

## **Brussels conference chosen for launch of European Industrial Initiative on Nuclear Energy (ESNII)**

Brussels, 15 November, 2010

A two-day energy conference in Brussels (Belgium) today hosted the official launch of a major initiative to help develop a new generation of nuclear energy reactors designed to respond to Europe's growing energy needs, while meeting stringent targets to reduce greenhouse gas emissions. Called the European Sustainable Nuclear Industrial Initiative (ESNII)<sup>1</sup>, this group of industry and research partners will promote Europe's leadership in the development of so-called Generation IV Fast Neutron Reactor technology, as part of the European Union's (EU) Strategic Energy Technology Plan (SET-Plan).

Nuclear energy currently represents about 30% of all power production in the European Union and relies widely on the Light Water Reactor. This technology has a cumulative record equivalent to over 1000 years of safety and operation. However, while nuclear energy can make a sustainable contribution towards meeting the expected increase in electricity demand over the next decades, as it produces no carbon dioxide (CO<sub>2</sub>) emissions and uses an abundant raw material – uranium – a number of challenges need to be addressed, according to the SET-Plan objectives. These include the management of spent radioactive fuel. And while known uranium resources are adequate for about 100 years of consumption with the present fleet of reactors, a marked increase in demand would put these stocks under pressure.

According to Paul Rorive, group senior vice-president of nuclear activities at Gdf Suez, speaking at the launch of ESNII in Brussels, “the fast neutron reactors with closed fuel cycle technologies have the potential to multiply by a factor of 50 to 100 the energy output from a given amount of uranium, while improving the management of high level radioactive waste. They are therefore potentially able to provide energy for the next thousand years with known uranium resources.”

With renewed interest in nuclear generation as a safe and clean source of electricity production, with no greenhouse gas emissions, the industry is turning to a new generation – Generation IV – of fast neutron reactor. As well as building on European experience with sodium as a coolant, prototypes are being developed which use lead (the Lead-cooled Fast Reactor) and gas (the Gas-cooled Fast Reactor), for deployment after 2025.

Noël Camarcat, special advisor for nuclear R&D and international issues at EDF Generation, and Chairman of the ESNII Task Force, confirms that “ESNII will play a key role by involving European industry and by maintaining and developing European leadership in nuclear technologies worldwide.”

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<sup>1</sup> ESNII is coordinated by a task force based on a Memorandum of Understanding originally signed by 13 organizations from 7 EU member States. It was set up under the umbrella of the Sustainable Nuclear Energy Technology Platform (SNETP), formed in 2007 and bringing together more than 90 stakeholders involved in nuclear fission: industry and services, research organisations, academia, safety bodies, NGOs and associations.

ESNII is now preparing to move forward with the development of three fast nuclear reactor technologies. ASTRID is a prototype sodium fast reactor, to be coupled to the electricity grid by 2020 in France, with an expected 600 Megawatts. The project led by the French government builds on existing experience and is the product of a collaboration between French industry and the *Commissariat à l'Energie Atomique et aux Energies Alternatives* (CEA), and European industry is invited to join. Meanwhile, the lead fast reactor programme builds on MYRRHA, a technology pilot plant being developed in Belgium, quickly followed by a demonstration reactor named ALFRED, scheduled to enter into operation in 2025, then by a prototype expected in 2035. The third development, ALLEGRO, is to be a gas-cooled fast reactor (GFR) with a thermal capacity in the range 50-80 MW, scheduled to be operational by 2025 in Central Europe.

Commenting on these initiatives, Paul Rorive said that “a huge potential increase in the sustainability of nuclear energy will be achieved, through demonstrating the technical, industrial and economic viability of Generation IV fast neutron reactors, thereby ensuring that nuclear energy can remain a long-term contributor to a low carbon economy.”

The Strategic Energy Technology Plan conference 2010 will be held at the Square - Brussels Meeting Centre, Glass Entrance, Rue Mont des Arts, 1000 Brussels, on 15-16 November. ESNII will be officially launched on 15 November at 14.35.

For further information on the SET-Plan conference, see: <http://www.setplan2010.be/en/setplan2010/home>

For further information on ESNII, see: <http://www.snetp.eu/esnii>

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