaluating the cost of construction and the effectiveness of capital investment.

Project description:

- 1. Create modern energy and resource saving system of heating supply, quality and uninterrupted supply of heating energy, taking into account the needs of the population, social, cultural and household sector facilities in heating and hot water of existing and newly built heating sources of Jizzakh.
- 2. Reconstruction and modernization of existing boilers, replacement of existing boilers and auxiliary equipment with modern energy-saving equipment with introduction of new technologies, as well as introduction of automated process control system for boiler units, introduction of modern systems of control and metering of heat production and consumption.
- 3. Construction of new local district heating boilers with optimized length of the main heat pipeline to the heat consumers, reconstruction and rehabilitation of the external and internal house heating networks to provide a quality heat supply to the population and ensure economical and

Economical and stable operation of the heat supply system.

- 4. Reconstruction and rehabilitation of the external and internal house heating networks repairs of the external and internal house heating networks in order to achieve a quality heat supply to the residents under the condition of economical and sustainable operation of the heat supply system;
- 5. Introduction of new modern insulation materials, in particular polyurethane foam for pipeline insulation.
- 6. Introduction of a modern automated heat energy metering and control system (AISKUT) at all stages from heat generation to consumer consumption. Installation of electronic meters in residential and public buildings electronic meters with data transfer to the central control center.
- 7. Reconstruction of power supply networks and construction of electric transformer substations to provide guaranteed power supply to relevant categorized heat generators and individual heating substations (IHS).
- 8. Transfer of heat consumers to a "closed" heating supply scheme, which saves heating energy and reduces the cost of chemical water treatment of heating water.
- 9. Installation of individual heating points (IPPs) in buildings of heating consumers, which are switched to the "closed" heating supply scheme, providing regulation of the individual temperature mode and object-based metering of heating and hot water consumption. This ensures the transfer of information from electronic metering devices in individual metering units to the centralized metering station to the district heating company's dispatching center.
- 10. Reconstruction of individual sections of water supply networks for water supply to individual heating substations (IHS).
 - 11. Replacement of worn-out heating networks from heat sources in Jizzakh

Reconstruction and rehabilitation of internal house heating networks in order to provide quality heat supply to the population and ensure economical and sustainable operation of the heating system economical and sustainable operation of the heat supply system.

The project provides for:

- Modernization of the existing district heating boilers DB-1 with the replacement of the main replace the main and auxiliary equipment with new energy-saving equipment and install heating energy metering devices;
- Overhaul of in-house heating network systems complete overhaul of the heating networks inside residential buildings (80 houses in Ittifok mahalla) and installation of heating energy meters at the entrances to residential buildings and budget organizations (80 units).

The implementation of the project will contribute to:

Heating supply of 80 residential apartment buildings and 6 budget organizations in Jizzakh is carried out from boiler-houses DB-1 on reconstructed heating main with the transition to a "closed" heating supply scheme and the consumer is provided with heating and hot water supply.

Project Location:

The project is located in the territory of densely populated planned development of Jizzakh city. It is characterized by the following relief: Jizzakh city was founded in 1974, it is the center of Jizzakh province and an important industrial center of Jizzakh province.

Cost of the project:

The estimated cost of the project is 89,5 million US dollars.

Proposed Financing Plan:

It is envisaged to finance the project by means of credit funds of IFIs in the amount of 75,0 million US dollars

Project implementation period: 2021-2025.

Project Efficiency and Payback Period:

The effect of the project (specifically in numbers) and payback period will be 25 years.

Fuel savings of 80 thousand m3 a year.

Available documents: Development of the technical feasibility study of the project is required

Contractor (initiator) of the project:

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