



Precision Engineering

Advanced Metering Infrastructure (AMI)

At York Valves, the installation of Advanced Metering Infrastructure (AMI) is looked upon as a bridge to the construction of smart grids; especially, while most of the meters are still mechanical ones without digitization. An AMI consists of smart meter, communication technology, meter data management, and associated software and hardware. After AMI has been implemented, many advanced functions e.g. automatic and accurate reliability calculation systems can be achieved, giving greater power(s) to decision makers of the status of a given network and its expansion needs. Such data availability will make a decision simpler to take as this will be based on real data and not guess work.

Our smart meters with outage recording function are designed first. The meters are used to transmit the detailed water/gas/electric consumption data and outage event data to rear-end processing system periodically. According to the detailed and accurate data stored in the rear-end database, an automatic and accurate reliability calculation system can be designed sequentially. The customer interruption costs can also be estimated by the proposed system. Experimental results show that the proposed system has great potential to be integrated into AMI to improve the accuracy of reliability calculation.

DRAFT

York Valves UK, Factory Estate, Argyle Street, HULL, HU3 1HD, United Kingdom

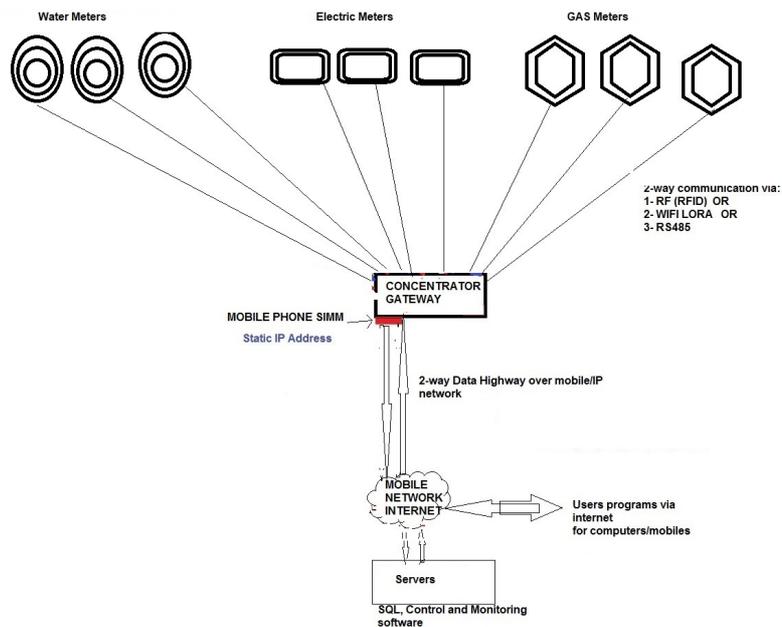
<http://www.yorkvalves.com> info@yorkvalves.com

Company Reg Number: 08256750 VAT Reg Number: 200 0944 67



Precision Engineering

In an AMI scenario, its vital that a proper strategic and cost effective solution is discussed, accepted, designed and implemented. The smart metering infrastructure, if designed and sized correctly, could cater for ALL main utilities such as Water, Electric and Gas or a combination of thereafter



From an overall view point, designs are calculated at the max required capacity range of a given company, organization or indeed a country. These maximum is calculated at a 1.5% increase to cover expansion for a period of 10 years ahead. Therefore, if say you have calculated that 1 million smart meters were needed then your actual design and implementation should be based on 1.5 million

Where the implemented meters are in their thousands or even millions then the task of human monitoring becomes almost impossible. The approach in our design is to ensure a fully automated system with a very minimal and negligible human intervention .. if any. The approach also follows the philosophy that if the overall Infrastructure is working as per the agreed preset threshold level(s), then the system should be left alone to do its thing. Operators and network controllers proactively intervene when alarms are raised due to a malefaction or a network error or a threshold

York Valves UK, Factory Estate, Argyle Street, HULL, HU3 1HD, United Kingdom

<http://www.yorkvalves.com> info@yorkvalves.com

Company Reg Number: 08256750 VAT Reg Number: 200 0944 67



Precision Engineering

level has nearly reached its limit. All of these values should be agreed during the design stage of an AMI network.

It is vitally important that the various proposed smart meters adhere to the same standards within a given country.

MANUFACTURER – A

MANUFACTURER - B



Meters from different manufacturers must adhere to the same standards. Such standards must also be adopted and accepted in a given country

Overall AMI designs are often carried out as per specific needs of the client. Contact us to find out more