

UGVCL

Building on its strong performance



Uttar Gujarat Vij Company Limited (UGVCL) was recently awarded by the Ministry of Power for its strong performance in 2010-11. The award recognises the discom's efforts towards reducing aggregate technical and commercial (AT&C) losses by about 10 per cent to 6.63 per cent in 2010-11 as compared to the previous year. UGVCL is among the discoms with the lowest AT&C losses in the country. This is a major achievement for a utility which has a large share of agricultural consumers, a major part of which are unmetered. N. Srivastava, managing director, UGVCL, says, "Having won the national award, it would be challenging to sustain the achievements of UGVCL, given the national power scenario."

As of March 2011, UGVCL had over 2.6 million consumers who drew about 13,438 MUs of electricity. The discom has a skewed consumer mix. The domestic segment had a share of about 80 per cent in the consumer base, accounting for 9.3 per cent of the total electricity consumption. While the agricultural segment constituted 8.5 per cent of the consumer base, its con-

sumption was the highest at about 52.5 per cent. Industries constituted about 1.4 per cent of the consumer base and accounted for about 31 per cent of electricity consumption.

UGVCL was set up in September 2003 following the unbundling of the Gujarat Electricity Board. The company started commercial operations from April 2005, and distributes electricity to nine districts in northern Gujarat, Ahmedabad, Anand, Banaskantha, Gandhinagar, Kheda, Mehsana, Patan, Sabarkantha and Surendranagar, covering an area of 49,950 square km.

Distribution infrastructure

As of August 2011, UGVCL's distribution network comprised 73,863.4 km of high tension (HT) lines, 66,133.7 km of low tension (LT) lines and 345 transformers. The discom's line length, substation base and transformer capacity witnessed a compound annual growth rate respectively of 3.3 per cent, 6.5 per cent and 3.8 per cent during 2006-11. The transformer capacity stood at 8,545.98 MVA at end-March 2011, with over 99 per cent of transformers at the 11 kV level.

Apart from adding capacity to its distribution network, UGVCL is taking several initiatives to strengthen it. The discom is replacing deteriorated conductors in urban areas with new equipment. At some locations, overhead lines are being replaced with underground cables. It also plans to install 11 kV feeders for bifurcation of load and minimising transformer overloading. The entity is also replacing conventional transformers with amorphous transformers. Moreover, the implementation of a high voltage distribution system for agricultural connections is under way.

Loss reduction

During 2010-11, UGVCL's AT&C losses stood at 6.63 per cent as compared to 16.87 per cent in 2009-10. The discom's losses were way below its target of 14 per cent for 2010-11, which was approved by the state power regulator. The reduction in AT&C losses was mainly due to regularisation of the agricultural load of 438,963 horsepower (HP) as well as installation of energy efficient pumps for 12,929 connections.

In addition, UGVCL has initiated a Rs 1.8 billion project which aims to reduce commercial losses in areas that report frequent electricity theft. Electricity theft accounts for 1.5-2 per cent of total connections. Some of the initiatives under this project include the installation of aerial bunched cables (ABCs) and armoured electrical cables, providing sheet moulding compound boxes for meters and increased vigilance.

Enforcement drives are conducted at each circle by vigilance wings to check power thefts. The consumption pattern of customers is regularly tracked through a consumer monitoring system software developed by UGVCL's in-house IT team. Bare conductors prone to hooking are being replaced with ABC and coated conductors. Electronic meters are being replaced with static meters. Cases of individuals guilty of power theft are registered with the police and such cases are highlighted through the media to discourage the practice.

Spot billing through hand-held equipment has been in place since the past three years. The task of revenue collection is outsourced to local agencies like post offices. Other modes of revenue collection include any time payment machines and online payment gateways. In rural areas, the e-gram initiative has been launched, under which bill collection is undertaken by village panchayats through a computerised process.

The percentage of unbilled consumption in total consumption till January 2012 was around 11.5 per cent, as compared to 6.6 per cent in 2010-11. Agricultural pump sets account for a major share in unbilled consumption. In rural households, various state- and union government-sponsored schemes are implemented to ensure the accounting of the entire amount of energy supplied.

UGVCL has introduced automated meter reading (AMR) for all HT consumers using GSM as a communication medium. The discom plans to extend AMR to industrial consumers with a load of above 50 HP as well. The adoption of AMR has helped in reducing errors related to manual meter reading and expediting the bill processing process. Further, it allows real-time monitoring of electricity consumption by these high-revenue customers, thereby preventing pilferage.

IT initiatives

UGVCL is implementing IT programmes to improve its distribution operations. It has established an energy management centre at Gandhinagar, which has facilitated the implementation of feeder meter data acquisition, the geographic information system, and supervisory control and data acquisition. The centre has also enabled load forecasting and management, regular energy audits as well as network analysis and improvement. In addition, a centralised customer care centre has been established.

The discom has adopted an Oracle-based enterprise resource planning

UGVCL's infrastructure and financial growth

	2008-09	2009-10	2010-11
Line length (ckt. km)	131,717	132,904	137,943
No. of substations	290	332	345
Transformer capacity (MVA)	7,964.9	8,284.1	8,545.9
AT&C losses (%)	14.3	16.9	6.6
Revenue (Rs billion)	-	45.5	55.2
Net profit (Rs million)	-	56.5	126.6

Source: UGVCL

solution, E-Urja, with modules including projects, purchases, asset management, cash and inventory management, and payroll. It is also preparing for the implementation of smart grid technologies. UGVCL has submitted the detailed project report to the Ministry of Power for a smart grid pilot.

Meanwhile, execution of IT projects under the Restructured Accelerated Power Development and Reforms Programme (R-APDRP) is also under way. Under Part A of the R-APDRP, 20 towns would be covered and a loan assistance of Rs 353.1 million has been sanctioned by the Power Finance Corporation. Projects such as asset mapping and consumer indexing have been completed in 19 towns. Energy meters have been deployed in 6,732 distribution transformers (DTs), while modems have been deployed in 5,505 of the 8,454 DTs identified for the project. Substation data acquisition has been started at five of the 36 selected substations. DT meter data acquisition is also under way.

UGVCL has recorded strong financial results. Its revenues grew by 21.36 per cent to Rs 55.22 billion in 2010-11 over the previous year, while the net profit increased by 124 per cent to Rs 126.6 million.

Under Part B, six towns are proposed to be covered and Rs 246.2 million has been sanctioned for system strengthening projects. The discom has initiated activities like installation of ABCs and cross-linked polyethylene underground cables as well as LT line conversion. Going forward, the company plans to undertake renovation and modernisation of transformers and replacement of electro-mechanical meters.

Going forward

UGVCL has set an example among state-owned distribution utilities with an impressive operational and financial performance. At a time when most state discoms are reporting losses, UGVCL has recorded strong financial results – its revenues grew by 21.36 per cent to Rs 55.22 billion in 2010-11 over the previous year, while the net profit increased by 124 per cent to Rs 126.6 million.

However, the company has a few challenges to address going forward. "Being a utility with a large agricultural consumer base, sustaining a robust distribution network, creating infrastructure for an annual projected load growth of 8 per cent, and meeting the demand of consumers in remote areas are major challenges," says Srivastava. Further, open access and multiple distribution licensees have increased competition in Gujarat's distribution segment. This would necessitate UGVCL to provide quality and fast services to consumers to deter them from switching to other licensees. Given its track record, UGVCL seems set to overcome these challenges. ■

Neha Bhatnagar