

Information Session for Conceptual Study of Innovative Approach for Fuel Debris  
Retrieval and Feasibility Study of Essential technologies  
Minutes

Date: Friday, July 4, 2014

Time: 1:30 - 4:00 PM

Location: Izumi Garden Gallery, Hall B

Presenter: Agency for Natural Resources and Energy – Mr. Kondo, Mr. Nakai  
Management Office (MIRI) – Mr. Nakajima, Dr. Takizawa, Mr. Asai  
Management Office (IRID) – Ms. Nakamura

Legends: Q: Question A: Answer C: Comment
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Proceedings of the Session:

1.

Q1. About the monitoring of criticality

We need to check on nuclear fuel substances not to cause criticality resumption and that is a difficult task. I provided the checking methods to the RFI and thought it would be targeted for this RFP. Why is it out of scope?

A1. This RFP consists of three projects as explained. For the essential technologies of other projects, we will consider whether to solicit or not in consideration of the needs when the methods are determined to a certain degree.

Q2. I was considering proposing the in-core monitoring technology. Is the criticality management in the scope of the RFP? Or can we suggest the timing of monitoring in the methods?

A2. In this RFP, we are not soliciting the critical management technology alone. The theme of RFP is narrowed down. We will consider peripheral and support technologies when the methods become concrete. However, we would like you to describe at which timing you will manage criticality during operation in the methods. That is, the critical management is not out of consideration.

Q3. Is it correct that the criticality management technology itself is not targeted for this RFP?

A3. Yes, that is correct.

2.

Q1. For the RFI, the wide range of technologies is gathered but the content of this RFP is closely focused. Could you explain how those technologies are chosen?

A1. Essential technologies are divided into five categories based on the classification of the RFI results. Among them, the visual technology, the measurement technology, the cutting technology are chosen for this RFP. The reason is because those technologies are considered to be necessary for every method although needed technologies change depending on which methods to deploy. As for the other technologies, we will discuss when the methods are determined to some extent.

3.

Q1. Will the names of intellectuals of the Review/Evaluation Committee be disclosed?

A1. No, they are unofficial.

Q2. How late should the latest financial statement be?

A2. Any of the latest statements will be fine regardless of when.

Q3. Will the discussions or the result of evaluation be disclosed?

A3. The discussion in the evaluation process won't be disclosed. If requested, however, how proposals were evaluated and why some of them were not adopted may be disclosed as far as possible. But we cannot say for certain right now.

4.

Q1. Among the three projects, I am considering submitting a proposal for the conceptual study of the innovative approach and cutting and dust collection are related to the study. In such a case, should I submit a proposal for the second and the third project too?

A1. For a proposal related to more than one project, the proponent can decide which project it is closest to. You can also submit one proposal as an innovative approach or two proposals separately for an innovative approach and for cutting fuel debris and dust collection.

Q2. To consider the innovative approach, we need to assume locations and weight of fuel debris as prerequisites. How should we assume those locations and weight?

A2. The locations of fuel debris are written as a prerequisite in the handout. We release another reference document with links to analysis results of fuel debris locations by

JAEA and TEPCO online on July 11 or later.

Q3. Among the evaluation points of innovative approach, “If the plant requirements are satisfied” and “if the details are reflected” are difficult to meet for the operators who cannot obtain detailed location and drawings of Fukushima Daiichi NPS. Although those are written in the prerequisites, isn’t that enough to submit a good proposal?

A3. As we said in the previous answer, we will release the information on the web page later. The locations of reactor buildings will be also published as detailed as possible.

5.

Q1. How can we register for the overseas information sessions? What should we do to participate?

A1. We are planning to release the relative information of the overseas information session.

6.

Q1. I am considering submitting a proposal for the visual technology. For example, I can propose for the image sensor of radiation-proof cameras. In such a case, should I propose cameras as part of a system? Or is a closed visual system required?

A1. You can propose essential technologies as either a single device or system.

Q2. Targeted development devices can be used by modifying existing technologies. If our proposal is adopted, when will the right of using such devices at other NPS before using actual devices (at Fukushima Daiichi NPS) becomes effective? Who will be the owner of the right of use during the subsidized project period?

A2. These solicited projects are subsidized projects. The intellectual property belongs to the operator but not the government.

7.

Q1. When will the technologies, which were proposed for RFI but not included in this RFP, be solicited? Please let me know the future plan.

A1. We will consider the methods and essential technologies which are not solicited this time when the methods are determined to a certain degree.

8.

Q1. If the upper limit of one project is 50,000,000 yen, the upper limit of the three

projects would be 150,000,000 yen?

A1. The number of proposals to be adopted for the three projects varies depending on the contents of submitted proposals. So we cannot say how many proposals will be adopted. The upper limited of one proposal is 50,000,000 yen and the total amount of the projects increases with an increase in the number of adopted proposals.

Q2. Fuel debris retrieval starts in 2020 or later. Is it acceptable to retrieve it, for example, in 2017?

A2. You can propose to start the retrieval earlier.

Q3. Can we propose not to retrieve fuel debris?

A3. For this RFP, the retrieval method is targeted. We aim to reduce the risk on peripheral environment by retrieving remaining fuel debris. The methods not retrieving fuel debris is out of the scope.

9.

Q1. To work as a consortium as written in Form 2, do we need to provide the names of other companies/organizations in detail? If we are in the process of negotiation at the time of proposal submission in August, can we say just Company A, Company B and so on? In addition, when do we need submit the notification of subcontractors? Is it at the start of project or at the stage of proposal submission? Should subcontractors' name and other information be written in the notification?

A1. If all the proposal items are managed by your company and you outsource only part of them, not detailed information but statement of Company A, Company B is necessary. For subcontractors, no detailed information is needed at the time of proposal submission, and you need to present it after the decision of granting. However, if your proposal necessitates working with other companies, please write which company is a representative and which companies collaborate.

Q2. I have a question about the distinguish method of fuel debris written in the consideration of innovative approach in Exhibit 1. It says fuel debris need to be retrieved as soon as possible. In terms of measurement management, however, it seems unrealistic to work in the core and near the fuel debris on site. Do you think to what extent we need to distinguish fuel debris?

A2. It depends on whether it is a method or essential technology. In case of essential technologies, a proposal to see the existence of nearby fuel debris to some extent is

desirable. For the methods, it is unnecessary to distinguish all the fuel debris in the core if you can propose to take countermeasures against radiation exposure and contamination and bring fuel debris to the pool and divide into small groups.

Q3. It says a 100-ton-class crane is used for building covers. However, the application from TEPCO dated on June 25 says the crane at Unit 3 is 50-ton-class. Will the 50 ton-class crane be replaced with a new 100-ton-class crane?

A3. In this RFP, we assume to use a 100-ton-class crane because it is a general type to be used for retrieving spent fuel. We say 100-ton-class is installed so that we can use it for retrieval at Units 1 and 2 too.

C1. For Unit 3, both the cover and the crane are decreased in size. As it is too heavy to make a closure even if spilt up, a crane which weighs about 100 ton is needed. Also, a big crane is necessary to place a RPV head and a PCV head. In terms of area, it cannot fit into the cover which is currently assumed. For Unit 3, there may be a contradiction between the actually-applied placement and the solicited one.

10.

Q1. How do you work on the support technology for reducing radiation exposure in the working environment?

A1. For this RFP, essential technologies were divided into five categories at first. Then visual and measurement technologies were combined into one category and we decided to proceed with it as soon as possible. We will request for proposals of transportation technology when the methods are determined. As for the support technology you asked, we are planning to solicit when the methods are somewhat fixed so the timing of RFP is delayed. There are other desirable essential technologies and we would like to take more time to discuss them.

Q2. What are the measurement technology in the RFP?

A2. For this RFP, technologies for viewing where fuel debris exits and distinguishing it from surrounding structures by its characteristics are targeted. Those technologies are considered to be necessary as different devices are needed whether to cut fuel debris or structures.

Q3. In addition to criticality, there is an issue of radiation exposure.

A3. As the required condition differs by method, it takes more time to consider about the

issue.

11.

Q1. If the requirements for plants and fuel are the same, technologies for which an operator can propose would be limited. If similar proposals are submitted by some operators and their rights are overlapped as with RFI, will there be some adjustment? How are the patents handled?

A1. As these are subsidized project and all the deliverables and intellectual properties belong to each operator, the management office won't get involved in the adjustment, etc.

12.

Q1. I am considering submitting a proposal for the conceptual study of innovative approach. There are six kinds of retrieval methods if divided by top, side, etc. Can we propose separately for each method? Or should we propose as one project for retrieving fuel debris both from PRV and PCV?

A1. As a conclusion, a proposal for either one of them or both would be fine.

13.

Q1. Exhibit 1 says that ceiling cranes, spend fuel pool, and spend fuel and equipment of dryer separator pits have been carried out already. Can we say that especially spend fuel pools and dryer separators pits are dry and all the racks of spent fuel pools are removed? In addition, not only racks but also liners of both dryer separators pits and spent fuel pools are decontaminated?

A1. In the assumption of this RFP, spend fuel is taken out of the pools but they are not completely dry. If you would like to make fuel pools dry in the methods, it is necessary to propose to make dry fuel pools whose fuel was taken out and racks are inside.

EOR