

Press Release

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International Industry Organizations Meet to Collaborate on Intrinsically Safe HTGR Technology

Washington, D.C. – Leaders of the US-based NNGP Industry Alliance Limited (Alliance) and the European Nuclear Cogeneration Industrial Initiative (NC2I) met this week to discuss collaboration opportunities to develop and commercialize a Generation IV, intrinsically safe high temperature gas-cooled reactor (HTGR) technology that can be used for cogeneration of process heat and electricity, displacing fossil fuels.

Common interests in the development of this safe, clean and sustainable nuclear energy brought high-level representatives of the Alliance and NC2I together for a three-day meeting at the Nuclear Energy Institute in Washington D.C. on 5-7 March 2014.

Both the NC2I and Alliance have missions to enable commercialization of the HTGR technology and expand the use of nuclear energy to industrial applications with the primary objectives to significantly reduce industry's carbon footprint as well as their dependence on premium fossil fuels.

Both groups are setting targets to build and demonstrate HTGR installations in energy-intensive industries over the coming decade.

Participants shared updates on the overall status of HTGR activities in North America and in Europe. They reviewed funding options for nuclear cogeneration installations and discussed areas open for future partnerships and cooperation. Together, they agreed to sign a Memorandum of Understanding that will pave the way to:

- Develop a joint vision, business plan and roadmap;
- Share information on technology, safety and applications to electric power generation, process heat application and, in the longer term, hydrogen production;
- Collaborate on establishing an international licensing framework for the HTGR;
- Collaborate on demonstration and deployment of HTGR systems;
- Support joint research beneficial to worldwide commercialization; and
- Outline concepts of "sister" HTGR projects in the US and the EU

Nearly 80% of the world's energy demand is consumed in the industrial and transportation sectors and fossil fuels are today by far the main source of energy supply for these sectors. The production of carbon free high temperature heat with nuclear energy technology is a major innovation that can open significant new markets for nuclear systems, and provide a significant contribution to national energy policies in terms of curbing carbon dioxide emissions, increasing security and efficiency of energy supply and decreasing energy cost volatility.

Both Europe and the USA are carrying out HTGR development activities with the intent to develop and demonstrate this intrinsically safe reactor technology that can be used for process heat/steam applications in the industrial and transportation fuel sectors as well as in the production of electricity for both industrial and utility customers.

TECHNOLOGY BACKGROUND

High Temperature Gas Cooled Reactor (HTGR) technology, built on a multi-decade development history, brings with it unique operating characteristics that provide a compelling case for its commercialization today including: a) substantially higher operating temperatures than light water reactors resulting in broader applications than just electricity production; b) unparalleled intrinsic safety ensuring no substantial releases even in worst case scenarios and enabling co-location with industrial processes; c) competitive economics with natural gas for the production of process heat in most regions of the world today; d) a modular design allowing very high levels of reliability; and e) a size equivalent to small gas turbine/steam turbine plant making it suitable for a wide range of applications and distributed energy generation.

ORGANIZATIONAL BACKGROUND

The NGNP Industry Alliance is an international consortium headquartered in the United States of America with member organizations aligned to promote HTGR technology. In 2012, the Alliance identified and selected the HTGR technology that fits industry needs and has implemented a plan to move it forward. The Alliance has continued to grow since 2010 and is currently comprised of industry-leading membership including potential end users, owner operators, industrial suppliers and nuclear technology companies including: Savannah River Site Community Reuse Organization (SRSCRO) and the Advanced Research Center (ARC), AREVA, ConocoPhillips, Dow Chemical Company, Entergy Corporation, Graftech International Ltd., Mersen, Petroleum Technology Alliance Canada, SGL Group, Technology Insights, Toyo Tanso Co. Ltd., Manufacturing Excellence Consulting, Inc., Westinghouse Electric Company and Wyoming.

For more see: www.ngnpalliance.org

2014 Alliance Members



ORGANIZATIONAL BACKGROUND

The European Nuclear Cogeneration Industrial Initiative (NC2I) was officially created in 2011 as one of three pillars of the European Sustainable Nuclear Energy Technology Platform (SNETP). The objective of the Initiative is to demonstrate an innovative and competitive energy solution for the low-carbon cogeneration of heat and electricity based on nuclear energy. The targeted outcome is the commissioning within 10 years of a nuclear cogeneration prototype to deploy this low-carbon energy technology in several energy-intensive industries. NC2I builds on the EUROPAIRS (see: www.europairs.eu) project that identified possible operating windows for the combined system of a very (V)HTR connected to industrial processes. Today NC2I counts eight full members and is supported by the NC2I-R (Research) European project, which is structuring the European public and private capabilities for preparing a nuclear cogeneration demonstrator program. NC2I is currently setting up a Business Group designed to structure the dialogue with energy-intensive industry and market actors.

For more see: www.nc2i.eu

