

## **CALL FOR EXPRESSION OF INTEREST**

### **BACKGROUND**

The Ministry for the Environment, Land and Sea of the Republic of Italy and the Ministry of Tourism and Environment of Montenegro signed a Memorandum of Understanding (MoU) on "Cooperation for Environmental Protection", in order to maintain and enhance bilateral cooperation in the field of environment and sustainable development on the basis of equality, reciprocity and mutual benefit.

The successful cooperation between the two mentioned Ministries has been also established in the field of the CDM implementation resulting in an efficient contribution to sustainable development focusing on the assessment and development of the GHG emission reduction projects.

In the scope of this bilateral cooperation, the Ministry for the Environment, Land and Sea of the Republic of Italy and the Ministry of Tourism and Environment of Montenegro have jointly identified the Podgorica Landfill site as suitable Landfill Gas (LFG) to energy pilot project. Within this framework, a feasibility study was realized, proving the technical and economic feasibility for plant construction, operation and maintenance at the Podgorica site. A summary of the study, prepared by the CETMA Consortium under the supervision of the Steering Committee, is attached to the present Call (Attachment I).

Therefore, the Ministry of Tourism and Environment of Montenegro is now issuing a Call for Expression of Interest to select the most competitive company wishing to establish a partnership to implement the aforementioned project.

### **OBJECTIVE OF THE CALL**

The present Call for Expression of Interest aims at selecting an Italian or Italo-Montenegrin company willing to implement the project "Podgorica Landfill Gas to Energy System". The project is to be realized at the "Livade" landfill site in Podgorica in association with the local site owner Deponjia d.o.o.

As the first step in carrying out the project, within 3 months from the date of selection the selected company shall present to the local site owner a detailed proposal on the technical and commercial conditions for the project implementation.

As the project is to be developed together with the site owner, the second step of the project realization would entail the creation of a partnership with the Podgorica site owner and operator (Deponjia d.o.o.).

### **PROCEDURE**

The Call for Expression of Interest will be conducted pursuant to the procedure and the criteria set by the Steering Committee established according to the Annex II to the Memorandum of Understanding between the Italian Ministry for the Environment, Land and Sea and the Ministry of Tourism and Environment of Montenegro.

Being realized within the framework of a bilateral cooperation agreement between Italy and Montenegro, signed on November 11<sup>th</sup>, 2004, the present Call is issued in accordance with the Article 3, paragraph 1, point 2a, of the Law on Public Procurement of Montenegro (OJ 46/2006):

- applicants are invited to express their interest in implementing the project, while giving sufficient evidence of their technical and professional capacity and financial / economic solidity;
- the Steering Committee, which will include experts from the Italian Ministry for the Environment, Land and Sea, the Ministry of Tourism and Environment of Montenegro, Deponjia d.o.o. and the

CETMA Consortium, shall review the applications received and select the company that best fulfil the conditions set below;

- in order to assist selected company to produce high quality technical documentation for the realization of the project, the full feasibility study will be made available to the selected company, upon the payment of a non refundable fee of 5,000 Euro and the signature of a confidentiality agreement;
- in 3 months time from the selection, the selected company shall present to the local site owner a detailed proposal on the technical and commercial conditions. Technical documentation, which shall include the Conceptual Project as described in the Law on Spatial Development and Construction of Structures (OJ 51/08, article 79), shall be in compliance with the relevant Montenegrin legislation<sup>1</sup> allowing for obtaining all permits and licenses from the local authorities necessary for project realization;
- the conceptual project shall determine at least:
  - position (micro-location),
  - capacity, technical, technological and functional characteristics of the system,
  - technical-technological and organizational elements for the construction and the maintenance,
  - indicative calculation of stability and safety of the structures,
  - design of infrastructure
  - preliminary environmental impact assessment;
- the project implementation is a subject to approval of the aforementioned proposals submitted by the interested companies will be evaluated by a technical commission composed of experts from Italian Ministry for the Environment, Land and Sea, the Ministry of Tourism and Environment of Montenegro, Capital City Podgorica, Deponjia d.o.o. and CETMA Consortium;
- once the best proposal will be selected, an agreement shall be signed between the selected company and Deponjia d.o.o, defining the common implementation of the project and the form of the partnership;
- Italian Ministry for the Environment, Land and Sea will provide the PPP/JV with a grant to co-finance the construction of the plant.

## **DOCUMENTS REQUIRED FOR THE EXPRESSION OF INTEREST**

Applicants are required to submit the complete documentation listed below in English and Montenegrin language (with the exception of official documents, such as certifications and financial statements, which can be enclosed in the language of origin).

In case an incomplete application is submitted, the Steering Committee reserves the right to reject the Expression of Interest.

The Applicants need to submit the following items:

- a) Cover letter (Attachment II);
- b) General information (Attachment III);

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<sup>1</sup> The relevant legislation includes, but is not limited to, the Law on Spatial Development and Construction of Structures; Part VII of the Business Organisation Law; Law on Environmental Impact Assessment, The Energy Law and other laws and secondary legislation and technical regulation in the area related to the project activity.

- c) Proof of legal existence - recent extract from Italian Professional or Trade Register, or equivalent document (Attachment IV);
- d) Declaration on exclusion criteria (Attachment V);
- e) Proof of financial capacity (year-end balance sheets and profit and loss accounts for the past 3 financial years), with summary table for selected indicators over the past 3 years (Attachment VI);
- f) Reference list of key projects carried out by the Applicant (Attachment VII), with specific reference to the construction and operation of landfill gas to energy plants;
- g) Resumes (EC format) of the project team members, with summary table (Attachment VIII).

The Steering Committee may request the Applicants to provide clarifications and/or additional information on the documentation submitted.

## **SUBMISSION OF THE EXPRESSION OF INTEREST**

The deadline for the presentation of the Expressions of Interest is on May 27<sup>th</sup>, 2009.

All documents shall be sent to the address below:

The Ministry of Tourism and Environment of Montenegro  
Rimski trg 46, 81000 Podgorica, Montenegro  
Contact person: Siniša Stanković (Deputy Minister)

And copy to:  
Capital City – Podgorica  
Njegoseva br. 13, 81000 Podgorica, Montenegro  
Contact person: Mr. Pavle Radulović (City Manager)

Any Expression of Interest received after the deadline shall not be considered.

Each Applicant shall be informed in writing of the outcome of the selection process within 45 days from the expiration of the deadline for the submission.

## **SELECTION CRITERIA**

Applicants shall be assessed based on the following set of criteria:

### *1. Proof of Registration*

The applicants must prove their enrolment in a professional or trade register in the Republic of Italy. The relevant professional and trade registers in Italy are the "Registro della Camera di Commercio, Industria, Agricoltura e Artigianato", the "Registro delle Commissioni Provinciali per l'Artigianato" or the "Consiglio Nazionale degli Ordini Professionali". Recent extracts from such registers should therefore be submitted.

Applicants failing to do so shall be automatically excluded from participation.

## 2. *Technical and Professional Capacity*

The Applicant should possess the technical and professional capacity to realise the project. The technical capacity of the Applicant will be assessed by using indicators such as:

- Key expertise/core business of the Applicant, years of operation, permanent technical staff;
- Previous experience of the Applicant in similar projects, with specific reference to the construction and operation of landfill gas to energy plants;
- Professional experience of the Applicant in the Balkan countries;
- Strength of proposed project team (training, professional qualifications, regional experience, years in the business).

## 3. *Financial and Economic Standing*

The financial and economic standing of the Applicant will be assessed based on, amongst others, the following indicators:

- Net equity;
- Net assets;
- Total sales;
- Gross profit.

## 4. *Ineligibility*

Any applicant shall automatically be excluded from participation if:

- Is bankrupt or is being wound up, whose affairs are being administered by the court, who has entered into an arrangement with creditors, who has suspended business activities or who is in an analogous situation arising from similar procedure under national laws and regulations;
- Is the subject of proceeding for a declaration of bankruptcy, for an order for compulsory winding up or administration by the court or for an arrangement with creditors or of any other similar under national laws and regulations;
- Has been convicted of an offence concerning his professional conduct by a judgment which has the force of res judicata;
- Has been guilty of grave professional misconduct proven any means which the contracting authority can justify;
- Has not fulfilled obligations related to the payment of social security contributions in accordance with the Italian legislation;
- Is guilty of serious misrepresentation in supplying or failing to supply the information that may be required under this Call for Expression of Interest.

## ATTACHMENT I

### LANDFILL GENERAL DATA

The Municipality of Podgorica, the capital city of Montenegro, extends over approximately 10% of the Country territory and hosts about 30% of its population. In Podgorica live around 170,000 inhabitants (MONSTAT, 2007). Podgorica landfill is the only operative sanitary landfill in Montenegro. The landfill site is located in the South-Eastern part of Podgorica, 6 km from the centre of Podgorica city and it is subdivided in 3 sanitary basins plus the ancillary facilities. Currently (November 2008), the waste is disposed only in the first sanitary basin having a surface of about 20,000 m<sup>2</sup> (100m x 200m) and an overall capacity of about 480,000 m<sup>3</sup>.

The following table summarizes the MSW disposal from 2008 to 2030. A project crediting period of 21 years, from 2010 to 2030, was assumed, taking into account that the electricity production will start in 2010.

| Years             | Municipal Solid Waste Disposal |                             |
|-------------------|--------------------------------|-----------------------------|
|                   | to the "Livade" landfill (t/y) | to the Recycling Centre (%) |
| 2008              | 91,000                         | 0                           |
| 2009              | 100,000                        | 0                           |
| From 2010 to 2030 | 65,000                         | 20                          |

This Feasibility Study was developed taking into account the sanitary basins No.1, 2 and 3, analyzing dynamics of filling of the basins and considering that around 480,000 m<sup>3</sup> of MSW can be collected in each of them.

### BIOGAS PRODUCTION, ELECTRICITY GENERATION AND ESTIMATION OF GHG EMISSIONS REDUCTION

In the first sanitary basin, landfill gas is captured through 21 wells located on three different lines including seven wells each. Since a landfill gas treatment plant does not exist, landfill gas is currently sucked up and conveyed from the sanitary basin No. 1 to the flare which is in operation since eight months. The number of wells for three sanitary basins is 63 wells and 14 wells more are expected to be installed, leading to overall 77 wells; moreover, three biogas substations are planned.

The assumed duration of the CDM project is 21 years (the maximum allowable). The methane recovery over 21 years is estimated to be 38,000 t-CH<sub>4</sub>. The electricity production is estimated on the basis of the electric efficiency of the generating sets (36%) and the lower heating value (LHV) of the biogas extracted (18,000 kJ/m<sup>3</sup>), assuming 50% of methane in the landfill gas.

Based on the amount of methane available, the expected overall electricity production should be approximately 165,000 MWh over 21 years. The quantity of CO<sub>2</sub> avoided from CH<sub>4</sub> combustion and from electricity displacement should be respectively 590,000 tons and 100,000 tons over the same period for a total CO<sub>2</sub> reduction of 690,000 tons.

### PROJECT CONCEPT LAYOUT

The project concept layout includes the following sections:

- biogas extraction section;
- biogas suction and treatment section;
- biogas monitoring and control;
- power generation section;
- flare.

Biogas suction and treatment section was designed in order to allow a proper use of biogas as fuel in the generating sets.

The suggested flare will be a “ground flare” type working at a high temperature and with a design capacity of about 1,000 Nm<sup>3</sup>/h; this value is the maximum biogas flowrate that can be conveyed to the flare in case of gas engines shut-down. The proposed flare will be additional to the existing one.

It must be noted that the proposed concept layout constitutes a preliminary idea functional to the assessment of the technical and economical feasibility of the project; the preliminary and the final design of the project shall be developed by the company selected for the project designing and implementation.

A 10 kV/35 kV sub-station is available at a distance, from the landfill site, of approximately 8 km. From a preliminary analysis, the possibility of employing a 10kV line has been excluded due to losses considerations and, therefore, the use of a 35 kV line has been selected.

## PRELIMINARY FINANCIAL ANALYSIS

The foreseen capital expenditure (CAPEX) is estimated of the order of 4,200,000 Euro. The operation and maintenance costs were estimated equal to 107,000 Euro/Year.

Revenues are directly proportional to the amount of landfill gas that is being captured and, consequently, to the amount of methane available for combustion, either in the electricity generators or in the flare. Possible revenues originating from the project implementation are the following:

- revenues from selling the electricity generated by the plant and delivered into the National Power Grid;
- revenues from selling the Certified Emission Reductions (CERs) produced by the implementation of the Project within the Kyoto Protocol’s flexible mechanisms (CDM).

The impact of CERs upon financial performance was evaluated assuming a CERs price equal to 10 €/t CO<sub>2</sub>e over the emission crediting period. The assumed duration of CDM projects was of 21 years (the maximum allowable).

|                               | <b>Base Case Scenario No. 1<br/>(sale of electricity)</b> | <b>Base Case Scenario No. 2<br/>(sale of electricity and CERs)</b> |       |
|-------------------------------|---|--|-------|
| Net Present Value (NPV)       | 406,000   | 3,620,000  | [€]   |
| Internal Rate of Return (IRR) | 11.14   | 38.42  | %     |
| Payback Period                | 9 (2018)  | 5 (2014)   | years |