

## Press Release

### *For Immediate Release*

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### **International Industry Organizations Meet to Collaborate on Intrinsically Safe Nuclear Reactor Technology**

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

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. They are carrying out technology development activities with the goal to design, demonstrate, build and operate the HTGR as a standard offering that can be used for process heat/steam applications.

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 work on 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 parallel or "sister" HTGR projects in North America and the European Union.

Today, nearly 80% of the world's energy demand is consumed in the industrial and transportation sectors with fossil fuels being the primary source of energy supply for these sectors. The production of carbon free heat at temperatures approaching 700 - 900 deg. C from advanced nuclear energy technology is a major innovation that can open large new markets for plant production systems, and jobs for the future.

Nuclear power continues to provide a significant contribution to curbing carbon dioxide, mercury and other particulate emissions. Energy from nuclear supports world-wide leadership in energy policy by providing a clean energy option that increases security and efficiency of energy supply and decreasing energy cost volatility.

## **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 organization 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: the Advanced Research Center (ARC), AREVA, ConocoPhillips, Dow Chemical Company, Entergy Corporation, Graftech International Ltd., Mersen, Petroleum Technology Alliance Canada, Savannah River Site Community Reuse Organization (SRSCRO), SGL Group, Technology Insights, Toyo Tanso Co. Ltd., Ultra Safe Nuclear Corporation, Manufacturing Excellence Consulting, Inc., Westinghouse Electric Company and Wyoming. For more see: [www.ngnpalliance.org](http://www.ngnpalliance.org)

2014 Alliance Members



[Manufacturing Excellence Consulting, Inc.](http://www.mecinc.com)

## 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 follows on from the EUROPAIRS (see: [www.europairs.eu](http://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.snetp.eu](http://www.snetp.eu)



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