

Enable your smart grid through our world class AMI Solutions

End to end – From Meter to Control Centre • Scalable – More than 50000 meters..
Interoperable – DLMS, ANSI, Modbus, Proprietary • Secure – Advanced Encryption, User management, others



Advanced Metering Infrastructure

June 2012

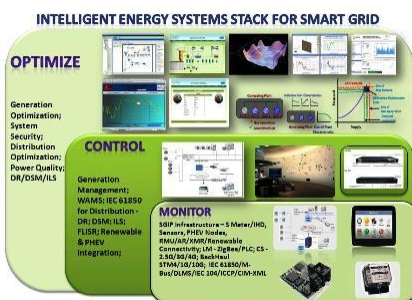
Hi,

We are pleased to share with you the June edition newsletter. This edition focuses on **Advanced Metering Infrastructure** solutions.

Introduction

Kalkitech's metering solutions pans over the entire power supply chain from generation to transmission and distribution. Our technical expertise and indepth knowledge on metering requirements of utilities and field level communication channels as well as protocols like DLMS/COSEM, Modbus and ANSI can help create a Smarter Grid.

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Transmission Grid AMR

Grid Metering Solutions are required by the utilities to collect data from all energy exchange points through special energy meters. Kalkitech Grid metering system helps the utilities to automatically read the data, remotely configure the system, collect load data and further manage, process and analyze the gathered data to produce the required reports and graphs. This solution provides the utility with significant cost savings in the area of outage management, revenue protection and asset management.



Key Benefits:

- Input for utility revenue management, energy accounting
- DCU can serve instantaneous meter data to SCADA
- Combine with multiple functionalities like Disturbance Record collection from protection relays, remote configuration of substation devices, remote asset status monitoring
- Time drift correction
- Compatibility with OPGW, GPRS, CDMA, VSAT, MLLN based communication
- SMS based configuration of remote devices

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DLMS/COSEM Training Programs

- July 24-26, 2012, Colombia - SA
- November, 2012 Mumbai - India

To know more on the DLMS training topics [click here](#) or send in your enquiries to training@kalkitech.com



DLMS is an international standard, maintained by the DLMS User Association and dual-standardized under the DLMS Colored books as well as the IEC-62056 protocol standards. The COSEM application layer models all metering elements and data as standardized object models that can be applied to represent multi-medium metering quantities (electricity, gas, water, heat etc.). This data model is complemented by an object identification system that gives a globally unambiguous naming for all metering quantities. These features (among others) position DLMS/COSEM as the leading smart grid technology choice of today.

[Download Presentation](#)
[DLMS Standards in AMI](#)

Data Security in AMR/AMI

Utilities today try to address latest smart grid functions such as Home Area Automation, Demand Response, Remote Connect/ Disconnect, Distributed energy resources and meter firmware upgrade over the air. In the overall scheme of things, this makes IT and Telecommunication equally important like Power system engineering. The risks associated with Information technology such as cyber security can have a large impact on the entire system.

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Implementation Case Studies:

Grid Metering for Monitoring & Energy Accounting Solution:

A State Government run Power Transmission Company operating more than 1, 00,000 ckt km in India required an Automated Meter Reading (AMR) system that will feed data to the Monitoring and Energy Accounting (MEA) System for each Open Access (OA) customers connected to the grid. The total number of ABT metering points were close to 300 locations and the stakeholders included generation companies, transmission utility, distribution circles, CPPs, IPPs and distributed power generation operators as well as EHT consumers in the state. Kalkitech solution involved customized AMR Client/Server, Data Concentration Units (DCUs), MIS reports and ABT software as part of the MEA system. [Read More](#)

Substation AMM project in Middle East Asia:

Kalkitech implemented an integrated Automated Meter Management (AMM) System to collect data from all energy exchange points, transmission and sub-transmission substations and power plants from all over the country. The system is capable of automatically reading and remote configuring, collecting load data, managing, processing, analyzing gathered data and producing the required reports and graphs as required by the client. Several features including web based reports and graphs introduced in the system has helped in achieving significant utility operational cost savings in the areas of outage management, revenue protection and asset management. [Read More](#)

Distribution AMI/AMR

AMI for Consumer Billing

A distribution utility is typically the final touch point with residential and industrial consumers. Apart from delivering quality power to the consumer premises, it manages consumer expectations, environmental implications and billing to generate revenue for the entire stakeholders in the the power eco-system. Kalkitech's AMR/AMI Solutions for consumer metering helps gather real-time and actionable data for industrial (HT & LT bulk) , commercial (LT bulk) and residential consumers.

The system supports a wide range of the distribution utility requirements like:

- Multi-utility Metering
- Interoperability
- Scalability
- Robustness
- Security
- Demand Response
- Easy Integration with HAN



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AMI for Distribution Loss Accounting

With electrical power demand increasing year by year, energy balancing and loss accounting has become a key focus area apart from improving the generation capacity. Distribution companies across the globe have been mandated to reduce Aggregate Technical & Commercial (AT&C) losses, which reflect the difference in energy inputted into the system and the final billed energy.

Kalkitech solution for distribution loss accounting includes Substation feeder monitoring, Distribution Transformer Monitoring and HT monitoring to analyze the technical loss aspects as well as become a critical input to the SCADA/ DMS systems.

[Read More](#)

Kalkitech wins turnkey intelligent metering system project for Northern Region of PowerGrid, India

Kalkitech wins grid metering project for the entire Northern Region of the PowerGrid under NRLDC. The project covers about 1250 meters that are installed at about 220 locations covering the states of Rajasthan, Punjab, Haryana, Uttar Pradesh, Uttarakhand, Delhi HP, J&K, and UT of Chandigarh.

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Kalkitech Product offerings for AMI

- **Meter Interface Unit/Card (SYNC 15xx/6xx)**

MIU/MIC can be plugged into Energy Meters to enhance the communication capabilities of the meters. It enables communication protocols like DLMS, ANSI or Add communication channels like Zigbee/GPRS/PLC.

- **Metering DCU /Substation DCU (SYNC 17xx/)**

DCU function as a gateway and concentrator between meter head end system and energy meters installed at DCU location.

- **Substation M2M Gateway (SYNC 4xxx)**

M2M gateway installed in communication server acts as a Front End Processor (FEP) to handle the communication with DCU and modem route the data to the central data collection system

- **MDAS (SYNC 5xxx)**

A high end Data Acquisition software that performs AMR/AMI as well as generic process control data acquisition in an integrated application base



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Power ELIN

Kalkitech's technology partner Power is a leading European software company that provides data collection and data management solutions. Power ELIN is a vendor independent system that collects and manages the consumption data from virtually any utility meter or sub-meter using open protocols standards as well as supplier proprietary protocols.

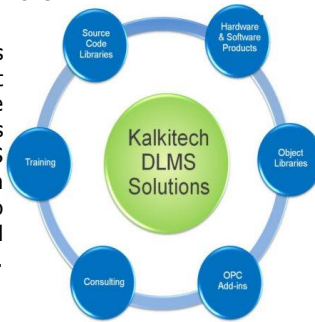
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DLMS Solutions

Kalkitech has been continuously involved with the

DLMS / COSEM specifications right from its inception, providing the most complete set of solutions for the industry. An active member of the DLMS User Association as well as working committees of DLMS companion standards, Kalkitech has been able to apply its expertise in this field to come up with superior products and solutions for its customers.

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IS15959:2011 (Indian Companion Standards for DLMS)

This companion specification outlines the selections of DLMS/COSEM choices related to standard objects and services adapted to Indian conditions with the objective of providing for interchangeability as opposed to just interoperability. The DLMS/COSEM standards provide for many different mechanisms to perform the same metering protocol functions like tariffications, schedules, security etc. and the presence of these choices, while improving the flexibility of the protocol, actually increases the complexity of achieving true interoperability and interchangeability amongst their implementations. The ICS enforces specific selections and choices, thereby ensuring an advanced level of similarity for meters adhering to this specification and being deployed in India.

Implementation Case-study

MIOS & DLMS Integration for Distribution Utility:

An Indian distribution utility required a DLMS extension for their existing AMR system based on MIOS. Their existing system had a web based Meter Data Management (MDM) software designed, developed and maintained by their in-house IT department. This was used for billing and monitoring of meters installed at consumers, transformers and feeders. Kalkitech implemented a new metering head end system for DLMS meters with no change in the software interface between utility application and head end system as compared to existing MIOS based systems. The new system was designed such that it communicated with old MIOS based meters as well as with new DLMS meters.

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Our Valued Partners

Kalkitech's partners are spread across the different regions of the world. Few of our valued partners are listed below.

PTI SA, Colombia: It is a firm dedicated to engineering, consulting, installation, testing, commissioning, import and distribution as well as being representative of major international companies in the areas of systems analysis software for electrical equipment for power systems, telecommunications and automation.

A.I. Corporation, Japan: Solutions vendor, provides marketing, development and engineering services, focused on the engineering of software for embedded systems, communications and networks. While the communication systems are rapidly growing in the complexity and size, requiring shorter time to market and higher quality, employing emerging new technologies in a timely fashion, the mission of AIC is to provide flexible and wide range of solutions to the today's requirements.

ELEKTRAKOM, Turkey: aims to give the best service about SCADA/RTU systems, energy automation, energy quality and automatic meter reading systems. For this purpose, collaboration with Kalkitech and national institutes is carried to develop customer-focused R&D solutions and achieve the upward trends in energy area.

Kalkitech to co-exhibit with POWEL at

Metering Billing / CRM Europe
9- 11 October, 2012 - Amsterdam

Fix a Meeting

[Click here](#) to avail a 25% discount for the 3 day technical conference

Customized Billing & Reporting Softwares

Typically the Billing requirements are highly dependant on the requirements of the utility and consumers. Kalkitech Solution is tailored to fit in the Client's unique Business Process, based on the functionality prioritized by the consumer. Different modules can be included for Billing, User Management, Database Interface, Payment and Reporting as required. [Read More](#)

Case-Studies

AMR for Generation Company ABT

A State Government run Power Generating Company in India with total installed capacity of close to 2000MW required to set up a state of the art Generation Control Centre (GCC) to continuously monitor on-line plant parameters & plant performance for optimization of input cost and UI revenue maximization. Kalkitech provided the entire solution which included an AMR system for implementing ABT. [Read More](#)

Grid Metering for ABT

Kalkitech successfully performed Automated Energy Meter Reading from various substations involving more than 1000 energy meters for the client. Data from Energy Meters of different vendors were retrieved and was made readily available for ABT software. Energy Accounting and Analysis was also done up to feeder level. [Read More](#)

White Paper

Building Blocks of Smart Metering

Smart grid is the buzzword among all energy sector stake holders across the world. This paper covers all major topics under the smart metering umbrella such as Home Area Network (HAN), Smart Meter, Intelligent Modem, Data Concentrator and considerations for AMR/AMI. [Read More](#)

IEC 61850 Training Program 8-10 August, 2012 Bangaluru, India

A three day comprehensive seminar plus training workshop on IEC61850 standards for Substation Automation.

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Sales Inquiry: sales@kalkitech.com Website: www.kalkitech.com Feedback: marketing@kalkitech.com