

## **TERMS OF REFERENCE**

### **Slovakia: Zvolen District Heating Project - Preparation of Detailed Designs, Support with Initial Permits**

This 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 (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. 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 preparation of detailed designs and providing expert support to the Company with applying and obtaining initial permits for construction.

#### **2. OBJECTIVES**

The overall objective of this Assignment is to facilitate the timely and effective preparation of the Project components by rendering assistance to the Company.

In particular the Consultant will assist the Company to: (i) prepare detailed engineering designs of the new DH plant in suitable form to be used in tender procedure according to IIB Procurement Rules and (ii) assist the Company in applying and obtaining necessary initial applications and permits according to relevant legislation of the Slovak Republic related to the project of construction of new biomass fired district heating plant.

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

The Consultant shall provide assistance to the Company in engineering / design services in accordance with applicable legislation of the Slovak Republic and in line with procedures, specifications and documentation of the Company and pursuant to all other agreements and provisions stipulated in the Loan Agreement signed between the Company and Bank.

In order to meet the above objectives, the Consultant shall, *inter alia*:

- (a) Review and verify all project related engineering documents (mainly preliminary and conceptual designs) prepared for the project,
- (b) Propose changes in order to prepare detailed designs (to meet current requirements of the Company which might have occurred, MDB (multilateral development bank) standards for designs to be used in the Tender documents and also in accordance with applicable EU / SK legislation related to the project),
- (c) Prepare main detailed designs and technical specifications including Bill of Quantities as necessary,
- (d) Assist the Company in preparation of all necessary applications and in obtaining permits related to the construction of new heating plant;

The Consultant shall support the Company with the following tasks:

#### **3.1 Review and verification of project related documents prepared for the project**

##### *3.1.1 Initial data collection*

The Consultant shall collect available data and identify missing initial technical data with regard to the contract to be implemented.

The Consultant will review and verify the project related engineering documents (mainly preliminary and conceptual designs) of the DH plant in order to propose needed changes to the Company which might have arisen since the time the documents have been prepared until now. Particular attention shall be given to the proposed timeplan for the project implementation in order to maintain the project deadlines (or suggesting ways how to shorten them).

The output of this part will serve as a basis for the next part – changes to be proposed to the Company in order to prepare detailed project designs.

#### **3.2 Propose changes in order to prepare detailed designs**

The review and verification of the prepared documentation (e.g. preliminary designs and other) will become a basis for discussion with the Company for alignment on the needed changes. Special attention should be paid to parts of project, which might have positive impact on shortening of project implementation/construction time plan, bearing in mind ratio between extra cost vs. time saved. In this regard the Consultant shall propose alternatives, if possible.

The Consultant will work closely with the Company during identification of needed changes as the Consultant will be responsible for identification of current requirements/needs of the Company which might have occurred and also for adherence to MDB standards for designs to be included in the Tender documents and also in accordance with applicable Slovak / EU legislation related to the project.

The Consultant will quickly after project kick-off prepare a longlist of proposed changes in order to discuss with the Company, based on which a shortlist of changes will be prepared. The Consultant will demonstrate and present changes to the Company and request approval on items on the shortlist before start of work on detailed designs.

### **3.3 Preparation of detailed designs and technical specifications**

The Consultant will be responsible for preparation of detailed designs and technical specifications as necessary in order to have complete package of design and technical documentation needed for a 2-stage open tender procedure.

#### *3.3.1 Development of employer's requirements and main designs of the new DH plant*

The designs shall be sufficiently detailed to allow the works, supply and installations to be procured and to enable an accurate cost estimate to be made. The designs shall provide such details as location, size, number, capacity, strength, equipment and specifications. The design assumptions and criteria used to develop the designs shall be clearly documented.

The main (detailed) design works of new DH plant shall include, but may not be limited to:

- Architectural design,
- Construction design,
- Design of HVAC installations,
- Design of Hydro installations,
- Design of Electric installations,
- Landscaping design,
- Design of integration into the existing district heating system,
- Main design review,

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 required design and technical specifications and complete them in the detail sufficient 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 ensure that the final design meets the requirement of the local construction legislation. The Consultant will ensure continuous supervision of the design works, as well as quality assurance. The Consultant shall possess relevant licenses, certifications, permits in

relation to perform engineering and design or other specialised services related to the Assignment within Slovakia / European Union.

The Consultant shall base his technical solutions on the best industrial practice and innovative solutions.

The final package of detailed designs shall contain all information in various forms and shall include all necessary and essential drawings, designs and specifications (thus shall require no additional work, adjustments or additions by the Employer or by third party) to be used in the tender documentation based on which the Contractor will be able to build the DH plant using FIDIC Red Book. The format of the detailed designs shall be .dwg format (AutoCAD), in both editable and non-editable formats.

The Consultant shall prepare 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 project funded and procured under MDB rules.

The Bill of Quantities shall be prepared in editable formats (both MS Word and MS Excel) and shall contain all items essential and necessary to erect the district heating plant according to the Employer’s designs prepared by the Consultant according to FIDIC Red Book Conditions of Contract. Any items that are missing in the below structure and which the Consultant considers essential to achieving full operation of the plant shall be added, but shall include at least the following items:

- Civil works including landscaping, foundation, boilerhouse building and related installations
- Biomass storage and processing facilities
- Delivery and installation of heat-only boilers and related equipment
- Trainings, testing, commissioning, and spare parts

### **3.4 Assist the Company in preparation and obtaining of all necessary permits related to the construction of new heating plant**

The Consultant shall actively assist the Client with identification, application and obtaining necessary approvals and permits by authorities for design and project. The approvals and permits shall include at least the following items, but shall contain all items essential to allow the construction of DH plant according to applicable legislation:

- Decision from Environmental Impact Assessment (EIA) process (*the Consultant shall closely cooperate with another Consultant responsible for preparation of all Environmental and Social Impact Assessment documentation*)
- Permit on construction of air polluting sources
- Issuing permit for the use of the building in accordance with § 79 of Act no. 50/1976

- Issue of consent to change technical-operating parameters and technical-organizational measures in accordance with § 3 of Act no. 39/2013 Coll.
- Issue of approval for the approval of the technical calculation of emission limit data acc. to § 3 of Act no. 39/2013 Coll.
- Issuance of consent to determine emission limits
- Issue of consent to change the permit for disposal of hazardous waste acc. to § 3 let. c6) of Act no. 39/2013 Coll.
- Consent to approving the procedure for calculating the amount of pollutants discharged
- Performing first discontinuous measurement of pollutant emissions
- Consent to the disposal of hazardous waste

The Consultant will be responsible for identification of all needed permits relevant for the project. In the first 2 weeks in the assignment the Consultant shall identify permits and institutions and assess the status of documents for applications and propose an optimal time plan for smooth preparation of all applications and obtaining the permits for the project.

Based on the time plan the Consultant shall actively involve in applying and obtaining all necessary permits relevant for the project.

#### 4. IMPLEMENTATION ARRANGEMENTS AND DELIVERABLES

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

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

It is expected that the Company will provide the Consultant free of charge with furnished, office accommodation and access to telephones, fax and internet within its buildings. 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.

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 outputs shall be prepared both in English and Slovak.

## **4.2 Deliverables**

The Consultant will prepare (1) initial time plan, (2) long-list and short-list of proposed changes to the technical documentation, (3) complete package of detailed designs to be included in tender document under MDB procurement rules, and (4) necessary applications for project permits. All reports and documentation shall be prepared in the Slovak and English languages.

The Consultant will submit the following deliverables to the Company for the Assignment:

- Initial time plan – 2 weeks after Contract signature
- Long-list of proposed changes to the technical documentation – 2 weeks after Contract signature
- Short-list of proposed changes to the technical documentation – to be finalized in cooperation with the Company 1 week after the long-list submission
- Complete package of detailed designs and technical documentation – 2 months after Contract signature
- All applications for permits and approvals – will be prepared and submitted individually, but latest 2 months after Contract signature

The shift of deadlines for the submission of the deliverables will be agreed with the Company in advance, depending on the outcome of the initial time plan.

## **4.3 Profile of the 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 team of experts with proven experience. 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.

The Consultant shall possess relevant licenses, certifications, permits in relation to perform engineering and design or other specialised services related to the Assignment within Slovakia / European Union.

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

- Team leader/Project Manager;
- Local Project Manager;
- 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 District Heating 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 design of district heating rehabilitation and upgrade projects;
- have experience in (i) planning and design activities; (ii) assistance with planning and design activities; (iii) project management; (iv) project management assistance; (v) engineering;
- 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.