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## **Uitnodiging GENERATION IV Bijeenkomst KIVI-KE/NNS & DYG, 17 april 2003**

Geachte KIVI-KE/NNS en DYG-leden,

De afdeling Kerntechniek van het Koninklijk Instituut van Ingenieurs en de Stichting Netherlands Nuclear Society organiseren de komende jaren een aantal symposia en excursies die de leden een goede indruk zal verschaffen van de nucleaire activiteiten en ontwikkelingen in binnen- en buitenland. Voor verdere informatie verwijzen wij u naar het programmaboekje dat u onlangs per post ontving.

Het eerste symposium richt zich op mondiale ontwikkelingen, die momenteel gedomineerd worden door het zogenoemde 'Generation-IV programma' van de Amerikanen en zal plaatsvinden op donderdag 17 april a.s. bij Urenco Nederland B.V., Planthofsweg 77 in Almelo. Voor een gedetailleerde routebeschrijving verwijzen we u naar de internetsite [www.urenc.nl](http://www.urenc.nl).

De toegang is gratis voor KIVI-, NNS- en DYG-leden. Voor niet-leden bedraagt de toegangsprijs EURO 12,50, welke desgewenst kan worden omgezet in een jaarlidmaatschap van de NNS, zie antwoordfax die u per post heeft ontvangen.

### **Programma**

13:00 Ontvangst

13:30 *Generation IV International Forum; History, preparation of the Roadmap and UK Perspective*

Voordracht door de heer T.J. Abram (Head of Advanced Fuels and Reactor Systems, Research and Technology Division of BNFL).

14:30 *Generation IV International Forum; Proposed R&D Programmes and French Perspective*

Voordracht door de heer G.-L. Fiorini (Assistant-director Future Nuclear Energy Systems, CEA Nuclear Energy Division).

15:15 Pauze

15:30 *The Finnish Challenge*

Voordracht door de heer D. Schneider (Director Product Management EPR, Framatome ANP).

16:15 Afsluiting en Borrel

In verband met de zaalreservering stellen we het zeer op prijs indien u zich aanmeldt via e-mail: [a.lamain@urengo.nl](mailto:a.lamain@urengo.nl), via de verstuurde aanmeldingsfax of via een briefje aan: Secretariaat KIVI-KE/NNS, p/a Urenco Nederland B.V., t.a.v. Jolanda Lamain, Postbus 158, 7600 AD Almelo.

## CVs

### **Tim Abram (UK)**

Tim Abram originally graduated in Mechanical Engineering from the University of Manchester. He is currently the Head of Advanced Fuels and Reactor Systems within BNFL's Research & Technology Division. He is based at BNFL's Springfields Laboratories, located near Preston in the north west of England.

His interests in this area cover a range of advanced nuclear energy systems:

- the Westinghouse AP1000 PWR, which is aimed at current markets;
- the Pebble Bed Modular Reactor (PBMR), a small modular helium-cooled system based on German pebble bed technology, which is being developed in consortium with South African partners;
- the IRIS integral primary circuit PWR, which is a small modular reactor system based on existing PWR technology, but having most of the primary components (reactor, pumps, steam generators, etc.) located in a single vessel, and which is being developed by an international consortium; and
- fast neutron systems, where BNFL, together with other European and international partners (in particular, the CEA), is investigating the potential for gas-cooled systems, whilst seeking to maintain expertise in sodium-cooled system technologies.

In the frame of the Generation-IV programme, he is currently the UK's representative on the Technical Expert Group, which reports directly to the top-level Policy Group. During the Roadmap development phase, he was also a member of the Gas-Cooled Systems group, and co-chair of the Fuel & Materials Cross-Cut Group.

### **FIORINI Gian Luigi (France)**

Education: Graduate in Nuclear Engineering (Pisa - Italy 1975; Magna Cum Laude)

Summary of work experience:

G.L.Fiorini is a senior engineer, his professional experience covers twenty five years spent on the definition, the realisation and the management of experimental and theoretical activities concerning the operation and the safety of fission reactors.

Since 1976, until 1989 his work was essentially devoted to the Liquid Metal reactors (LMR). Since 1989 he has been involved in the definition of the French Atomic Commission (CEA) Innovative Program. Several reactor types have been studied: LMR, LWR, HTGR, ADS as well as the experimental CEA reactor RJH.

Former head of a CEA Laboratory for Systems and Safety, since 1990 he has been in charge of the French CEA contribution for the definition of the future fission plants' safety approach ; between 1993 and 1998 he has been strongly involved in the definition of an analogous approach for the fusion plants (e.g. ITER).

During the year 2000 he has been implicated on the project activities for the French ADS Demonstrator.

In 2001 he joined the CEA Nuclear Energy Division/Nuclear Development & Innovation Division (DEN/DDIN). He has been assigned to the INEEL US laboratory as CEA representative within the Generation IV Roadmap Integration Team (RIT). He is currently assistant of the Director for the "Future Nuclear Energy Systems" (F.Carr.).

He also acts as consultant for the IAEA, both for the Division of Nuclear Installation Safety and the Division of Nuclear Power.

### **Dieter Schneider, Dipl.-Ing. (Germany)**

Director, Product Management EPR, Framatome ANP, Erlangen, Germany.

Dieter Schneider started his professional career with Siemens in 1966 as a system engineer and was promoted in the following year to main department manager.

In 1989 he became Project Manager for the EPR Predesign in NPI (Nuclear Power International), Paris, which was a common subsidiary of Framatome and Siemens in developing advanced nuclear plant designs.

In 1993 Mr. Schneider became head of Product Management of the EPR in Erlangen

Today he is member of the Finland 5 Bid Team.

### **Abstract of: *The Finnish Challenge***

By: Dieter Schneider, Dipl.-Ing.

Director, Product Management EPR, Framatome ANP, Erlangen, Germany.

The presentation will highlight the main technical and safety features of the EPR and the SWR1000, two products which have been developed in Framatome ANP and which have been offered in Finland in replay of the Inquiry the Finnish Utility TVO has sent in Oct. 2002.

Both products have safety features with which even extremely improbable, beyond design- basis events can be controlled and their effects can be limited to such an extent that no emergency response actions need be taken outside of the immediate plant site even in the improbable case of a core melt.

The European Pressurized Water Reactor (EPR) as an evolutionary development has based his design on the very successful operating pre design, the Konvoi series in Germany and the N4 series in France. This technical basis together with the selected high thermal output ensures the high competitiveness of this concept.

The SWR1000 is a combination of a design implemented in the Nuclear Power Plant Gundremmingen operating also very successfully since many years with a set of innovative, new developed passive safety features. This combination has the advantage that the competitiveness of the SWR1000 is comparable with the EPR but at a lower level of thermal output.

Both products were designed in the frame of international cooperation with strong utility partnerships and the involvement of the safety bodies. Competitiveness was always a key target during the development process. The EPR and the SWR1000 based on proven designs meet the requirements of the utilities in terms of reliability and generation costs.