

## I&C Engineering

### Challenge

Operators of nuclear power plants require cost effective Instrumentation & Control (I&C) solutions with high quality and predictability. They expect every job to be done right — the first time, on budget and on schedule.

### Solution

Framatome listens and delivers reliable and predictable I&C engineering solutions. Our solution-based approach incorporates years of industry experience, utilizing engineers with extensive system experience, SRO experience, and plant start-up experience, along with our global reach.

We evaluate plant issues and develop the right solution which is not always a plant modification with minimum owner oversight. Our design phase builds from conceptual evaluation, solid scope definition, incorporating industry operating experience, station experience, constructability, a robust Human Performance program and lessons-learned, to foster a culture of safety, continuous learning, and continuous improvement — all key elements to sustainable, predictable, reliable results.

### Customer benefits

- Highly experienced engineers and industry experts providing comprehensive design solutions and licensing support for resolution of obsolescence issues and plant life extension
- Access to the vast number of U.S. and global Framatome experts and technologies for support of your plants' engineering, operation and maintenance
- More than 40 years of plant design and modification experience with a spectrum of different nuclear plant designs
- The combination of engineering, product and field services capabilities allows Framatome to deliver total plant engineering solutions to you



**Your performance**  
is **our** everyday **commitment**



Our solution-based approach incorporates years of industry experience, utilizing engineers with extensive system experience, SRO experience, and plant start-up experience, along with our global reach. At Framatome, your performance, is our everyday commitment. By listening to what our clients have to say, we strive on a daily basis to deliver a comprehensive array of product and services to support you through all phases of your project. By bundling Framatome products and engineering services, you can minimize risk with Framatome's single point of accountability.

In addition to offering modification services, we offer the following:

- Project engineering, integration, and management for safety and non-safety related digital control systems
- I&C Systems modernization studies, cost/benefit analysis, conceptual design, and planning
- System design including requirements specifications for digital systems
- Hardware and software design
- Software Verification and Validation/Testing (V&V)
- Software Quality Assurance (SQA) plans and procedures
- I&C system analyses: Setpoint, FMEA, reliability, response time, uncertainty, equipment qualification
- Human Factors Engineering (HFE), Control Room Modernization
- Analog and Digital I&C systems installation support, testing, and commissioning
- I&C Engineering and HFE Training
- Licensing support for digital upgrades
- Cyber security
- Physical Plant Security
- Architect Engineering, Plant Modifications
- TELEPERM™ XS safety related digital control platform equipment and engineering
- Tricon® safety related platform software design and V&V



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