

indra

Energy & Utilities

Smart Solutions for a Digital World

More than 140 Utilities worldwide support their
key business processes using Indra Solutions

Energy & Utilities

Smart Solutions for a Digital World



Power

Gas

Oil

Water

Solutions and services

Consulting

- Strategic and business consulting
- Organization and systems consulting
- IT consulting

Systems Integration

- Plant and Infrastructure Management
- Energy Markets and ETRM
- Network Management / Smart Grids
- Energy Efficiency
- Commercial Management System
- ERP Systems
- Physical and Logical Security

Energy Technologies

- SCADA Control Systems
- Substation Control Equipment
- Metering Systems / Smart Metering (AMI/AMR)
- MDM (Master Data Management)
- Assets Monitoring and Performance Technologies
- Electric Vehicle Recharging Infrastructure

Processes externalization

- Application Management (AM)
- IT Outsourcing
- Business Processes Outsourcing (BPO)
- Indra Cloud

Own Solutions

Third Party Solutions

Services

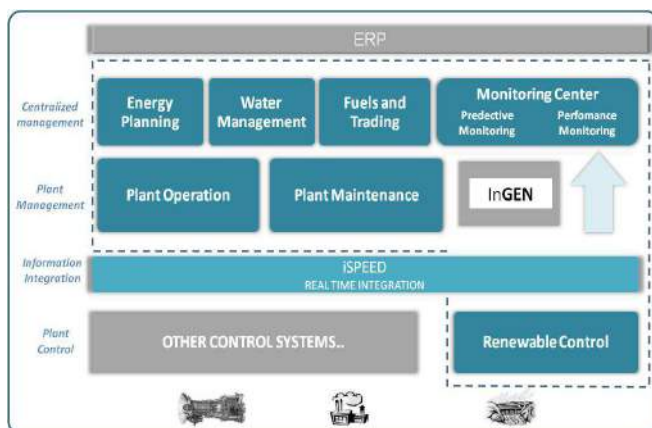
InGEN - Energy Management

InGEN is a comprehensive and modular solution capable of **fully supporting the processes involved in energy management**, for Generation & Distribution companies and other energy market participants.

InGEN integrates on a common and unified vision the whole energy management business, from operating

plants to the generation portfolio management and operation in energy markets.

This integrated view of the energy management is based on **more than a decade of accumulated experience** with implementations in multiple countries, managing all types of generation technologies and operating under different types of energy markets.



Real-time Connectivity: Robust connectivity with process variables .

Analytical capability: Allows analysis from basic levels (plant and hourly detail) to fully aggregated levels (Country / Company and monthly / yearly breakdown).

Modularity and Scalability: The architecture modularity allows easy evolutive maintenance activities on both functionality and number of managed assets..

Globality: Geographic assets management with multi-zone, multi-connection, and multilingual capacities.

ERP Integration: Full integration with ERP systems.

InGRID – Modular architecture for a full coverage of the Distribution & Metering business

InGRID supports current and future requirements of the grid transmission & distribution companies through a modular solution based on five basic principles:

Geo-referenced Information: All modules are supported on GIS advanced features, allowing a clear view of the grid status, as well as all the relationships among its elements.

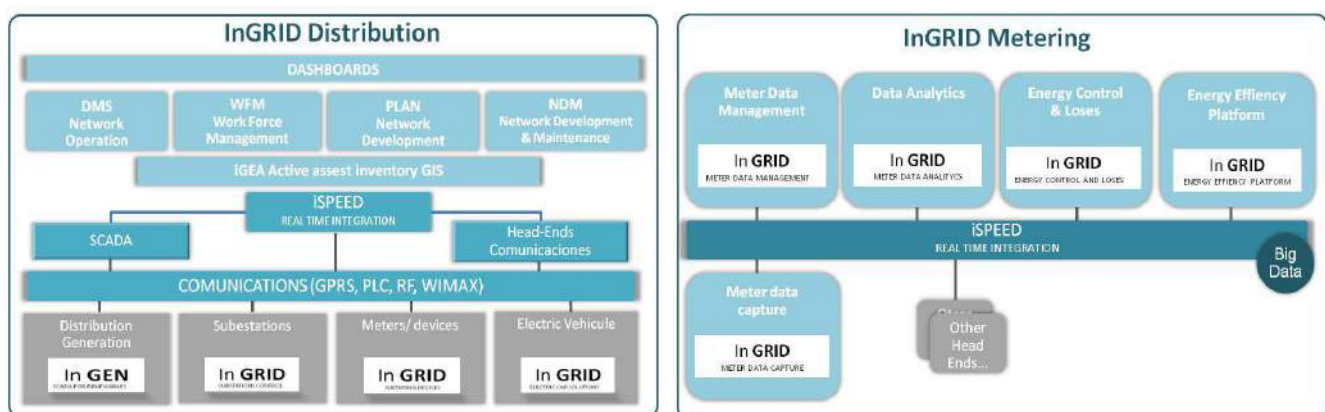
Modularity and Interoperability: Standards-based interoperability, enabling integration with call centers, business systems, management systems, measurement, and other

agents' systems, providing operators and managers with a complete and holistic grid view.

Real-Time: Integrated with SCADA systems and field devices through our real-time platform (iSPEED), enabling distributed intelligence, real-time monitoring and decision making.

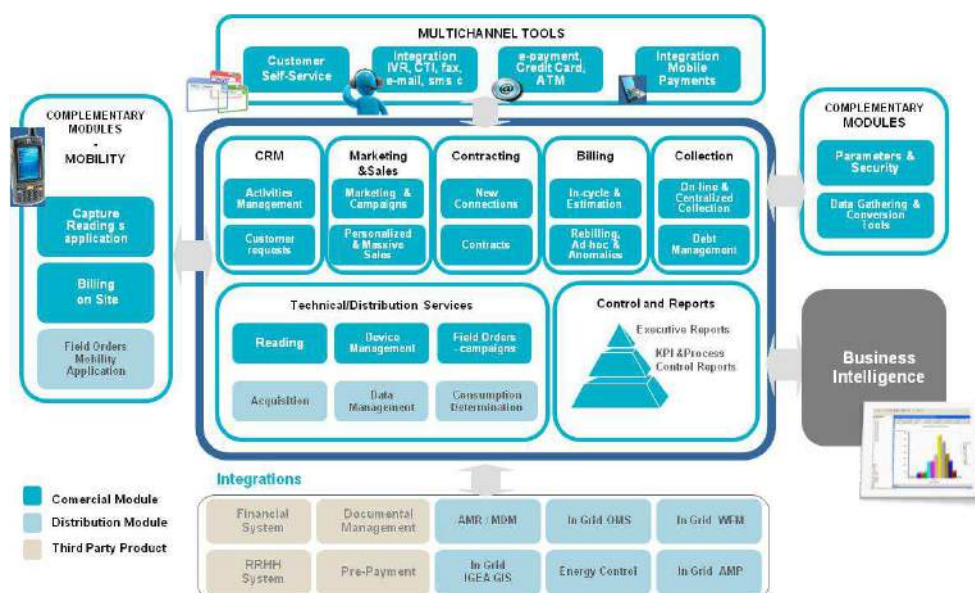
Smart technology: Includes advanced analytical and simulation capabilities to allow fast grid diagnosis and effective identification and implementation of optimal resolution strategies.

Smart Grid support: Ready to support coordinated demand response, distributed generation, storage and active grid elements



InCMS - Customer Management System

InCMS is an **integrated, modular system** designed to support customer management, invoicing and collection for utilities and energy companies. Its highly configurable functional structure has been designed to meet the needs of a dynamic market in constant evolution, which have already been covered in more than 90 implementations from 1998.



InCMS has been included in Gartner's Magic Quadrant in the CIS (Customer Information System) category for the last 8 years.

SECURITY

Indra offers an **integral solution to the Security challenges that companies face, minimizing vulnerabilities and ensuring the continuity of the business**. INDRA's Security unit includes services for physical safety and cyber-security, supported by its own products and strategic partners.

Cybersecurity

The proposal developed by **Indra** includes a set of **technologies, processes, procedures and services directed to protecting the assets** (physical, logical or services) of a company or organization which depend on an ICT infrastructure.

Prevention, anticipated answer, protection and reaction to threats to the systems and networks supporting the business processes and the **mission-critical infrastructures**. Development and implementation of **cybersecurity plans. Securitization of Smart Grids**.

Physical Security

Indra develops all phases of security projects, **from the definition of security plans to security systems implementation and maintenance**:

The basic characteristics of Indra projects are:

- Smart integration of complex security systems
- Creation of integrated control centers.



Own products:

- **Antimalware safety desks**: Access control to mobile and portable devices in restricted areas
- **Safe voice and data communications** with commercial cell phones in cellular and wireless networks
- **Frequency inhibitors**
- **Radiation portal monitors**

CONSULTING

Indra has a portfolio of products and services designed **to improve the way energy companies are managed**. Our offering is tailored to the needs and requirements of the energy sector and it is focused on creating and improving our clients' **competitive advantages**.

Offering

Customer Service

We aim to improve business results and **customer satisfaction** through the improvement of the whole commercial cycle and customer care processes.

Regulatory Consulting

We also help our **clients optimize their regulatory management processes** (tariff setting, wholesale markets rules, regulated revenues).

Operational Efficiency

We help our clients **improve their operations**, focusing on redefining key processes, analyzing the adequacy of the organization and optimizing the use of technology to reduce costs and improve efficiency.



Market Consulting

We work with **organizations and market operators in the transformation and segregation of activities (unbundling,)**

Strategic Consulting

The development of sustainable **competitive advantages** and achieving tangible results are the goals of our activity.



Control and Metering Systems

The area of Control and Metering Systems provides products and services to control, measure and analyze the performance of industrial facilities.

Offering

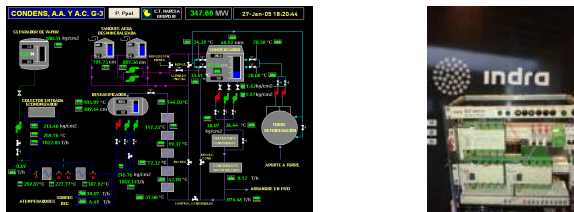
Electric Vehicle Supply Equipment (EVSE)

Indra's solutions include modular equipment and centralized systems for managing the conductive charging of electric vehicles (both three-phase and one-phase) with advanced functionalities regarding communications and the capacity of interacting with other EVSEs and the grid .



Smart Metering

Indra includes solutions for **Automatic Meter Reading (AMR)** and Energy Monitoring, These solutions cover the internal requirements of a distribution and/or retail company and the exigencies of a liberalized market. From equipment Smart Meter (**Imeter**) to the suite of Advance Metering Management (**InGRID.MDC, InGRID.MDM**)



Control Systems

Indra's offer includes **SCADA solutions for Energy facilities** (transmission and distribution grids and generation facilities) instrumentation and automation and remote control&monitoring systems (RTUs).



InGRID 4LARES - Energy Efficiency Solution

Indra Technical Overlay can manage advanced energy efficiency services using the most innovative technology. intended to manage big amounts of information applying complex rules and alarms.



InGRID IoT

SOFIA-2 is the **Internet of Things (IoT)** middleware that allows interoperability between multiple systems and devices, and **provides real time information for intelligent applications**. It is a **Multilanguage and multiprotocol** platform, that allows heterogeneous devices interconnection.



InGRID IEEP

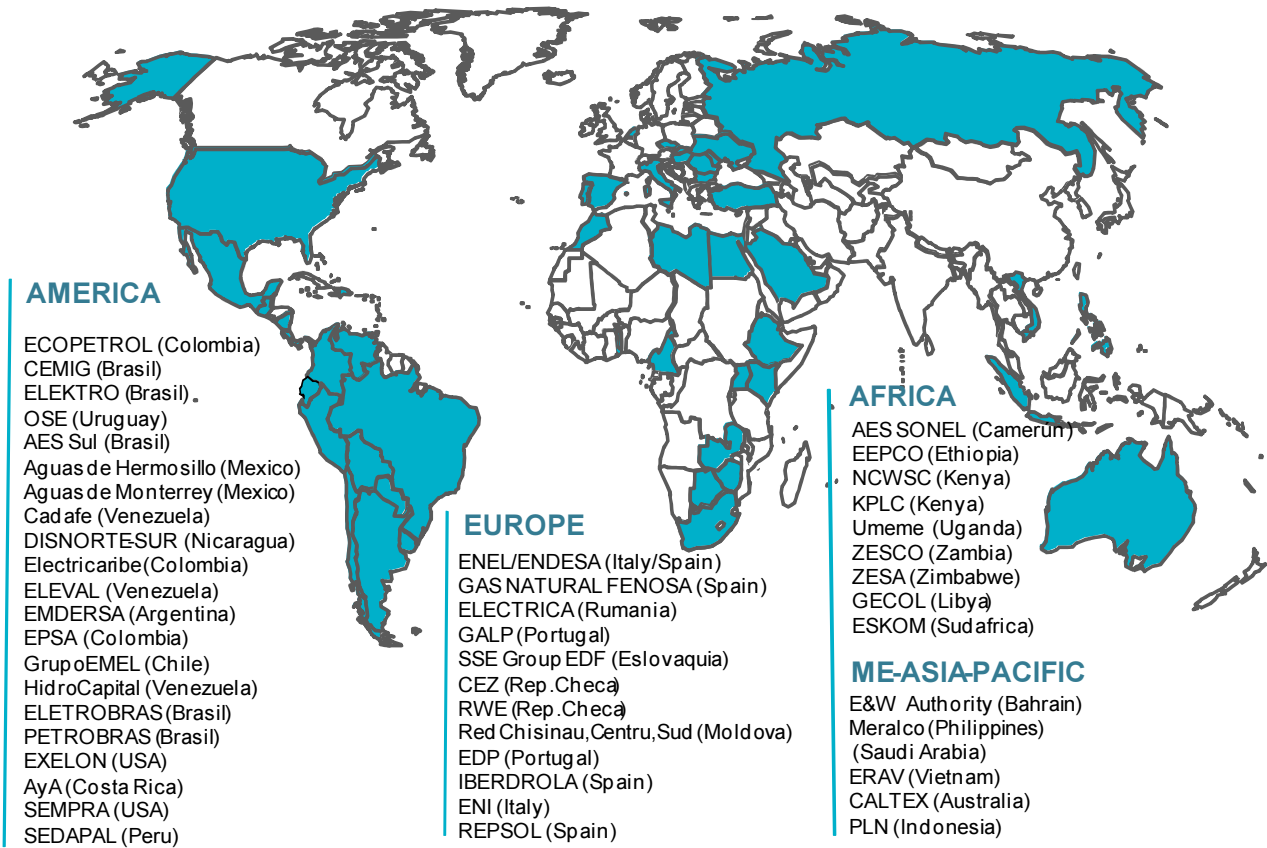
Applied technology for local field devices interconnectivity and platform-device connectivity.

Sensors and Actuators:

Data gatherers and actuators based on **low consumption communication protocols** , using wire (X11, KNX, etc.) and wireless (zWave, Zigbee, etc.) technologies.



Over **140 utilities companies** use Indra technology solutions



- ✓ More than **700 Power Plants** managed by Indra Solutions
- ✓ More than **100 MM** clients managed by Indra's Commercial System
- ✓ More than **50 Utility companies** using Indra's Grid Management Solutions