

**RESOLUTION OF BOARD OF DIRECTORS  
SUPERVISORY AGENCY FOR INVESTMENT IN ENERGY AND MINING  
OSINERGMIN No. 046-2009-OS/CD**

**Lima, PERU**

**HAVING SEEN:**

The Memorandum No. GFE-064-2009 from the *Gerencia de Fiscalización Eléctrica* (Electricity Inspection Agency) requesting that the Board of Directors of the Supervisory Agency for Investment in Energy approve the “Methodological Basis for application of the Technical Quality Standard for Rural Electricity Services”; and

**CONSIDERING:**

That, pursuant to Article 3(c) of Law No. 27332 – Framework Law governing Agencies Established to Regulate Private Investment in the Public Services, the normative function of the Regulatory Agencies, which include OSINERGMIN, comprises the exclusive power to lay down, among other things, within the scope and subject matter of their respective jurisdictions, the regulations to govern the procedures for which they are responsible and the rules of a general nature relating to activities supervised or performed by their users;

That Article 22 of the General Rules of Procedure of OSINERGMIN, approved by Supreme Decree No. 054-2001-PCM, stipulates that the general normative function shall be exercised exclusively by the Board of Directors through its resolutions;

That, pursuant to Article 3 of Law No. 27699 – Complementary Law for Institutional Strengthening of OSINERGMIN, the Board of Directors is empowered to approve administrative procedures connected with, inter alia, the Supervisory Function;

That Article 5(a) of Law No. 26734, the Law Creating OSINERGMIN, establishes as a function the ensuring of compliance with the legislation regulating the quality and efficiency of the service provided to the user. Similarly, Article 1 of the General Bylaws of OSINERGMIN, approved by Supreme Decree No. 054-2001-PCM, specifies that OSINERGMIN is competent to supervise and inspect the ENTITIES of the ENERGY SECTOR with a view to ensuring the quality, safety, security and efficiency of the service and/or products provided to users in general, while safeguarding effective conservation of the environment;

That the Second Transitory Provision of the Technical Quality Standard for Rural Electricity Services, approved by Board Resolution No. 016-2008-EM/DGE, stipulated that OSINERGMIN should approve the Methodological Basis of said Technical Standard;

That to this end OSINERGMIN prepublished, on October 14, 2008 in the Official Gazette “El Peruano”, the “Methodological Basis for application of the Technical Quality

Standard for Rural Electricity Services” in accordance with Article 25 of the General Bylaws of OSINERGMIN, approved by Supreme Decree No. 054-2001-PCM, with the aim of receiving the observations and suggestions of the general public, which have in turn been commented on in the Explanatory Statement in respect of this Resolution;

Now therefore, in accordance with the provisions of Articles 22 and 25 of the General Bylaws of OSINERGMIN, approved by Supreme Decree No. 054-2001-PCM:

With the favorable opinion of the General Department (*Gerencia General*), the Legal Department (*Gerencia Legal*) and of the Electricity Inspection Department (*Gerencia de Fiscalización Eléctrica*),

IT IS HEREBY RESOLVED AS FOLLOWS:

**Article 1.** To approve the “Methodological Basis for application of the Technical Quality Standard for Rural Electricity Services,” the text of which forms part of this Resolution.

**Article 2.** This Procedure shall enter into force on the day following its publication in the Official Gazette “**El Peruano.**”

## **METHODOLOGICAL BASIS FOR APPLICATION OF THE “TECHNICAL QUALITY STANDARD FOR RURAL ELECTRICITY SERVICES”**

### **1. PURPOSE**

The purpose of this document is to establish the Methodological Basis for application of the “Technical Quality Standard for Rural Electricity Services” (NTCSER), approved by Board Resolution No. 016-2008-EM/DGE.

To this end, the Basis describes the conceptual principles and procedures for:

- The structuring of the Database
- The transfer of information
- The execution of the campaigns and the reporting of findings
- The approval of technical specifications of the equipment.

### **2. DEFINITIONS**

**MB:** Methodological Basis for application of the NTCSE.

**Measurement interval:** In accordance with para. 5.0.3 of the NTCSE, this is defined as the time interval at which the tension is measured. Specifically, for the quality of the tension, the interval is 15 minutes and the average of the instantaneous tension values is considered.

**Failed Measurement:** For the evaluation of the tension quality, a measurement is considered failed when the quantity of measurement intervals is less than 192 or when the recording of measurement shows irregularities in measurement such as:

- When the Recording of Negative Energies exceeds 5 percent of the intervals.
- When in the three-phase measurement at least one of the phases presents incoherent readings.
- When because of communication problems in the system no recording of the measurement can be obtained.
- When the duly set-up equipment is pilfered or stolen.
- When there is no simultaneity in the recordings of the measurements made for a particular SED MT/LT.

It is not categorized as a failed measurement when the supplier does not perform the measurement because there is no equipment available or when OSINERGMIN so determines in the evaluation of a specified case.

**NTCSE:** Technical Quality Standard of Electricity Services.

**Concentrated Rural:** No. 4 Typical Distribution Sector.

**Scattered Rural:** No. 5 Typical Distribution Sector, the Special Typical Sector, and new Distribution Sectors established with a markedly scattered population pattern.

**SER:** Rural Electricity System.

**Computerized Reception and Validation system for application of the NTCSE (SIRVAN):** Extranet-type system that permits transfer of information required under this Methodological Basis.

**Computerized Random Selection (SISA):** Extranet-type system which enables use of the random selection procedure for LT supplies or ways for evaluating quality and the introduction of the respective schedule.

In addition the other definitions established in the MB will also be applied.

### **3. DATABASE**

- 3.1 The information on the client database must form part of the information required by the MB. The structure and the delivery times are those specified in the MB.
- 3.2 When an enterprise is not subject to the NTCSE, it shall report the database in accordance with the criteria laid down in the MB

### **4. INFORMATION TRANSFER MEDIUM**

- 4.1 Information will be transferred by means of the SIRVAN extranet system, through the WEB portal that will be notified to the enterprises. For access to this portal, the supplier must designate a coordinator who will then be given the user and access passwords. The date considered for compliance with the data-delivery deadlines is the one registered by the portal upon completion of the transfer.
- 4.2 If there are restrictions on information transfer, OSINERGMIN will be able to arrange for the information to be furnished to a particular supplier at a later date or by means of a different medium of communication.
- 4.3 If the deadline set for transferring information (including source files) and the random selection process will expire on nonbusiness days, the deadlines will be extended automatically to the first-following business day.

### **5. IMPLEMENTATION OF THE MEASUREMENT CAMPAIGN AND REPORTING OF FINDINGS**

#### **5.1 PRODUCT QUALITY**

### **5.1.1 Full application of the NTCSE regarding tension quality in the Generator – Distributor delivery points**

In application of the Second Final Provision of the NTCSE, for all purposes the regular NTCSE check must include the generator-distributor delivery points since they serve supplies considered in the application of the NTCSE. Furthermore, the tolerances and compensation established in the NTCSE shall be applied.

### **5.1.2 Determination of the number of measurements to be made by the distribution enterprises**

Through the SISA portal, OSINERGMIN will communicate, thirty (30) business days before the beginning of the semester the numbers of tension measurements to be made during the semester.

### **5.1.3 Selection of the SED MT/LT for evaluation of the tension quality**

In application of the Second Final Provision of the NTCSE, the selection of the SED MT/LT for evaluation of the tension quality will be done as follows:

- a) Once OSINERGMIN has communicated the number of measurements to be made in the semester, the distribution enterprise shall, within two weeks and using the SISA portal, communicate the quantity of measurements to be performed in order to comply with the number required for the semester.
- b) Once the preceding stage is completed, the distribution enterprise, using the SISA portal, shall make the drawing for the random selection of the SED MT/LT.
- c) Two weeks prior to the start of each month, the SED MT/LT selected for evaluation during the month will be posted in the SISA portal.

### **5.1.4 Schedule of tension measurements**

- a) The supplier shall provide the schedule of the measurements to be performed in a given month, using the format of the tables shown in ANNEX B. The deadline for provision of the schedule is one week before the start of the month in question.
- b) The selection of the MT supply points for evaluating the tension quality shall be made solely between non-measured points. The supplier shall repeat the process once the measuring of all MT supply points has been completed.
- c) The enterprises can provide an additional schedule for each month of measurements, exclusively for Repetition of Failed Measurements (F) or Remeasuring to Correct Poor Quality Ratings (X).

### **5.1.5 Execution of measurements**

**a) Prior notification to supply**

The programmed measurement must be notified to the user no later than 48 hours before the date the measurement is scheduled to be done.

**b) Measurement Sheet**

To validate the measurements, in all cases the supplier shall fill out the Measurement Sheet, the format of which is presented in Annex 19 of the MB (this format can be accessed via SIRVAN).

**c) Selection of Alternative Supplies**

In the case of measurements in LT, if obstacles arise at the time the tension-recording equipment is being set up at a programmed point, the supplier can move the equipment to the closest alternative point belonging to the same LT feeder.

For the case of measurements in MT, alternatives may only be selected when the client expressly refuses to accept the point originally set.

**d) Measurements to eliminate poor tension quality**

To remove poor tension quality in a particular SED MT/LT, simultaneous measurements must be made in the supply closest to the LT bar of the SED MT/LT and in the farthest supply of each LT feeder belonging to said SED MT/LT.

The poor-quality problem is considered corrected when all measurements demonstrate the existence of acceptable quality.

**e) Notification to OSINERGMIN of equipment set up**

Once the equipment is in place, the supplier shall report, through the SIRVAN portal, the date on which the equipment was ready for use. The deadline for reporting the equipment ready for use shall be one business day counting from the date on which the equipment is set up.

**f) Repetition of Failed Measurements**

Failed measurements must be repeated within the semester in question or, when appropriate, during the first month of the next semester; if this is not done the failed measurement will be entered as a case of noncompliance with the NTCSEER and the relevant penalty will be applied.

This repetition of measurements will not form part of the normal number of measurements the NTCSEER requires for the half-yearly sample of measurements.

In the case of SED MT/LT, when one of the two measurements fails, the two measurements specified for evaluating the SED MT/LT must be repeated.

**g) Calibration periods of the equipment**

In application of the Second Final Provision of the NTCSE, the calibration criteria and periods of the equipment shall be those specified in paragraph 5.1.4(i) of the MB. The criteria and formats laid down in the MB can be obtained through SIRVAN.

**5.1.6 Evaluation of indicators and compensations**

**a) Evaluation Period of Indicators**

The calculation of indicators is performed on the basis of the first measurement intervals with values recorded, which make up the measurement period.

**b) Evaluation of Indicators in Three-Phase Supplies**

For evaluation of these indicators, tolerance in a measurement interval is considered exceeded when the admissible limit is exceeded in any of the three phases.

When in more than one of the phases tension values are found that are outside the tolerance limits, the value of the phase that shows the greatest departure from the tolerances shall be adopted.

**c) Measurements completed after the end of the semester**

If the tension-quality measurements are started in the closing days of a particular semester and the measurements are completed in the next semester, the energy to be considered for calculation of the compensations is that which corresponds to the semester in which measurement was started.

**d) Exchange Rate to be Used**

Follow the approach specified in paragraph 5.1.5(d) of the MB of the NTCSE (accessible through SIRVAN).

**e) Determination of the percentage of clients affected in a SED MT/LT by poor tension quality in LT**

In accordance with paragraph 4.1.4 of the NTCSE, in order to determine the percentage of LT clients affected by poor tension quality, one must consider: first, a uniform distribution of the loads (constant variation of tension), and second, that the percentage of supplies affected in a SED MT/LT should be equal to the percentage of supplies affected in the LT feeder where the quality was evaluated.

Taking this approach, the percentage of clients affected in the SED MT/LT is calculated as the sum of the following two components:

- **Percentage of clients with poor tension quality connected with overtension:**

The tension readings obtained from the measurements in the supplies located at the start and at the end of the LT feeder selected are organized from the greatest to the smallest and the values  $V_{SO1}$ ,  $V_{SO2}$ , and  $V_{SOT}$  are defined as:

$V_{SO1}$  The highest value of tension in 95 percent of the intervals measured for the client located at the head of the feeder (tension reading that corresponds to the interval No. 10 (5 percent of 192) of the measurement).

$V_{SO2}$  The highest tension value in 95 percent of the intervals measured for the client located at the end of the feeder (tension reading that corresponds to the interval No. 10 (5 percent of 192) of the measurement).

$V_{SOT}$  Maximum tension value allowed by the NTCSEER.

The percentage of supplies affected with poor quality due to overtension (%SASOT) is:

$$\%SASOT = (V_{SO1} - V_{SOT}) / (V_{SO1} - V_{SO2})$$

When  $V_{SO2} > V_{SOT}$ , the %SASOT = 100%.

- **Percentage of clients with poor tension quality connected with undertension:**

The tension readings obtained from the measurements in the supplies located at the start and end of the LT feeder selected are organized from the greatest to the lowest and the values  $V_{SU1}$ ,  $V_{SU2}$  and  $V_{SUT}$  are defined as follows:

$V_{SU1}$  The lowest tension value in 95 percent of the intervals measured for the client located at the feeder head (tension reading corresponding to interval No. 182 (95 percent of 192) of the measurement).

$V_{SU2}$  The lowest tension value in 95 percent of the intervals measured for the client located at the end of the feeder (tension reading corresponding to interval No. 182 (95 percent of 192) of the measurement).

$V_{SUT}$  Minimum tension value allowed by the NTCSEER.

The percentage of supplies affected with poor quality due to undertension is:

$$\%SASUT = (V_{SUT} - V_{SU2}) / (V_{SU1} - V_{SU2})$$

When  $V_{SU1} < V_{SUT}$ , the %SASUT = 100%



#### **f) Updating of the Calculation of Compensation**

In application of the Second Final Provision of the NTCSEER, as long as the poor tension quality is not remedied the half-yearly compensation payments must be continued.

The amount of the compensation payments shall be updated for each semester, using for calculation of the ENS factor (formula No. 8 of the NTCSEER) the energy recorded for the semester for which compensation is to be paid and, if applicable, based on the poor-quality intervals recorded at the last remeasurement.

#### **g) Calculation for the case of Failed Measurements**

When poor quality is confirmed in repetition of a failed measurement, compensation must be given for the semester in which the failed measurement occurred. In this case the poor-quality intervals recorded in the measurement shall be considered, together with the energy recorded for each semester for which compensation is payable.

#### **h) Calculation of half-yearly compensation for LT clients of a SED MT/LT**

If poor tension quality is determined in LT supplies, the compensation due to the SED MT/LT shall be determined as follows:

- First the percentage of supplies affected by poor quality in terms of both overtension and undertension (%SASOT, %SASUT) must be determined.
- Next the energy of the supplies of poor quality due to overtension ( $E_{ESMSO}$ ) must be determined; this is the product of the energy of all the supplies of the SED MT/LT and the %SASOT.
- Then the energy of the supplies categorized as being of poor quality due to undertension ( $E_{ESMSU}$ ), which results from the product of the energy of all the supplies of the SED MT/LT and the %SASUT.
- The average of the factor  $\Sigma A_p$  (proportionality factor used by the NTCSEER for establishing compensation) associated with the supplies of poor quality due to overtension ( $\Sigma A_{pso}$ ); for this the average of the  $\Sigma A_p$  factor for the client located in the initial section of the feeder and of the  $\Sigma A_p$  factor corresponding to the supply the tension level of which is in the limit of the poor quality (the tension records of this supply are obtained by adding a constant amount of tension ( $V_{SOT} - V_{SOT}$ ) to the tensions registered for the supply located in the initial section of the feeder).
- The average of the factor  $\Sigma A_p$  (proportionality factor used by the NTCSEER for establishing compensation) associated with the supplies of poor quality due to undertension ( $\Sigma A_{psu}$ ) is determined; for this the average of the  $\Sigma A_p$  factor for the client located in the end section of the feeder and of the  $\Sigma A_p$  factor corresponding to the supply the tension of which is in the limit of the poor quality is used (the tension records of this

supply are obtained by adding a constant amount of tension ( $V_{SUT} - V_{SU2}$ ) to the tensions registered for the supply located in the end section of the feeder).

Formula No. 2 of the NTCSEER (formula for individual compensations) is used for calculating the compensation due to an entire SED MT/LT. The total compensation is the sum of two components:

- Compensation for overtension which results from applying Formula 2 of the NTCSEER but considering  $E_{pj} = E_{ESMSO}$  and  $\Sigma A_{pso}$
- Compensation for undertension which results from applying Formula 2 of the NTCSEER but considering  $E_{pj} = E_{ESMSU}$  and  $\Sigma A_{psu}$

#### **i) Transfer of amounts of compensation for Poor Tension Quality**

During the first 30 calendar days after the end of the control semester, the supplier shall transfer to OSINERGMIN the total amount of the compensation payments due on account of poor tension quality.

### **5.1.7 Reporting of findings**

#### **a) Turning in of tension source files**

On the first business day of each week, the supplier shall forward to OSINERGMIN, via the SIRVAN portal, the measurement file in the format of its own equipment (primary data without processing) of the measurements completed in the previous week.

#### **b) Report of tension-measurement findings**

For the case of electricity-generating enterprises, the report of results required by para. 5.1.6(e) of the MB must include, when appropriate, the findings for the generator-distributor delivery points where the NTCSEER applies.

In the case of distribution enterprises, OSINERGMIN must be sent the following via the SIRVAN portal:

- 20 calendar days after the end of each month, the result of the measurements performed as stipulated in ANNEX C.
- 20 calendar days after the end of each semester, the compensation report as stipulated in ANNEX D.

#### **c) Consolidated report**

Within the first 20 calendar days after the close of the control semester, the concession holders must furnish to OSINERGMIN, in printed form, a consolidated report of the results of the control of tension quality.

This report must contain the same points as specified for tension quality in the NTCSE's BM (these points can be accessed via the SIRVAN portal). In addition to the report, a copy of the schedule of measurements must also be provided.

## **5.2 QUALITY OF SUPPLY**

### **5.2.1 Full application of the NTCSE regarding quality of supply for the generating and transmission enterprises**

In application of paragraph 8.1.2 and the Second Final Provision of the NTCSE:

- a) The generating enterprises must calculate the indicators and compensation in the generator-distributor delivery points as established by the NTCSE and its MB.

In this connection, each generator-distributor delivery point that serves electricity systems where the NTCSE applies will have to be evaluated applying the same conditions as laid down for the NTCSE.

- b) The calculation of indicators and compensations for interruptions covered by Provision 13 of the NTCSE is hereby expanded to the zones where the NTCSE applies.

In this connection, the tolerances and compensation currently applied to the points of the system where the NTCSE applies are now extended to the points of the system affected by the type of interruption referred to where the NTCSE applies.

- c) The transmission and generating enterprises are responsible for reimbursing the enterprises which pay out the compensation monies that are payable on account of interruptions imputable to the transmission and generating enterprises. The time limits and procedures for effecting the reimbursements are set forth in the MB.

### **5.2.2 Programming of interruptions**

#### **a) Notification to OSINERGMIN**

The same approaches and transfer media established for the application of the NTCSE (para. 5.2.1(a) of the MB) are used, with the addition of a space for a single digit, at the end of the table with PIN extension, to identify that it affects rural areas: "P" when the interruption affects both supplies where the NTCSE applies and also supplies where the NTCSE applies, or "R" when the interruption will only affect supplies where the NTCSE applies.

#### **b) Notification to user**

The enterprise must ensure effective communication to users. The minimum points to be covered in the notification to users must be:

Magnitude of the interruption	Information medium
An entire electricity system or Transformer Substation	Memorandum to each client or 2 mass media*
One or more MT feeders	Memorandum to each client or 1 mass medium
One or more MT/LT SEDs or output in LT	Memorandum to each client

\*In zones where use of two mass media is not possible just one can be used, provided it ensures adequate communication to the user.

The determination of the mass medium (newspaper, radio, TV) to be used by the enterprise and the presentation and content of the notification must be such as to ensure effective communication to the users affected. OSINERGMIN may permit a variation in the type of communication medium or the presentation or content if it deems such appropriate.

### c) Suspension of programmed interruptions

If the supplier has to defer or cancel a programmed interruption it must so notify OSINERGMIN and also state the reason for deferment or cancellation.

### d) Definition of expansion or strengthening of networks

The same approach as is established in paragraph 5.2.1(e) of the MB will be used for application of the NTCSE (the criteria laid down can be accessed via SIRVAN).

### 5.2.3 Request for recognition of force majeure and waiving of compensation payments in cases of expansion or strengthening of transmission systems

In application of the Second Final Provision of the NTCSE, requests for recognition of force majeure and waiving of compensation payments in cases of transmission system expansion or strengthening shall be treated as established in the NTCSE and its MB.

### 5.2.4 System for receiving claims

In application of the Second Final Provision of the NTCSE, the monitoring of interruptions includes use of a telephone claim system. This means that the telephone center required under para. 5.2.3(c) of the NTCSE must have a system that automatically records the date and time of a claim based on interruption of supply, which will allow such claims to be audited at any time by OSINERGMIN.

### 5.2.5 Evaluation of indicators and compensation payments by the distribution enterprises

The distribution concession-holder must evaluate the supply quality indicators half-yearly, taking into account the weighting factors and tolerances established in the NTCSE,

together with the current waivers, as well as proceeding to make the appropriate compensation payments.

To this end, the following must be taken into account:

**a) Interruptions that last longer than the programmed time**

In the event that an interruption lasts longer than programmed, it shall be considered one single interruption ( $N = 1$ ) but with two periods of duration: the first shall be the programmed period with its respective weighting (50 percent or 25 percent as applicable) and the second that of the time in excess of that programmed as an unforeseen interruption (100 percent weighting).

**b) Single-phase interruptions**

If single-phase interruptions occur and the supplier does not have the user-network link that makes it possible to identify the real phase to which each of its clients has been connected, it will be assumed for computation purposes that said interruptions involve all of the users associated with the network affected, regardless of the phases to which they are connected.

**c) Interruptions on account of client default or arrears or other causes**

Interruptions connected with homes of users whose service has been cut off by the supplier itself as a consequence of their delinquency or of other causes reasons allowed by Law, will not be included in the calculation of the quality indicators of the supply.

**d) Compensation payments for poor-quality supply due to interruptions originating upstream of the SER**

When the SER is affected by interruptions originating outside of it, then for all purposes each MT supplier of the SER will be considered an MT client who is under the NTCSE, with the typical distribution sector 1, 2, or 3, as appropriate

To determine typical sector, the typical sector of the electricity system under the NRSCE that is located upstream of the SER will be taken. If there is no upstream electricity system assigned to the NTCSE, Typical Distribution Sector 3 will be assumed.

Once the compensation to be received by each MT supplier of the SER has been determined, this compensation must be split among all the supplies affected based on the energy invoiced in the semester for each of them.

**e) Compensation payments for interruptions connected with Provision Thirteen of the NTCSE**

When the SER is affected by interruptions connected with Provision Thirteen of the NTCSE, the generating enterprise shall deliver to the distribution enterprise the compensation

payments due for said interruptions in accordance with the arrangements laid down in the NTCSE and its MB.

The above compensation shall be distributed among all the supplies affected on the basis of the criterion set forth in para. 5.2.4(h) of the MB (these points can be accessed through the SIRVAN portal).

**f) Cases of Force Majeure and Request for Waiver of Compensation Payments**

In application of the Second Final Provision of the NTCSE, for calculating compensation payments connected with a request for recognition of force majeure or waiver of compensation required under current legislation, the decisions shall be based on the instructions set forth in para. 5.2.4(j) of the MB.

**g) Exchange rate to be used for the compensation payments**

The same approach shall be followed as that specified in para. 5.2.4(k) of the MB of the NTCSE (this approach can be accessed through SIRVAN).

**h) Transfer of compensation for having exceeded the NIC and/or DIC tolerances**

During the first 30 calendar days after the end of the control semester, the supplier shall transfer to OSINERGMIN the total amount of the compensation payments due for having exceeded the NIC and/or DIC tolerances.

In application of the Second Final Provision of the NTCSE, the compensation payments set by the NTCSE are complementary to those under Articles 57 and 86 of the Law governing Electricity Concessions (LCE) and Articles 131 and 168 of its Implementing Regulations. Consequently, the sums allowed under Articles 57 and 86 of the LCE and Articles 31 and 168 of its Implementing Regulations shall be deducted from the amounts of compensation payments on account of poor quality of the supply.

**5.2.6 Reporting of results**

**a) Recording of interruptions**

Interruptions must be recorded in accordance with the same instructions as specified in the MB, with the addition of the following:

- Two fields at the end of the table with extension RDI: the first, of one single digit, to identify whether solely rural zones were affected, “R” or whether both rural and urban zones were affected, “P.” The second, also a single digit, to indicate whether the interruption originated outside the SER, “E”; was due to load rejection, “R”; or was within the SER, “D.”
- One field at the end of the table with extension RIN, showing “R.”

The approaches and formats specified in the MB can be obtained through SIRVAN.

**b) Amount of Compensation Payments**

Within 20 calendar days after the end of the semester, the Supplier shall remit, via SIRVAN, the amounts of compensation for Poor Quality of Supply, broken down as shown in ANNEX E.

**c) Updating of compensation payments for cases of force majeure**

The regularization payments in respect of requests for recognition of force majeure that have been denied must be reported quarterly, via SIRVAN, using the breakdown set forth in ANNEX E. This must be done within 20 calendar days of the end of each quarter.

**d) Consolidated Report**

In application of paragraph 8.1.2 of the NTCSE, the generating and transmission enterprises must include in the Consolidated Report of the findings of the monitoring of supply quality required by paragraph 5.2.5(c) of the MB, the evaluation of the quality of the supplies or system points under the NTCSE.

As for distribution enterprises, within the first 20 calendar days of the end of the control semester they must send in to OSINERGMIN, using a printed form, the Consolidated Report of the findings of the monitoring of supply quality in rural zones. The report must contain the following:

- Summary of interruptions occurring in the semester, in the following format:

Rural Electricity System	MT Supplies			LT Supplies		
	NIC	DIC	No. of Supplies	NIC	DIC	No. of Supplies

- The reporting of the interruptions not considered in the calculation of indicators because they are connected with requests for recognition of force majeure, waivers on account of expansion or strengthening of transmission, or any other waivers provided for in current legislation, should be presented as follows:

Interruption Code	Reason	No. of File or OSINERGMIN Document

Note 1: Applicable only to force majeure or system expansion or strengthening cases.

Where:

Interruption Code: Code with which registered in ANNEX 9.

Reason: Ground for waiver.

File or Document No.: No. of OSINERGMIN files relating to the request for acknowledgment of force majeure or waiver due to system expansion or strengthening. If there is no file No., the OSINERGMIN registration code of the document with which the request was initiated must be stated.

- A summary of the compensation payments to be transferred to OSINERGMIN, in the following format:

Rural Electricity System	NTCSER Compensation US\$		Compensation per LCE US\$	
	LT	MT	LT	MT

- A summary of compensation payments to be transferred to supplies, in the following format:

For interruption originating outside the SER:

Rural Electricity System	NTCSER Compensation US\$		Compensation per LCE US\$	
	LT	MT	LT	MT

By application of 13<sup>th</sup> Final Provision of NTCSE:

Rural Electricity System	NTCSER Compensation US\$		Compensation per LCE US\$	
	LT	MT	LT	MT

### 5.3 QUALITY OF COMMERCIAL SERVICE

#### 5.3.1 Treatment of client

The distribution concession-holder shall furnish information so that OSINERGMIN can evaluate compliance with the standards set for time spent dealing with clients.

##### a) Information on user claims and questions



The information on clients' claims and questions must be forwarded using the same method and formats specified in paragraph 5.3.1(a) of the MB. This also means that, via your webpage, OSINERGMIN can access your database (online updating).

**b) Information concerning response to requests for new supplies or increasing of contracted power, reconnections, and tariff options**

Information concerning requests for new supplies, changes of tariff option, reconnections and response times and claims and questions of users must be forwarded using the same method and formats as specified in paragraph 5.3.1(b) of the MB. This means that, via your webpage, OSINERGMIN can access your database (online updating).

**c) Report on cases where tolerances are exceeded**

The information on cases in which the maximum time allowed for handling requests for new supplies, increasing of contracted power, changes of tariff option and claims based on possible invoicing errors and others is exceeded, must be forwarded using the same method and formats as specified in paragraph 5.3.1(c) of the MB.

Field No. 12 of the file with extension SCN (Excessive time spent on budget) must be left blank, and field No. 11 of the file with extension SCC (Excessive time spent on changes of tariff option) must line up with the tolerances laid down in the NTCSER.

**5.3.2 Facilities available to clients**

In accordance with paragraph 6.2.3(c) (iv) of the NTCSER, the supplier must have commercial offices with adequate facilities for serving the public; these offices must offer the minimum conditions necessary for providing security and comfort, including restrooms and appropriate waiting-room furniture.

In the event of such offices being moved to a different location as referred to in ANNEX 1 of the MB, the concession-holder shall submit to OSINERGMIN, in documented form, the required formal evidence of such move.

The distribution concession-holder must comply with the requirements set forth under 6.2.3 of the NTCSER, paying special attention to the following:

**a) Comments Book**

The Comments Book must be in full compliance with the requirements detailed in paragraph 5.3.2(a) of the MB. The enterprise can obtain these requirements through SIRVAN.

Taking into consideration that the report for the MB covers all cases, the data pertaining to the rural zones will be taken from those statistics for the respective evaluation of the indicator.

## **b) Invoices**

As set forth in ANNEX 12-A of the MB, the distribution enterprise shall, on a monthly basis and for each Billing Center, enter the timing of its system for sending out the invoices, which on average should not exceed 5 calendar days after the issuance of said documents. The enterprise will be able to obtain the rules and formats specified in the MB through SIRVAN.

In accordance with paragraph 6.2.3(a)(i) of the NTCSE, important information that must be included in the invoice forms is the nominal supply voltage and the type of meter used in the connection (electronic or electromechanical).

## **c) Registration of claims**

The computerized system defined in paragraph 6.2.3(b) of the NTCSE must be designed and permanently updated in a manner that will ensure that, in addition to generating the reports specified under 5.3.1 "Treatment of Client" of this Methodological Basis, it can be used via the internet to perform the checking and follow-up of a claim, question, request or other contact (in writing, verbally, by telephone or any other means of communication), taking the matter to a solution and/or a final response to the client.

A code must be assigned to the claim, question, request, etc., and this code must be communicated to the user. The client will, through the concession-holder enterprise's portal, be able to check the status of his/its claim, query, request or other document submitted.

## **d) Telephone/fax service centers for handling claims due to lack of service**

In accordance with paragraph 6.2.3(c) of the NTCSE and also considering the Second Final Provision of the NTCSE, the telephone/fax system for receiving claims based on lack of service, will have to be capable of registering the time of commencement of an interruption in accordance with paragraph 6.1.1 of the NTCSE MB, and also the steps taken to respond to the claim.

The enterprise must, through its webpage, permit access to the claims database in accordance with the format specified in ANNEX 17 to the MB.

## **e) Service for claims in respect of lack of supply**

- When the lack of supply affects just one claimant user, the distribution enterprise must provide the user in a satisfactory manner with information about the actions that will be taken to help him.
  - The minimum information must be such that the claimant is made aware of the specific steps that the enterprise will take to help him, including the estimated time needed to carry out these steps, which must be consistent with the accessibility of the zone.

- When it is not possible to restore service during the first 24 hours the user must be informed, as soon as possible and in writing, of the technical reasons which render immediate restoration of service impossible and must be notified of the probable date and time of resumption of service.
- When lack of service claimed by the user affects a zone (more than one user) and the enterprise has not been able to restore electricity supply after 24 hours, the users claiming lack of supply must be informed of the reason for the delay in restoring the service and of the probable date and time of resumption of service.

### **5.3.3 Precision of the measurement of the energy**

The distribution enterprise must perform a comparison of meters in order to ascertain the precision of the energy measurement by the meters it uses. To evaluate this indicator the following must be done:

#### **5.3.3.1 Determination of the Number of Comparisons to be done per Semester**

Via the SISA portal, OSINERGMIN will communicate thirty (30) business days before the start of the semester how many comparisons must be done during the semester.

#### **5.3.3.2 Random selection of supplies for which precision will be evaluated**

In application of the Second Final Provision of the NTCSE, the selection of the supplies for evaluation of the quality of precision of energy measurement shall be done as follows:

- a) Once OSINERGMIN has communicated the number of comparisons to be performed in the semester, in a maximum period of two weeks, the distribution enterprise, through the SISA portal, shall communicate the number of monthly comparison measurements to be carried out in order to comply with the number required for the semester.
- b) When the previous stage is completed the distribution enterprise, via the SISA portal, will perform the drawing for the random selection of supplies.
- c) In addition, SISA will select a batch of alternative meters to replace the meters for which comparisons could not be made, following the same procedure for selecting as for the main batch.
- d) Two weeks prior to the start of each month, the supplies selected to be evaluated in the month will be listed in the SISA portal.

#### **5.3.3.3 Schedule of measurements**

The supplier shall provide, through SISA, the schedule of the comparisons to be performed in a given month. The deadline for providing the schedule is one week before the beginning of the month concerned.

#### **5.3.3.4 Performance of the comparisons**

##### **a) Prior notice to user**

The programmed comparison must be notified to the user at least 48 hours before the date set for it to be done.

##### **b) Enterprise authorized to perform comparisons**

The distribution enterprise shall have these comparisons carried out in its concession by one or more specialized enterprises duly authorized by INDECOPI. When there is no enterprise authorized by INDECOPI for doing the comparison for a particular type of meter, the distribution enterprise shall submit the case to OSINERGMIN for it to decide on the procedure to be followed.

##### **c) Comparing the meters**

The same procedure as laid down in paragraph 5.3.3.4(e) of the MB shall be used for the NTCSE application (said procedures can be accessed via SIRVAN), with the exception that evaluation of the complementary parts of the meter (reducers, transducers, timing devices, etc.) is not obligatory.

##### **d) Comparison record**

A comparison record shall be drawn up for each test. The instructions for writing this up and the format to be used are specified in paragraph 5.3.3.4(f) of the MB (the instructions can be accessed via SIRVAN).

When the comparison is completed, the meter compared must be labeled to show the comparison campaign concerned. The label used shall be similar to the one employed for the procedure approved by Board Resolution No. 005-2004 /OS-CD or the one replacing it, noting that it relates to a comparison required under the NTCSE.

##### **e) Selection of alternative supplies**

If the comparison cannot be done for certain selected meters due to evidence of falsifying of the meter's reading to the supplier's disadvantage, to the meter having been scrapped, or to refusal of the user to permit the comparison, then alternative supplies shall be used.

The identification of the alternative supply must be requested through the SISA portal, specifying the supply that will be replaced.

#### **5.3.3.5 Evaluation and reporting of findings**

The evaluation of the Percentage of Supplies with Deficiencies in the Measurement System shall be calculated in accordance with the procedure laid down in paragraph 6.3.2 of the NTCSER.

**a) Status Report of Monthly Findings**

Within the first 20 calendar days of the end of a given month, the findings of the comparisons performed in that month are to be submitted in the formats specified in ANNEX 18 of the MB.

In addition, should OSINERGMIN so require, copies of the comparison records for a sample of supplies are to be furnished, either via SIRVAN or in printed form.

**b) Half-Yearly Consolidated Report**

The Consolidated Commercial Quality Report must include the summary of the findings of the evaluation of the measurement precision and, if necessary, an explanation of the reason for any failure to comply with NTCSER standards.

**5.4 QUALITY OF PUBLIC LIGHTING (PL)**

In accordance with the requirements set forth in paragraph 7.1.4 of the NTCSER, the checking of the quality of this service shall be performed by means of the procedure approved by Board Resolution 078-2007-OS /CD or the resolution taking its place.

**6. TECHNICAL SPECIFICATIONS OF THE EQUIPMENT**

The tension-recording equipment used for the application of the NTCSER must be approved for use in application of the NTCSE.

**7. SUPERVISION AND PENALTIES**

The standards for supervision are defined in the Supervision Procedure of the NTCSER and the Methodological Basis approved by OSINERGMIN.

In addition, for Commercial Quality and Public Lighting, supervision and inspection will be performed in accordance with the rules laid down in the supervision and inspection procedures approved by OSINERGMIN for commercial activity and effective operation of public lighting.

Failure to comply with the provisions of the NTCSER and this Methodological Basis shall be considered an offense punishable by application of a penalty in accordance with the Scale of Fines and Penalties of OSINERGMIN.

**8. TEMPORARY PROVISIONS**

- 8.1 In application of paragraph 2.1(c) of the NTCSEER, the Program to Ensure Compliance with the Standard that the enterprises are to submit to OSINERGMIN must be in printed form.
- 8.2 During the first stage of application of the NTCSEER, every six months the enterprises must report to OSINERGMIN on the progress of their compliance programs. The first progress report is to be submitted in April 2009.

## ANNEX A. FORMATION OF THE RURAL IDENTIFIER NUMBER

POSITION	SUBJECT	DETAILED DESCRIPTION
1 to 3	Enterprise	Identification of Supplier Enterprise
4 and 5	Year	Last two digits of year
6 and 7	Period	Two digits acc. to order of month: 01,02,...12 For half-yearly data: S1 and S2
8	Type of measurement	Identification of measurement (ALPHANUMERIC) 1 Measurement of TENSION in points in MHT, HT, MT 2 Measurements of TENSION in points in LT 6 Measurements of ENERGY MEASUREMENT PRECISION
9 to 12	Electr. System	System Code
13	Type of measurement point	B Selected or basic R Claim F Repetition of failed measurement O Requested by OSINERGMIN X Remeasurement
14	Measurement No.	0 for first measurement 1,2,3,...,8,9,A,B,C,...Z for successive measurements in the same point until acceptable quality is obtained

## ANNEX B. MEASUREMENT SCHEDULES – TENSION QUALITY

- **File Name:** xxxAxxxx.MTR
- **File Name:** xxxAxxxx.ATR (for additional measurements)

FIELD	DESCRIPTION	LENGTH	TYPE	NOTES
1	Identifier No.	14	ALP	See Annex A
2	No. of Client Supply	10	ALP	
3	Equipment installation date	8	ALP	DDMMAAAA(Day, Month, Year)
4	SED MT/LT to which the LT supply belongs	7	ALP	Only when making measurements in LT

## ANNEX C. REPORTS OF MEASUREMENTS MADE – TENSION QUALITY

- **File Name:** xxxAxxxx.CCT → for Tension

FIELD	DESCRIPTION	LENGTH	TYPE	NOTES
1	Identifier No.	14	ALP	See Annex A
2	Name of Source File	25	ALP	E.g. (Supply Code) .XXX
3	No. of Supply measured	10	ALP	No. of Supply measured
4	No. of Supply it replaces	10	ALP	Only for cases of LT TENSION measurements in alternative point
5	Supply tension (Volts)	7	NUM	
6	Make and model of recording equipment	25	ALP	Tension recorder
7	Series No. of recording equipment	15	ALP	Tension recorder
8	Correction factor: TENSION	4.3	NUM	When applicable
9	Correction factor: CURRENT	4.3	NUM	When applicable
10	Equipment set-up date	8	ALP	DDMMAAAA (Day, Month, Year)
11	Recording equipment removal date	8	ALP	DDMMAAAA (Day, Month, Year)
12	Result of measurement	1	ALP	V = Valid F = Failed
13	Observations regarding set-up/removal	60	ALP	
14	SED MT/LT to which the LT supply belongs	7	ALP	Only when making measurements in LT
15	Location of LT in the SED MT/LT	1	ALP	“i” initial section of SED MT/LT “f” end section of SED MT/LT

- File Name:** xxxAxxxx.FTR (ONLY FOR OUT-OF-RANGE MEASUREMENTS)

FIELD	DESCRIPTION	LENGTH	TYPE	NOTES
1	Respective Identifier No.	14	ALP	See Annex A
2	No. of Client Supply	10	ALP	Code or No. of supply
3	Qty of Intervals w/in Range_1	3	N	For V → 6% < □ V □ 7.5%
4	Qty of Intervals w/in Range_2	3	N	For V → 7.5% < □ V □ 105%



5	Qty of Intervals w/in Range_3	3	N	For V → 10% < □ V □ 12.5%
6	Qty of Intervals w/in Range_4	3	N	For V → 12% < □ V □ 15%
7	Qty of Intervals w/in Range_5	3	N	For V → 15% < □ V □ 17.5%
8	Qty of Intervals w/in Range_6	3	N	For V → □ V □ 17.5%
9	Qty of Intervals w/in Range_7	3	N	For V → -7.5% □ □ V □ -6%
10	Qty of Intervals w/in Range_8	3	N	For V → -10% □ □ V □ -7.5%
11	Qty of Intervals w/in Range_9	3	N	For V → -12.5% □ □ V □ -10%
12	Qty of Intervals w/in Range_10	3	N	For V → -15% □ □ V □ -12%
13	Qty of Intervals w/in Range_11	3	N	For V → -17.5% □ □ V □ -15%
14	Qty of Intervals w/in Range_12	3	N	For V → □ V □ -17.5%
15	VS01	3.2	N	Only for supply located at the head of SED MT/LT
16	VS02	3.2	N	
17	VSU1	3.2	N	Only for supply located at the end of the SED MT/LT
18	VSU2	3.2	N	

**ANNEX D. REPORT ON COMPENSATION PAYMENTS  
FOR POOR TENSION QUALITY**

- **File Name: xxAxxSx.CTR**

<b>FIELD</b>	<b>DESCRIPTION</b>	<b>LENGTH</b>	<b>TYPE</b>	<b>NOTES</b>
1	Respective Identifier	14	ALP	See Annex A
2	Number of supply measured 1	10	ALP	Code of MT supply evaluated or LT supply code of the initial section of the SED MT/LT
3	Number of supply measured 2	10	ALP	LT supply code of the end section of the SED MT/LT
4	Energy supplied kWh	10.3	N	For MT: The energy of the semester For LT: The energy Sem. SED MT/LT
5	Sum total of all the values of AP	10.2	N	For case of MT Supplies
6	Amount of compensation	7.4	N	In US\$ (corresponding to the MT supply or the entire SED MT/LT)

7	Year to which the compensation refers	4	ALP	
8	Semester (S1 or S2)	2	ALP	To which compensation relates
9	% Feeder SOT	3.2	N	For case of LT supplies
10				
11	% Feeder SUT	3.2	N	For case of LT supplies
12	$\Sigma A_p$ of supply located in initial section of SED MT/LT	10.2	N	
13	$\Sigma A_p$ responsible for reduction (V S02 – V SOT)	10.2	N	At the tension recorded in the initial section
14	$\Sigma A_p$ of supply located in end section of SED MT/LT	10.2	N	
15	$\Sigma A_p$ responsible for increase (V S02 – V SOT)	10.2	N	At the tension recorded in the end section

## ANNEX E. COMPENSATION PAYMENTS FOR POOR SUPPLY QUALITY

### For exceeding DIC and/or NIC tolerances

**File Name:** xxxAxxxSx.CR1

**File Name:** xxxAxxTn.CR1 For Quarterly Report (n= 1, 2, 3, or 4) for updates

FIELD	DESCRIPTION	LENGTH	TYPE	NOTES
1	Enterprise code	3	ALP	See Annex 3 of MB
2	Year to which compensation relates	4	ALP	Format AAAA
3	Semester to which compensation relates	2	ALP	S1 or S2
4	Electricity System code	10	ALP	Aligned to right
5	Tension level to be evaluated (medium or low tension)	2	ALP	MT; LT
6	NIC associated with nonprogrammed interruptions	4.2	N	
7	NIC associated with programmed interruptions for maintenance	4.2	N	

8	NIC associated with programmed interruptions for expansion or strengthening	4.2	N	Without weighting
9	DIC associated with nonprogrammed interruptions	6.2	N	
10	DIC associated with programmed interruptions for maintenance	6.2	N	Without weighting (in hours and tenths of hrs)
11	DIC associated with programmed interruptions for expansion or strengthening	6.2	N	Without weighting
12	Energy recorded in semester (ERS)	15.3	N	Expressed in kWh
13	Amount of compensation by electricity systems by application of NTCSE	10.4	N	In US\$. (Amount calculated without deducting compensation under LCE)
14	Amount of compensation with application of LCE	10.4	N	In US\$

**For application of Provision 13 of the NTCSE**

**File Name:** xxxAxxSx.CR2

**File Name:** xxxAxxTn.CR2 For Quarterly Report (n- 1, 2, 3 or 4) for updates

FIELD	DESCRIPTION	LENGTH	TYPE	NOTES
1	Enterprise Code	3	ALP	See Annex 3 of MB
2	Year to which compensation relates	4	ALP	Format AAAA
3	Semester to which compensation relates	2	ALP	S1 or S2 (1 <sup>st</sup> or 2 <sup>nd</sup> semester)
4	Detector code	10	ALP	Detector code or No.
5	Code of supply or distribution enterprise to be compensated	10	ALP	Distrib. Ent: Supply code Gen. ent: Distrib. enterprise code. (Enter first 3 positions only)
6	Energy recorded in the semester of supply (ERS)	N	N	Only for case of distribution enterprises

	supply (ERS)			
7	Amount of compensation	10.4	N	In US\$

**For interruptions outside of the SER (not including interruptions**

**Associated with Provision 13 of the NTCSE)**

**File Name:** xxxAxxSx.CR3

**File Name:** xxxAxxTn.CR3 For Quarterly Report (n= 1, 2, 3, or 4) for updates

<b>FIELD</b>	<b>DESCRIPTION</b>	<b>LENGTH</b>	<b>TYPE</b>	<b>NOTES</b>
1	Enterprise code	3	ALP	See Annex 3 of MB
2	Year to which compensation relates	4	ALP	Format AAAA
3	Semester to which compensation relates	2	ALP	S1 or S2 (1 <sup>st</sup> or 2 <sup>nd</sup> semester)
4	MT Feeder code	7	ALP	
5	Code of supply to be compensated			
6	No. of nonprogrammed interruptions	4	N	Associated with MT feeder  Without weighting
7	No. of programmed interruptions for maintenance	4	N	
8	No. of programmed interruptions for expansion or strengthening	4	N	
9	Duration of nonprogrammed interruptions	6.2	N	Associated with MT feeder (in hours and tenths of hr)  Without weighting
10	Duration of programmed interruptions for maintenance	6.2	N	
11	Duration of programmed interruptions for expansion or strengthening	6.2	N	
12	Energy recorded in the semester of supply (ERS)	15.3	N	Of supply to be compensated
13	Amount of compensation per application of NTCSE	10.4	N	Of supply compensated In US\$
14	Amount of compensation under LCE	10.4	N	Of supply compensated

				In US\$
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**METHODOLOGICAL BASIS FOR APPLICATION OF THE “TECHNICAL QUALITY  
STANDARDS FOR RURAL ELECTRICITY SERVICES”**

**EXPLANATORY STATEMENT**

On May 24, 2008, Board Resolution No. 016-2008-EM/DGE (Technical Quality Standard for Rural Electricity Services) was published in the Official Gazette “EL Peruano.” In its Second Transitory Provision this Resolution specifies that OSINERGMIN shall establish the pertinent Methodological Basis.

Accordingly, OSINERGMIN, in application of the normative power conferred upon it by Article 3(c) of Law No. 27332 – Framework Law governing Agencies Established to Regulate Private Investment in the Public Services, and also Article 3 of Law No. 27699 – Complementary Law for Institutional Strengthening of OSINERGMIN, republished on October 14, 2008, in the Official Gazette “El Peruano,” the Draft “Methodological Basis for application of the Technical Quality Standard for Rural Electricity Services”, in order to obtain the comments of the general public.

After evaluating the observations and suggestions received regarding the said draft version the present standard has been prepared, which is organized in five main sections. The first comprises the general information, made up of the Definitions, Database, and Information

Transfer Media. It should be noted that the definitions already established in the NTCSE (Urban) are used, as is the Database consisting of the data the enterprises are transferring by means of the urban NTCSE. The internet will be used for transferring files. Finally, the time periods and deadlines set are those stipulated in the NTCSE.

The second section covers Tension Quality. For the case of generating enterprises, application of the NTCSE will apply for the generator-distributor delivery points serving electricity systems where the NTCSE applies. For distribution enterprises, the criteria are specified for calculating indicators and compensation due.

The third section relates to Supply Quality and notes that in the case of generating enterprises application of the NTCSE will apply for the generator-distributor delivery points serving electricity systems where the NTCSE and load-rejection rules apply. On the other hand, for distribution enterprises, the criteria are specified for calculating indicators and compensation payments.

The fourth section deals with Commercial Quality, establishing the same policy of application of the NTCSE (Urban) for client service but adopting the time periods specified in the NTCSE.

The fifth section discusses the subject matter of Public Lighting, noting that the quality of Public Lighting will be evaluated by the procedure approved by Board Resolution No. 078-2007-OS/CD or the one replacing it. The sixth topic covered is the question of the technical

specifications of the tension-recording equipment to be used by the NTCSEER. Lastly, the seventh part stipulates that during the first stage of the application of the NTCSEER, the enterprises shall report every six months to OSINERGMIN on the status of the progress of their compliance programs, and states that the first status report is to be submitted in March 2009.

**Regarding the observations and suggestions received:**

The chief observations and suggestions are detailed in the following, together with the pertinent comments:

## DEFINITIONS:

- 1) **Re: 2 Observations of the Enterprises: Failed Measurement: Electrosur:** The precision of the grip current testers for measurements in supplies with low load generates negative energy readings, a situation which makes it necessary to consider this circumstance when declaring the measurement failed. In addition, measurement should be considered failed when it could not be carried out due to lack of equipment, since this is an occurrence that is both not very frequent and also unforeseeable.

### Suggestion:

- **Electrosur:** In the definition of Failed Measurement: Delete reference to negative energy and consider lack of equipment a cause of failed measurement.

### Outcome:

Not accepted

### Evaluation of the Observation/Suggestion:

It is an obligation of the enterprise that it possess the equipment needed to perform the measurements; if the measurements are not made because equipment is not available, this is a matter of noncompliance and not a failed measurement.

## INFORMATION TRANSFER MEDIUM

- 2) **Re: 4. Observations of the Enterprises: Failed Measurement: Seal:** Subpara. 4.3 conflicts with subpara. 5.1.7(a), which specifies the day on which the files must be sent.

### Suggestion:

- **Seal:** No suggestion, just notes the conflict.

### Outcome:

Accepted

### Evaluation of the Observation/Suggestion:

The wording of subpara. 4.3 will be adjusted to make it consistent with subpara. 5.1.7(a).

## PRODUCT QUALITY

- 3) **Re: 5.1.5(a) Observations of the Enterprises: Electrosur:** Since the rural zones are distant and scattered, notification would entail traveling out twice (once to give notice and another time to set up), which would mean additional cost. **Hidrandina:** It must be taken into



account that in the case of supplies located in rural zones, prior notification will entail excessive costs.

**Suggestion:**

- Electrosur and Hidrandina: It is suggested that the notification to the user be given on the same day that the tension-recording equipment is set up.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

This approach is consistent with that laid down for the comparisons campaign. It should be noted that for rural zones the enterprise know sufficiently in advance the clients who have been selected, so they can optimize the operating costs involved in notifying the users.

- 4) **Re: 5.1.5(c) Observations of the Enterprises: Seal:** Since the client can say no at any point, it could also be helpful to perform the alternative measurement before the client can refuse it. **Edelnor:** Not insisting, but only suggesting that changes be made in the way alternative clients are selected. **Hidrandina:** In the case of LT, consideration should be given to the possibility of selecting an alternative client, so that if the measurement cannot be done in the same LT feeder of the SED MT/LT selected, it can then be done in an LT feeder of another SED MT/LT.

**Suggestion:**

- Seal: It would also be advisable to make the alternative measurement before the MT client refuses it.
- Edelnor and Hidrandina: In selecting alternative LT supplies, one should choose a supply that belongs to the same LT feeder; if this is not possible, a different LT feeder of the same SED MT/LT should be chosen. If there are no other alternatives, set the measurement up in a supply of another SED MT/LT.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

For the case of LT supplies, the objective is to evaluate all the SED MT/LT through the most critical feeder. Picking one supply in the head area of a particular feeder and another

in the tail area of a different feeder adversely impacts the objective of the NTCSE (Rural).

For the case of MT supplies, it is necessary that the supply expressly (in writing) refuses to accept the measurement, for an alternative supply to be permitted.

- 5) **Re: 5.1.5(d) Observations of the Enterprises:** **Electronorte:** To eliminate poor quality, the approach of the NTCSE (Rural) for establishing poor quality should be considered. **Seal:** For eliminating poor quality the feeder selected must be evaluated using the NTCSE (Rural) approach. It is antieconomic to evaluate each LT feeder. **Edelnor:** No strong opinions, but alert to suggestions. **Hidrandina:** In the NTCSE the elimination of poor quality is evaluated in the same supply where the unsatisfactory quality was found. A similar procedure should be considered in the NTCSE (Rural).

**Suggestion:**

- Hidrandina, Electronorte, Edelnor, and Seal: Elimination of the poor quality should only be evaluated in the LT feeder where the poor quality was found.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

Elimination of the unsatisfactory quality in a particular LT feeder does not guarantee that the poor-quality problem in the SED MT/LT has been resolved. For that it would be necessary to evaluate the entire SED. It should be noted that the spirit of the NTCSE (Rural) is to evaluate the entire SED MT/LT.

- 6) **Re: 5.1.5(e) Observations of the Enterprises:** **Electronorte, Seal:** This information is redundant. **Electrosur:** Not insisting, just suggesting increasing the time period allowed for notifying OSINERGMIN. **Hidrandina:** It should be taken into account that the supply systems in rural zones are located in remote and inaccessible areas.

**Suggestion:**

- Electronorte and Seal: No suggestions, simply comment that this information is redundant.
- Electrosur: Suggests that consideration be given to allowing two (2) business days following the set-up date for reporting that the equipment is in place.
- Hidrandina: Suggests five (5) business days after equipment in place.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

The time allowed is consistent with the NTCSE MB and is part of the OSINERGMIN supervision framework.

- 7) **Re: 5.1.5(f) Observations of the Enterprises: Edelnor:** No strong opinions, just suggests changes. **Hidrandina:** There is argument about whether the information should be submitted monthly or half-yearly. **Electronorte:** The procedure to be followed when one of the two measurements of product quality for an LT feeder failed should be indicated.

**Suggestion:**

- Hidrandina and Edelnor: Tension measurements rated failed must be repeated in the course of the next semester.
- Electronorte: No suggestions, but tracking developments.

**Outcome:**

Accepted in part

**Evaluation of the Observation/Suggestion:**

If a measurement is rated failed, it must be repeated quickly. Certainly without waiting until the next semester.

However, to enable flexibility in the enterprises' operation it would be possible to have it done during the control semester. Something will also be done about Electronorte's request.

- 8) **Re: 5.1.6(d) Observations of the Enterprises: Edelnor and Hidrandina:** No firm recommendation, but it is suggested that the exchange rate to be used be specified.

**Suggestion:**

- Hidrandina and Edelnor: For the exchange rate, the value as of the last business day of the control period could be adopted.

**Outcome:**

Not accepted

### **Evaluation of the Observation/Suggestion:**

The approach adopted for determining the exchange rate must be the same as used in the NTCSE MB.

- 9) **Re: 5.1.6(e) Observations of the Enterprises: Edelnor and Hidrandina:** The formula for the % Feeder SUT is incorrect. **Seal:** Ninety percent of the total intervals should be considered, whether for over- or undertension. Clarification of the formulas in this subparagraph would be appreciated.

### **Suggestion:**

- Edelnor, Hidrandina: % Feeder SUT =  $(V_{SUT} - V_{SUT}) / (V_{SU1} - V_{SU2})$
- Seal: The explanation of the meaning of V SUT should read: minimum value of subtension allowed by the NTCSE (Rural).

### **Outcome:**

Accepted in part

### **Evaluation of the Observation/Suggestion:**

If the % Feeder SUT is modified, one will need to know how to determine the highest value of the tension recorded in 95 percent of the time.

- 10) **Re: 5.1.6(h) Observations of the Enterprises: Edelnor:** No strong opinion, but suggests replacing the SED MT/LT concept by LT Feeder. **Hidrandina:** Would like to expand the compensation to the total energy of the SED MT/LT, instead of channeling it to the total energy of the supplies connected with the LT feeder where the product quality was evaluated.

### **Suggestion:**

- Hidrandina, Edelnor: To determine the energy EPj one should consider the sum of the energies of the supplies affected in the feeder measured instead of the total energy of the SED MT/LT.

### **Evaluation of the Observation/Suggestion:**

Subpara. 4.1.4(b) of the NTCSE (Rural) specifies that assignment of the poor quality of the SED MT/LT is in the same proportion as in the case of the BLT feeder evaluated. In this respect, the compensation given for poor quality is due to the entire SED MT/LT.

However, the phrase “energy of the entire SED MT/LT” will be changed to “sum of the energies of the supplies in the SED MT/LT.”

**11) Re: 5.1.6(i) Observations of the Enterprises: Electrosur:** In the semester when the unsatisfactory tension quality problem is eliminated no compensation should be calculated because para. 4.0.01 of the NTSCE (Rural) clearly states that the “Control Period” for evaluation of product quality is six-monthly.

**Suggestion:**

- Electrosur: In the semester in which poor tension quality is remedied no compensation shall be calculated.

**Outcome:**

Accepted

**Evaluation of the Observation/Suggestion:**

It will be clarified that compensation updating only applies when the poor quality remains unimproved.

**12) Re: 5.1.7(b) Observations of the Enterprises: Edelnor:** No particular points, just suggestions. **Hidrandina:** Since the control is half-yearly, the information should be turned in 20 days after the end of each semester.

**Suggestion:**

- Hidrandina and Edelnor: The reporting of the findings should be done half-yearly and not monthly.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

The reporting of compensation and the consolidated report is half-yearly. The only monthly reporting requirement relates to the progress reports on measurements performed (Annex 6 and 7). It should be noted that this is consistent with the checking of the precision of the measurements.

**13) Re: 5.1.7(c) Observations of the Enterprises: Seal:** Regarding 5.1.7(c) the consolidated report should be required within 25 days of the end of the control semester, so as not to interfere with the submission of the NTCSE consolidated report.

**Suggestion:**

- Seal: That submission of the consolidated report be required within 25 days after the end of the control semester.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

The time period is laid down in para. 3.2.6 of the NTCSE (Rural).

**QUALITY OF SUPPLY**

**14) Re: 5.2.2(a) Observations of the Enterprises: Edelnor:** The second paragraph of the draft fails to specify the time period allowed to concession holders for sending in the magnetic medium containing the required notifications to be sent to supplies affected by service interruptions. **Electro Sur Medio:** It is not stated whether the additional field should be put at the start, the end, or elsewhere. **Hidrandina:** It must be borne in mind that the supplies are located in rural areas.

**Suggestion:**

- Edelnor: By means of the SIRVAN portal a magnetic medium should be added within three business days of the programmed interruption with the document verifying the notification given to the supplies affected.
- Electro Sur Medio: Specify that the position of the additional field for identifying the rural zones is at the end of the table (PIN file).
- Hidrandina: Use the SIRVAN portal to report the notification information on magnetic medium within no later than five (5) business days of delivery of same.

**Outcome:**

Accepted in part

**Evaluation of the Observation/Suggestion:**

The period allowed for delivering the documentation verifying notification to the user will be set at up to the time programmed for commencement of the interruption, via the SIRVAN portal.

In addition, it will be noted that the additional field required in the PIN file will be at the end of the entry.

**15) Re: 5.2.2(b) Observations of the Enterprises: Edelnor:** The systems where the NTCSE (Rural) applies are small in size; many of them do not have two mass media. **Electronorte:** It must be borne in mind that there are rural zones which have only one mass medium. **Hidrandina:** Two observations, firstly how is effectiveness of communication to users demonstrated (this is neither established nor specifically described), and secondly we would note that in some zones the existence of two mass media is not possible.

**Suggestion:**

- Edelnor, Electronorte: Just require one mass medium instead of two.
- Hidrandina: Require just one mass medium instead of two. Another alternative for zones without a mass medium could be reference to the representative authorities of the zones concerned.

**Outcome:**

Accepted in part

**Evaluation of the Observation/Suggestion:**

If two mass media are not available, it will be acceptable to proceed with just one.

It should be clarified that the enterprise, acting in conjunction with the zones it supplies, is the party required to establish the medium that will be most effective for communicating notification regarding a forthcoming interruption.

**16) Re: 5.2.2(c) Observations of the Enterprises: Seal:** The draft does not specify the time limit for notifying OSINERGMIN and the users when a programmed interruption is suspended.

**Suggestion:**

- No suggestions

**Outcome:**

**Evaluation of the Observation/Suggestion:**

Bearing in mind the nature of the rural zones, no maximum time limit is considered for notifying OSINERGMIN or users.

**17) Re: 5.2.4 Observations of the Enterprises: Edelnor:** It must be borne in mind that the proper functioning of the telecommunications service is a matter solely and exclusively for the concession-holder of the conventional telephone service, and is not a responsibility of the electrical energy distribution service concession-holder. **Hidrandina:** The concession-

holders are responsible for the service we provide to our customers, but we do not have operating capacity nor direct responsibility “to ensure that users have the possibility of immediate telephone access 24 hours a day.”

**Suggestion:**

- Hidrandina and Edelnor: The supplier must ensure, within the extent and scope of its direct responsibilities, that the quality of the telephone service provides users the possibility of immediate telephone access 24 hours a day...

**Outcome:**

Accepted in part

**Evaluation of the Observation/Suggestion:**

This paragraph in the MB is consistent with 6.2.3(c) of the NTCSE (Rural), which requires the enterprise to have a telephone service available round-the-clock for zones with more than 5,000 clients.

However, the wording will be adjusted to make it clear that the enterprise is responsible for client service over the phone.

**18) Re: 5.2.5 Observations of the Enterprises: Electronorte:** In calculating the indicators NIC and DIC, interruptions caused in generation by extreme climatic conditions such as heavy precipitation of any sort which creates blockages should not be included, because they are temporary and do not arise from intrinsic failures in the electricity networks or systems.

**Suggestion:**

- Electronorte: Interruptions due associated with extreme climatic conditions should not be included in the calculation of NIC and DIC.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

The NTCSE (Rural) does not establish this type of exemption for calculating NIC and DIC.

**19) Re: 5.2.5(d) Observations of the Enterprises: Electro Sur Medio:** The MB states that if there are interruptions outside of the SER, each MT feeder should be considered an MT client. Reasoning from this standpoint would be assuming that all clients are on MT, which is not the case. (Examples are listed of feeders that supply for the most part LT supplies.)



**Hidrandina:** Greater clarity is needed on this point since this would amount to involving the feeders of the SERs in the NTCSE as if they are MT supplies subject to that Standard.

**Suggestion:**

- Electro Sur Medio: When SER is affected by interruptions originating outside of it, it will be considered for all purposes that each MT feeder of the SER is an LT client included in the NTCSE with Typical Distribution Sector 1, 2 or 3, as appropriate. If more than 50 percent of the clients on the feeder are on MT, each MT feeder to the SER will be considered an MT client.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

The approach laid down in the proposed MB is consistent with that in 8.1.2 of the NTCSE (Rural).

The tolerances are set by tension levels: the LT clients have greater tolerances than the MT because serving them requires more distribution networks (normally radial) which means more interruptions are likely.

However, for the specific case of 8.1.2 of the NTCSE (Rural), the evaluation (for both LT and MT clients) will be effected at a point located in Medium Tension so that it will be the MT tolerances that are evaluated.

**20) Re: 5.2.5(f) Observations of the Enterprises: Edelnor:** Due to the considerable increase in the reports required by the regulatory agency we consider it reasonable that the transfer to OSINERGMIN be effected within the proposed time period. **Electrosur:** We suggest that the settlement of compensation payments be done at the end of each quarter. It must also be taken into account that after the administrative channels have been exhausted there still remain other recourses such as bringing an action before a judge who deals with administrative law, so this point should be amended. **Hidrandina:** Just a suggestion, we consider it would be prudent to allow more time.

**Suggestion:**

- Edelnor: The Supplier shall proceed to recalculate the indicators and also to transfer the amount due to OSINERGMIN, within 30 business days of the administrative decision which exhausts the administrative recourses.
- Hidrandina: For the case of compensation payments based on administrative decisions regarding force majeure which exhaust the administrative recourses, the matter must be regularized within 30 business days, unless there are challenges of a judicial nature pending.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

The MB establishes that settlement must be made in the month following completion of the administrative recourse. In other words, it could be possible to settle 30 days after the end of the month in which the administrative recourse is completed.

By not setting a specific day in the following month when settlement must be made, the enterprise will be able to do it at the time in the month is considered best for it in light of its work load.

**21) Re: 5.2.5(g) Observations of the Enterprises: Edelnor:** Careful wording is called for to ensure correct application by all the parties in the electricity sector.

**Suggestion:**

- Hidrandina and Edelnor: The value corresponding to the last business day of the control period will be taken into account.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

In view of the extended chain of payments established in the NTCSE for the case of the rural systems, it is not desirable that the procedures already put in place by the NTCSE should be changed.

**22) Re: 5.2.5(h) Observations of the Enterprises: Seal:** It is not clear how compensation payments under the Law on Electricity Concessions should be treated.

**Suggestion:**

- No suggestion

**Outcome:**

Accepted

**Evaluation of the Observation/Suggestion:**

By extended application of the NTCSE, compensation payments already made under the LCE will have to be deducted from the payments made under the NTCSE (Rural).

**23) Re: 5.2.6 Observations of the Enterprises: Electro Sur Medio:** Twenty days after the completion of the semester and quarter the enterprises have to send in the corresponding information to the NTCSE and its MB; this means that the personnel have to give their full attention to the preparing of the statements and/or reports and are functioning under a heavy work load during that period.

**Suggestion:**

- Electro Sur Medio: Within 30 calendar days of the end of the semester the Supplier shall forward, via SIRVAN, the amounts of compensation and the Consolidated Report.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

The period is set in subpara. 3.2.6 of the NTCSE (Rural).

**QUALITY OF COMMERCIAL SERVICE**

**24) Re: 5.3.1(a) and (b) Observations of the Enterprises: Electro Sur Medio:** It is suggested that there be 20 characters (positions) in this field because it does not otherwise reflect the full code of the claim.

**Suggestion:**

- No suggestion

**Outcome:**

Not accepted

**Evaluation of the observation/Suggestion:**

Needs to be kept in line with the NTCSE MB.

**25) Re: 5.3.2 Observations of the Enterprises: Edelnor:** The enterprises provide security, comfort, and convenience for their clients, as is evident from the waiting room and informational facilities and so on, though the requirement to provide toilets is verging on the excessive. However, the matter of relocation of office premises is a business decision and OSINERGMIN's requirement of documented information and justification for relocation

seems to be going too far. **Hidrandina:** Considering their position in the NTCSE MB, the toilets should be eliminated. Regarding possible relocations of offices serving the public, we consider such moves a response to various commercial pressures and we feel the documented report required by OSINERGMIN is asking too much.

**Suggestion:**

- **Hidrandina and Edelnor:** In order to provide satisfactory service, the supplier must have commercial offices serving the public and equipped with appropriate infrastructure for the purpose, while offering the minimal conditions necessary for security, comfort, and convenience, including comfortable seating. As regards possible relocating of commercial offices serving the public as referred to in ANNEX 1 of the Methodological Basis, the concession-holder must report such instances to OSINERGMIN.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion;**

The policy regarding the infrastructure is laid down in subpara. 6.2.3(c)(iv) of the NTCSE (Rural). The MB cannot change this policy.

Regarding the commercial offices serving the public, the approach laid down by the NTCSE MB is maintained.

**26) Re: 5.3.2(d) Observations of the Enterprises: Electro Sur Medio:** If it requires a call-recording system, OSINERGMIN ought to check whether this cost is included in the fixed charge, maintenance and replacement charge, tariff, or under any other head. This independently of business competitiveness.

**Suggestion:**

- No suggestion

**Outcome:**

Accepted

**Evaluation of the Observation/Suggestion:**

No comment

**27) Re: 5.3.2(e) Observations of the Enterprises: Edelnor:** The time limits set for resumption of service do not take into consideration the difficulties posed by the enterprise's

concession zone. **Electronorte:** It is proposed to increase the hours of service to the public in the Typical Sectors 4 and 5, due to the long distances and the more complex terrain involved. Moreover, notification of clients regarding delays in restarting service would not be necessary if the client did not call in by phone. **Electro Sur Medio:** Please confirm whether the Technical Sheet issued by the Repair Crew and signed by the user will be sufficient for proving there has been an interruption. This is the best way to go. **Hidrandina:** Bearing in mind that the rural zones are both distant and inaccessible, longer times than those specified in this paragraph should be considered.

### **Suggestion:**

- Edelnor: Increase from 24 hours to 96 hours the time set in the Rural Basis, after which
  - The enterprise must communicate in writing to the user the reason for the delay in restoring service (in the case of interruptions affecting one single user).
  - The enterprise must tell users who call in the reason for the delay in restoring service (in case of interruptions affecting more than one user).
- Electronorte and Hidrandina: Increase from 24 hours to 72 hours the time set in the Rural Basis.

### **Outcome:**

Accepted in part

### **Evaluation of the Observation/Suggested:**

For the case of interruption in a single supply, the fact that the zone is not readily accessible should not mean that the request for service cannot be met. If restoration of service takes longer than 24 hours the user should be informed of the reason for the delay.

However, it will be pointed out that the enterprise must tell the user the reason for the delay at the time of speaking with him/her, and not after 24 hours have elapsed, as some enterprises have interpreted the requirement.

Regarding the use of technical sheets for communicating the reason for delay to the user, the MB does not specify the how and format for conveying the information. For the moment, we do not consider it necessary to specify a standard format.

**28) Re: 5.3.3.4(a) Observations of the Enterprises: Hidrandina:** It must be taken into account that the supplies located in rural zones are in remote and largely inaccessible areas (in some cases involving hours and/or days of travel, including primitive forms of transportation, detouring around blockages, etc.), all of which complicate matters and generate additional and at time excessive costs, a situation we need to avoid.

**Suggestion:**

- Hidrandina: It is suggested that the notification be done on the same day as the work is performed.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

This requirement is laid down in the technical standard concerning comparisons.

**29) Re: 5.3.3.4(e) Observations of the Enterprises: Seal:** In 5.3.3.4(f), the grounds for use of alternative supplies should be expanded.

**Suggestions:**

- No suggestion

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

It is not necessary to include more assumptions for the selection of alternative supplies.

**30) Re: 5.3.3.5(a) Observations of the Enterprises: Seal:** The status report of monthly findings should be submitted in the first 25 days of the month following the one checked, so as not to interfere with the submission of the NTCSE consolidated report; the same also applies for the half-yearly consolidated report.

**Suggestion:**

- Seal: The monthly progress reports should be submitted within the first 25 days of the month following the one checked.

**Outcome:**

Not accepted

**Evaluation of the Observation/Suggestion:**

The dates must line up with the requirements for Quality of Tension.

## **TRANSITIONAL PROVISION**

**31) Re: 8.2 Observations of the Enterprises: Electro Sur Medio:** It is excessive that a progress report on the compliance programs has to be submitted every six months; however, we suggest that the first progress report should be required in February 2009, since it is well known that January and July are months with a heavy work load.

### **Suggestion:**

- **Electro Sur Medio:** During the first stage of application, a report should be submitted every nine months on the status of progress with the compliance programs. The first status report will be due in March 2009.

### **Outcome:**

Accepted in part

### **Evaluation of the Observation/Suggestion:**

The progress reports will be submitted half-yearly but as of March 2009. This in light of the fact that January and July are months in which a large number of reports are required to be submitted concerning application of the NTCSE.