

SERVICES SCADA Systems

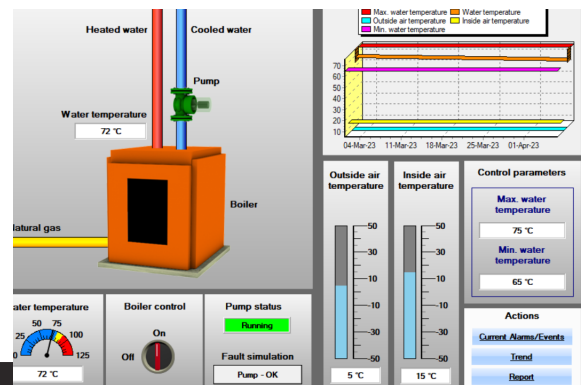
Are have used SCADA (Supervisory Control and Data Acquisition) systems in different projects in order to monitor and control remotely industrial equipment.

A remote units and sensors in site can be collected by gateways using hybrid communication with data center that can monitor the site in real-time and control the nodes based on automatic or manuals triggers and actions.

Our SCADA system can be monitored from one or multi locations at the same time and can be integrated with external systems such as CRM, mobile Apps, web portals...

SCADA solutions is very important for monitoring systems to guarantee proper and smooth running on any system based on the preset protocols. It can monitor the thresholds and values based on macro and micro readouts.

SCADA readings and analytics of machines can secure the security and safety on site, in addition to that, it can report all the logs and customized reports about the whole system.



SCADA is widely used in:

Oil and Gas
 Pipeline monitoring and control
 Remote read of pumps, and storage locations
 Offshore platforms and onshore wells
 Refineries, petro-chemical stations
 Plant/factory automation
 Water and Wastewater
 Water treatment centers and distribution
 Wastewater collection and treatment facilities

Utilities
 Electrical power distribution from gas-fired, coal,
 Electrical power transmission and distribution
 Agriculture / Irrigation
 Manufacturing
 Food and Beverage
 Pharmaceutical
 Telecommunications
 Transportation

Our Product

Split Type STS Prepaid Water Meter with AMR/AMI function

LAISON Split Type STS Prepaid Water Meter consists of two parts namely Prepaid Water Meter, optional for Velocity type or Volumetric type which complies to STS standard IEC 62055-41,51, the solution comes with a Customer Interface Unit (CIU), supporting RF Wireless Communication and Dot matrix Type LCD to support local language for Remote Meter Recharge and Data Query.

In addition, it supports Walk-by AMR (Automatic Meter Reading) function and Fixed Data Concentrator Unit (DCU) AMI (Advanced Metering Infrastructure) function for remote meter data collection.



Features

* STS Prepaid Working Mode, Meter Recharge & Data Query via CIU

* Multiple Water Purchase Ways available (Vending points, Vendor, Customer self-service)

* AMR Functions:

- Meter Installation Location (GIS) info. Collection
- Meter Reading Task Download from LAPIS Server
- Meter reading path optimization
- Automatic Meter Data Collection and upload to Laison Meter Data Management System (MDM)
- Remote Meter Parameter Checking & Valve Control

* AMI Functions:

- Automatic Meter Data Upload like Hourly/Monthly Consumption Data Record, Battery Voltage, Meter Alarm Event etc. Automatic Real Time Clock (RTC) Calibration
- Remote Meter Parameter Checking & Valve Control

* 10 years historical meter data storage

* Prepaid and Postpaid Working Mode switchable



| Model | DN (mm) | LL | 1 | WH | H1 | Connection Thread | | |
|------------|---------|------|-----|------|-------|-------------------|-------|---------|
| | | mm | | | | d | D | |
| LXSZ-15(S) | 15 | 165 | 255 | 92.5 | 132.5 | 207.6 | R1/2G | 3/4B |
| LXSZ-20(S) | 20 | 1952 | 959 | 2.5 | 136 | 211 | R3/4G | 1B |
| LXSZ-25(S) | 25 | 225 | 341 | 92.5 | 137 | 212 | R1 | G1 1/4B |

Our Product







Split Type STS Prepaid Gas Meter

LAISON Split Type STS Prepaid Gas Meter with AMR/AMI function can realize prepayment function and remote semi-automatic/automatic meter data collection through integrated LoRa RF wireless Comm. Module inside.

For Prepaid Function, it complies with International STS Standard IEC 62055-41,51 and gets the STS certification. Customers can purchase gas through multiple methods

(Vending Points, Agency, Customer Self-service, etc.), and obtain a 20 digit recharge token. By inputting the recharge token through CustomerInterface Unit (CIU), the Gas Meter will be recharged successfully.



| | | | | | |
|--|--|---|--|--|--|
|  Prepaid |  Data Security |  Antiexternal magnetic interference |  Step Water Tariff |  Consumption Data Record |  Insufficiency Alert |
|--|--|---|--|--|--|

- AMR Functions**

- Meter Installation Location (GIS) info. Collection
- Meter Reading Task Download from LAPIS Server
- Meter reading path optimization
- Automatic Meter Data Collection and upload
- Remote Meter Valve Control

- AMI Functions**

- Automatic Meter Data Upload
- like Hourly/Monthly Consumption Data Record, Battery
- Voltage, Meter Alarm Event etc.
- Automatic Real Time Clock (RTC) Calibration
- Real Time Communication, Remotely Control Valve Open/Close

- Massive Data Storage**

- 10 years' Hourly/Monthly Consumption Data Record
- Meter Event Record during whole meters' lifespan, such
- as meter re-start, valve operation failure, magnetic interference, etc.

- Anti-magnetic interference**

- If external magnetic interference happens, the meter shall close the valve and record this event with exact time and event type.

- Low Battery Detection & Warning**

- 2 Levels of Low Battery Warning
- Data auto-save & Valve Close when battery low

| MODEL SIZE | A | H | W | D | E |
|-------------|------------|------------|------------|------------|-------------|
| G1.6 | | | | | |
| G2.5 | 130 | 224 | 201 | 167 | 67.5 |
| G4.0 | | | | | |

SERVICES Smart Grids

Technical Specifications

1 phase 2 wire single phase meter

Active-Reactive / Import-Export

Active: B/C – Reactive: 2 class

Direct connected

5(100)A current

230VAC – 240VAC

1000 imp/kWh – 1000 imp/kVAh

-40°C...+85°C temperature range

IP54 protection class

188 segments LCD screen

Single Phase



Optional Features

RS485 comm. port

PLC comm. module

GSM comm. module / RF

Prepaid

RF-ID module option

DLMS-COSEM / OSGP support

Anti magnetic (AML)

Magnetic intervention

Latching relay (100A)

LCD backlight

Technical Specifications

3 phase 4 wire three phase meter

Active-Reactive / Import-Export

Active: B/C – Reactive: 2 class

Direct connected

5(100)A current | CT: 1(6)A current

3×240/416VAC | CT: 3×63/110VAC

1000 imp/kWh – 1000 imp/kVAh

-40°C...+85°C temperature range

IP54 protection class

188 segments LCD screen

Three Phase



Optional Features

RS485 comm. port

PLC comm. module

GSM comm. module / RF

Prepaid

DLMS-COSEM / OSGP support

Anti magnetic (AML)

Prepaid / Post Paid

Multi Tariff - Generator Source

TP: Latching relay (100A)

LCD backlight

Quad-Band GSM/GPRS module

Software update with USB or Remote

Different communication expansion ports

PLC, RF, Ethernet module options

Communicate with 1000+ meters

Dynamic and static IP compatible

Non-volatile memory

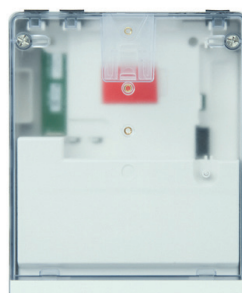
Ability to work without AC energy

Graphic LCD screen

Suitable for outdoor use (IP54)

EMI test approved, CE compliant

Data Concentrator



Quick and easy installation

Software remote update

Connection with alternative servers

Reading all brands of meters

Integrated

RTC

Remote control of scheduled tasks

100+ job orders

Linux Based

Notifications, Alerts and Alarms

Operating temp. range -40°C...+70°C

SERVICES Smart Grids

Technical Specifications

3 phase 4 wire three phase meter

Active-Reactive / Import-Export

Active: B – Reactive: 2 class

Direct connected

5(80)A current - 3×230/400VAC

1000 imp/kWh – 1000 imp/kVArh

-40°C...+70°C temperature range

IP54 protection class

188 segments LCD screen

Optical port communication

Panel Type



Optional Features

RS485 comm. port

PLC comm. module

GSM comm. module

RF comm. module

RF-ID module option

Anti magnetic (AML)

Magnetic intervention

Latching relay (100A)

LCD backlight

Export energy measurement

Cold Water

Nature friendly, long lifetime

Digital large display, IP68 class

No magnetic influence

AMR options, suitable for optical reading

Brass and composite material options

MID approved and certificated

First class materials & production technology

Suitable up to 50 °C as a cold water meter

Water Smart Meter / Prepaid



Hot Water

Nature friendly, long lifetime

For hot waters use for up to 90°C

Suitable for drinking water installations

Electrostatic paint >120 microns

AMR options

Brass and composite material options

MID approved and certificated

Wide and dynamic pressure accurate range

Technical Specifications

3 phase 4 wire three phase meter

Active-Reactive / Import-Export

Active: B/C – Reactive: 2 class

Direct connected

5(100)A current / 3×230/400VAC

1000 imp/kWh – 1000 imp/kVArh

-40°C...+70°C temperature range

IP54 protection class

188 segments LCD screen

Keypad / RF / Mobile App / Remote refill

KeyPad meter Prepaid



Optional Features

RS485 communication module

PLC communication module

GSM communication module

RF communication module

DLMS-COSEM / OSGP support

Magnetic intervention

LCD backlight

Export energy measurement

Total Harmonic Distortion

(THD) measurement

SERVICES Smart Grids

Smart Grids Software



Smart Grid Software is the meter data management software that is installed on the top of head end system.

Through the web-based interface the end users can manage the whole smart grid and the installed devices.

The smart grid software is built on robust development platform and up to the latest technological methods and best practices.

Using the smart grid software, you can do the following:

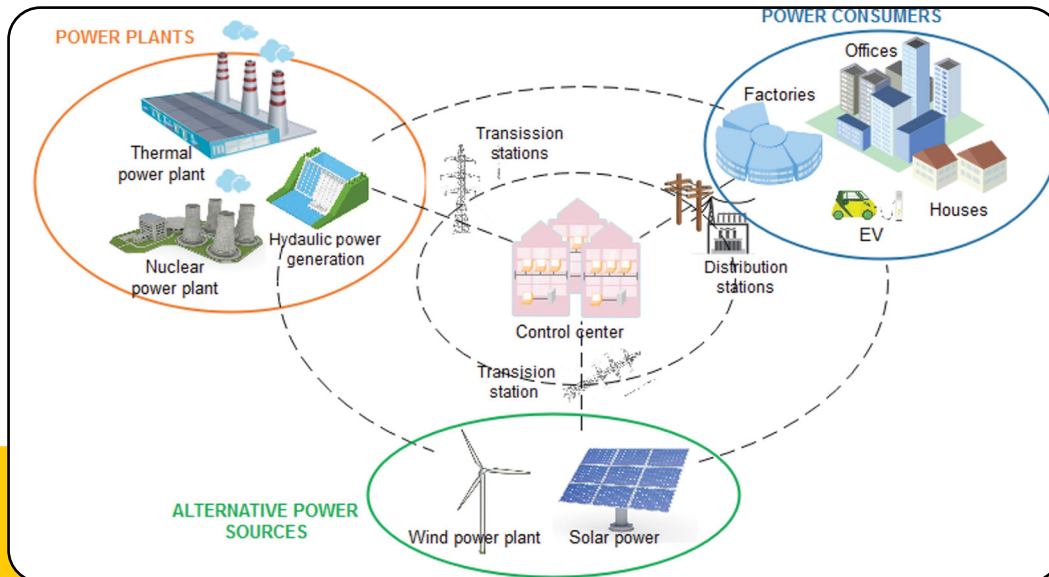
- Manage the smart grid devices, like editing, adding or auto detection of the new meters & devices
- Manage the data concentrators and send commands to the grid
- Establish the communication with the devices throughout different topologies
- Update the firmware of the devices in the grid
- Maintain the security of the devices and communication
- Receive all the alerts and alarms in the grid
- Manage subscribers, groups and companies
- Manage transformers and CT meters
- Monitor, Analyze and report
- Establish API and SOAP terminals to external applications



Never compromise security! We apply best and strongest security measures and techniques in all levels of the grid, starting from hardware and communication to the smart devices in the grid.

SERVICES Smart Grids

Grid Security



In addition to applications such as billing, CRM, prepayment, mobile Apps and smart grid software, we use also security applications, in order to protect and detect any threat in the different levels of the grid, starting from head end system and ending with the last device in the smart grid.

Our security applications can help us to:

1. Detect and illustrate threats, alerts and alarms.
2. Isolate devices based on types of events.
3. Show alarms based on device and location.
4. Give possible solution for any threat or tamper.
5. Show different levels of tamper events.
6. Heart beat security regulations in all sectors of the grid.
7. Notify admins by email, SMS, mobile Apps.
8. Monitor the firmware and software updates.

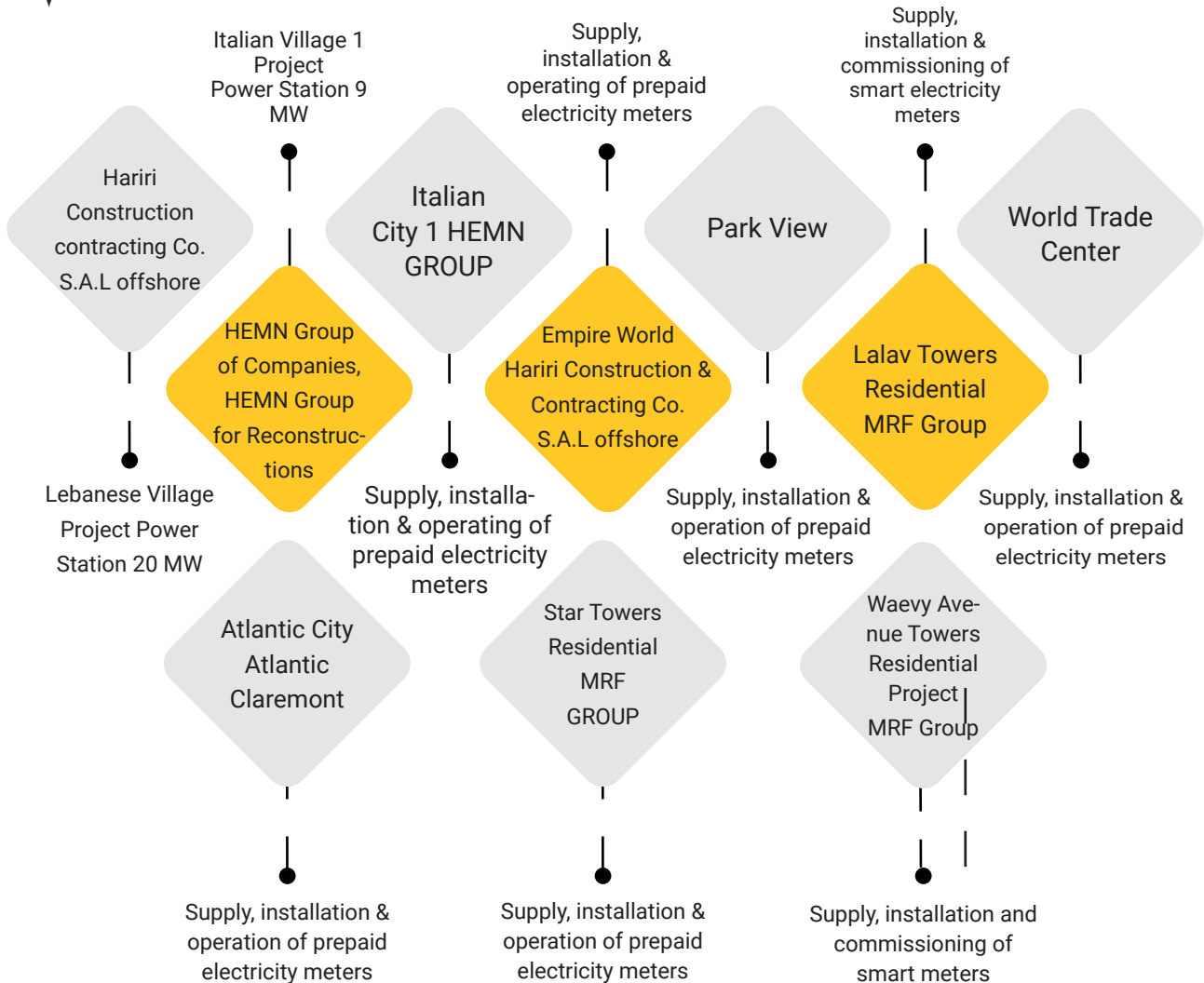


Our research and development centers commit to use the latest technology, in all our devices and apply the best practices in smart grids and software development, the build-in / always-on encryption methods and non-compromised security is a must in the grid as a whole.

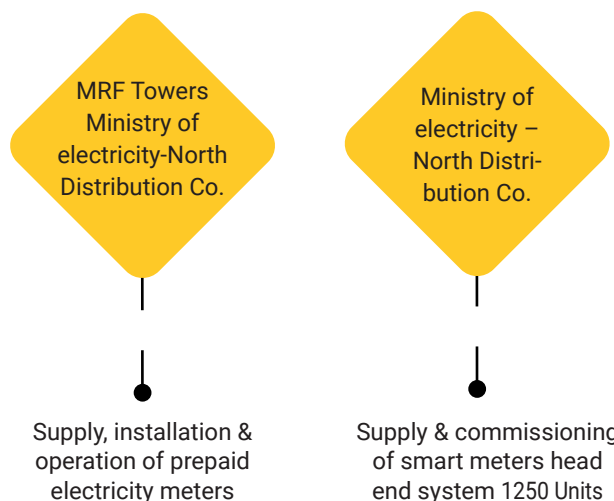
- | | |
|---|---|
| 1. Using the latest technology in encryption. | 6. Update and latest firmware. |
| 2. Ensure the third-party audits. | 7. Physical indicators for alerts. |
| 3. Two-ways encryption. | 8. Secure different levels in the grid. |
| 4. Multi key levels and permissions. | 9. Outage control and isolation plans. |
| 5. Secure application communications. | 10. Prevention of hijack or unauthorized access |

References Smart Grids

Erbil ,Iraq - Client unit 2021

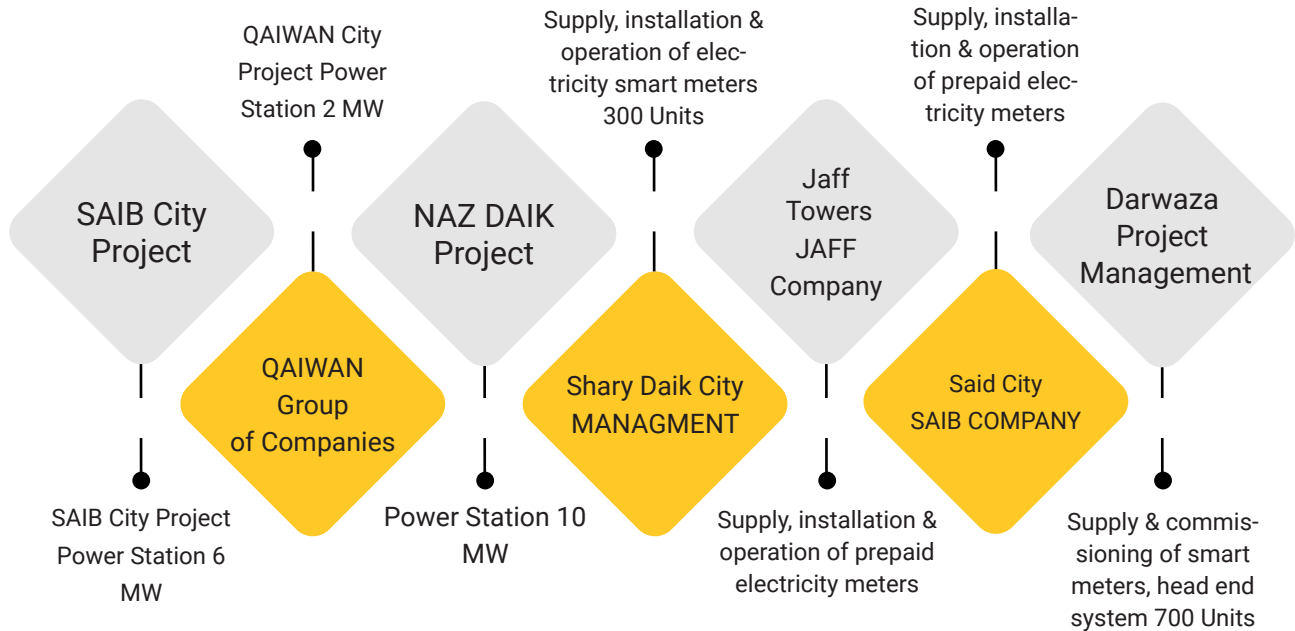


Mosul ,Iraq - Client unit 2021

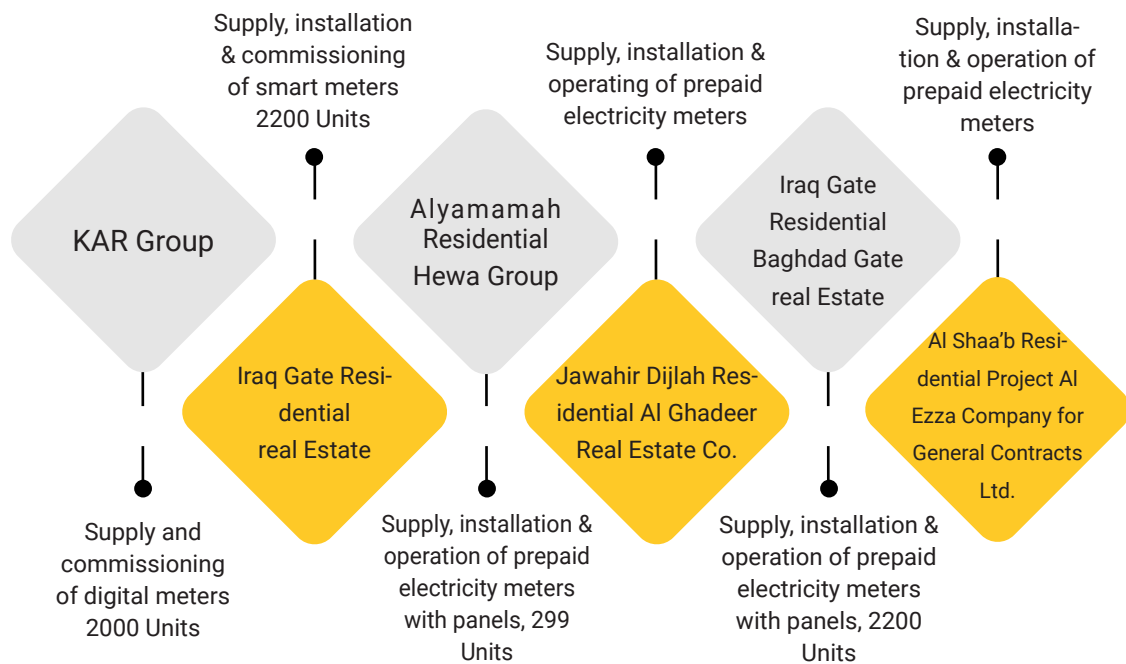


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Sulaumaniyah ,Iraq - Client unit 2021

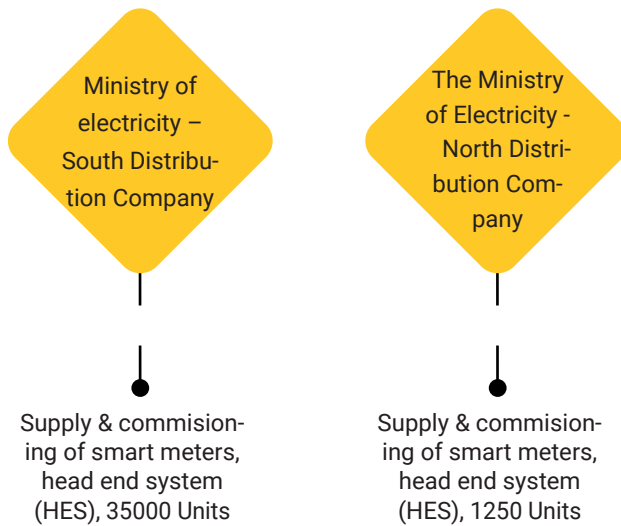


Baghdad ,Iraq - Client unit 2021



References Smart Grids

Basra ,Iraq - Client unit 2021



Kirkuk ,Iraq - Client unit 2021

