

Introducing mBELLAb Power Solutions L.L.C.

## About mBELLAb

mBELLAb Power Solutions L.L.C. (mBELLAb) is a field intelligent system integration and consultancy company based in Abu Dhabi, United Arab Emirates and specializes in offering solutions to the energy and utilities industries.

mBELLAb provides a range of solutions for the management and operations of energy and utilities companies ranging from field automation, protection and relays, metering, monitoring, control, telecommunication & automation at the field, station and remote center(s) to optimizing and securing plant, substation and network operations.

Our bespoke solutions combine hardware, software and development capabilities and requirements with localized system engineering, consultancy, project management and support services in providing full scale turn-key projects. Our services are provided by certified engineers with many years of experience working on automation, protection and information systems.

mBELLAb's competitive advantage is its capability to source, retain and lead experienced high caliber personnel bringing with them accumulated knowledge of the technologies of such leading companies as IDS, ABB, Microsol, Alstom, IBM, General Electric, Siemens and others. Once trained within the mBELLAb culture, our team is encouraged to provide our clients bespoke and tailor-made solutions with confidence and innovation that surpass rigid boundaries.

Our commitment to excellence and to serving our clients with the highest standards of care uniquely positions us to be the partner of choice for our clients in the fields of automation, protection and information systems within the regions and sectors we operate. We are dedicated to our clients' objectives and internalize their goals, ambitions and mandates as our own. In this way, we take pride in the solutions we design and the assistance and services we provide to our clients. We bring value to our clients through customization by taking a keen interest in learning about our clients' requirements, challenges and opportunities and then establishing tailor-made solutions and services. In an ever-increasing cookie-cutter world, we strive to be bespoke while keeping with tried and tested resolutions to everyday challenges and opportunities of our clients.

Deregulation, increased customer expectation, aging assets, increased load, expected return on capital and departing expertise are just some of the recognized global challenges facing our clients. mBELLAb leverages the experience, knowledge and know-how of its management and staff in delivering grid management solutions, SAS, SCADA/EMS/DMS, Telecom, DCS, Feeder Management, RTU, and other solutions in partnership with our clients to effectively and efficiently confront and overcome these challenges.



# mBELLAb Industries

mBELLAb offers a comprehensive range of industry specific solutions and services to the energy and utilities sector in the fields of plant/grid and enterprise management.

More specifically, the industries within which mBELLAb operates include:

- ▶ Electricity
- ▶ Water and Waste Water
- Oil and Gas
- Pipelines
- Telecommunication

Within each industry, mBELLAb works with general contractors, other system integrators and "end-user organizations". We work with our clients to provide turnkey solutions either as a direct contractor to end-user organizations or as subcontractor to general contractors and other system integrators.

Key contractors with which mBELLAb personnel have worked with include such reputable and international companies as ABB, IDS, Siemens, Aljaber, Power Economy, GECO, Lucy Switchgear, Danway, Lindenberg, Saxon Energy and Galfar, to name a few.

The end-user organizations with which mBELLAb personnel have provided services and solutions within the GCC region include Abu Dhabi Distribution Company (ADDC), Al Ain Distribution Company (AADC), Dubai Electricity and Water Authority (DEWA), Federal Electricity and Water Authority (FEWA), Sharjah Electricity and Water Authority (SEWA), Abu Dhabi Airport, Abu Dhabi Ports Company (ADPC), Oman Electricity Transmission Company (OETC), Mazoon Electricity Company (MZEC), and Dhofar Power Company (DPC), to name a few.



# mBELLAb Solutions

Through the delivery of numerous projects in the private and public energy and utility sectors, mBELLAb's expert consulting, engineering and system implementation teams offer customer-centric services and solutions that include design, implementation, procurement, integration, deployment as well as support and maintenance.

Our strategy is to develop our level of services and solutions as our clients' needs and requirements evolve. To fulfill this strategy, mBELLAb brings together unmatched multi-vendor platform/technology system implementation skills on market leading technologies, best industry practices and a dedicated culture to continuously learn and grow.

More specifically, our solutions and services include:

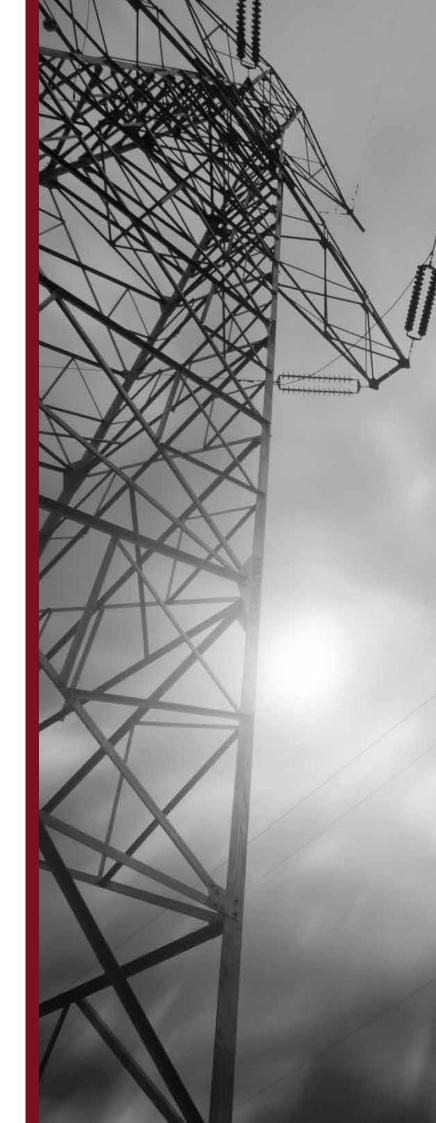
## **Energy Automation**

mBELLAb provides solutions and services for automation of energy resources including electricity and water for utilities.

As a specialist system integrator and consultancy company, mBELLAb covers all elements of network management from plant adaptation works through to the supply of complete SCADA/EMS/DMS systems through its in-house engineering and project management capabilities using reputable international vendors' products. Our aim is to work in partnership with our clients to meet all of their needs for automation, protection and information systems through localized services.

mBELLAb energy automation solutions and services consist of:

- Network Management Systems (SCADA/GMS/EMS/DMS/OMS)
- ► Plant and Substation Automation (SAS, DCS, RTU, HMI, IED)
- Power Network and Industrial Protection
- ► Telecommunication (Fiber Optic, PLC and Wireless)
- Plant Adaptation and Field Services





## Network Management Systems

mBELLAb provides complete network management systems and applications to govern energy and utility organizations' operating infrastructure. Systems include Supervisory Control and Data Acquisition (SCADA), Generation Management System (GMS), Energy or Distribution Management Systems (EMS/DMS), and Outage Management System (OMS).

### Plant and Substation Automation

mBELLAb provides localized automation schemes for a single transmission substation or a section of the distribution network covering primary and secondary sites as well as for the industrial plants which vary from a basic mini or large RTU and centralized Substation Control System (SCS) to Distributed Control Systems (DCS/SAS). mBELLAb offers Substation Automation Systems (SAS) with advanced features such as:

- ▶ Data monitoring
- ► Logic controlling
- ► Alarm archiving
- ► Event recording
- Fault recoding
- ► Disturbance recording
- ► Local and remote controlling from PLC, BCU & HMI
- ► Substation and bay interlocking
- Measurement recording
- ► Protection system implementation accompanied with remote configuration
- ► Network automation

SAS systems have automation schemes that share data and commands at a high speed including auto-sectionalizing, interlocking, distributed protection and network automation. Similar solutions are also utilized in the water and waste water industry to automate treatment plants, pumping stations, and reservoirs.



#### Power Network & Industrial Protection

One of mBELLAb's core knowledge and engineering base is power system and industrial protection equipment and systems. mBELLAb has established a pool of expert engineers and know-how (gained from working with market leading vendors and delivery of projects) in the key role of the protection relays for the functionality and operation of the plant/power systems. mBELLAb's experienced protection engineers for governing system and plant requirements have the ability to provide design and services based on the most optimized products from single or multiple vendors.

A broad range of services including concept, basic and detail design, relays engineering and configuration, protection setting calculation and coordination, and protection test and commissioning are provided by mBELLAb.

#### **Telecommunication**

mBELLAb's telecommunication services typically relate to a large network area and involve a mix of communication medias, such as fiber optics, power line carrier and wireless networks. mBELLAb provides bespoke telecommunication solutions by having the capability to design, implement and integrate communication backbones to meet the real-time needs of both operational and non-operational data.

# mBELLAb Solutions

mBELLAb 's wide range of services may be broadly categorized into

- Consultancy: process restructuring and optimization, industry specific expertise, business requirement analysis, converting business requirements into technical requirements and information modeling:
- Project Management: localized contracting plans, project control systems, safety, and logistics;
- ► Engineering: feasibility study support, front end engineering, basic design, detail design, detailed engineering, systems integration, vendor interface / FAT services, as-built, and SAT;
- ▶ Procurement: vendor prequalification, RFQ package preparation, commercial evaluation, purchase order placement, vendor inspection, transportation, import & custom handling, and alternative sources of supply;
- ▶ Integration & Construction: construction management, self perform execution, site safety management, logistics, and material control:
- ► Testing & Commissioning: pre-commissioning, installation acceptance test, site acceptance test, and commissioning support; and
- ▶ Maintenance: pre-commissioning, installation acceptance test, site acceptance test, and commissioning support.



Member of mBELLAb group of companies

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