

## SUMMARY OF GOOD PRACTICES ADOPTED BY DISCOMS

| State   | Name of the utility                         | Theme  | Best Practice  | Key Description and benefits  |
|---|---|--|--|---|
| <b>Business Strategy</b>                      |   |  |  |   |
| Delhi   | North Delhi Power Limited                   | Revenue Management and Monitoring            | SAMBANDH (Solution for All Modules in Billing System At North Delhi Power Limited) | SAMBANDH is an IT based application designed to provide a comprehensive and centralized record of the billing and revenue recovery from various consumer segments at NDPL. It enables the management to assess the performance of the company, Zone-wise, district-wise and at the overall company level.   |
| Delhi   | BSES  | Loss Reduction                               | Analytics  | Reliance Infrastructure has developed proprietary Analytics Software which is an extremely powerful tool for theft identification. This has had significant traction at both Mumbai and Delhi operations and involves analysis of different types of data (meter downloads, billing, consumer survey) to identify theft with very high strike rates which have been in excess of 50 %.  |
| Andhra Pradesh                                | Southern Power Distribution Company Limited | Customer Information Management and Analysis | Consumer Analysis Tool (CAT)   | Consumer Analysis Tool (CAT) is used to monitor the metering, billing and collection. The reports generate include abnormal consumption, non functional/ abnormal units, inaccurate billing, non collection of dues, revenue leakages due to unbilled, inaccurate declaration of tariff categories, multiple connections, under declared load details etc. that help management urgent action on critical issues  |
| <b>Functional (Operational and Financial)</b> |   |  |  |   |
| Maharashtra                                   | Torrent Power AEC Limited                   | Distribution Management (Franchisee)         | Urban Distribution Franchisee – Bhiwandi Experience                                | Bhiwandi is a part of Thane District in Mumbai with a total consumer base of 1.4 lakh consumers and a geographical area of 721 square kms. The consumer base in Bhiwandi largely comprises power looms. The area was known for high distribution losses, poor collections and poor state of infrastructure. It has approx. Rs. 800 Cr pending arrears to the utility.<br>Torrent Power took over this area in December 2006 and has made a significant impact in terms of improving the collections and reducing the losses in this area. |
| Karnataka                                     | Hubli                                       | Distribution                                 | Rural  | The scheme was targeted to  |

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|           | Electricity Supply Company Limited (and state discoms) | Management (Franchisee)              | Distribution Franchisee – Gram Vidyut Prathinidis (GVPs) | improve revenue collections and customer satisfaction wherein GVPs were given the task of meter reading, bill distribution and revenue collection. In view of the significant improvement in the revenue collection in short time and improvement in customer service, the scheme as extended to other talukas, not covered in the initial plan.  |
| Assam     | Three distribution companies in Assam                  | Distribution Management (Franchisee) | Single Point Power Supply (SPPS) Scheme                  | Rural Franchisee scheme in Assam is termed as the SPPS Scheme, under which rural consumers are provided with quality supply and quality services through rural distribution franchisees operating on behalf of the three distribution companies. The scheme led to improvement in revenue collection and management, reduction of administrative overheads, and regularization of unauthorized connections.   |
| Gujarat   | Gujarat Urja Vikas Nigam Limited                       | Rural Load Management                | Jyoti Gram Yojana (JGY)                                  | Jyoti Gram Yojana was announced by Government of Gujarat to provide continuous three phase power supply of the rural area for upliftment of rural population. It was launched in September 2003 on pilot basis. The pilot covering 8 districts was completed in 2004. Some of the direct benefits of the scheme were: (i) More opportunity for local employment; (ii) Reduction in migration from Rural to Urban areas; (iii) Provision of better health services and infrastructure facility; (iv) Development of cottage/home industries and small scale industries in the rural sector; (v) Due to continuous supply of power, housewives can use electric appliances; students can use computers for their upliftment; (vi) Reduction in migration from rural to urban areas. |
| Karnataka | Bangalore Electricity Supply Company Limited           | Rural Load Management (RLM)          | RLM using Programmable Logic Controllers (PLC)           | BESCOM controlled usage of irrigation pumping loads using Programmable Logic Controllers (PLC). PLC is used for alternate switching in or out IP loads as per demand schedule. The consumers  |

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|           |  |                    |  | on distribution transformers were split up into industrial and rural irrigation category to facilitate continuous 3-phase power supply to non-IP loads.   |
| Karnataka | Bangalore Electricity Supply Company Limited | Energy Audit       | Energy Audit at Distribution Transformer Level | BESCOM initiated the concept of treating smaller units in distribution supply as separate profit centre. It was the first utility to start energy auditing at Distribution Transformer Level, which was later adopted as part of APDRP scheme and practices in a number of states. Some of the direct benefits of the scheme were: Leakage identification; Focused action plan for loss reduction; Scientific and reliable loss estimation; Metered consumption increased.  |
| Mumbai    | Reliance Infrastructure                      | AMR / Energy Audit | AMR / Energy audit                             | <p>Automated Meter Reading solution is based on packet based methodology using either GPRS or CDMA technologies. This solution is scalable, feature rich, reliable &amp; cost effective. This is an IP based solution. The solution provides greater flexibility on polling frequency and parameters of data collection.</p> <p>The polling &amp; meter data management software has many functionalities including Theft Identification module, Business Analysis module, Web based reporting interface. The solution ensures reliable data transfer from meter to data center and provides for complete data security. The solution is integrated with billing system and GIS and is used for Customer Billing, Energy Audit, Load forecasting, outage management and theft identification.</p> |
| Mumbai    | Reliance Infrastructure                      | Power restoration  | SCADA / DMS implementation                     | Reliance Infrastructure SCADA deployment covers network elements up to 33/11 KV substations including outgoing 11 KV feeders. It enables remote monitoring and control of various network elements, obviating the need for manned substations. Distribution Management System (DMS), extends the monitoring and   |

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|                |                             |  |   | control functionality of SCADA to distribution transformers. Remote Terminal Unit's (RTU) and Fault Passage indicators (FPI's) are installed at substations. This has facilitated in improving our reliability indices by more than 50%.  |
| Mumbai         | Reliance Infrastructure     | Customer service                           | Integrated IT implementation                                      | RInfra has set up necessary infrastructure, developed an application roadmap and implemented IT systems right across the entire gamut of operation involving Metering, Billing, Energy Accounting, Customer Care, New Connection/Disconnection, Geographical Information Systems based applications and solution, Web based access to consumers and many more such applications. Reliance Infrastructure's Mumbai Distribution has most comprehensive and integrated IT implementation. |
| Andhra Pradesh | All Discoms                 | Energy Audit                               | Process adopted for Energy Audit                                  | All the four Discoms in Andhra Pradesh undertook a special initiative to standardize and streamline the processes of Energy Auditing at their respective areas. The objective of such initiative was to introduce a system of Energy Auditing which is independent and verifiable. The program resulted in encouraging results in terms of accurately identifying the loss levels in various feeders and reduction of commercial losses within the short span.                          |
| Delhi          | North Delhi Power Limited   | Loss Reduction and Reliability Improvement | Comprehensive Technical and Administrative measure to curb losses | NDPL introduced a number of solutions both technical and administrative to reduce technical and commercial losses in its area of operation. The measures resulted in reduction in losses from close to 50% to 18.5% (current level).  |
| Uttar Pradesh  | Noida Power Company Limited | GIS Implementation                         | GIS System  | NPCL, along with InfoTech Enterprises Ltd, formulated an end-to-end GIS solution for analyzing and optimizing the power distribution network Apart from developing typical facility   |

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|                         |  |                          |   | management applications, an innovative application to detect power pilferage via GIS was also developed and deployed to detect network as well as commercial losses (power thefts), a common problem in India and some Asian countries. The implementation of GIS at NPCL provided substantial business benefits to NPCL.  |
| Gujarat                 | Gujarat Electricity Board                                  | Inventory Management     | Integrated Inventory Management System  | GEB developed a comprehensive plan to solve the inventory related problems including codification of all items and computerization of all records. The measures resulted host of benefits to the Board. Based on the success of the program launched in 13 locations, it was extended to other areas as well.  |
| Maharashtra             | Maharashtra State Electricity Distribution Company Limited | Procurement              | e-Tendering                             | MSETCL implemented process of e-tendering that involved automation of steps involved in the tendering process. The system involved electronic preparation and exchange of tender documents and includes inviting, receiving and opening of offers from suppliers.  |
| Gujarat                 | Gujarat Electricity Board                                  | Training                 | Comprehensive approach towards training | The GEB adopted an innovative and aggressive approach towards training its employees, something that was not common among the Electricity Boards at that time. It formulated its own training policy, rapidly upgraded its infrastructure, designed and implemented specialized training at all levels, tied up with specialized and reputed institutes for sustainability of training initiatives etc.  |
| <b>Customer Service</b> |  |                          |   |  |
| Andhra Pradesh          | Central Power Distribution Company Limited                 | Consumer Billing Process | Spot Billing                            | Spot billing is one alternative to eliminate the time lost in first half (meter reading compilation, bills preparation, printing and distribution) and to some extent in second half in revenue collection. The spot billing process helps in integrating various activities being handled by several people at multiple locations into a single window operation. Initially introduced only in selected pockets of Hyderabad and Secunderabad, it |

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|        |                           |   |   | was later extended to the complete towns of Hyderabad, Secunderabad and Rangareddy.   |
| Mumbai | Reliance Infrastructure   | Customer Care                           | Customer Care                           | <ul style="list-style-type: none"> <li>◆ IT driven work order creation having TAT's for each complaint category.</li> <li>◆ Has a start of the art24X7 call centre</li> <li>◆ Multi lingual bill</li> <li>◆ Various payment options</li> <li>◆ SMS alerts for various applications</li> </ul> |
| Delhi  | North Delhi Power Limited | Web Portal for hosting Consumer Details | Sugam – Web-hosting of Customer Records | NDPL was the first Utility in India to make its entire billing database available to consumers through internet. Its efforts were appreciated by Delhi Government by presenting “SUGAM” Award to NDPL for transparency in its billing database.   |

**(Source: MERCADOS Report and inputs from utilities)**