



# **Technology & Engineering Services**

  
**ENERGYSOLUTIONS**  
We're part of the solution



EnergySolutions Technology and Engineering division has a highly qualified staff consisting of key technical, engineering personnel with practical experience in critical areas of the nuclear industry. With this background knowledge and experience EnergySolutions can meet the needs all of our customers. Our capabilities include:

- Chemical and Process Engineering
- Mechanical Engineering
- Civil and Structural Engineering
- Radiological Safety
- Electrical & Instrumental (including special radiological instruments)
- Process Chemistry
- Environmental, Safety and Ergonomics Experts.

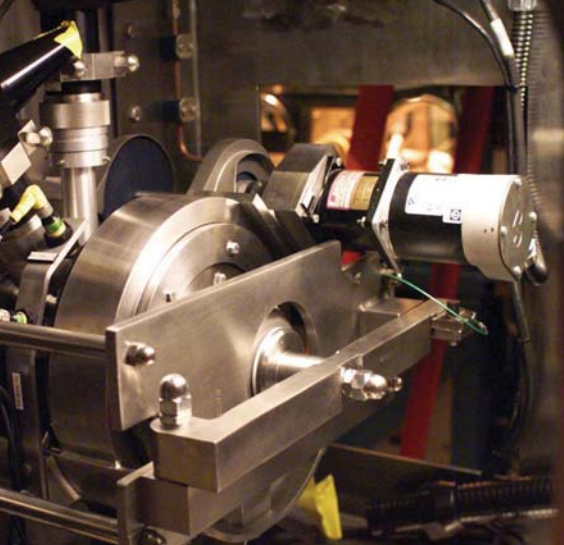
With more than 75 engineers and technology staff located across the country, EnergySolutions has 17 registered Professional Engineers (PE) in the Civil, Structural, Nuclear, Chemical

Environmental & Mechanical disciplines. In addition EnergySolutions has 15 Chartered Engineers (CEng) from the major professional institutions in the UK/Europe/Canada.

EnergySolutions provides unique expertise in areas of direct relevance to ongoing US nuclear projects including:

- Cross Flow/Ultrafiltration
- Closed Cell/Black Cell Design
- Grout Encapsulation
- Glass Chemistry
- Power Fluidics
- Slurry Handling
- US and UK based expertise on HLW management
- Ion Exchange

EnergySolutions is unique in the US nuclear industry in having key engineering, technology and operations staff combining US experience and experience derived from practical implementation of nuclear projects in the UK including D&D waste management and fuel reprocessing.



EnergySolutions has exclusive US rights to use BNFL's Intellectual Property developed during 40 years of nuclear design and operations in the UK. This technology is successfully being implemented in US nuclear facilities.

### Full Range of Design Facilities

EnergySolutions has full-scope, state-of-the-art CAD design operating 2-D and 3-D parametric "Solidworks", "Inventor" and AutoCad capabilities. We have developed relationships with universities and specialty testing companies to support our design and technology development activities.

Our expertise and capabilities span the entire nuclear waste management spectrum and include:

- High-Level Waste
  - Remote Handling
  - Process Development
  - Design and Operation
  - Nuclear Safety
- Thermal Treatment of Radioactive and Mixed Waste
  - Melter/Vitrification Equipment and Design

- Seismic Qualification
  - Seismic/Structural Analysis
  - Design and Engineering
- Human Factors Engineering
- Nuclear Safety
  - Biological Shielding Design
  - ALARA Planning
  - Dose Field Mapping
  - Process/System Design
- Design Consultancy
- Nuclear Site Operations
- Design and Fabrication Capability
- Nuclear Transport and Storage Cask Design and Licensing
- Mathematical Modeling of Plants and Processes
- Chemical Process Engineering/Chemical Separations
- WTP – Autosampling System
  - LAW and HLW Production Melter Design
  - Fluidic Pump and Mixer Design
- Sludge Retrieval and Packaging
- Salt Waste Processing Design
- Advanced Mixed Waste Treatment Project

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