

# ICE Service Offer

■ Our energy at your service

## Using knowledge to master your electrical networks

Anticipating changes needed in your networks while maintaining optimal protection for people and equipment may seem like an ambitious objective. It is nonetheless realistic, even in a context requiring greater control of operating costs.

ICE, Industrielle de Contrôle et d'Équipement, has assisted its clients since 1947 in markets where effective energy management is essential:

- Petrochemical sector and heavy industry (LV to EHV)
- Conventional and nuclear electricity production (LV to EHV)
- Railway sector (AC/DC)
- Transmission and distribution (60KV to 400kv)

ICE leverages expertise acquired both as a designer and manufacturer of protection equipment and command-control systems, working closely with your electrical teams to meet their daily needs. Our priority is to provide long-term results and to control costs for projects related to these major topics:

- Electrical network studies
- Team training
- Expert on-site assistance

### BENEFITS

- Ensure security for networks and people
- Satisfy strategic needs
- Respect budgets
- Optimize response time
- Handle emergencies
- Benefit from more than 70 years of experience

### RESOURCES

- 25 dedicated experts
- 4 training centers in Europe
- On-site training
- Personalized training
- Dedicated contact

### TOOLS

- Network calculation software
  - SKM Power\*Tools®
  - Etap®
- Simulation software
  - Matlab®
- Test tools for protection systems
  - Omicron®
  - Isa®
  - Cotel®
- Automated high-voltage simulation



## Complex studies and calculations: Knowing your networks for optimal control

One of the great challenges for the 21<sup>st</sup> century is to optimize the use of electrical energy in a highly competitive environment, while protecting people and equipment.

From the very beginning, ICE has been in close contact with major decision makers in the field, notably EDF, Enedis, RTE, and SNCF, building expertise that we leverage to carry out your complex electrical studies in compliance with the latest ANSI and IEC international standards.

Our engineering and application departments are available to work with you on your project from beginning to end:

- Defining protection plans based on the target operating mode
- Scaling power components for excitation systems
- Upgrading protection to match network evolution
- Engineering for equipment renovation
- Reducing electrical risk by analyzing equipment safety: signaling and compliance with hygiene, safety, and environmental regulations

Our teams will also help you analyze and understand occasional or recurring issues that could lead to operational losses.

Thorough understanding of your network enables you to plan the changes required to meet your objectives.

## Preventive, adaptive, and corrective maintenance: Experts trained to reinforce your teams

Starting from inception and continuing over the course of site lifetime, ICE offers you custom assistance for all your planned and corrective maintenance needs.

Support from our specialized team and their high quality site interventions ensure that your equipment stays up and running at all times. Interventions are generally organized when equipment goes live, as well as when maintaining protection systems and performing urgent repairs.

Under contract or on an as-needed basis, our protection engineers respond quickly, equipped with the latest tools to offer you the support and skills necessary to guarantee the effective results of their actions:

- Assistance for using our products and systems optimally
- Our specialists, able to react quickly around the world
- Repairs and fast intervention for all types of protections
- Post-intervention follow-up
- Technician mobility in under 24 hours (depending on contract)
- An expert on-site with team support
- MRO (maintenance, repair, and operations) with long-term contracts up to 20 years



### BENEFITS

- HV-MV protection plan audits
- Network stability and selectivity improvements
- Proximity of intervention teams
- Reliable results
- Cost and risk control

### RESOURCES

- 4 experienced teams of application engineers
- Coordinated teamwork
- Simulation and calculation tools
  - SKM Power\*Tools®
  - Etap®
  - Matlab®



### BENEFITS

- Maintenance in compliance with international standards
- Optimization of equipment life-cycle
- Experts at your service
- Remote diagnostics
- Proven and fast test procedures
- Detailed intervention reports
- Additional skills to meet your needs
- Post-intervention follow-up
- Cost control

### RESOURCES

- Intervention team available on-demand
- Injection tools for protection
- Networking monitoring

## Training: An effective tool for better performance and lower risk

Building people's skills is probably the most effective manner to drive performance in your company, both increasing team loyalty and ensuring site safety.

ICE offers a complete range of training options to meet the needs of all your different employee profiles, at your site, in our training center, and via the Web.

Our training programs are updated every year to ensure that their content covers the issues encountered in the field. Our goal is to ensure your satisfaction and provide relevant information that can be applied quickly.

We have significant experience developing training content adapted to all your needs, for engineering consultants, equipment manufacturers, installers, and end-users.



### BENEFITS

- Acquiring new skills
- Keeping up-to-date with the industry
- Mastering the latest techniques
- Controlling electrical networks effectively
- Reducing electrical hazards
- Integrating new staff quickly
- Follow-up after training
- Controlling costs

### RESOURCES

- 5 training rooms
- 2 practical exercise rooms
- Expert training team
- Fluency in 4 European languages: English, Italian, Spanish, and French
- Extensive experience
- On-site training
- Personalized training

## Integration and supervision studies: Creating custom solutions

Our engineering team is at your service to recommend components for integration, such as protective relays and command-control systems in racks and cabinets.

Our system experts work with you to define and implement supervision solutions that match your site's functional needs ([PS8000](#)).



### BENEFITS

- Custom solutions
- Energy management
- Cogeneration control systems

### RESOURCES

- Specialized team
- Test center
- Network experts





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