

#### Department of Industrial and Management Engineering Indian Institute of Technology Kanpur



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#### Standards of Performance for Electricity Distribution Companies: Approach and Experiences

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#### Definition: Performance Standard

- <u>Benchmark against</u> which <u>actual performance</u> is measured.
- <u>Benchmark is the Standard</u>, or a set of standards, used as a point of <u>reference</u> for evaluating <u>performance</u> or <u>level</u> of <u>quality</u>.
- A Performance Standard is
  - a written statement of the conditions that will exist when a <u>satisfactory</u> job is performed.
  - Measurable it describes how much, how many, of what, by when, how quickly, how well, how accurate, etc.

#### Performance areas:

#### **Quality of Supply and Quality of Services**

- The above two are very important aspects but very often neglected.
- Quality of Supply relates to continuity of supply, voltage of supply, frequency of supply, etc.
- Quality of services on the other hand covers various other aspects such as fuse off call, restoration of supply, attending to distribution transformer failures, meter related complaints, new connection/increase or reduction in load, etc.

#### Legal Framework- Electricity Act 2003

- Preamble:
  - " Protecting interest of consumers"
- Sec 42 Establishment of Electricity Consumer Grievance Redressal Forum and appointment of Electricity Ombudsman
- Sec 43 Duty to supply on request: within 1 month after receipt of the application provided no extension of distribution mains, or commissioning of new substations is required. In case of failure to supply the electricity within the specified period, the licensee is liable to a penalty extending to one thousand rupees for each day of default.

#### Legal Framework- Electricity Act 2003

#### **Consumer protection: Standard of performance**

- Sections 57, 58 and 59 specifically deals with these issues.
- Sub-section (1) of Section 57 stipulates that the Commission in consultation with Licensees and persons likely to be affected shall specify standards of performance of a Licensee or a class of Licensees.
- Sub-section (2) of section 57 provides that if a Licensee fails to meet the standards specified under sub-section (1), without prejudice to any penalty that may be imposed or prosecution that may be initiated, he shall be liable to pay compensation determined by the Commission to the affected person
- Before determination of compensation, the concerned Licensee is given reasonable opportunity of being heard.

#### Legal Framework- Electricity Act 2003

(Contd.)

- The Commission has to specify different standards of performance by licensee in exercise of the powers vested in it under section 58.
- Under sub-section (1) of Sec 59 every licensee within the period specified by the Commission has to furnish the following information:-
  - (a) the level of performance achieved under subsection (1) of section 57
  - (b) the number of cases in which compensation was made under sub-section (2) of section 57 and the aggregate amount of the compensation.
- Under sub-section (2) of Sec 59, the Commission shall arrange for the publication of the information furnished to it, at least once every year.

# Legal Framework- Electricity Act 2003

(Contd.)

- Sec 86 Functions of State Commission
  - sub-section(1) The State Commission shall discharge the following functions, namely:-
    - (i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees

## Legal Framework- Electricity Act 2003

(Contd.)

- Sec 181 Powers of State Commissions to make regulations.
  - sub-section (2)(s) the time and manner for settlement of grievances under sec 42(7).
  - Sub-section (2)(t) period for the purposes specified under sec 43(1).
  - Sub-section (2)(za) Standards of performance of a licensee or a class of licensees under sec 57(1).
  - Sub-section (2)(zb) the period within which information to be furnished by the licensee under sec 59(1).

#### **National Electricity Policy**

# Clause 5.13: PROTECTION OF CONSUMER INTERESTS AND QUALITY STANDARDS

- "....Commissions should regulate utilities based on predetermined indices on quality of power supply. Parameters should include, amongst others, frequency and duration of interruption, voltage parameters, harmonics, transformer failure rates, waiting time for restoration of supply, percentage defective meters and waiting list of new connections.
- Reliability index (RI) of supply of power to consumers should be indicated by the distribution licensee. A road map for declaration of RI for all cities and towns up to the District Headquarter towns as also for rural areas, should be drawn up by SERCs."

#### MPERC performance standard Regulations

- MPERC issued the regulation titled
   MPERC (DISTRIBUTION PERFORMANCE STANDARDS) REGULATIONS, 2004
   way back on 13th July 2004 with the objective of
  - To ensure that Distribution System performance meets a minimum standard which is essential for Users' installation to function properly.
  - To enable Users' to design their systems and equipment to suit the electrical environment that they operate in.
  - To enhance quality of standards of Distribution System and services to meet acceptable standards in short term and to move towards improved standards in long run.



#### MPERC performance standard Regulations

- The regulations broadly covered General Service Standards, Technical Standards and other Performance Standards
- · General Service Standards included :
  - Restoration of Power Supply
  - Complaints about Meters
  - Applications for New Connections/Additional Load
  - Transfer of Ownership and Conversion of Services
  - · Complaints about Consumers' Bills
  - Disconnection of Supply for Non-payment of Dues
  - Reconnection of Supply following Disconnection due to Non-payment of Bills

#### MPERC performance standard Regulations

- Under Technical Standards
  - Quality of Power Supply voltage variations
  - Harmonics were covered
- The Overall Standards of Performance included
  - · fuse-off calls
  - Line Breakdowns
  - Distribution Transformer Failures
  - Period of Scheduled Outages
  - Reliability Indices
  - Frequency Variations
  - Voltage Unbalance, etc. Reliability Indices

#### MPERC performance standard Regulations

- The regulations also specified the amount of compensation payable to consumers in the event of Licensee's failure to meet the performance standards mentioned in the regulations.
- Compensation claims were to be dealt both automatic i.e. calculated and paid by the licensee and through claim lodged by the affected consumer(s).
- Submission of periodic reports by licensees to the Commission was included in the regulations.



#### Revision/Amendments to Regulations

- The 2004 regulation was revised on 26<sup>th</sup> Sep 2005 and amended on 20<sup>th</sup> Dec 2005, 2<sup>nd</sup> Mar 2006 and 18<sup>th</sup> Sep 2006 to cover certain new areas or to make them more specific. Some of the changes included
  - Provisions for spot billing, SMS, toll free telephone nos., call centres
  - Provisions for enhancement of load and reduction in contract demand
  - Replacement of transformer for restoration of power supply within specified time limits
  - Monthly information in respect of all 11 KV feeders in each Commissionary HQ, District HQ and Industrial Growth Centre within 15 days by Distribution Licensees
  - Level of Supply Interruption Parameters, etc.

# Latest Amendment made to MPERC Regulations on 8<sup>th</sup> July 2011

- Licensee to pay specified compensation to the affected consumer through a rebate in the bill, without waiting for any claim by consumer
- Rebate admissible to such consumers who have regularly paid their bills in the preceding six months.
- Compensation within ninety days from the date of event of not meeting Performance Standard
- Compensation in all cases increased to Rs. 100 per day or part thereof



# Forum of Regulators

Model Regulation on SoP



### Key provisions of model Regulations

- Suggested to link actual compensation to
  - (a) hardship caused to the consumer; and
  - (b) average monthly bill of the consumer
- Measurement of overall standards through Audit Report verifying/ assessing
  - (a) Adherence to procedures and formats as per regulations
  - (b) Staff engaged in call centres/complaint handling centres/customer care centres for their understanding of complaint handling procedures, quality parameters, and training adequacy for their task
  - (c) Method of data collection and management procedures
  - (d) Review of relevant records (as per appropriate sampling procedures) for reliability and accuracy across quality parameters;



### Key provisions of model Regulations (contd.) Audit Methodology

Reliability Grading

Reliability Grade	Assessment of reliability grade	
A	Based on proper records with adequate procedures	
В	Data has significant procedural deviations	
С	Unsatisfactory data	



# Key provisions of model Regulations (contd.) Audit Methodology

• Accuracy Grading

Accuracy Grade	Assessed accuracy level	Percentage of compensation paid to be recovered through Annual revenue requirement
1	+/- 2%	100%
2	+/- 5%	85%
3	+/- 10%	70%



# Key provisions of model Regulations (contd.)

- Complaint Handling Mechanism
- Creation of awareness
- Submission of Reports

#### Experience

Over last 7 years not much compensation is paid by licensees due to

- Lack of awareness amongst consumers, which MPERC tried to address by-
  - Distributing pamphlets giving details of Performance Standards at Indore, Bhopal and Jabalpur through Licensees and then cross checking distribution of pamphlets by deputing its own officers
  - Conducting workshops of NGOs to disseminate information on performance standards
  - Creating C-CARE (Cell for Consumer Advocacy and Relationship) in its office
- Apprehension amongst consumers that utility officers may harass them on claiming compensation, which is addressed by
  - Recent amendment provides for giving rebate without waiting for claim by consumer



#### Experience

- Mindset of Discom officers and employees
  - SEBs have worked almost as State run administration for nearly 50 years.
  - Electricity Industry remained a monopoly
- Things are changing now
  - Electricity Act has unbundled SEBs to make it possible to introduce competition in certain segments
  - De-licensing of Generation, free captive generation, trading licenses, possibility of multiple distribution licenses and open access have made some difference
  - Even State Governments have come out with Service Guarantee Acts providing time limits for delivery of services



#### Experience

- Lack of reliable systems to record receipt of complaints/ service calls and action taken on such calls
  - IT interventions now make it possible to record these details
  - RAPDRP lays emphasis on creation of IT infrastructure in the first phase to determine baselines
  - Even Government owned distribution companies are opting for ERP/SCADA etc. consumer
- Overall trends indicate that the concept of standards of performance is likely to take off in coming years



# **Thanks**

An M.P.E.R.C. Presentation

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