



expert services & solutions
for the Power Generation sector





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PROTASIS provides a wide range of expert services for Power Generation Utilities, IPPs and the Renewable Energy sector including assessments, consulting, engineering design, testing, maintenance, training and support of operations to satisfy the strategic and operational requirements of any Power Generation Plant. Our consultants will assess your infrastructure and provide comprehensive solutions, technical support and training to effectively maintain, modernize, monitor and manage your facility's electrical installations. Our expert services, set up to ensure the overall quality, safety and reliability of your installation, are divided into three distinctive areas:

1 Electrical Protection, Control & Automation Systems

Our Power Systems Applications department (**PSA**) combines the qualifications of a Systems Integrator with those of an experienced Engineering & Consulting company.

Without being affiliated with or committed to any manufacturer, **PROTASIS** PSA develops turn-key projects, solves problems and provides technical solutions and support in a number of areas related to the Power Generation System's infrastructure and operation Management.

In detail, our services encompass:



- ⊕ Specific aspects of Digital Control Systems
- ⊕ Automation, Control & Telecommunication systems
- ⊕ Data Exchange Systems design between Power Plants and Regional Energy Management Systems (EMS)
- ⊕ Protection systems design
- ⊕ Upgrade and optimization of existing protection schemes and protection/control philosophy (through studies & on-site)
- ⊕ Retrofit and Upgrade of existing Protection, Automation, Telecommunication & Control Systems
- ⊕ Primary and Secondary Testing
- ⊕ Technical due diligence of protection & control systems in new power plants
- ⊕ FAT, SAT and Commissioning services
- ⊕ CAD drafting and design (Schematic/Wiring diagrams, Cable lists, etc.)
- ⊕ Training Services
- ⊕ Maintenance and Systems Operation Support

with power, we perform

2 Electrical Planning and Operation Studies, Consulting & Support

Our Power Systems Studies & Consulting Department (**PSS&C**) has the knowledge and experience to conduct studies related with the Power Production System.

Our independent services include:

⦿ Static Analysis

- Power Flow
- Static Security Assessment (contingency analysis)
- Short circuit analysis

⦿ Dynamic Analysis

- Transient stability
- Voltage stability
- Frequency stability
- Dynamic Security Assessment (dynamic disturbance analysis)

⦿ Protection System Analysis

- Protective equipment modeling
- Relays setting/coordination studies
- Design of Special Protection Schemes (generator/load rejection)

⦿ Verification of protection and control equipment operation

Our services can cover various types of Studies such as:

⦿ Power Systems Planning, Control and Operation

⦿ System impact studies and grid code compliance studies for interconnection of plants (e.g. renewable source plants)

⦿ Response testing and tuning of generators, regulators (AVR, GENERATORS, PSS)/Generators parameters identification

3 Energy Metering & IT Systems

Having experience in development, operation and support of Telemetry Systems, our Metering & IT Applications department (**M&ITA**) develops solutions and provides consulting and support in all aspects of a modern data collection and management system.

Our services include:



- ⦿ Data collection systems
- ⦿ Meter & Energy Data Management Systems
- ⦿ Telecommunication infrastructure (GSM, GPRS, 3G, PLC, ETHERNET and RF) for transferring data (recording, measurements, load profiles, etc.)
- ⦿ IT and Security Audit Services
- ⦿ Asset Management Solutions
- ⦿ System, Network, Data Base and Application Administration
- ⦿ Training
- ⦿ Operation Support
- ⦿ Net-metering solutions for Distributed Generation application

Contact our company for more information and details on how we can better serve your Power Generation Plant (system) needs and how we can solve important aspects challenging your Operations.





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