Fusion and Fission Energy and Science Directorate

Fusion Energy Division

- Burning Plasma Foundations
- Plasma Theory and Modeling
- Diagnostics and Control
- Advanced Tokamak Physics
- Power Exhaust and Particle Control
- **Fusion Nuclear Science, Technology, and Engineering**
- Blanket and Fuel Cycle
- Fusion Technology
- Fusion Engineering
- Remote Systems

Nuclear Energy and Fuel Cycle Division

- **Advanced Reactor Engineering and Development**
- Advanced Reactor Systems
- Energy Systems Development
- Advanced Nuclear System Safety and Licensing
- Thermal Hydraulics
- Nuclear Structures and Construction
- Modern Nuclear I&C
- **Nuclear Modeling and Simulation Development and Deployment**
- Power Reactor Modeling
- Depletion Modeling
- Research and Test Reactor Modeling
- Nuclear Code Integration
- HPC Methods for Nuclear Applications
- **Nuclear Criticality, Radiation Transport and Safety**
- Nuclear Criticality
- Nuclear Data
- Radiation Transport

- **Fuel Development**
- Advanced Fuel Forms Development
- Nuclear Cladding Development and Characterization
- Particle Fuel Forms
- Irradiation Testing Design and Fabrication
- Nuclear Experiments
- **Integrated Fuel Cycle**
- Fuel Cycle Chemistry Research
- Fuel Reprocessing Technology
- Uranium Process Chemistry
- Extended Burn-Up and Increased Enrichment Fuel
- Packaging Systems and Logistics
- Used Fuel Disposition

US ITER Project

- **Technical Systems**
- Analysis and Design Integration
- CS Magnets
- Diagnostics
- Disruption Mitigation and Pellet Injection
- EC and IC Transmission Lines/I&C
- Standard Vacuum Components/Roughing Pumps
- Systems Engineering and Configuration Management
- Tokamak Cooling Water System
- Tokamak Exhaust Processing System
- **Project Support**
- Quality and ES&H
- Project Controls
- Business Office (Support to ITER International Team)