

# Advanced Metering Infrastructure



Electricity | Water | Gas  
Smart Metering System

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## What is AMI?

AMI or Advanced Metering Interface enable two way communication with customer and distribution utility, a remote connect or disconnect switch is usually enabled. AMI system is designed for error free remote meter reading, identify network problem, energy audit, load profiling and load management during load shedding. The two way communication helps in system stability, reliability and transparency.

The major advantage of AMI are:

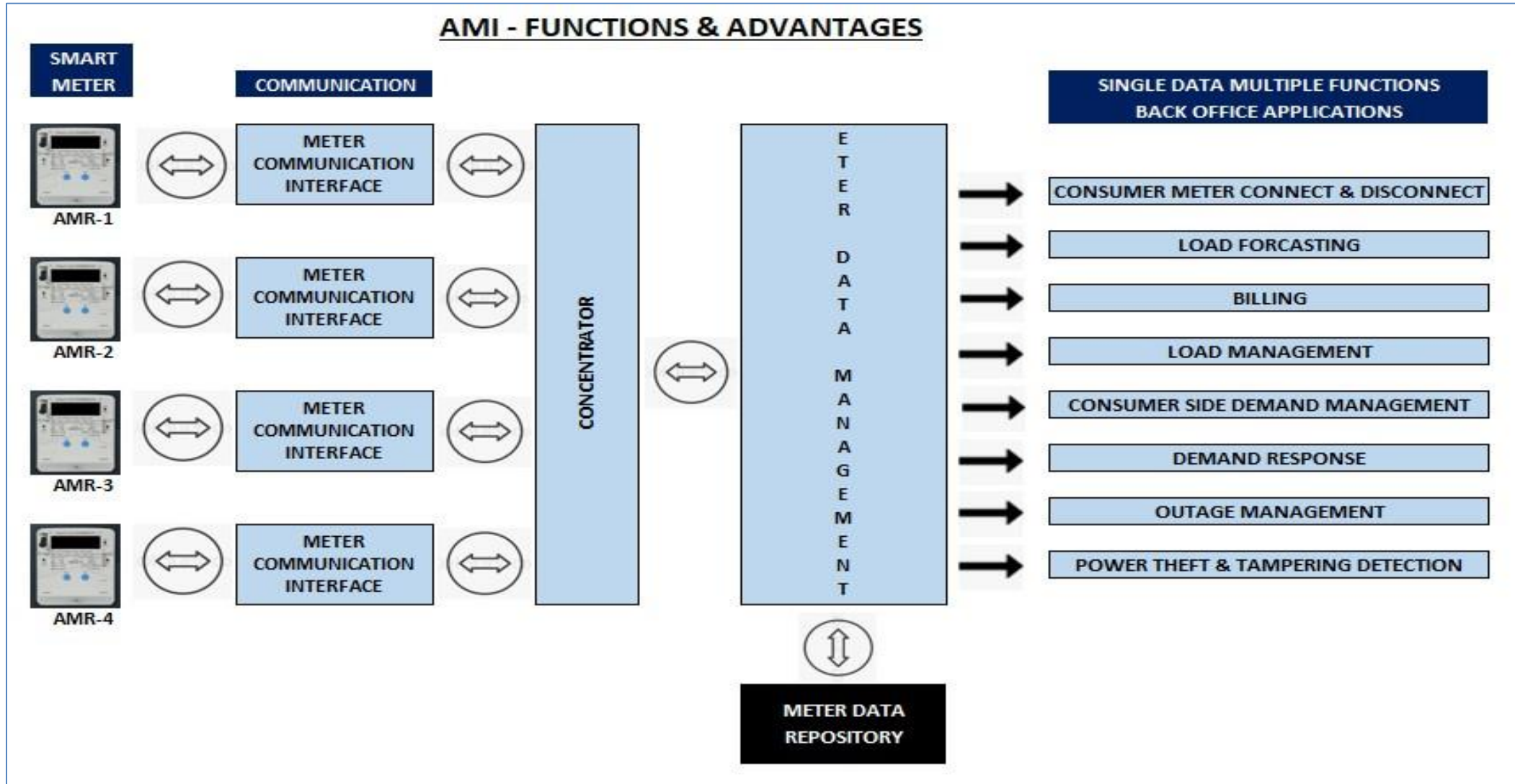
- Power theft & Meter tampering detection.
- Reduction of AT&C losses
- Reduction of carbon foot prints.



## AMI FUNCTIONS & ADVANTAGES

In India the advantages of AMI has already been proved by the Smart Metering Program initiated by Energy Efficiency Services Ltd. The AMI system came as a boon for the distribution companies during the 2020 lockdown and the billing efficiency achieved was about 95%.

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## AMI IN INDIA

### ROLLOUT OF AMI IN INDIA

YEAR		
2011	INDIAN STANDARD FOR ELECTRONIC METER   IS-15959	INDIAN STANDARD
2014	SMART METERING INITIATIVE - IPDS - <a href="http://www.ipds.gov.in">www.ipds.gov.in</a>	IPDS
2015	UDAY - PLAN TO INSTALL 35 M SMART METERS BY 2019	UDAY
2015	INDIAN STANDARD FOR SMART METER   IS-16444	INDIAN STANDARD
2016	INDIAN STANDARD FOR SMART METER DATA EXCHANGE   IS-15959-2	INDIAN STANDARD
2016	ISGF - INDIA SMART GRID FORUM - PROPOSES LEASING & SERVICE MODEL	ISGF
2016	ISGF - ROLLOUT AMI STRATEGY WHITE PAPER	ISGF
2016	ISGF - SUBMITS WHITE PAPER TO MINISTRY OF POWER (MOP)	ISGF
2016	ISGF - SUBMITS WHITE PAPER TO CENTRAL ELECTRICITY AUTHORITY (CEA)	ISGF
2016	CEA ANNOUNCES AMI ROLLOUT STRATEGY DEPLOYMENT ON FEEDER OR BY AREA	CEA
2017	MOP REVIEWS PROJECTS FOR APPROVAL	MOP
2019	DEPLOY SMART METERS FOR ALL CONSUMERS ABOVE 200 KWH PER MONTH	UDAY
2020	1.9 MILLION SMART METERS INSTALLED TILL DATE IN UTTAR PRADESH   HARYANA BIHAR   DELHI	UDAY
2025	250 MILLION SMART METERS TO BE INSTALLED IN INDIA	EESL

ISGF – India Smart Grid Forum | CEA – Central Electricity Authority | MOP – Ministry of Power  
EESL – Energy Efficiency Services Limited | IPDS – Integrated Power Development Scheme

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## INDIAN SMART METER MARKET

India was a late entrant in the AMI system integration as the focus was on setting up robust transmission systems and replacing absolute technology with the most modern ones. The Indian grid is very vast and the disparity in technical efficiencies and accountability of distribution companies are evident from the AT&C losses figures available with Ministry of Power. In year 2017-18 AT&C losses of Arunachal Pradesh was at 43.00% and Kerala was at 11.23%.

Indian market regulators and stake holders are of the opinion to go for Pre Paid Smart Meters and has targeted consumers of power above 200 Kwh per month for AMR implementation in the initial stage. AMI rollout strategy issued by CEA has stated deployment of AMR by area or feeder.

As per estimate by EESL about 250 Million Smart Meters are to be installed in India, as on date only 1.9 Million Smart Meters are installed.

Poor financial health of the distribution companies, lack of domain expertise in IT and electronics and the inability to decide on business model are the main growth inhibiting factors.

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## AMI BENEFITS

### Economical

- **No More Manual Reading** – Automatic Meter Reading cuts down on man hours spend on meter reading and data entry. AMI system generates electronic bill and there by reduces carbon foot prints and huge printing and stationary cost.
- **Power Theft & Tampering / Leak Detection** – AMI system can detect power theft and tampering activities and disconnects the supply to the premises automatically. AT&C losses can be reduced and controlled to a considerable extend.
- **Power Purchase Planning and Forecast** – AMI system updates data between the consumer and distribution system every 15 minutes. This two way communication helps in understanding consumer demand and the distribution utility can purchase power based on demand and forecast to consumer tariff in advance.



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## Operational Benefits

- **Remote Access** – AMR function helps the utility manually or automatically connect and disconnect the Smart Meter. This functions comes in handy when there is an excess use of power or when there is an overdue of payment. AT&C losses can be monitored and controlled.
- **Grid Management** –AMI system is designed to optimize the current and voltage in the distribution network. This multifunctional system automates the process and helps the distribution companies in power purchase and management.
- **AMR Vs Manual Reading** – The best know AMI system returns a figure of 97.6% efficiency as the system automatically cuts of power to the customer on non-payment of dues and brings out accurate results.
- **System Outage** – AMI system can identify power outages to consumers and can respond to service and maintenance

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## **ABOUT NURI AMI**

NURI Telecom is a world leader in AMI technology with proven track record. NURI AMI system is used in electric / water / gas / AMI systems using the wire / wireless communication method provided by NURI Telecom are being adopted by 46 overseas electric power companies.

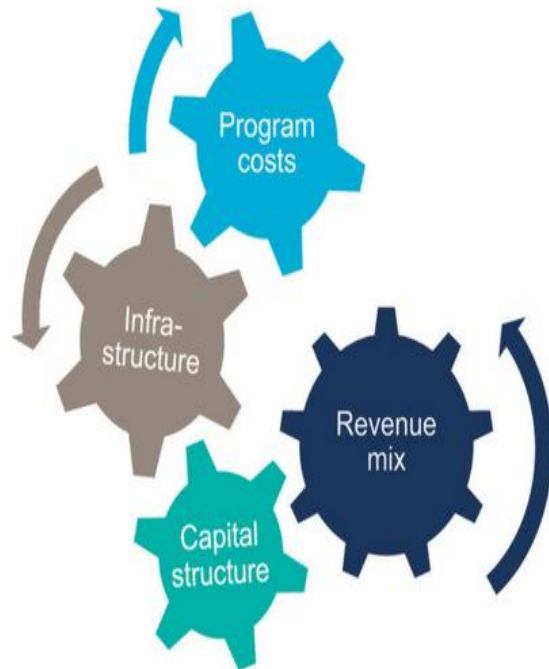
NURI Telecom shipped more than 216 Million units to Korean and overseas distribution companies.

## **ADVANTAGE NURI AMI CLOUD**

Cloud AMI is an efficient service that utilizes the server environment needed for AMI system operation through Cloud. The initial server build does not cost anything, and it utilizes only the necessary amount of server space required, for a set time period, and thereby reduces maintenance costs. Indeed, this new AMI service has benefits in the areas of financial budgeting, expandability, utility, and speed.



## Business Model Mix



### BUSINESS MODEL MIX

**EPC** (Engineering Procurement and Construction) - The utility takes full responsibility of procuring, Financing and managing the projects.

**Partial EPC & Service** – The utility is responsible for procurement and financing and outsource project management and maintenance to a third party.

**Leasing and Partial EPC** – The utility leases meters and equipment's from a third party but is responsible for project management and maintenance.

**Leasing and Servicing** – The utility leases the meters from a third party and outsources project management and maintenance to a metering agency.

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## About Us

**OCTAWIZ INFRA** – The firm was founded in 2018 with the vision and mission to bring the best technology to India. The firm in this short span of time has made technology partnerships with leading global companies in Environment Protection, AMI (Advanced Metering Infrastructure), Energy Storage and Electric Mobility verticals. We provides consultancy and EPC service.

**ESPACU PUR** France is our technology partner and developer of ‘STABIPLAGE’ was appraised by ‘NITI AAYOG’ and inducted into Indo – France Joint Working Group on Environment programme in India. The technology helps build beaches and prevent soil erosion. The French government sanctioned one million euro for the pilot project in India and we are expected to bag contracts worth Rupees 1800 crores from various state governments in India.

**NURI TELECOM** is the AMI technology partner for India and Middle East. NURI’s electric / water / gas / AMI systems using the wire / wireless communication method provided by NURI Telecom are being adopted by 46 overseas electric power companies including KEPCO, leading the domestic smart grid and Internet of things.

**YEMOTA SYSTEMS** is a leading Traffic Signalling system manufacturing and EPC company in India. The company was selected as System Integration partner for the AMI project rollout in India.



## Contact

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