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New Technical Requirement of a Distribution Licence

1. Introduction

Since the early 1990s, there has been much discussion about the restructuring of the electricity distribution industry (EDI), which has been driven by the need to address a number of issues engulfing the EDI including the substantial fragmentation of the industry. The industry is currently characterized by:

- Fragmentation of the industry which poses a huge challenge in terms of regulation;
- Serious financial and technical problems;
- Wide disparity in cost, tariff and service levels;
- Serious lack of human resource;
- Electrification backlogs;
- Scale economies and efficiency; and
- Lately, by deterioration of maintenance and infrastructure investment.

Many electricity distributors do not have the resources to maintain their networks, expansion and meet electrification and growing economic demand needs.

Restructuring into Regional Electricity Distributors (REDs) will therefore allow the development of a more efficient industry that is better able to implement the electrification programme while not compromising the ability of the EDI to support the funding of local government or to offer subsidised electricity tariffs for poor customers. Improved service and efficiency levels will also help maintain and improve South Africa's electricity price competitiveness.

The EDI Blue print identified the following as objectives of restructuring:

- Universal access to electricity for all South Africans.
- Acceptable and sustainable levels of supply security and quality.
- Achievement of government's electrification programme.
- Sustainable electricity supply to low-income consumers, regardless of location, at affordable prices.
- Future REDs to operate on a sustained financially viable basis as independent businesses.
- Future REDs to provide secure employment to their employees, provide skills development and training consistent with a high technology, modern distribution business
- Planned and managed transition.
- Transition to be done within the context of a comprehensive human resources strategy and an agreed social plan.

The grid code will therefore elevate some of the problems that are encountered at the distribution level. Since this is a technical document it will uniform the distribution industry and also prepare

for the formation of REDs. It will also make it easier for regulation especially in the improvement of quality and reliability of supply. NERSA approved the distribution code for incorporation into the distribution licence. All distribution licensees will be required to comply with the code.

2. Objectives of the Grid Code

The Distribution Code will be a primary regulatory instrument that will ensure that the following:

- It defines detailed conditions for access to and use of the Distribution System including basic rules, procedures and requirements that govern the operation and maintenance of the Distribution System.
- It will form part of the licensing conditions of the Distribution Network Service Providers.
- The restructuring of the Electricity Supply Industry in South Africa will present significant challenges pertaining to the operation, planning and maintenance of the Distribution System. The Code is intended to define the technical aspects of the Distribution System which the Distributors and other Users of the Distribution System should comply with.

3. Electricity Industry Developments

NERSA is the Grid Code administrative authority in line with the Electricity Regulation Act (2006). The Development of the RSA Code (transmission and distribution) is done with the involvement of the affected in the industry through a representative panel of experts. The process for the development of the Distribution Code took a period of over two years, starting June 2005. It followed a rigorous process which included industry workshops under the auspices of the Grid Code Secretariat. Participants involved in Distribution code drafting process included:

- NERSA, AMEU, DME, EIUG, Eskom (Gx, Tx, Dx),

The Grid Code (i.e. Transmission Code) was implemented as an extension of licensee obligations on 1 January 2005. The Grid Code however only catered for transmission network services. Therefore there was a need to extend the code to distribution network services. The Distribution Code therefore was proposed as a Code that defines detailed conditions for access to and use of the Distribution System including basic rules, procedures and requirements that govern the operation and maintenance of the Distribution System. The Distribution Code will form part of the licensing conditions of the all subscribers. The restructuring of the Electricity Supply Industry in South Africa will present significant challenges pertaining to the operation, planning and maintenance of the Distribution System. The Distribution Code is also intended to define the technical aspects of the Distribution System which the Distributors and other Users of the Distribution System should comply with.

The Distribution Code contains the following sections

1. Code Definitions

As the name suggests, this code defines terms used throughout the Distribution Code. This section will eventually be reconciled with the Preamble Code of the current Transmission Grid Code.

2. Distribution Network Code

This section deals with requirements that will ensure open access to all subscribers (*Distributors, Embedded Generators, End-use customers, Retailers, Generators, Any other entities with equipment connected to the Distribution System.*) It defines minimum technical and operational requirements for connection to the grid by generators or loads, and defines the planning standards and procedures that the network owner needs to adhere to.

3. Distribution Tariff Code

The *tariff code* applies to all regulated *tariff structures* (components and level) and negotiated pricing agreements under the jurisdiction of NERSA (governed by the relevant legislation and national policy) including international pricing agreements impacting prices for local customers. The determination of the revenue requirement is managed by a process and rules set by *NERSA*. *NERSA* shall determine a methodology for regulation of distribution revenue, currently not dealt with in this code. The tariff code applies to the following generic retail charges:

- (a) Energy charges including recovery of losses
- (b) Network charges, including ancillary services
- (c) Customer services charges
- (d) Connection charges.

4 Distribution System Operation Code

This code set out the responsibilities and roles of the *participants* as far as the operation of the *Distribution System* is concerned and more specifically issues related to:

- (a) economic operation, *reliability* and security of the *Distribution System*
- (b) operational authority, communication and contingency planning of the *Distribution System*
- (c) management of power quality
- (d) operation of the *Distribution System* under normal and abnormal conditions
- (e) field operation, maintenance and maintenance coordination/ outage planning

- (f) safety of personnel and public

5 Distribution Metering Code

The objectives of this code are as follows:

- (1) To ensure compliance with minimum requirements for tariff metering and energy trading metering installations.
- (2) To define responsibilities for metering installations.
- (3) To ensure that appropriate procedures are followed by the distributor of electricity (referred to as ‘licensee’ by *NRS057* and in this code) and its metering service provider regarding the maintenance, validation, collection, processing and verification of metering data

6 Distribution Information Exchange Code

The objectives of this code are:

- (1) To define the reciprocal obligations of *participants* with regard to the provision and exchange of planning, operational and maintenance information for the implementation of the *Distribution Code*.

Information exchanged between *participants* governed by this code shall not be confidential, unless otherwise stated.

4. Implementation of the Distribution Code

The Distribution Code will be implemented in 2 stages starting with the trial period of one year. At the end of the 12 months trial period full implementation will commence. Licensees will be informed in advanced about the inclusion of the Distribution Code requirements as part of their license conditions.

Start	Licensee align themselves	Submissions for exemptions	Full Implementation
	6 months	6 months	12 months

During the first six months each licensee will be required to assess its business and align it in accordance with the requirements of the code. At the end of the first 6 months all licenses will be required to report their compliance status to NERSA and lodge any amendment and exemptions with the Grid Code Secretariat. The process for lodging amendment and exemptions is covered in

the Governance Code. Each application for exemption should be accompanied by a project plan with defined dates by which the licensee will fully comply to the code. These project plans will make it easier for tracking of progress made with regard to closing out of non-compliances.

Licensees may also apply for the code interpretation where the code requirements are unclear. Such request should be sent directly to the Grid Code Secretariat. There will be a six months window for GCAC to review all the exemptions received after the first six months of trial period. Upon recommendation by GCAC, the exemptions will be taken to the Energy Regulator for consideration of approval. All licensees that have not submitted exemptions within the six months period, it will be assumed that they comply with the code and any non-compliance thereof will be considered as a transgression of the licence condition and will be dealt with according to the Electricity Regulation Act, (Act 4 of 2006).

5. The rollout Plan

NERSA together with the grid code secretariat will start by visiting all those municipalities of installed capacity greater than 100MVA. The closest municipalities by geographical area to the greater than 100MVA will also be included in this plan and the rest will be grouped per geographical area. It is intended to visit all licensees to make sure that they understand the code and the processes of applying exemptions if needs be. AMEU will be consulted to assist especially in gathering the smaller municipalities under one roof. This process is expected to run for a month and after that letters will be issued informing licensees about the inclusion of the code as part of the licence condition

6. Compliance enforcement.

Compliance with the Distribution Code will not come into effect immediately. Participants shall be given the opportunity to align their businesses to the requirements of the Grid Code and/or request exemption from certain provisions of the Grid Code.

Enforcement will therefore only commence after one year of the trial period, subject to exemptions being approved.

7. Compliance monitoring

NERSA has the framework in place to monitor compliance to licence conditions. Once it is included as part of the licence condition it will be enforced through this framework.

8. Future participation

It should be noted that the Distribution Code is a living document and therefore, requires continuous update to align with the latest developments in the industry. It is therefore, every

participant's responsibility to ensure the code is continuously tested and updated as required. The process for the review of the code is included in the Governance Code. System Operator remain the Secretariat of both Grid and Distribution Codes and therefore all changes to the code must be channelled to them.

