

## **TERMS OF REFERENCE**

### **Slovakia: Zvolen District Heating Project - Review of Feasibility Study and Designs**

This Open Tender and all issues related to it shall be subject to the relevant law of the EU, Slovakia and the Procurement Rules for Projects Financed by International Investment Bank (“Procurement Rules”)

#### **1. BACKGROUND**

The International Investment Bank (the “IIB” or the “Bank”) is considering to provide a loan of up to EUR 30.9 million to the Zvolenska teplarenska, a.s. (the “ZVTP” or “Company”) in the City of Zvolen (“Zvolen” or the “City”) in the Central Slovakia.

The Bank’s financing is aimed to replace existing coal-powered combined heat and power plant (further as “CHP plant”) ceased to meet emission limits with wooden biomass fired heating plant including rehabilitation works, supply and installation of biomass and gas boilers. The Company plans to construct a new biomass-based district heating plant of total capacity currently planned at 77.5 MWt consisting of several heat-only boilers. The new district heating plant (further as “DH plant”) will be located in already existing, but unused building on the main land of the Company near the existing heating plant and will be connected to the existing heat distribution network.

The rationale for the investment stems from the need to decrease the emission of SO<sub>2</sub>, NO<sub>X</sub> and dust in accordance with Directive 2010/75 / EU of the European Parliament and Decree of the Ministry of the Environment of the Slovak Republic No 410/2012. Continuing operations requires rebuilding the plant and installing modern technology, making it operational no later than on 30.6.2020 (the technical and commercial completion date of the new DH Plant). Since that date the Company will no longer be able to use coal for heat generation because of regulatory constraints.

The Company and the Bank have now agreed that the assistance of an experienced firm (the “Consultant”) is required in order to speed up project preparation – mainly in area of review of feasibility study and verification of technical parameters of the project and review of detailed designs.

#### **2. OBJECTIVES**

The overall objective of this Assignment is to review the feasibility study for the new DH plant, confirm technical parameters of the project of new DH plant, proposed technical solutions and detailed designs of new DH plant (prepared for the project by separate engineering consultant) and provide reports on the review.

The project work and reports should provide comments and advice and/or confirmation to the Company in terms of:

- Company’s technical needs and parameters in relation to supply and demand of heat,

- Recommended capacity and type of the boilers,
- Investment costs and financials for the repayment,
- Biomass supply, storage and handling system,
- Review of detailed designs of new DH plant,
- Fulfilment of standard requirements for designs to be included in tenders run under Multilateral Development Bank procurement rules (further as “MDB”) ,
- Preparation of Zero Report for the Bank.

**Zero Report** means, in relation to the Project, an initial written report by the Consultant addressed to the Bank.

### **3. SCOPE OF WORK**

The Consultant will review the data available from the Company, all previous studies and the data collected and prepared during the Feasibility Study phase during project preparation done in 2017 and 2018.

Following the review of available data and reports, the Consultant will revisit the site as needed, to obtain any supplemental information needed to complete the assessment and carry out the activities necessary to confirm the project requirements.

Following completion of the review and site visits the Consultant will deliver a summary of key findings in Feasibility Study Review Report, Design Review Report and Zero Report.

#### **3.1 Review of the feasibility study**

The consultant shall namely focus during the review of the feasibility study on the following areas:

- Source data, requirements and conditions of the project and its location (City of Zvolen)
- Methodology selection and its application for finding the optimal heating solution
- Analysis of historical technical parameters and conditions of heat supply and demand and of the heating plant
- Analysis of shortlisted technical solutions
- Analysis and review of the proposed project location, proposal for placement of new technology,
- Analysis and review of suggested project parts related to:
  - Transport, storage and fuel manipulation
  - Heating sources
  - Water treatment
  - Taking out heat energy from the source
  - Turbines
  - Control systems
  - Metering
  - Buildings and planned construction
  - Investment costs
- Timeline for project implementation

- Legislation framework (related to emissions, etc.)
- Environmental permits and related obligations
- Economic and financial analyses for the project and suggested solutions/technologies

The review of the feasibility study shall provide comments and answers to the Company and the Bank for the areas named above whether all relevant areas of the project analysis and preparation have been fully taken into account and whether there are areas which require additional attention. During the course of preparation the Company and/or the Bank may submit additional requests to include in the analysis and related report.

The outcome of this exercise shall serve as a basis for preparation of Feasibility Study Review Report.

### **3.2 Review of detailed designs**

The consultant shall analyse all detailed designs which are to be prepared by specialised consultant.

The analysis and verification shall be made in accordance with best international practise for preparation of detailed designs which are used in procurement procedures under rules of Multilateral Development Banks (such as EBRD, IIB, WB, EIB, etc.).

As the heating plant construction contract will be tendered on Supply and Installation concept while using Red FIDIC Book (The International Federation of Consulting Engineers, commonly known as FIDIC, acronym for its French name *Fédération Internationale Des Ingénieurs-Conseils*) as a form of contract (in full “Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer: The Construction Contract, First edition 1999”), the Consultant shall review the detailed designs and technical specifications and provide comments/suggestions to improve them in the sufficient detail for inclusion in tender documents (including all technical aspects of the design). All design specifications shall meet requirements of Slovak / EU Laws and international standards, where appropriate. The Consultant shall provide review to ensure that the final design of the new DH plant meets the requirement of the local construction legislation.

The Consultant shall review the technical specifications and Bill of quantities in accordance with the “*Guidelines for Preparation of Technical Specifications and Bill of Quantities*”, or similar equivalent guideline or standard tender document guidance (e.g. Standard Tender Documents for Works by EBRD - <https://www.ebrd.com/cs/Satellite?c=Content&cid=1395278648964&d=&pagename=EBRD%2FContent%2FDownloadDocument>, page 45-46 and 73-74) generally used in projects funded and procured under MDB rules.

The outcome of the work will be Design Review Report, summarising suggested changes, advice and proposals to improve/update the detailed designs, technical requirements and other documentation.

### **3.3 Preparation of the Zero Report**

The objective of the Zero Report is to provide clear understanding and confirmation to the Bank in relation to the project, namely that:

- a) All necessary project documents, permits and approvals for construction of new DH plant by the respective authorities are obtained;
- b) Calculated Project budget costs are confirmed on the market level;
- c) Calculated Project budget costs are sufficient to finalize the project;
- d) Confirmation of the technical characteristics of the Project;
- e) Confirmation of the reality of the provided forecast of cash flow for the Project, including savings costs from using cheaper raw materials and announced reduction of staff;

A Zero Report shall include the following information/conclusions:

- Analysis of the initial permit documentation, permits of the authorized bodies for the right to use land plots, permits for construction/reconstruction/modernization, conclusion of the Consultant regarding availability, completeness and compliance of the current permit documentation to the current legislation;
- Analysis of the capital investments in the Project, the contractual base with the main future contractor, correspondence of the cost of services/equipment to the budget of the Project and the average prices on the market, conclusion of the Consultant regarding budget of the Project and compliance the budget of the Project to the market prices;
- Market analysis including assessment of risks of growth of competition, sufficiency of raw materials/inventories in the region, analysis of possible markets for the purchase of raw materials/inventories in order to assess the possibility of continuous work of the Company for the term of the loan (including risk of insufficient raw materials for the term of the loan) also an analysis of the Company's contractual base with suppliers/customers of products/services, assessment of the main risks, conclusion of the Consultant regarding possible market risks for the Company, regarding influences counterparties on the business of the Company (e.g. dependence the activity of the Company from specific suppliers/customers);
- Analysis of the legislation of Slovakia regarding tariff regulation for heat, assessment of possible regulatory risks for the Company in the short/medium and long-term perspectives, assessment of possible reduction of tariffs, analysis of the financial model of the Project provided by the Company, analysis of the Company's competitive position, conclusion of the Consultant regarding the realistic of the provided by the Company financial model and proposals of the Consultant for minimizing of possible risks;
  - a confirmation that the submitted specifications contain all the permits and that all these permits are final and conclusive (*právoplatné*) and in form and substance sufficient for the new DH Plant and its completion and further operation in accordance with the other specifications;

- a confirmation that the supply documents contain such terms, which (in the context of the Specifications) will ensure that the new DH Plant will be completed in accordance with the specifications;
- a confirmation that the Plant will be capable of permanent operation and constant production of heat at the minimum acceptable to the Bank once the technology is installed at the Plant;
- a confirmation that the Project is capable to generate cashflow which at least at the level of the cashflow projections once the technology is installed at the Plant;
- a confirmation that the budgeted costs or their part:
  - have been, having regarded all specifications, calculated accurately and realistically;
  - are based on prices standard on the relevant market at the relevant time; and
  - cover all supplies and works that will be required for completion of the new DH Plant in accordance with the specifications;
- a confirmation on potential savings in budgeted costs (if any) resulting from using of a cheaper raw materials and considering any announced reduction of employees and other staff of the Company;
- a confirmation on potential savings in costs of operating of the Plant (if any) resulting from using the technology (which is, or which is to be, installed within the new DH Plant) calculated by comparing the financial performance of the Company, anticipated following the practical completion, with the financial results of the Company set out in the original financial statements;
- confirming that the timetable of the new DH Plant (being part of the specifications), having regarded all the other specifications and the relevant supply documents, is realistic for the practical completion to take place on or before the required completion date;
- evaluating potential technical and construction risks of the new DH Plant;
- evaluating the existing suppliers (with respect to their qualifications) and the existing supply documents (in particular whether the supply contracts: (i) have a guaranteed maximum price in line with the budgeted costs or their part and fixed delivery date in line with the timetable, (ii) provide for safeguards and warranties customary and reasonable for the particular type of supply contract, providing an overview of performance bonds or other guarantees for the performance of the suppliers' obligations, and outlining the potential suppliers and supply contracts that will need to be concluded in the later stages of the development; and
- a confirmation that the cashflow projections:
  - have been, having regarded all specifications, calculated accurately and realistically; and
  - are based on prices standard on the relevant market at the relevant time.

The Consultant shall closely cooperate also with other consultant providing support the Company in obtaining the permits for the construction.

#### **4. IMPLEMENTATION ARRANGEMENTS AND DELIVERABLES**

##### **4.1 Implementation Arrangements**

The Consultant will report to the Company on all aspects of this Assignment. The Consultant will sign the contract with the Company. The Assignment is expected to start in March 2019 and have duration of 3 months.

The Consultant will be responsible for arranging accommodation and local and international transportation. The Consultant will be responsible for all salaries, fees, allowances, insurance, leave pay and taxes.

The Consultant including its engineering staff (where relevant) shall hold relevant licences, certifications, permits in relation to perform engineering, design or other specialised services within Slovakia / European Union related to the Project.

It is expected that the Company will provide the Consultant free of charge with furnished, office accommodation and access to telephones, fax and internet. All calls and internet service costs are to be paid by the Consultant.

All available project information, reports, and documents will be made available for the Consultant by the Company at the start of the assignment.

All documentation related to the contract will remain the property of the Company after completion of the assignment. The Consultant shall not publish, use or dispose of this documentation without the written consent of the Company.

The Company may from time to time request the Consultant to produce an ad hoc report. The reports shall be prepared in both English and Slovak.

The Consultant shall cooperate closely with other consultants in the project, as the inputs like detailed designs are yet to be prepared by another specialised consultant under assignment "Preparation of detailed designs".

##### **4.2 Deliverables**

In the course of the assignment the Consultant shall prepare the following Reports:

###### **1. Feasibility Study Review Report**

The draft report to be provided 2 weeks after signature of contract for this Assignment. The report shall include and provide information described in the 2.1 above. The comments of the Company and the Bank shall be incorporated within 1 week and Final version of the report shall be delivered.

###### **2. Design Review Report**

The draft report shall be delivered within 2 weeks after receiving detailed designs and technical documentation prepared by the Consultant responsible for Preparation of

detailed designs. The comments of the Company and the Bank shall be incorporated within 1 week and Final version of the report shall be delivered.

### **3. Zero Report**

The draft of Zero Report shall be delivered within 1 month after signature of the Contract for this Assignment and deliver it to the Company and the Bank. The comments of the Company and the Bank shall be incorporated within 1 week and Final version of the report shall be delivered.

### **4.3 Consultant**

The Consultant shall provide adequate staff in terms of expertise and time allocation, as well as needed equipment in order to complete the activities required under the scope of work and to finally achieve the objectives of the project in terms of time, costs and quality.

The Consultant shall be responsible for mobilisation of qualified project manager, engineers and designers with proven experience in the preparation and review of designs in infrastructure projects financed by MDBs. The experts shall be experienced in preparation and review of feasibility studies, including district heating. Where staff does not speak the local language, interpretation and translation will be the responsibility of the Consultant. All proposed experts of the Consultant shall have valid work permits applicable for Slovakia or to be citizens of EU Member States, or shall reasonably demonstrate at the time of bid submission that such work permits will be obtained by the time of contract signature without causing delays in the Assignment.

It is anticipated that the Consultant's team shall include the following expertise:

- Team leader/Project Manager;
- Local Project Manager;
- Financial / Economic Expert;
- Engineers/Designers:
  - Civil;
  - Mechanical;
  - Electrical;
  - SCADA (Supervisory Control and Data Acquisition);
  - District heating;
- Environmental and Social Expert.

All experts shall preferably have a minimum of 5 years' experience of the activity which they are proposed for, except for Team leader/Project Manager and Engineers where 8 years of experience is required. The experts shall also have the following experience for positions they are proposed, including:

- have design and project management experience gained in countries with conditions similar to Slovakia;

- have experience with DH plant construction/rehabilitation, or DH plant construction supervision or DH plant operations of at least 1 DH plant in managerial position;
- have experience in preparation and review of feasibility studies for infrastructure projects financed by various MDBs (preferably to have work experience from both sides – working for MDBs for preparation/review of FS and also for final beneficiaries/investors.)
- have experience in review and validation of infrastructure engineering projects incl. district heating rehabilitation and upgrade projects;
- have experience in design and design review of infrastructure engineering projects incl. district heating rehabilitation and upgrade projects;
- have experience in (i) planning, design and design review activities; (ii) assistance with planning and design activities; (iii) project management; (iv) project management assistance; (v) engineering; (vi) preparation / review of feasibility studies in projects financed by various MBDs; (vii) financial / economic appraisals of infrastructure projects;
- have a good knowledge of requirements for designs and technical documentation from projects tendered under procurement procedures and rules of Multilateral Development Banks, such as the IIB, EBRD, World Bank, EIB
- have a good knowledge of FIDIC Red Book;
- have a good knowledge of requirements of Slovak legislation concerning designs, construction, engineering, environmental and social issues.
- be able to work proficiently in English, fluency in Slovak would be an advantage.