
TERMS OF REFERENCE

Short Term expert on best available techniques (BAT) in cement industry, in the framework of the preparation of the feasibility study for the potential of production and use of RDF/SRF in the cement production industry.

Contract-no: 81257332
Project processing number: 12.1003.8-024.39
Project name/country: Waste to Energy in Western Balkans Cement Industry, Albania

Employer: **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH**

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Contractor : **Co-PLAN Institute for Habitat Development**
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Contract duration From: Oct. 10th, 2022 To: Nov. 18th, 2022

Application deadline October 7th, 2022

The project "Waste to Energy for Western Balkans Cement Industry" is funded by the Federal Ministry of Economic Cooperation and Development of Germany (BMZ) and the companies Titan Antea Cement (Albania), Titan Cementarnica Usje (North Macedonia) and Titan Cementara Kosjeric (Serbia), within the develoPPP.de programme.

Implementing partners of the project are Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and private cement factories (Antea Cement, Cementarnica Usje and Cementara Kosjeric), in cooperation with the Co-PLAN Institute for Habitat Development, Albanian Manufacture Union (AMU), Regional Environment Center North Macedonia (REC) and Regional Development Agency Zlatibor (RDA).

1. Project Description and objectives

The main objective of the project “Waste to Energy for Western Balkans Cement Industry” is to set the preconditions for the use of household waste, industrial waste and waste tyres for the cement production in three countries of the Western Balkan: Albania, North Macedonia and Serbia in the local cement industry.

This overall objective is defined by the following benchmarks:

- Market research on the quantity and quality of municipal waste and potential for production of RDF/SRF (Evaluating the potential of production and use of RDF/SRF in the cement industry);
- Improving framework conditions for co-processing of waste as alternative fuel on local and national level;
- Raise awareness among the public on benefits of waste as alternative fuel;
- Analysis on establishing and utilizing the collection network for different waste streams.

In order to achieve this objective, among other activities are foreseen the preparation of feasibility studies for co-processing of waste as alternative fuel and as part of this process analyzing the needs for local infrastructure for co-processing of municipal waste.

2. Scope of the assignment

The objective of this assignment is to provide the technical input and information for the design and construction of the collection network for co-processing of municipal waste and production of RDF/SRF as alternative fuel by cement factories and cement production industry.

As such this assignment will specifically contribute to one of the main activities of the project, preparation of the feasibility study for co-processing of waste as alternative fuel in cement production industry.

3. Requested services

The expert will work and coordinate closely with the project team, mainly with the project manager and will contribute to the following activities:

- 1) Support and contribute to the preparation of the Feasibility Study for the potential of production and use of RDF/SRF in the cement production industry with all relevant data, analyses, design and technical details as required;
- 2) Support the finalisation of the need’s assessment report and the preparation of different scenarios of local infrastructure needed for co-processing of municipal waste;
- 3) Prepare the physico-chemical evaluations of urban and industrial waste that will be used as raw material for producing the alternative fuel (AF) for cement production industry;
- 4) Prepare the evaluation of the energy potential of the waste to be treated;
- 5) Identification of the Best Available Techniques (BAT) for the alternative fuel in cement production industry in accordance with the needs of the targeted municipalities (Shkodra, Lezha, Mat, Kurbin, Kukës, Krujë);

- 6) Prepare the design elements for the construction of the technological scheme of the co-processing of municipal waste;
- 7) Provide the theoretical input and rationale for of the entire production line of chosen alternative fuels;
- 8) Prepare the description and features of the expected output from the chemical and energetic point of view according to the information needed from the cement production industry;
- 9) Collect information and prepare a report related to the costs of the construction of the line;
- 10) Summarise the possible scenarios/options for the proposed and available technical solutions to feed the cost-benefit analysis and the feasibility study;
- 11) Provide an organizational chart (number of employes and short job description) for the proposed industrial line to feed the cost-benefit analysis;
- 12) Provide arguments and input for the preparation of the socio-economic and environmental part of the cost-benefit analysis;
- 13) Contribute to the preparation of the chapter on risk and sensitivity analysis as part of the feasibility study;
- 14) Contribute to the preparation of the chapter on quality assurance and conclusions of the study.

4. Required Outputs / Deliverables

The required outputs as mentioned hereinafter shall be delivered in close cooperation and contribution of other experts in the team and will be revied by the project manager.

- 1) Preparation of different scenarios of local infrastructure needed for co-processing of municipal waste (in collaboration with W2E project team);
7 working days after the assignment
- 2) Preparation of the physico-chemical evaluations of urban and industrial waste that will be used as raw material for producing the alternative fuel (AF) for cement production industry;
10 working days after the assignment
- 3) Preparation of the report for the evaluation of the energy potential of the waste to be treated;
12 working days after the assignment
- 4) Identification of the Best Available Techniques (BAT) for the alternative fuel in cement production industry in accordance with the needs of the targeted municipalities (Shkodra, Lezha, Mat, Kurbin, Kukës, Krujë);
12 working days after the assignment
- 5) Preparation of the design elements and suggested technological scheme of the co-processing of municipal waste;
15 working days after the assignment
- 6) Preparation of the theoretical input and rationale for of the entire production line of chosen alternative fuels;
20 working days after the assignment
- 7) Preparation of the description and features of the expected output from the chemical and energetic point of view according to the information needed from the cement production industry;

- 20 working days after the assignment**
- 8) Collect information and prepare a report related to the costs of the construction of the line;
- 20 working days after the assignment**
- 9) Summarise the possible scenarios/options for the proposed and available technical solutions to feed the cost-benefit analysis and the feasibility study;
- 22 working days after the assignment**
- 10) Preparation of the organizational chart (number of employees and short job description) for the proposed industrial line to feed the cost-benefit analysis;
- 20 working days after the assignment**
- 11) Devising arguments and input for the preparation of the socio-economic and environmental part of the cost-benefit analysis;
- 22 working days after the assignment**
- 12) Short report about the risk and sensitivity analysis of the whole process;
- 15 working days after the assignment**
- 13) Contribute to the preparation of the chapter on quality assurance and conclusions of the study.

25 working days after the assignment

5. Location and duration of the assignment

The activities will be implemented in Albania, in Tirana and depending on the necessary information and specific requests, the consultant should anticipate possible travels in the targeted municipalities (Shkodra, Lezha, Mat, Kurbin, Kukës, Krujë) as well as in the premises or offices of the cement factory in Borizane, Krujë;

Time input requested: **up to 25 working days, during 10 October 2022 to 18 November 2022.**

6. Reporting

The expert shall report to the Project Manager and coordinate with him the detailed timeline for the assignment. The expert will provide all the agreed deliverables/outputs in English, in electronic form.

7. QUALIFICATION CRITERIA FOR THE CANDIDATES

Individual consultants will be evaluated based on the following methodology:

The award of the contract shall be made to the individual consultant (technical expert) or consulting company whose offer will be evaluated based on technical criteria and submitted financial offer.

Technical Criteria for Evaluation

- A minimum University degree in Engineering, Chemistry, Technology, or any other university degree relevant to the assignment.
- A minimum of ten (7) years of professional experience in the field relevant to the assignment;
- Extensive expertise and knowledge in solid waste management and waste hierarchy principle, including experience in technologies and value chain analysis related to the assignment.
- Extensive expertise, knowledge, and experience in conducting value chain analyses, pre- and feasibility studies related to the assignment, and cost-benefit analysis and needs assessments of municipal/regional infrastructure project development.
- Experience and understanding of the context, capacities and constraints of utilization and processing AF in Cement Industry.
- Ability to facilitate consultative meetings with relevant stakeholders of WtE system, RDF producer, AF processor and utilizer, institutions, industry and commercial sectors as main waste producers and to make presentations of technical findings to a wide audience.
- Excellent written and oral communication skills in English.

The Financial Offer should be provided in lumpsum (brut).

The technical approach and methodology must initially cover all field of interest as provided on chapter 3. The consultant is free to elaborate the document based on his/her judgment.

8. DOCUMENTATION REQUIRED FOR THE APPLICATION

Interested individual consultants or consulting companies must submit the following documents/information to demonstrate their qualifications:

- Motivation Letter with brief description of their suitability for the assignment work-load and time-table.
- An Curriculum Vitae indicating with highlights relevant past experience from similar projects.
- Technical proposal i.e. Methodology on how they will approach and complete the assignment.
- Financial proposal, price expressed in EUR.

Applications should be submitted to the following email address:

co-plan@co-plan.org

rodion_gioka@co-plan.org; and

ogerta_gioknuri@co-plan.org

Incomplete proposals will not be considered.

9. EVALUATION OF THE PROPOSALS:

Co-PLAN shall enable its internal set of procedures and human resources to evaluate the proposals aiming to conduct an independent, objective and professional evaluation with regard to each proposal received within the deadline.

The evaluation shall consist of the following 4 main steps:

- a. Opening and protocol of received documents
- b. Administrative control
- c. Full evaluation
- d. Interview and Contract Signature

Administrative criteria are to be assessed by the evaluation committee with a pass/fail principle. Herby the administrative criteria comprise the fulfilment of:

- Full set of documents (CV, Motivation Letter, Technical Proposal, Financial Offer)
- Language of the documents and submission within the deadline.
- Minimum required experience.
- Technical proposal.

Content related evaluation criteria are to be assessed by the evaluation committee with a scoring principle. Herby the content related criteria consist of the following:

No.	Criteria	Score
1	Motivation	10
2	CV and Relevant Experience	30
3	Financial Offer	30
4	Technical Approach and Methodology	30
TOTAL:		100 points