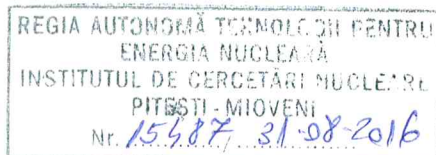


RATEN ICN Pitesti

Sectia a III-a



APPROVED

Director Dr. Constantin Paunoiu

Terms of Reference

Rev.0

1. Purchase name /type:

Services of "Cost Benefit Analysis of ALFRED demonstrator construction in Romania", CVP Code 72221000-0

2. Purchase Object

These Terms of Reference set up the requirements for the purchase of the Cost Benefit Analysis for the construction of ALFRED Demonstrator in Romania from a specialized Romanian or European company.

3. Quantity

1

4. Characteristics

4.1. Background

ALFRED is a Generation IV nuclear reactor demonstrator meant to achieve the industrial maturity of the LFR (Lead-cooled Fast Reactor) concept, considered by the European Sustainable Nuclear Industrial Initiative (ESNII) as one of the most credible alternative to the present Generation III or III+ reactor technologies. The implementation of ALFRED is led by FALCON consortium consisting in European research institutions and companies. The reference site for ALFRED is Mioveni, Romania.

Up to present, the implementation stages have been defined and, based on FALCOM members' know-how, the costs of each stage have been estimated; potential social and economical benefits at European, regional, national and local level have been identified and qualitatively and semi-quantitatively evaluated.

4.2. Information on the content of the Cost-Benefit Analysis

ALFRED's Cost-Benefit Analysis should combine a financial and an economic analysis, and therefore take into account cash-inflows and cash-outflows but also indirect benefits and costs induced by ALFRED.

The Cost-Benefit Analysis must be compliant with the CBA methodology for Research Infrastructure project developed by the European Investment Bank, and would include a minima the following elements:

1. Financial estimation of the ALFRED project

- 1.1. Project budget, split into cost categories defined by the EIB
- 1.2. Operational costs
- 1.3. Revenues
- 1.4. Residual value of the project

2. Financial analysis

- 2.1. Financial return on investment
- 2.2. Financial sustainability
- 2.3. Financial return on capital

3. Socio-economic analysis

- 3.1. Socio-economic analysis (benefits and costs, compliant with the EIB methodology)
- 3.2. Socio-economic return on investment
4. Risks analysis
 - 4.1. Sensitivity and risk analysis, including switching values
 - 4.2. Multiple scenario simulations
 - 4.3. Monte Carlo simulations on scenarios

The Cost-Benefit Analysis for ALFRED should also include an overview of the different sources of funds available for the implementation and operation of ALFRED.

4.3. Work planning

The activities for Cost Benefits Analysis should include:

- The analysis of input data
- Activity planning
- Implementation

Analysis of input data

The input data are defined by the Provider in order to comply with the CBA requirements.

Activity planning

The Provider will plan the activities taking into account that the final deadline of **31.10.2016**.

5. Deadline

October 31, 2016

6. Applicable Requirements

The Cost Benefit Analysis shall be elaborated according to the CBA methodology for Research Infrastructure project developed by the European Investment Bank.

The Provider is fully responsible for the content of the Cost Benefit Analysis.

The provider is responsible for the timeliness of implementation.

7. Criteria for qualification and selection

In the qualification and selection process, the following criteria will be considered:

- Existence of economic-financial analysis in the field of activity/economic and financial expertise
- at least ONE successful development of a Cost-Benefit Analysis for a Major Research Infrastructure project (>50 million euro)
- at least 5 years of experience collaborating with Research Institutions
- international experience
- an experience with the nuclear energy sector
- excellent command of the English language

8. Interface data

The beneficiary will make available for the Provider relevant data about the ALFRED, technical characteristics and cost estimations, as well as available information on the social and economic impact.

Both parties will nominate contact persons.

9. Testing and reliability requirements

N/A

10. Guarantees

N/A

11. Quality Assurance Standards

N/A

12. Requirements for environmental, health and safety at work and fire prevention

N/A

13. Access conditions, radiation protection authorisations

N / A

14. Requirements and criteria for evaluation

The lowest cost

15. Requirements for packaging, labelling, transportation, storage, handling

N/A

16. Reception requirements

16.1. Reception, verification, tests

N/A

16.2. Final Reception

Reception will be done by drawing up a receipt minutes upon completion and delivery of cost-benefit analysis report.

Provider payment is made based on receipt minutes and on the invoice issued by the Provider after signing the acceptance report by a representative of each Party, which certifies the service was performed and accepted.

The Language of tender documentation, bid, contract and related documents is English.

17. Requirements for contract management




N/A

18. Operational constraints

N/A

19. Confidentiality clauses or IPR

The Contracting Parties shall sign a confidentiality agreement entitled to protect data and information belonging to RATEN ICN Pitesti .

	Nume	Title/position	Signature	Date
Elaborated by:	Daniela Diaconu	Senior Reseracher IIII		30.08.2016
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Approved by:	Ilie Turcu	Scientific Deputy Director		30.08.2016