



Introduction

In line with the Sustainable Nuclear Energy Technology Platform (SNETP) Strategic Research Agenda (SRA) and Deployment Strategy (DS), the ARCHER project will extend the state-of-the-art European (V)HTR technology basis with generic technical effort in support of nuclear cogeneration demonstration. The partner consortium consists of representatives of conventional and nuclear industry, utilities, Technical Support Organisations, R&D institutes and universities. They jointly propose generic efforts composed of:

- System integration assessment of a nuclear cogeneration unit coupled to industrial processes
- Critical safety aspects of the primary and coupled system

- Essential HTR fuel and fuel back end R&D
- Coupling component development
- High temperature material R&D
- Nuclear cogeneration knowledge management, training and communication

The activities proposed are imbedded in the international framework via GIF; direct collaboration within the project with international partners from the US, China, Japan, and the republic of Korea; and cooperation with IAEA and ISTC.

The proposal is a technical building block supporting nuclear cogeneration as fossil fuel alternative for industry and as such supports a high potential contribution to European energy strategy as defined in the SET-Plan. The results of the proposal will be reported to SNETP, to support the strategic pillar of 'other uses of nuclear energy', and the establishment of a Nuclear Cogeneration Industrial Initiative, which shall include effective (international) nuclear cogeneration demonstration.