

Opinions regarding results of reviews relating to the state of progress of fast-breeder reactor (FBR) cycle R&D, and work being done to achieve early realization.

20<sup>th</sup> July, 2010

The Atomic Energy Commission of Japan

The Atomic Energy Commission (AEC) was reported on 13<sup>th</sup> July 2010 from the Japan Atomic Energy Agency (JAEA) regarding the progress being made in the compilation of results from phase I of the Fast Breeder Reactor Cycle Technology Development Project (FaCT). At the same time AEC was received a report from the "Five-Party Council for Smooth Transition to the FBR Cycle Demonstration Process (Five-Party Council)" made up of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) ; Ministry of Economy, Trade and Industry (METI); The Federation of Electric Power Companies (FEPC); The Japan Electrical Manufacturers' Association (JEMA); and JAEA, regarding what work needs to be done moving forward in order to ensure the early realization of a FBR cycle. AEC acknowledges that the activities described in each of these reports contribute greatly towards improving the specificity of basic R&D principles, which the government of Japan plans to implement this fiscal year, and therefore expects JAEA and the five parties to continue to fulfill their current roles in accordance with their respective reports.

In order to evaluate the possibility of fulfilling performance requirements based on the judgement of adoption of innovative technologies by JAEA this September, JAEA must keep in mind that further improvement in the specificity of R&D principles going forward is crucial.

1. The feasibility of innovative technologies, and alternate technologies; specific R&D efforts required to commercialize these technologies; studies of adequacy from the standpoint of establishing

international standards based on design requirements; potential for achieving performance targets based on preliminary studies of reprocessing system designs; technological evaluations on robustness; and the relationship between the size of the demonstrator reactor and the verifiability of design requirements.

2. The feasibility of innovative technologies relating to fuel manufacturing and reprocessing technologies that enable the recycling of minor actinides; alternative technologies; and specific R&D efforts required to commercialize these technologies.

Studies regarding the role and place of fuels in the early stages of demonstrator reactor verifications, verifications of the possibility of using fuels that enable minor actinide recycling in the demonstrator reactor and the performing of reprocessing based on chosen technologies, and studies relating to ways to achieve commercialization shall be initiated immediately once the results of the national government's evaluations of the JAEA report of September become available.

Additionally, the Commission deems the understanding indicated in the latest "Work Being Done to Achieve Early Commercialization of a FBR Cycle" from the Five-Party Conference to be crucial in driving R&D based on cooperation between government and the private sector. And, because the material the Five-Party Conference will be compiling moving forward will serve to clarify the roadmap pointed out by the Atomic Energy Commission of Japan in 2006, these efforts must be based on evaluations of the JAEA report and have sufficient basis in international trends relating to the R&D of sustainable nuclear technology. Additionally, particular attention must be paid to ensure to maximize the effects of the work that will have been done in the demonstration stage in terms of achieving commercialization of fast-breeder cycle technologies.

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