

Support Provided On Major Initiatives and National Programs Focused on Advanced Designs/Concepts

NRC

- Provided >15 years of support to RES in I&C
 - Safety systems for ALWRs
 - Qualification of computer-based I&C systems
 - Digital I&C and integrated control rooms
 - Lightning protection, wireless communications
- Gas-cooled reactor analysis—GRSAC
- Operating experience assessments and PRAs

NASA

- Space reactor technology
 - I&C lead for JIMO Government team (DOE-NE)
 - High-temperature sensor development (DOE-NR)
 - Design of reactor autonomous control (DOE-NR)
 - Drafted initial reactor safety test plan (DOE-NR)
- Space reactor design
 - Led DOE design team—surface power reactor
 - Key member of NASA ESAS team for Vision for Space Exploration—reactor design analysis
 - Affordable Fission Power System Study

DOE

- Gen IV program
 - Design analysis & dynamic modeling for LS-VHTR
 - Develop simulation models—TH/safety—VHTR
 - Potential I&C cross-cut lead (includes AFCI)
- I-NERI
 - System analysis of multi-modular n-plants (Brazil)
 - Enhanced sensing control approaches IPSRs (Korea)
- FMDP—VVER, BN-600, and licensing support

IAEA

- Consultancies
 - “Safety Report Series”—analyzing accident scenarios for MHTGRs
 - TechDoc for digital I&C implementation
 - TechDoc for on-line monitoring using advanced diagnostic systems
- CRP-5—Validation of codes for HTGR transients