

Opportunities to Internationalize Nuclear Science User Facilities

December 9, 2016

**Dr. Regis A. Matzie
NEAC International Subcommittee**

What is the Nuclear Science User Facilities (NSUF)?

- A consortium formed to undertake an enterprise beyond the resources of any one member
- Established in 2007 by DOE Office of Nuclear Energy with INL as lead institution
- Currently comprised of
 - 8 universities
 - 4 national laboratories
 - 1 industrial partner
- Designed to conduct rapid turnaround experiments (typically fuels and materials) for projects selected through open competitive proposals (\$1 M - \$4 M and up to 7 years duration)

Charge to the NEAC International Subcommittee

- **Identify international nuclear facilities that the U.S. nuclear industry could leverage to support the further development of the GAIN Initiative and complement existing U.S. facilities**
- **Guidance from DOE said that the Subcommittee should review past efforts by the national laboratories to identify and catalog the international nuclear facilities and their major capabilities with the objective of analyzing gaps and what is needed to leverage the GAIN Initiative**
- **This charge is an extension of the effort just reported on international radiation facilities**

Status of Progress on New Charge

- **The effort on international irradiation facilities is much better defined with a relatively small number of facilities to track and understand**
- **Other nuclear facilities (e.g., hot cells, critical facilities, accelerators, etc.) are much more abundant and have less available information in catalog form to compare**
- **Working with INL to develop a useable table format which includes substantial data, yet is sufficiently concise to be able to review and develop “findings”**
- **Expect this task to be completed around the end of March 2017**

Approach to Completing New Charge and Maintaining a Long Term Understanding

- **There is a major ongoing activity through the Generation IV International Forum (GIF) program to catalog international capabilities for advanced reactor development – this will be a significant source of information to the NSUF database**
- **An expert group is coordinating this effort and an INL employee is the Technical Director**
- **The data is being compiled into spreadsheets and presentations and will be the best source of up-to-date information going forward**
- **The NSUF database is the natural reference/source information for future GAIN activities**

Approach to Completing New Charge (cont'd)

- **International Subcommittee is scheduling its next meeting in mid-February 2017**
- **Some members of the Subcommittee, possibly augmented by other NEAC members, will work with INL to ensure that digestible information is available to review and draw conclusions**
- **Gaps relative to U.S. facilities will be identified and recommendations made to help leverage the GAIN Initiative**

Questions?