

Integrated Utilities

IT brings all-round benefits

For utilities that are still integrated, IT helps coordinate better between generation, transmission and distribution functions. It is useful in identifying losses and improving customer service. Computerisation and intranet have improved flow of information. While the utilities have done well and basics are in place, they have to progress to the next level. We bring you IT initiatives of the integrated utilities of Gujarat, Uttaranchal, Uttar Pradesh and West Bengal.

Gujarat Urja Vikas Nigam Limited

Gujarat Urja Vikas Nigam Limited (GUVNL), formerly Gujarat Electricity Board (GEB), continues to focus on its key objectives of generation, transmission and equitable distribution of power to achieve all-round economic growth in the state.

The use of IT in GUVNL covers almost 80 per cent of the application areas of the organisation, including areas like finance and accounts, billing, transmission sector payroll, HR and others.

The "e-URJA" project is an end-to-end IT solution intended to benefit the companies so that they have more transparent, organised, flexible, robust, integrated and efficient processes that will ensure better customer services. The company believes that it will help in a big way to monitor procurement costs and inventory levels on a real-time basis.

The project will be of immense help in online analysis of system performance, including quick preparation of financial statements. The system performance will be improved along with scalability of business systems to support future growth. It will also bring revolutionary changes in the planning, implementation and monitoring of any project, be it in systems, finance or customer service. The project, once implemented, will enable the new companies to meet the growing challenges in all areas of their operations.

There is a state-of-the-art data centre equipped with 100+ IBM E series server along with the SAN from IBM. The total number of computers will be more than 8,000 across the state.

The company has a functional website. All discoms have call centres. Electronic payment facility is available in selected areas.

There is a separate team to derive the IT initiative and its total strength is around 40 people, headed by a senior chief general manager who oversees the team. The annual IT spend in 2005-06 was more than Rs 300 million. The organisation is planning to spend approximately Rs 800 million in 2006-07. There is a separate budget for IT for different functional areas.

Uttaranchal Power Corporation Limited

Uttaranchal Power Corporation Limited (UPCL) manages and operates the transmission and distribution of power in 13 districts of Uttaranchal.

UPCL is making concerted efforts to make IT usage more pervasive in the corporation. All its units are connected to the head office at Dehradun through a leased line network, which runs enterprise database applications and intranet workflow applications.

It is using IT to improve operational performance through computerising the consumer commercial database using GIS technology in the Dehradun and Roorkee distribution circles which are strategic from the revenue perspective.

With the help of GIS database, it has mapped every electrical consumer with the corresponding network element, right from the substation, feeder and distribution transformer up to the LT pole in these two circles.

UPCL has also developed a software system for load-flow studies whereby it is in a position to identify feeders and distribution transformers having huge technical losses. IT usage also helps the management to make informed decisions on network reconfiguration and load management.

In order to improve customer satisfaction, it is operating computerised billing centres where customers can lodge complaints or raise queries. It has also started an IVRS-based call centre in Dehradun, integrated with the consumer and substation database on a pilot basis.

There is always a website – www.upcl.org - for consumers to download application forms for a new connection, load enhancement or disconnection. At present, there is no facility for consumers to access their billing data or make payments via the internet. By this year-end though, it will have this facility.

The utility has separate IT budget. Last year, it spent more than Rs 10 million. The same amount is earmarked for the current financial year. And a separate amount is specified for some projects such as substation automation and remote metering. The IT department is headed by a deputy general manager. The team is relatively small so it has to draw its resources from the functional domain users and develop multi-skilled cross-functional teams.

Uttar Pradesh Power Corporation Limited

Uttar Pradesh Power Corporation Limited (UPPCL), formed in 2000 as a result of power sector reforms and restructuring, is responsible for planning and managing the sector through transmission, distribution and supply of electricity in the state.

UPPCL is gradually progressing towards using IT for effective operations. Computers have been installed up to the executive engineering level and a few have been installed up to the executive engineering level and a few have been made available at the subdivision level. LAN has been set up at the utility's headquarters and at all the discom headquarters. The wide area network (WAN) is functional up to the circle level. The Management Information System (MIS) is fully functional up to the deputy general management level. SCADA system of up to 132 kV has been established.

Video-conferencing equipment has been installed. Remote metering and GSM will soon be established for large consumers. About 260 VSATs will be installed in sub-stations with a capacity of up to 132 kV to completely monitor the energy flow and equipment in remote areas. An online billing facility is also available.

The utility is using IT to facilitate customer interface through call centres functional in all major cities. Later, an online payment facility will also be made available. Regular computer training for employees has been arranged at the Electricity Training Institute in Delhi and in Lucknow. All discoms and UPPCL have functional websites.

A Multimedia Broadcast Multicast Service (MBMS) system monitors the energy accounts and audit of the discom. An officer at the level of chief engineer monitors and coordinates all wings with computerisation activities.

Two per cent of the budget is allocated for IT but this can be exceeded depending upon the utility's requirement.

West Bengal State Electricity Board (WBSEB)

West Bengal State Electricity Board (WBSEB) is a major power utility in the state with the main objective to generate more power, arrange its equitable distribution and help generate all-round economic growth of the state.

IT initiatives in WBSEB include the setting up of a zonal data warehouse and a call centre acting as a single-window service for prospective and existing consumers, remote metering for bulk consumers, and GIS mapping of electrical installations.

In order to improve its billing and collection efficiency, the board has introduced 100 per cent computerised billing. Thirty per cent of the cash collection is done through online transactions. An application monitoring system has also been established.

IT is being used to support and integrate WBSEB's business processes. It has established an MIS, a material management inventory system (MMIS) for inventory, a personnel information system (PIS), and employee resource centres for effective administration. It has also introduced GIS and satellite communication (SATCOM).

The organisational set up for IT consists of three divisions: the Entrepreneurship Development Programme (EDP) cell, the EMC and SATCOM. The EDP cell controls most of the IT activities in WBSEB and is headed by a deputy chief engineer who is helped by senior deputy engineers. The EMC division takes care of activities such as metering, GIS project and spot billing. The team consists of an additional chief engineer, a superintendent and deputy engineers. The SATCOM team, which is implementing IT initiatives such as V-SAT-WAN, MIS and MMIS, consists of a chief engineer, a superintendent, a deputy engineer and assistant engineers.

In 2005-06, the board spent Rs 139.8 million on IT, mainly on two projects: the electricity supply station modernisation project (Rs 75 million) and the GIS project (Rs 64.8 million), both of which were APDRP funded.

Reference Book

Power Line
August 2006