

NAMIBIA ELECTRICITY SUPPLY INDUSTRY

QUALITY OF SUPPLY AND SERVICE STANDARDS

IMPLEMENTATION AND BENCHMARKING FRAMEWORK

RELEASE 1: 2004

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Abbreviations:

- ECB – Electricity Control Board
- ESI – Electricity Supply Industry
- LV – Low Voltage (as defined in NRS 048 Part 1)
- MV – Medium Voltage (as defined in NRS 048 Part 1)
- QOSS – Quality of Supply and Service
- QOS – Quality of Supply
- RED – Regional Electricity Distributor



1 Introduction

The Electricity Control Board (ECB) has embarked on a consultative process for determining appropriate standards governing the quality of electricity supply and quality of service (QOSS) provided by licensed electricity undertakings in Namibia.

The key objective of the process is to involve stakeholders to the maximum possible extent and to come up with standards that are applicable to and can be implemented in Namibia.

Such standards exist in South Africa and have in fact been adopted locally by the ECB in the absence of Namibian standards. The ECB does not propose to “re-invent the wheel”. It rather proposes to engage in a stakeholder interaction process to determine which aspects of the RSA standards present a problem under Namibian conditions and then draw up recommendations of how these concerns can be addressed.

This approach supports the strengthening of regulatory co-operation within southern Africa and works towards the goal of regional standards. In adopting the approach of not developing completely new standards for Namibia the ECB has opened the way also for comparing performance regionally because at least definitions, approaches, measurement techniques and reporting guidelines are the same as in South Africa. This is certain to pay dividends in future when regional markets increasingly open up and comparison between countries becomes important for marketing a specific country but also for industry to be able to compare electricity suppliers between countries and choose those suppliers who perform better.



2 Implementation of QOSS Standards in Namibia

Despite the fact that the NRS standards have been entrenched in the license conditions for all distribution Licensees for more than two years, not much progress has been made in addressing QOSS issues (except for NamPower Transmission who are in the process of widespread installation of QOS measuring instruments and who have implemented a QOS database).

The purpose of this section is therefore to document the implementation plan agreed to by stakeholders at the final stakeholder workshop in March 2004. The ECB has followed a public and participative process toward the development of the Namibian QOSS standards. In taking this approach the stakeholders have had ample opportunity to air their concerns and take issue with the proposed approach.

2.1 Constraints in Implementing QOSS Standards in Namibia

The initial attempt at implementation of QOSS standards in Namibia through provisions in the original license conditions for all license types has not been successful. Some of the reasons for this failure are:

- A non-consultative approach taken in choosing the standards (RSA NRS standards)
- Lack of communication between the ECB and Licensees regarding how these standards were to be implemented
- Lack of technical capacity in a large number of Distribution Licensees.
- Budget constraints in many of the smaller Distribution Licensees for purchasing QOS meters and installing them.
- The NRS standards place extensive reporting requirements on the Licensees. The reporting requirements were identified as one of the most major stumbling blocks in implementation since most of the Licensees did not see fit to implement the systems necessary for such reporting. Spending excessive effort and money on reporting is also considered inappropriate when many of the Licensees struggle to manage the basics of running their business.

This has led the ECB to embark on a consultative process aimed at providing the stakeholders with opportunity to contribute to the establishment of standards suitable for Namibia and which they consider possible to implement, taking into account the above constraints.

The results of this process are that

- The RSA NRS standards have been adopted for Namibia with some technical modifications and major reductions in reporting requirements.
- In a significant deviation from the RSA approach a system of penalties has been adopted for Namibia. This gives the advantage that customers are incentivised to police the standards, which removes a lot of responsibility from the Licensee in terms of recording and reporting performance. The quality of service reporting has in fact been reduced to simply reporting penalties claimed and paid out for the various infringements carrying penalties (as opposed to having to record and report in detail on actual performance in respect of a large number of service activities.
- In terms of technical quality of supply the NRS standards have been largely adopted since they are focussed on providing a quality of supply that will not damage equipment. These standards are international in nature since much electrical



equipment is sourced from international markets. As such there is not much choice other than to adopt a standard which makes it possible to use such equipment locally without damaging it.

- Reporting requirements in terms of forced outages has been removed for the initial implementation period, since the information required to compile these reports is not available in many small Distribution Licensees. It is intended to reconsider this reporting requirement once the REDs have been established, alleviating some of the dire resource constraints experienced by the small distributors.

2.2 The Namibian Regulatory Approach

The South African experience in establishing QOSS standards and implementing them has shown that an approach of imposing standards and extensive reporting requirements has not been very successful. Specifically requiring Licensees to submit extensive reports which require advanced recording and reporting systems has not been successful, since Licensees tend to be unable to cope with the requirements and end up compiling reports which are not factual and therefore useless.

The South African Regulator (NER) has therefore issued its “Power Quality Directive” which changes the focus in regulating quality of supply away from extensive standards, extensive reporting and a heavy handed regulatory attitude towards a more light handed regulatory regime which places more responsibility on the Licensees to take an active role in deciding what is acceptable to them and their customers and to take an active management stance towards QOSS.

This has not resulted in standards being relaxed or removed, but instead has had the effect that standards are seen more as recommended best practice which should be adhered to while leaving some discretion to Licensees and their customers to manage quality to acceptable levels between themselves.

The ECB intends to learn from this experience and approach, and intends to follow a similar route. The ECB however recognises that conditions in Namibia are different from the RSA, and that a number of basic steps have preceded the NER’s power quality directive in the RSA, many of which have been appropriate.

The ECB sees the necessity to determine minimum standards for Namibia which give the Licensees a clear framework of basic quality parameters which they are expected to meet. These parameters have been kept at what can be considered “low standards” with a view of encouraging even the smallest Licensee to achieve them in the belief that they are set at such basic levels that every Licensee can achieve them even with limited means and lack of technical capacity.

Beyond these minimum requirements the ECB encourages Licensees to manage their own quality performance and to engage with their customers to determine what is acceptable to them. The cornerstones of this approach are

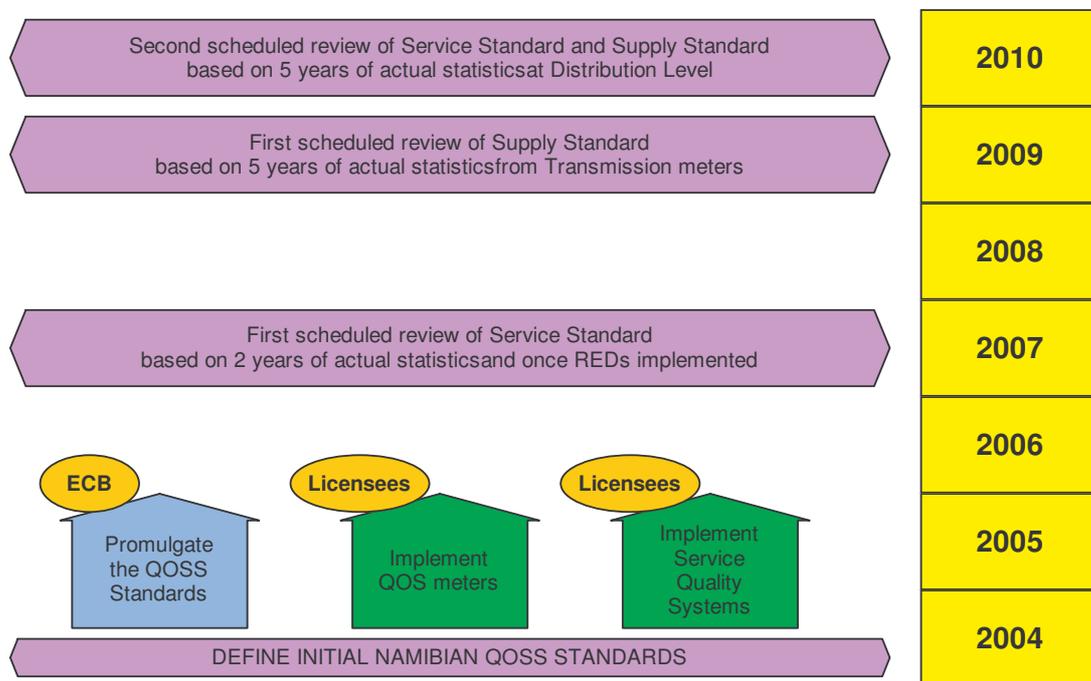
- Each Licensee should establish a quality of supply and service charter which should be well publicised and brought to the attention of customers
- Each Licensee should include quality of supply and service provisions in its power supply contracts. The extent of these provisions should be graded according to the size of the supply. It is expected for example that a domestic prepayment customer will have the customer service charter as guidance to his/her rights and responsibilities while a 20MVA customer could expect to have extensive and technically detailed quality provisions in his/her contract, tailored to that specific customer’s needs.



- Licensees should regard it as being in their own interest to monitor their quality performance. The ECB does not wish to impose requirements regarding the number of QOS meter sites beyond an absolute minimum detailed in this document. It is expected that Licensees should determine what is in their own interest and act accordingly.
- The ECB is planning to avail itself as facilitator to assist Licensees in eliminating resource constraints, specifically human capacity constraints. In this light is proposed that the initial implementation of QOS meters including the establishment of a QOS database for the Distribution Sector be co-ordinated through the ECB, and that the entire implementation be contracted on behalf of all the Distribution Licensees by the ECB.
- The ECB is also proposing to facilitate the management of QOS data on behalf of the Distribution Licensees through a centralised service contract with a competent service provider who will manage the entire QOS data process on behalf of the Distribution Licensees.
- In the long term the ECB's role is intended to be that of setting guidelines (in consultation with the industry), checking on the performance of the industry and acting as facilitator for achieving good results. The Licensees on the other hand will be responsible for managing their quality within the framework and standards set by themselves together with the ECB.

2.3 Planned Implementation Timeline

Figure 1: Standards Implementation Timeline





3 Responsibility of Transmission Licensees

3.1 Definition

A Transmission Licensee is the holder of a valid transmission license issued by the ECB.

The Transmission (wires) business in Namibia, at the time of publication of this paper, is defined as an electrical network operating at or above 66kV. The exception to this definition is the 66kV networks operated by the City of Windhoek which are operated under the City's distribution license. These 66kV networks are not considered part of Transmission.

3.2 Responsibility for Quality of Supply Performance

The Transmission Licensees shall be responsible for the quality of supply delivered to all its customers at all respective points of common coupling. Transmission customers currently include direct bulk customers, re-distributors and REDs.

The Transmission Licensees shall further be responsible for managing the voltage pollution¹ contributed by any Transmission customer at the point of common coupling. The preferred method of managing this aspect will be through power supply contracts containing quality of supply provisions. Where such contracts do not exist and/or cannot be immediately amended, the Transmission Licensees shall negotiate solutions to quality of supply and voltage pollution issues with the customers in question.

The Transmission Licensee shall also be responsible for contracting appropriate quality of supply with Generators and other transmission energy suppliers as may be appropriate in Namibia from time to time.

3.3 Implementation of Quality of Supply Measurements

3.3.1 Agreed Meter Placements

The Transmission Licensees will install and maintain QOS meters at least as follows:

- At all transmission substations with a voltage of 66kV or higher and with an installed transformer capacity of 2.5MVA or greater.

3.3.2 QOS Databases

The Transmission Licensees will maintain a QOS database which will receive measurement data from all QOS meters installed by the Transmission Licensee. The QOS data recorded by the meters and stored in the database shall comply with the specifications of the *Quality of Supply Standard*.

3.3.3 Data Management

The Transmission Licensees will ensure that its QOS data is properly and professionally managed to ensure consistency and data security.

¹ Voltage pollution: The introduction of harmonic distortion, dips, flicker and/or voltage unbalance onto the electricity supply network. Details of this can be obtained in the NRS 048 Standard.



3.4 Implementation of Quality of Supply Contracting

The Transmission Licensees shall include appropriate quality of supply provisions in all new power supply contracts. Such provisions shall deal with all quality of supply parameters dealt with in NRS 048.

The Transmission Licensees shall also amend any existing power supply contracts at the soonest future opportunity where such contracts can be amended to include appropriate quality of supply provisions, unless such contracts already contain such provisions.

Such contracts shall provide for:

- Allowable voltage pollution level contribution by the customer, based on the Transmission Licensee's calculations in accordance with the *Quality of Supply Standard*;
- Typical interruption and dip performance (as defined in the *Quality of Supply Standard*) of the network at the point of common coupling, should such information be available;
- A complaint and dispute resolution procedure, generally compliant with the complaints procedure provided in 5.4 hereof.



4 Responsibility of Distribution Licensees

4.1 Definition

Distribution Licensees are entities holding an electricity distribution license issued by the ECB.

The Distribution (wires) business, at the time of publication of this paper, is in a period of change due to the establishment of REDs. Generally however, distribution networks are defined as those electrical networks operating at voltages not exceeding 33kV. Some exceptions exist where 66kV networks are included (e.g. City of Windhoek).

With the establishment of REDs imminent, the approach to implementing quality of supply is focused at RED level. Where REDs are not yet established, the existing licensees are encouraged to co-operate at RED level to implement quality of supply measurements and systems as well quality management in general.

4.2 Responsibility for Quality of Supply Performance

The Distribution Licensee shall be responsible for the quality of supply delivered to all its customers at all respective points of common coupling.

The Distribution Licensee shall further be responsible for managing the voltage pollution contributed by any Distribution customer at the point of common coupling. The preferred method of managing this aspect will be through power supply contracts containing quality of supply provisions. Where such contracts do not exist and/or cannot be immediately amended, the Distribution Licensee shall negotiate solutions to quality of supply and voltage pollution issues with the customers in question.

The Distribution Licensee shall also be responsible for managing the voltage pollution contributed to the transmission system at any point of common coupling. This should be done through an appropriate quality of supply contract with the Transmission Licensee.

In the case of domestic and other small customers it will not be practical to contract individually for quality of supply. The Licensee should publish general quality of supply information applicable to small customers and make such publication(s) available to the affected customers in order to educate them regarding quality of supply and the responsibilities of the Licensee and the customer.

4.3 Implementation of Quality of Supply Measurements

The implementation of quality of supply (voltage quality and continuity) requires the elaboration of the following topics:

- Agreement on where to measure, and what to measure
- Budget definition and Acquisitions for implementation by Licensees
- Purchase and installation of measurement devices by Licensees
- Acquisition and implementation of QOS databases by Licensees
- Definition and implementation of regular data management procedures by Licensees

4.3.1 Agreed Meter Placements

The following meters will be purchased, installed and managed by Distribution Licensees (site class refers to NRS definition) as a minimum:



Table 1: Minimum QOS Meter Placement - NORED Area (Including Oshakati)

NORED Area (Including Oshakati)		
Site Class	Places for installation	Notes
1A, 1B, 1C	Oshakati (3) Ondangwa (3) Rundu (3) Katima Mulilo (3) Opuwo (1)	
1D	Rural networks (3)	
2A	Rural MV customers (1)	e.g. Musese or Etunda
2B	Oshakati (1)	

Table 2: Minimum QOS Meter Placement - CENORED Area

CENORED Area		
Site Class	Places for installation	Notes
1A, 1B, 1C	Otjiwarongo (3) Grootfontein (3) Tsumeb (3) Outjo (1) Otavi (1) Khorixas (1) Okakarara (1)	
1D	Rural villages (3) Farms (3)	
2A	Rural MV customers (1)	e.g. Waterberg Resort
2B	Otjiwarongo (1)	

Table 3: Minimum QOS Meter Placement - ERONGO RED Area

Erongo RED Area		
Site Class	Places for installation	Notes
1A, 1B, 1C	Walvis Bay (3) Swakopmund (3) Henties Bay (1) Karibib (1) Usakos (1) Omaruru (1) Arandis (1)	
1D	Rural villages (3) Farms (1)	
2A	Rural MV customers (1)	e.g. Wittreich - Marmorwerke
2B	Walvis Bay (1)	

Table 4: Minimum QOS Meter Placement - CENTRAL RED Area

Central RED Area		
Site Class	Places for installation	Notes
1A,	Windhoek (6)	



1B, 1C	Okahandja (3) Gobabis (3)	
1D	Rural villages (3) Farms (3)	
2A	Rural MV customers (1)	e.g. Neudamm, WHK Intl airport
2B	Windhoek (3)	

Table 5: Minimum QOS Meter Placement - SOUTHERN RED Area

Southern RED Area		
Site Class	Places for installation	Notes
1A, 1B, 1C	Rehoboth (3) Lüderitz (3) Mariental (3) Keetmanshoop (3) Karasburg (1) Aranos (1)	
1D	Rural villages (3) Farms (3)	
2A	Rural MV customers (1)	e.g. Ai-Ais
2B	Lüderitz (1)	

4.3.2 Budget Definition and Acquisition

The financial year for most Licensees ends in June. Licensees shall include adequate provision in their budgets for the 2004/2005 financial year to implement QOS measurements and data management.

4.3.3 Purchase and Installation of Meters

Licensees shall purchase and install the meters as listed in section 4.3.1. The Licensees agree to complete this work by June 2005.

4.3.4 QOS Measurements Databases

The Licensees shall be responsible for acquiring and managing a quality of supply database. Since it is likely that the Licensees will find it difficult to address this requirement due to their resource constraints the following is recommended to ensure initial implementation:

- The Licensees should jointly obtain the services of a professional service provider to
 - Assist with the initial acquisition and installation of meters, communications systems and the QOS measurements database
 - Manage the complete data acquisition, storage and querying on behalf of the Licensees, including the download of data from the QOS meters.
- The ECB is willing to assist in the above process in a co-ordinating role.
- The above would ensure that all Licensees obtain the same meters with the same communications protocols and data formats, plus the approach would ensure that the QOS data from the meters is handled professionally in all instances, resulting in the maximum reliability and credibility of data.



4.3.5 Data Management

The Licensees agree to implement adequate data management procedures, specifically the following:

- Regular download of data from QOS meters, i.e. data is downloaded well within the data storage limits of the meters.
- Proper handling and backup of QOS data to prevent corruption and loss
- Proper storage of QOS data to enable reporting, i.e. data stored in a professionally designed and purpose built database system.

The Licensees shall implement the above by June 2005.



5 Responsibilities of Supply Licensees

5.1 Definition

Supply Licensees are entities who hold a valid electricity supply license issued by the ECB.

Currently, supply licenses are issued by the ECB only in conjunction with a transmission or distribution license. The supply license essentially covers the “retail” operation and as such is primarily concerned with service quality.

5.2 Responsibility for Quality of Supply Performance

The power supply agreements concluded between distribution and transmission licensees and end customers are made under the respective supply licenses. However the supply contracts deal with both the “wires” business and the “retail” business. The provisions relating to quality of supply under the “wires” has been dealt with under the transmission and distribution licensee responsibility sections respectively.

This section deals with the service quality delivered to customers under the supply licenses.

The Supply Licensee is responsible for service quality (also referred to as commercial quality) to the customer. This refers to the quality of interactions with customers (where customers includes potential customers) as defined in the *Quality of Service Standard*, and includes

- Personal interaction at service centres or elsewhere
- Telephonic interaction
- Written interaction, including quoting, billing and dealing with queries and complaints

If in future supply licenses and transmission/distribution licenses are issued separately, then it is expected that the end customer will contract only with the Supply Licensee. In that case the contract between the Supply Licensee and the customer shall include provisions for quality of supply. Such provision for quality of supply shall reflect the conditions for quality of supply contained in the contract between the Distribution/Transmission Licensee and the Supply Licensee.

5.3 Implementation of Service Quality Measurements

All Licensees are required to implement at least manual systems to comply with the requirements stipulated in the *Quality of Service Standard* document. This implementation shall be completed by June 2005 and systems shall commence operation no later than July 2005.

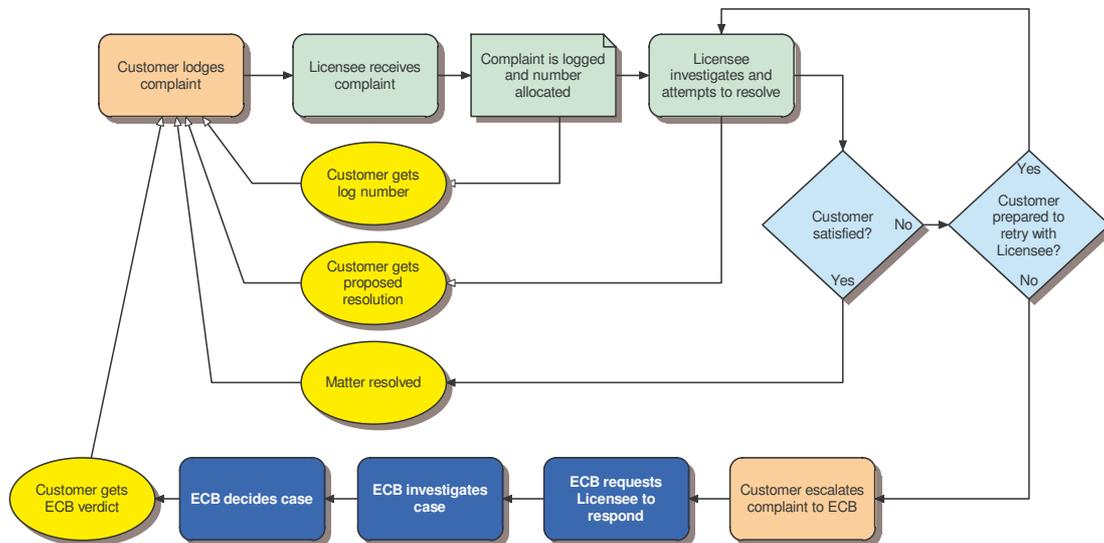
The ECB undertakes to investigate suitable service quality tracking software tools and will recommend suitable options to Licensees.

5.4 Standard Complaints Handling Procedure

It is important that all stakeholders in the ESI understand and adhere to a common agreed procedure for dealing with complaints regarding QOS.

This section introduces a standard complaints handling procedure which maps out responsibilities and processes to be followed by the various stakeholders.

Figure 2: Complaints Handling Procedure Overview



5.4.1 Initial Complaint

In case of a complaint the customer should first address him/herself to the Licensee who supplies him/her. Complaints should preferably be lodged in writing, but the Licensee should also be prepared to accept verbal complaints.

Upon receipt of a complaint the Licensee shall log the complaint and allocate a unique complaint number which is to be provided to the customer for reference. The Licensee shall keep all documentation associated with the complaint filed under this reference number for easy later retrieval. The Licensee shall retain records of complaints for a period of at least two years.

The Licensee shall advise the customer regarding the time required for the Licensee to respond formally to the complaint.

The Licensee will then proceed to investigate the complaint as speedily as possible. The results of the Licensee’s investigation and the proposed remedy (if any) should be submitted to the customer in writing, however in case of minor complaints telephonic feedback is also acceptable, provided that the date of the feedback is logged by the Licensee.

If the customer is satisfied and accepts the Licensee’s conclusions and/or proposed remedy, the Licensee will implement the remedy which will resolve the complaint.

Should the Customer not be satisfied, he/she may either revert to the Licensee and request another attempt to resolve the matter, or otherwise address the complaint to the ECB in writing.

5.4.2 Escalation of Complaints to the ECB

After failure of at least one attempt to resolve a complaint directly with the Licensee a customer may escalate the complaint to the ECB for resolution.

The customer shall submit the complaint to the ECB in writing, stating the name of the Licensee, the complaint sequence number issued by the Licensee and as much detail and supporting documentation as is necessary for the ECB to gain a proper understanding of the customer’s point of view regarding the complaint.



Upon receipt of a complaint the ECB will advise the Licensee that the complaint has been lodged with the ECB and request the Licensee to submit a summary of the Licensee's investigation and conclusions to the ECB. The ECB will allow the Licensee fourteen days time for this submission.

The ECB will then proceed to consider the complaint in the light of both the customer's and the Licensee's submissions. If necessary the ECB may undertake its own further investigation and/or measurements and/or may request the Licensee to undertake further investigations and/or measurements. The ECB should also take whatever other steps it deems necessary to solve the matter and/or gain a good understanding of the facts relating to the complaint.

Upon conclusion of its investigation the ECB shall compile a written decision and provide this decision to both the customer and the Licensee. Should this process not satisfy the customer then he/she still has recourse to due legal process.



6 Reporting to the ECB

6.1.1 General

The ECB will expect licensees to compile and submit reports relating to quality of supply and service as set out below.

Any Licensee who has valid reasons for not being able to report as required shall advise the ECB of their circumstances in writing as soon as they become aware of their inability to comply.

The ECB may, at its discretion, exempt Licensees from some reporting requirements on the basis of a properly motivated written application being received in good time before reports are due.

6.1.2 Quality of Supply Reporting

The first regular annual quality of supply statistical report shall be submitted to the ECB within two months after the first anniversary of the supply license after July 2005.

The report shall comply with the requirements of NRS 048 Part 3 as referenced in the *Quality of Supply Standard* document.

6.1.3 Service Quality Reporting

The first regular annual service quality statistical report shall be submitted to the ECB within two months after the first anniversary of the supply license after July 2005.

The report shall comply with the requirements of the *Quality of Service Standard* document.

6.1.4 Data Access

The ECB shall have the right to request Licensees to provide the ECB with extract copies of QOSS data as collected by the Licensee.

A customer shall have the right to access QOSS related data collected in connection with him/herself, for example service data related to his/her account(s) and supply data from meters at or close to his/her point(s) of common coupling.

6.1.5 Reporting Formats

The required reporting formats will be provided by the ECB to the Licensees in the form of a spreadsheet for ease of use. A copy of the required report formats is attached to this document as an annexure.



7 Benchmarking Framework

The requirements and standards detailed in the *Quality of Supply Standard* and *Quality of Service Standard* documents are intended as minimum standards to be achieved in order to commence implementation of QOS standards in Namibia.

It is expected that the standards will need to be revised and reviewed once the initial implementation has been completed and at least one year's worth of statistical data is available. It is also necessary from time to time to consult changing international standards and regulatory approaches and adjust the Namibian approach accordingly.

The ECB, assisted by the QOSS Standing Committee, will review international best practice and consider how it can be best applied in Namibia.

This section of the document deals with the processes that will be followed to manage QOS in Namibia on an ongoing basis.

7.1 The QOSS Standing Committee

The QOSS Standing Committee was initially established as a project steering committee overseeing the development of initial standards. It is common practice for such committees to be standing committees which assist the regulator in the ongoing management of quality, benchmarking and standards.

The QOSS Standing Committee is therefore established as a standing committee with a mandate to assist the ECB in ongoing maintenance of quality standards and their application in the Namibian ESI.

7.1.1 Composition of the Standing Committee

The composition of the committee is driven by two main criteria:

- Representation of key stakeholder groupings
- Skills and experience of individual members

7.1.1.1 Stakeholder Representation

Key stakeholders participating in the activities of the committee include:

- ECB
- NamPower Transmission (two representatives)
- REDs (technical & customer service representatives) (max two representatives per RED)
- Standards Institute (Ministry of Trade and Industry) (one representative)
- Chamber of Mines (one representative)
- Consumer Lobby (one representative)
- NCCI on behalf of Industry (one representative)
- Equipment Suppliers (one representative)
- Communications industry (MTC/Telecom/NBC) (one representative)
- NamWater (one representative)
- NAU+NNFU (one representative)



7.1.1.2 Skills and Experience Mix

Committee members should represent a mix of experience and skills and be able to contribute substantively in its deliberations. Expertise in one or several of the following aspects is a pre-requisite:

- Regulatory affairs
- Technical - relating to quality of supply (both supplier and user perspective)
- Customer service
- Standards
- Measurements
- Systems
- Equipment specification & use (domestic & industrial)

7.1.2 Mandate of the Standing Committee

The primary focus of the Standing Committee is to serve as a forum where stakeholders in the ESI can interact with the ECB and each other in defining and amending quality standards for the industry.

The Standing Committee is advisory in nature.

Specific tasks in terms of this mandate include:

- Assist the ECB with the implementation of the standards
- Assist and advise the ECB when reviewing standards
- Identification of the key issues to be addressed by the standards
- Providing technical and practical inputs to the standards development and maintenance process
- Facilitating active participation by key stakeholders and ensuring general stakeholder acceptance of the proposals
- Reviewing documents before distribution to the wider public
- Ensuring that the QOSS standards are implementable

7.1.3 Organisation of the Standing Committee

7.1.3.1 Chairperson and secretary

A senior representative from the Electricity Control Board will chair the Standing Committee. The ECB will provide the secretariat for the Committee.

7.1.3.2 Administrative Matters

The following administrative matters apply:

- The Standing Committee shall meet at least once per annum. More regular meetings can be arranged by the ECB as needed or on request from Members;
- The Electricity Control Board is responsible for calling and convening meetings of the Standing Committee as often as required;
- The normal venue for the meetings of the Standing Committee is the ECB boardroom;



- The Secretary of the Standing Committee will ensure that all minutes and documentation that are prepared as part of the work of the Committee will be circulated to all members and are available for inspection by other stakeholders on demand.

7.2 Standards Reviews

Regular reviews of the quality standards and benchmarks forms part of the mandate and responsibility of the QOSS Standing Committee and the ECB. This section deals with these functions.

7.2.1 Regular Reviews

The ECB (assisted by the QOSS Standing Committee) should review the Namibian Electricity Quality of Supply and Service Standards at least once every two years.

Such reviews shall specifically consider changes to the South African standards which form the reference basis for the Namibian standards. The Namibian standards reference specific versions of the South African standards and as such will not become invalid when newer versions are issued in South Africa.

However for the purpose of regional integration and staying abreast with latest trends any changes to the RSA standards should be reviewed and considered for updated referencing in the Namibian standards. Therefore the ECB will keep abreast with changes to the RSA standards and will initiate a review of the Namibian standards within one year of changes to the RSA standards having been published.

Furthermore developments in Namibia may necessitate changes in standards and/or changes to references to the RSA standards.

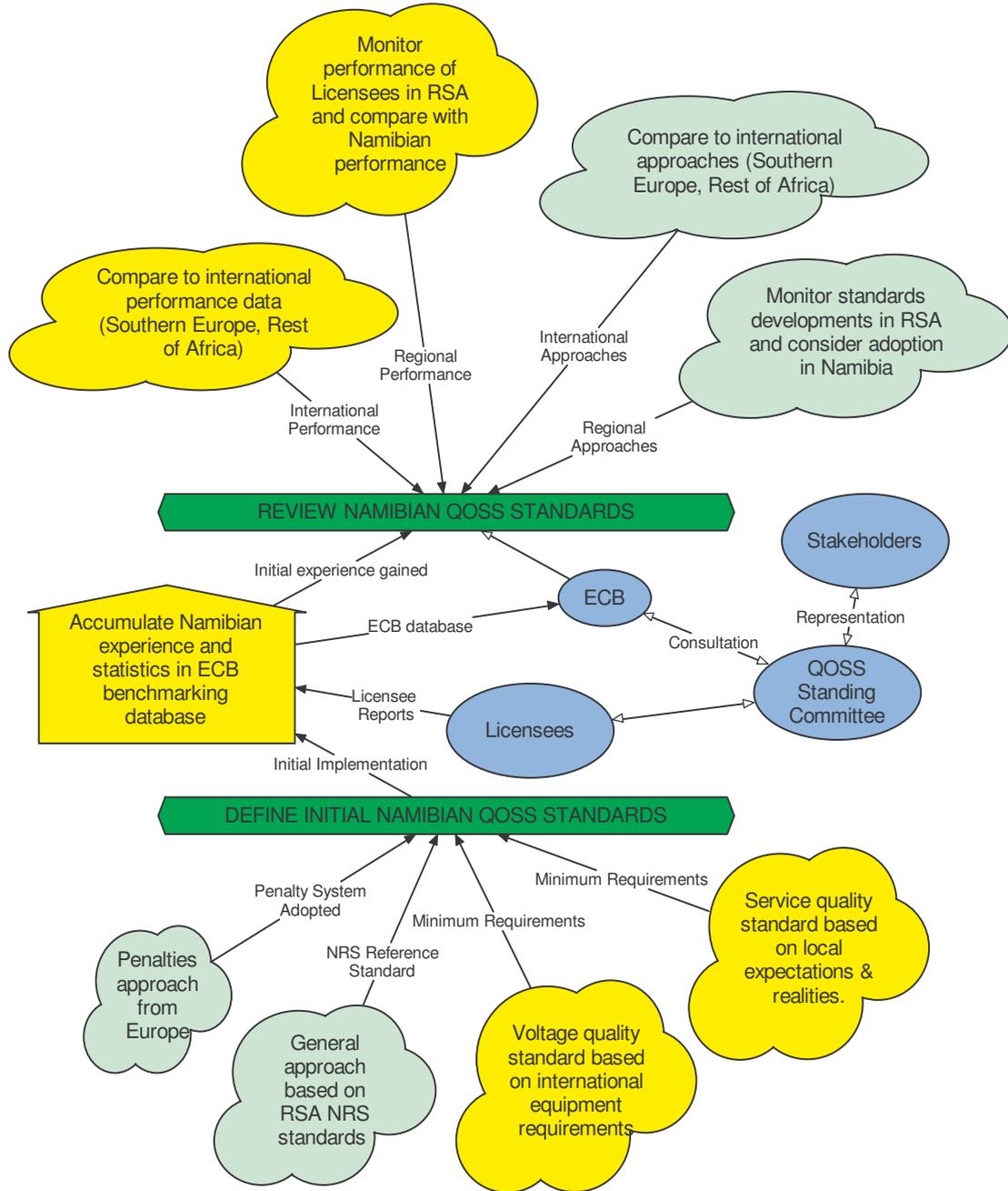
The ECB together with the QOSS Standing Committee will consider requests from ESI stakeholders for changes or amendments to standards. They will also undertake reviews on their own initiative and maintain contacts in the RSA and internationally to receive relevant reports and information regarding QOSS developments.

7.2.2 Stakeholder Consultation

If the outcome of any standards review indicates that significant changes should be made to the Namibian standards, then the ECB will through the Standing Committee consult with the Namibian ESI stakeholders as widely as is reasonably possible before implementing such changes.

7.3 Benchmarking

Figure 3: Benchmarking Process Map



7.3.1 Step 1: Assessment of Current Status Quo

Before benchmarking can really be implemented in Namibia the current status quo needs to be assessed. To this end this document contains an implementation plan for starting QOSS related measurements and reporting. A reasonable amount of time is allowed for this implementation and before first reporting is required.



During this initial time the only guidelines for minimum standards that are available are a) the RSA minimum standards and b) minimal historic actual and anecdotal information from Namibia.

Generally the RSA minimum standards have been adopted as *overall* standards in Namibia. Regarding service quality, some basic *guaranteed* standards have been developed for Namibia. These *guaranteed* standards have specifically been kept very low, i.e. they are intended as “rock bottom” or minimalist standards which should be achieved in every instance.

It is recommended that the first reports to be received by the ECB should be assessed against these minimum standards, i.e. first of all the ECB should determine how the Licensees are actually performing against the initial Namibian standards and against each other.

In compiling the Namibian Quality of Service Standard information has been drawn from the experience in Europe as summarised in two reports compiled for the Council Of European Energy Regulators (CEER)². Specifically the principle of employing penalty payments for non-compliance with guaranteed standards has been adopted from the European experience. It is recommended to also in future consider the European experience when reviewing Namibian standards.

7.3.2 Step 2: Review of Namibia Minimum Standards

After the first and/or second annual QOSS reports have been received by the ECB (in 2006 / 2007) a first review of the Namibian minimum standards will be required. At that stage it will be possible to assess the minimum standards against the actual performance of the Licensees.

The first review of minimum standards is recommended to concentrate on the following:

- Actual performance of Licensees during the first one or two years of monitoring
- Actual problems experienced by Licensees in recording and reporting on performance, including reporting and other exemptions granted to Licensees
- Developments in RSA minimum standards and actual performance recorded in South Africa
- Improving the relevance of Namibian minimum standards
- Addressing problems and constraints experienced in implementing minimum standards in Namibia

7.3.3 Step 3: Alignment with International Performance

Once quality management and minimum standards have been successfully entrenched in the Namibian ESI and a definite start has been made by Licensees it will be time to concentrate more on regional and international alignment and benchmarking.

At this point the approach of basing the Namibian standards on the RSA standards should pay off. The NER in the RSA should by that time have a database of actual performance, and since the parameters and definitions are largely the same it should be possible to compare the performance of Namibian Licensees with that of their RSA counterparts.

² CEER: Quality Of Electricity Supply: Initial Benchmarking On Actual Levels, Standards And Regulatory Strategies - R. Malaman (Chairman), J. Afonso, L. Lo Schiavo, A. Romero, C. Sep lveda, R. Vrolijk, B. Wharmby - April 2001

CEER: Second Benchmarking Report On Quality Of Electricity Supply – September 2003



With RERA pursuing the idea of regional standards (or at least alignment of standards on a regional basis), it is also possible that further countries may have aligned with the RSA standards (as Zambia has done), and that would enable further comparison.

It is recommended that

- The ECB should keep abreast with QOSS developments in other Southern African countries. This may be easiest to do through RERA.
- The ECB should strongly consider more elaborate reporting of key quality of service parameters once the REDs have been established and systems for monitoring quality of service performance are in place. This would make it possible to compare performance with that reported for example by the CEER benchmarking reports, which give detailed information for a number of countries and for a wide range of quality of service and supply parameters. From these reports it becomes clear that performance across Europe varies significantly.

7.3.4 Establishment of a Namibian QOSS Performance Benchmarks Database

The ECB will prepare for receiving QOSS reports from Licensees by developing or purchasing a database into which the relevant summary performance data received from Licensees can be entered and reported upon.

This will enable the ECB to build statistics on Namibian QOSS performance vis-à-vis minimum standards and monitor trends over time.

It is recommended that

- The ECB ensure that its database is updated annually with reported data from Licensees
- The ECB compile comparative reports and graphs showing the performance of the Licensees for the most recent period in comparison to one another in the context of some key business parameters of the Licensees (such as customer numbers, total km of network). If available, such reports should also include comparative information from South African Licensees or from European Licensees.
- Once some years' data has been accumulated the ECB should compile timeline reports showing some of the key QOSS parameters over time, for the various Licensees and averages.



8 **Annexure A: Report Formats**