

Standards for Distribution Service in a Competitive Electric Market

NARUC Energy Regulatory
Partnership Program

Nicaraguan Energy Institute and
Public Utility Commission of Texas

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Public Utility Commission of TX

PUCT

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Points of Discussion

- Service quality standards in Texas
- Penalties and rebates

Electric Service Quality (SQ) Standards

- Prior to 1999, PUCT had authority to adopt standards for
 - How electric service is furnished
 - Conditions of service (quality, initial voltage, etc.)
 - How to examine, test, & measure service conditions
 - Ensuring accuracy of testing & measuring equipment
 - Reliability of service rules not yet adopted by PUCT

PUCT Substantive Rule 25.51

Quality of Service

- Adopted by PUCT prior to 1999
- Refers to applicable ANSI, NERC, IEEE standards
- Power Quality
 - Voltage variation
 - Frequency variation
 - Harmonics

Electric Service Quality & Reliability Standards

- Section 38.005 of Public Utility Regulatory Act (PURA) was added in 1999
- Applies only to eleven (11) Investor Owned Utilities (IOU); cooperatives & cities are exempt
- Directed PUCT to develop reasonable and appropriate standards for service quality and reliability of service
- SAIDI & SAIFI standards were specifically required by Section 38.005

Electric Service Quality & Reliability Standards (continued)

- SAIDI – System Average Interruption Duration Index (average amount of outage time per customer per period)
- SAIFI – System Average Interruption Frequency Index (average number of interruptions per customer per period)
- PUCT Rule 25.52 was adopted in response to Section 38.005 (PUCT Rule 25.51 was adopted previously)

SAIFI & SAIDI Definitions

- SAIFI –
$$\frac{\Sigma (\text{number of customers interrupted})}{\text{total number of customers}}$$
- SAIDI –
$$\frac{\Sigma [(\text{outage time}) \times (\text{number customers out})]}{\text{total number of customers}}$$

Substantive Rule 25.52

Reliability & Continuity of Service

- PUCT Rule 25.52 was adopted in response to Section 38.005 (PUCT Rule 25.51 was adopted previously)
- Rule 25.52 defines SAIDI/SAIFI indices required by 38.005
- Rule 25.52 addresses feeder SAIDI and SAIFI performance
 - A feeder should not be among the 10% worst-performing feeders (as measured by the feeder SAIDI or SAIFI index) for two consecutive years
 - A feeder SAIDI or SAIFI index should not be more than 300% greater than the annual system-wide SAIDI or SAIFI index for two consecutive years

Substantive Rule 25.52

Reliability & Continuity of Service

- Rule 25.52 defines two standards not specified by 38.005
 - System-wide SAIDI & SAIFI standards: calculated as the averages of 1998, 1999, 2000 actual annual SAIDI & SAIFI system performance indices
 - Rule 25.52 specifies two additional performance requirements
 - After 2000, if the annual system-wide SAIDI or SAIFI index exceeds the system-wide standard by more than 5%, then a violation occurs

Enforcement Provisions of PURA

Section 38.005

- Beginning in 2000, PUCT can take appropriate enforcement action if any feeder with 10 or more customers
 - (1) is on the annual SAIDI or SAIFI list of worst 10% performing feeders for two consecutive years; or
 - (2) has a SAIDI or SAIFI average that is more than 300% greater than the annual system-wide average for two consecutive years

Violation and Penalty

- PUCT staff developed a form (“Matrix”) for summarizing each utility’s annual service quality violations and recommended penalties – first used for reporting year 2004
- Penalties range from \$1,000 to \$5,000 for each violation in the reporting year
- Penalties are larger for violations that continue for more than two consecutive years

Rebates to Customers for Reliability Standards (Mergers & Sales)

- Rebates not to exceed a predetermined amount
- 10% Worst Feeder for SAIDI or SAIFI - \$20 per customer per index
- Feeder SAIDI or SAIFI 300% greater than system average - \$50 per customer per index
- System-wide SAIFI violation– difference between actual and allowable value times \$1,000,000
- Rebates System wide SAIDI violation– difference between actual and allowable SAIDI value times \$10,000
- Rebates made annually for a fixed number of years

Customer Service Standards

Mergers & Sales

- Service Installation and Upgrades
 - 95% of new service requiring construction must be completed within 24 hours on a quarterly basis
 - 75 - 90% of new, constructed service must be completed within 10 business days
- Security & streetlight Replacements
 - 90% of outages corrected within 2 business days
- Customer Service Call Center
 - Answer calls within 45 seconds
 - Abandoned calls 3.4% or less

Rebates to Customers for Service Mergers & Sales

- Service installations & upgrades
 - \$40 per installation
- Security & street lighting
 - No rebate
- Customer service Call Center response time
 - \$150,000 to all customers
 - \$20 if no answer in 60 seconds