

Strengthening the HRP co-operation with Universities in member countries

Introducing HUNISEC :
the Halden-Universities-Seconded program

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OECD Halden Reactor Project

- **International collaborative research**
 - directed at Safe and Reliable Operation of Nuclear Power Plants
 - affiliated to OECD NEA in Paris
- **Two types of members**
 - **Signatory members**
 - OECD countries, signs the Halden Agreement
 - **Associated Parties**
 - an extension to the original Halden Agreement to allow for multiple independent organizations in a country, or non-OECD countries, to participate to the HRP
- **Present Participant types**
 - Utilities, Vendors, Licensing Authorities and R&D centers
 - No universities
- **Funding**
 - HRP is jointly funded by its members:
 - 19 countries
 - > 100 nuclear organizations world wide

AGREEMENT

ON THE OECD HALDEN
REACTOR PROJECT

COVERING THE PERIOD

1st JANUARY 2009 TO
31st DECEMBER 2011

ASSOCIATED PARTY AGREEMENT

between

INSTITUTT FOR
ENERGITEKNIKK, NORWAY

and

"Organisation"

COVERING THE PERIOD

1st JANUARY 2009 TO 31st
DECEMBER 2011



Halden Reactor Project Member Organisations

Signatory members:

- **Norway** – IFE - Institutt for energiteknikk
- **Belgium** - SCK/CEN - Belgian Nuclear Research Centre
- **Denmark** - Risø DTU
- **Finland** - TYÖ – JA ELINKEINO-MINISTERIÖ - Finnish Ministry of Employment and the Economy, operated by VTT
- **France** - EDF - Electricité de France
- **Germany** – GRS - Gesellschaft für Anlagen- und Reaktorsicherheit mbH
- **Japan** - JNES - Japan Nuclear Energy Safety Organization
- **Korea** - KAERI - Korean Atomic Energy Research Institute
- **Spain** - CIEMAT - Spanish Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas
- **Sweden** - SSM - Swedish Radiation Safety Authority
- **Switzerland** - ENSI - Swiss Federal Nuclear Safety Inspectorate
- **UK** - NNL – National Nuclear Laboratory
- **USA** - US NRC - United States Nuclear Regulatory Commission

Associated Parties:

- **Czech Rep.** - NRI - Czech Nuclear Research Inst.
 - **Slovakia** - VUJE Slovak Nuclear Research Inst.
 - **Hungary** - KFKI Hungarian Atomic Energy Res. Inst.
 - **Russia** - “TVEL” JSC.
 - Research Centre “Kurchatov Institute”,
 - Research Institute VNIIAES
 - **Kazakhstan** – Ulba Manufacturing company
 - **Italy** – ENEA Italian National Research Center
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- **USA**
 - GE/ GNF - Global Nuclear Fuel
 - Westinghouse Electric Power Company
 - EPRI - Electric Power Research Institute
 - DOE – US Department of Energy (INL&ORNL)
 - **Japan**
 - JAEA, CRIEPI (incl. Toshiba og 11 utilities) and Mitsubishi NF (incl. MHI)
 - **France**
 - IRSN - French Institut de Radioprotection et de Sûreté Nucléaire
 - CEA - Commissariat à l'énergie atomique et aux énergies alternatives
 - **EU JRC** Transuranium, Karlsruhe

Secondee arrangement – An HRP Success Factor

- Secondees:
 - One of several benefits from participation in the HRP
- Up to now
 - Employees from member organizations can stay at Halden and work with Halden staff, 1-2 years
 - E.g. follow experiments at HBWR of special interest to the home organization
- Many countries use it extensively, for example
 - Japan had ca. 80 secondees, since 1968
 - Finland ca. 30 secondees



Collaboration between HRP and Universities in Member organizations

- The Halden Project has for many years co-operated with various universities around the world.
 - The experience from such work is that it has provided valuable contributions to the Project in various R&D areas.
 - Typically, universities have a variety of resources that can *drill deeper* into a specific topic by for instance involving PhD programs and students.
- At the Project, this co-operative work has been handled case by case.
 - HUNISEC is directed at establishing a more formal arrangement between member organisations, universities and the HRP that might lead to a win-win situation for the three parties.



Collaboration between HRP and Universities in Member organizations

- The short term aims are:
 1. encourage members organisations to involve their (technical) universities in the HRP work and
 2. establish a more formal way of linking universities to the Project's activities through **Associated Party Agreements** between HRP and Universities (APAU)
- The longer term aim of the initiative can be formulated as:
 - “Extending the network and strengthening the links between the academia, education and HRP in the different member countries to stimulate mutual knowledge transfer and information sharing among various stakeholders.”



In summary

- The main goals of HUNISEC are to:
 - Increase knowledge transfer from Halden to member countries.
 - Increase the number of Secondees by inviting Master students, PhD's and Post-Docs to the HRP to work with their thesis in our experimental environments
 - Provide opportunities for member country students to study and work abroad in a small but renowned international research institute
 - Provide opportunities for the HRP to access fundamental methods, techniques and tools available from various member Universities for use in applied research at the HRP
- If some of you would like to get involved in this process, please contact me: fridtjov.owre@hrp.no

BACKUP SLIDES

List of activities of mutual benefit to Member organisations, Universities and HRP

- **From the HRP point of view, the collaboration could provide access to:**
 - fundamental methods and techniques for use in applied research at the HRP.
 - fundamental models, codes and software systems for analysis and assessment of experimental data generated by the HRP.
 - results from relevant R&D projects at universities through mutual cooperation, extending and enhancing the value of HRP research.
 - results from PhD programmes at universities of thematic interest to HRP members.
 - to university expertise and personnel in selected areas of particular needs for the HRP.
 - applying for grants at universities by HRP staff, and applying for participation in e.g. PhD programmes, thus increasing the competence at HRP.
 - In some research areas, cooperation with universities might lead to added value to the HRP programmes by benefitting from external national programmes and funding prioritized in a member country.

List of activities of mutual benefit to Member organisations, Universities and HRP

- **From the universities and member organisations point of view:**
 - Increased knowledge transfer from the HRP work to member countries
 - HRP would provide PhD thesis' opportunities at the HRP, in areas of priority for the HRP.
 - Opportunities for member country students to study and work abroad in a small but renowned international research institute
 - PhD thesis and other relevant reports will be placed in the central HRP DocuShare system and made accessible to all members.

Ideas about organisation, procedures, rules and conditions

- Universities that will enter into a formal co-operation with HRP must:
 - Send an application to the HRP member organisation in its respective country.
 - When the application has been accepted, the three parties will enter into a standard three-party agreement.
 - This “Halden Agreement for Universities” regulates the terms and conditions of the co-operation, typically: IPR, ownership, confidentiality, limitations, etc.
 - The responsibility for the HRP joint research program shall always rest with the HRP.
 - At this point, the HRP would advise to open up for universities to participate in Workshops, Summer schools and the Enlarged Meetings

Marketing of such a cooperation

- The HRP would provide
 - an information pamphlets and the standard Halden Agreement for Universities and
- The HRP would
 - participate in meetings between universities, member organizations and the HRP following initiatives taken by member organizations.