



Kozani: 20/05/2026  
Protocol Number: 75796

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## INVITATION FOR OFFERS

### FOR THE PROVISION OF SPECIALIZED TECHNICAL CONSULTING SERVICES

#### SCOPE OF THE CALL

**“Provision of Specialized Technical Consulting Services for the Preparation of an Operational Plan for Sustainability & Substitution of Fossil Fuels in the Energy Mix of the Kozani District Heating Facility (Heating Plan)”**

**Reference code: TΘ 0582/2025**

The Kozani Municipal Water Supply and Sewerage Company “DEYA Kozani,” in response to the provisions of the National Energy and Climate Plan (ESEK), with a view to providing uninterrupted, reliable, and competitively priced thermal energy services to residents within the framework of the energy transition, is considering modifying its production model by introducing new thermal energy production technologies, with an initial estimated investment cost of €120,000,000

To this end, it intends to enter into a contract with a partner specializing in energy transition issues, who will propose an energy transition roadmap for the company involving the integration of renewable energy technologies into the company’s energy production model, to cover, in addition to the aforementioned thermal energy supply contract, a portion of the thermal energy required by the Kozani district heating system.

The award procedure takes place pursuant to the provisions of Article 128, paragraph 1 of Law 4412/2016, as amended, supplemented, and currently in force, primarily by Law 4782/2021, and in accordance with Opinion M 03/ March 26, 2026, 1st Meeting – Act No. 2 of the Public Works Council, Studies Department of the General Secretariat for Infrastructure of the Ministry of Infrastructure and Transport.

Taking into account the complex and specialized nature of the required studies, the need for coordination to ensure the consistency and compatibility of the individual studies, as well as the critical nature of the projects, we request the submission of a Technical and Financial Proposal.

The contract will be awarded through the negotiated procedure without publication of a notice, and this notice is posted on the Contracting Authority's website, with the following criteria:

**1. Suitability for the practice of the profession**

- Proof of registration with the District Heating Association or another body/organization certifying experience in the study, design, and implementation of similar projects, or in the provision of consultancy services related to the decarbonization and transition of district heating systems toward zero carbon footprint and the use of renewable energy sources.
- Proof of registration in professional and/or commercial registries of your country or another relevant authority that demonstrates the legal capacity to provide the services required for the project in question.

**2. Technical and professional competence – Relevant Experience**

- A list of the main similar services delivered over the past five years, including reference to the final public or private client, country, contract value, and date.
- Working group - minimum staffing levels, as well as the years of experience of personnel in energy systems  
(Senior Engineer +30 years of experience, Senior Engineer- + 12 years of experience, Engineer Consultant, + 5 years of experience, Junior Engineer, +3 years of experience, Junior Engineer, 1 year of experience)

and in accordance with the provisions of Article 128 of Law 4412/2016 (Government Gazette 147A/08.08.2016), as amended and currently in force, regarding the award of specialized services for the design and execution of public works contracts, as specified in Annex A.

The estimated cost of the construction contract amounts to €95,000.00 plus 24% VAT and the

completion of the above services is estimated at **SIX (6) months** from the signing of the contract, with the possibility of extension for reasons not attributable to the contractor, in accordance with the provisions of Article 128 of Law 4412/2016 (Government Gazette 147A/08.08.2016), as amended and in force.

Please submit the financial bid in sections, including the implementation schedule, in accordance with the indicative stages of the table estimating the required studies for the project in the Annex A, so as to enable the Contracting Authority to proceed with a partial or full award of the project in question, in accordance with the needs of the Service.

### **Payment Procedure**

An advance payment of 15% of the contract amount may be made, as well as instalment payments of up to 90% of the contract amount, based on deliverables. The remaining 10% will be paid upon completion and final acceptance of the contract work.

Due to the contract value in accordance with applicable Greek legislation and specifically Article 302 of Law 4412/2016, as amended and currently in force, a performance guarantee is required, amounting to 4% of the initial contractual value initial contractual value. This guarantee may be issued by any banking or financial institution in your country.

Finally, in accordance with the provisions of the same law, at the time of contract signing, a withholding of 0.1% of the initial contractual amount in Favor of E.A.DH.SY. (United Public Procurement Authority) , plus stamp duty, is required as per Article 350 of Law 4412/2016.

In order to provide these services, it is essential to be familiar with the local conditions of the Kozani district heating system and to visit our offices at least twice: one before signing the contract to discuss the scope of work, and one after completion to present the results. The cost of travel to our region will be covered by the Kozani Water and Sewerage Authority (DEYA KOZANIS). Any additional visits deemed necessary for the fulfilment of the contract will be at your own expense.

The bid shall be submitted, signed, to the Office of Studies & District Heating Projects of DEYA KOZANI (2nd km of the Kozani-Thessaloniki National Road), within **FIVE (5) working days**, by **Wednesday 27/05/2026 at 3:00 p.m.** signed and placed in a sealed envelope addressed to the Kozani District Heating Service Directorate.

Funding will be provided by the Special Development Program of the Region of Western Macedonia (Special Development Program (SDP) for the Region of Western Macedonia 2017-2021) and General

Management Decision Number ΑΓΔ:00225/24.04.2026 (KIMDIS 25REQ018887609 2026-04-24)

For more information or further details, please contact:

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**THE CHAIRMAN OF THE BOARD  
OF DIRECTORS OF DEYA KOZANI**

**MATIAKIS PANAGIOTIS**

## Annex A'

### Summary Description of the Project

#### 1. Introduction

The Kozani District Heating System has been in operation since 1993 and supplies thermal energy to the urban area of Kozani, as well as to the settlements of Nea Charavgi and the Zone of Active Urban Planning (ZEP) within the Municipality of Kozani.

The maximum required thermal load (peak load) of the system is assessed at 170–180 MWth.

The Municipal District Heating Company of Kozani (DEYAK) seeks to commission a qualified consulting team, hereafter referred to as the CONSULTANT, to conduct a comprehensive preliminary technical study, hereafter referred to as the PROJECT, to support the transition of the city's district heating system toward a more sustainable, long-term heat production model, introducing renewable energy sources to its energy production system, aiming to ensure the feasibility of a system capable of producing **150,000–180,000 MWh of thermal energy annually**.

The project will evaluate baseline conditions, identify and analyze alternative production scenarios, assess economic and environmental performance, and propose a recommended technical solution along with an implementation roadmap.

The purpose of this assignment is to provide DEYAK with a robust, data-driven decision framework for selecting the optimal future heat production mix and preparing for implementation.

#### 2. Objectives of the Assignment

The key objectives are:

- To assess current and future heat demand, system characteristics and local market conditions relevant to heat production.
- To develop and model viable technical scenarios for future heat generation using appropriate simulation tools.
- To evaluate each scenario in terms of investment needs, operational performance, cost of heat, sensitivity to energy market conditions and environmental impact (CO<sub>2</sub> emissions).
- To recommend the preferred technical solutions and provide a phased implementation plan.
- To provide a financial analysis of the preferred solution in accordance with the standards of the 2021–2027 programming period.
- To deliver a comprehensive final report and present findings to DEYAK and relevant stakeholders.

### 3. Scope of Work

The Consultant shall perform the following tasks. DEYAK may refine scope details at the contracting stage.

#### 3.1 Project Management

- Establish a detailed workplan, communication plan and quality assurance procedures.
- Coordinate all project activities, meetings and deliverables with DEYAK.
- Ensure timely progress updates and adapt the schedule where necessary.
- Organize workshops and technical meetings described in this Term of Reference.

#### 3.2 Inception Phase & Kick-Off Workshop

- Conduct a kick-off meeting/workshop with DEYAK's team.
- Introduce the overall modelling framework to be used for the assignment, including the methodology, input data requirements, assumptions and calculation approach for the assessment of the baseline and alternative technical heat production scenarios. The Consultant shall propose and justify the energy modelling software and/or computational tool to be used for this purpose. The selected tool shall be suitable for simulating the operation of the Kozani district heating system, taking into account heat demand profiles, heat load duration curves, technology performance data, energy market assumptions, operational constraints and scenario-specific technical configurations. No specific commercial software is prescribed.
- Define roles and responsibilities between Consultant and DEYAK regarding data provision and technical inputs.
- Document meeting outcomes and agreed data requirements.

#### 3.3 Data Collection & Market Assessment

The Consultant shall prepare a data request list to be collected and inform DEYAK. Tasks include:

- Assessment of the current and forecasted heat demand requirements of the district heating network. This shall include, at minimum:
  - annual heat demand
  - peak thermal load
  - hourly or representative heat demand profiles
  - current and forecasted heat load duration curves.

The Consultant shall develop and document the heat load duration curves on the basis of available historical operational data, demand forecasts, network development assumptions and any relevant

climatic or consumer-related parameters. The current and forecasted heat load duration curves shall constitute a key input for the sizing of heat production technologies, the definition of their operational role, the assessment of base-load, peak-load and back-up requirements, the operational simulation of the baseline and alternative technical heat production scenarios, and the comparison of their technical, economic and environmental performance. Identifying required capacity and operational constraints for the district heating system.

- Assessing the Greek Energy Market Framework electricity price structures, taxation, grid charges, energy market frameworks and other relevant regulatory parameters.
- Collecting CAPEX/OPEX benchmarks for relevant technologies (e.g., heat pumps, boilers, thermal storage, RES-based production units, etc.) from publicly available or industry-standard sources. Should relevant data from the Greek market be unavailable, the Consultant shall rely on internationally sourced data from similar projects and equipment, in accordance with established industry practices and the Consultant's professional judgement and expertise.
- Reviewing site constraints and any planning limitations communicated by DEYAK.
- Analyzing data for consistency and integrating it into the modeling process.

### 3.4 Development of Baseline and Alternative Scenarios

Using the modelling tool agreed at kick-off, the Consultant shall develop a total of four scenarios for assessment:

- Develop one (1) baseline scenario of current heat production that will represent the most probable heat supply case in the absence of a new RES-based or low-carbon transition scenario and will serve as the basis for comparison.
- Develop **three (3)** alternative production scenarios reflecting different technical options for heat production including renewable and/or low-carbon technologies for meeting the same heat demand requirements of the Kozani district heating network.
- Run operational simulations for each scenario, incorporating demand patterns, market conditions and technology characteristics.
- Compare scenario results and document assumptions.

For the purposes of this assignment, a scenario shall mean an integrated technical heat production configuration designed to meet the heat demand requirements of the Kozani district heating network. Each scenario shall define the combination of heat generation technologies, their installed capacities, their expected contribution to the annual heat production mix and their operational role within the system, including base-load, mid-load, peak-load or back-up operation.

A technical option shall mean an individual heat production technology, energy source or technical

measure that may be included in one or more scenarios. Scenarios and technical options shall therefore not be treated as identical terms. A scenario may consist of one or more technical options combined into a coherent and implementable heat production configuration.

Only technical options that are demonstrated to be technically feasible, locally applicable and realistically implementable under the local conditions of the Kozani district heating system shall be included in the scenarios. Each scenario shall subsequently be assessed in accordance with the relevant sections of this Terms of Reference, including economic performance, environmental impact and implementation timetable.

### **3.5 Mid-Term Workshop**

- Present interim findings, preliminary model outputs and early insights to DEYAK.
- Facilitate discussion to validate assumptions, adjust scenarios, and refine the modelling approach if needed.
- Document feedback and agreed modifications.

### **3.6 Economic Assessment-Heat production cost**

For each scenario, the Consultant shall perform:

- Calculation of average heat production costs and cost structure breakdown.
- Assessment of corporate/project economics including CAPEX, OPEX, revenue potential, financing assumptions, and risk parameters.
- The Levelized Cost of Heat (LCOH) will be used as a key economic indicator for comparing the scenarios, together with the underlying cost assumptions and components, including CAPEX, OPEX and energy input costs.

### **3.7 Environmental Assessment (CO<sub>2</sub> Emissions)**

- Estimate CO<sub>2</sub> emissions for each scenario based on fuel/energy input and operational profiles.

### **3.8 Implementation of scenarios Timetable**

For each scenario, the Consultant shall develop:

- A realistic and implementable phase-based timetable, taking into account permitting, design, procurement, financing, land availability, construction, commissioning, supply continuity during transition, network constraints and requirements for achieving or maintaining an efficient district heating system.
- Outline of operational adjustments required during transition phases.

### **3.9 Pricing Model Framework**

- Develop a template for a district heating tariff model reflecting international best practices.
- Propose pricing elements that encourage efficient consumption and cost-reflective charging.
- Provide guidelines for adapting the model to local regulatory conditions.

### **3.10 Business Model Framework of the selected scenario**

- Outline technical requirements for proposed production units.
- Identify consequential infrastructure needs (e.g., network reinforcements-expansions, pumping capacity, interconnections) and relevant costs.
- Preparation of a detailed implementation plan for the selected solution, specifying investment stages and associated timelines.
- Evaluation of the project's economic performance, including detailed cost analysis.

### **3.11 Financial analysis of the selected scenario**

- Taking into consideration the technical study assumptions (CAPEX, OPEX, implementation plan, energy production costs, etc.) for the selected solution, the CONSULTANT shall prepare a comprehensive Financial Analysis for the selected solution, in accordance with the methodological requirements and evaluation standards of the 2021–2027 Programming Period, including the European Commission's guidelines for financial analysis of investment projects.
- The CONSULTANT shall collect, verify, and analyze all relevant operational and financial data of the district heating system for the last three (3) completed fiscal years, ensuring alignment with the assumptions, financial indicators, discount rates, and calculation methodologies prescribed in the current programming period's guidance documents.
- The Financial Analysis shall include, at minimum:
  - projections of the selected solution operational revenues and expenditures
  - estimation of production cost and sales price of thermal energy produced by the selected solution, in accordance with regulatory and market constraints
  - assessment of the selected solution's financial sustainability
  - calculation of key financial indicators (FNPV, FIRR), as required.
- A sensitivity analysis shall be conducted to identify the critical financial variables and assess the robustness of the financial performance of the selected solution.
- For the financial schemes to be examined, the financial sustainability for the selected solution shall serve as the primary criterion for determining the thermal energy sale price generated.

### **3.12 Final Report and Presentation**

The Consultant shall prepare a complete final report including:

- Executive summary.
- Data inputs and validation.
- Scenario descriptions and modelling results.
- Economic and environmental assessments.
- Recommended technical solution.
- Implementation roadmap.
- Financial analysis results
- Preliminary site allocation installation plans
- Annexes with preliminary calculations.

A formal presentation of results shall be delivered to DEYAK management and stakeholders (in Kozani or online, as agreed).

#### **4. Project Deliverables**

1. **Draft Final Report** – comprehensive report of results and analyses for DEYAK review.
2. **Final Report** – incorporating DEYAK comments.
3. **Stakeholder Presentation** – final summary provided to DEYAK.

Deliverables shall be submitted in English in PDF and editable format (e.g., doc/xls/dxf/ dwg/mxd where relevant).

#### **5. Responsibilities of the Client**

DEYAK shall:

- Provide all available data and documentation relevant to the assignment.
- Provide proposed sites for the installation of the facilities upon being informed of the required land area for the facilities.
- Participate actively in meetings and workshops.
- Provide timely comments on deliverables.
- Facilitate access to local information, regulatory context, and site-related constraints.

#### **6. Consultant Qualifications**

Candidate firms must demonstrate:

- Proven experience in district heating planning, energy system modelling, and techno-economic

assessments.

- Expertise modelling software suitable for operational scenario analysis.
- Strong background in evaluating RES-based and hybrid heat production systems.
- Experience with tariff structures and energy market economics.
- Adequate staffing (senior, mid-level and junior experts) to ensure the completion of the assignment within the required timeframe, as well as cooperation with local experts of proven relevant experience, in order to secure a thorough understanding of local conditions.

## 7. Time Schedule

The expected duration of the assignment is **6 months** from contract signature, unless otherwise agreed.

A detailed schedule shall be submitted by the Consultant during the inception phase.

## 8. Proposal Requirements

Candidate firms shall submit:

- **Technical Proposal**, including methodology, schedule, team composition, and relevant experience.
- **Financial Proposal**, specifying time allocation by role, hourly rates and total cost.

## 9. Contracting & Payment Terms

- Payments will be made upon acceptance of deliverables or as defined in the contract.
- No additional costs shall be incurred without prior written approval from the DEYAK.