

[ERC, September 29, 2004]

**GUIDELINES FOR THE APPLICATION AND APPROVAL OF CAPS
ON THE RECOVERABLE RATE OF DISTRIBUTION SYSTEM LOSSES**

Pursuant to Section 43 (f) of Republic Act No. 9136, Rule 15 Section 5 of its Implementing Rules and Regulations, and Article 3.4 of the Philippine Distribution Code (PDC), the Energy Regulatory Commission (ERC) hereby adopts and promulgates the following Guidelines for the Application and Approval of Caps on the Recoverable Rate of Distribution System Losses.

**ARTICLE I
General Provisions**

SECTION 1. This Guidelines shall have the following objectives:

- (a) To promote transparency and accountability in all phases involving the services provided by Distribution Utilities;
- (b) To promote a policy of full disclosure of all transactions involving public interest;
- (c) To protect the public interest as it is affected by the rates and services of Distribution Utilities and other providers of electric Energy; and
- (d) To establish a methodology for the segregation and calculation of Distribution System Losses.

SECTION 2. Guiding Principles. Section 43 (f) of Republic Act No. 9136 and Rule 15 Section 5 of its Implementing Rules and Regulations provide that "the cap on the recoverable rate of system losses prescribed in Section 10 of Republic Act No. 7832, is hereby amended and shall be replaced by caps which shall be determined by the ERC based on load density, sales mix, cost of service, delivery voltage and other technical considerations it may promulgate."

Article 3.4 of the Philippine Distribution Code (PDC) classifies Distribution System Losses into three (3) categories, namely Technical Loss, Non-Technical Loss and Administrative Loss. This article also provides that "the Distributor shall identify and report separately to the ERC the technical and non-technical losses in its Distribution System. The ERC shall, after due notice and hearing, prescribe the caps for the technical and non-technical losses that the Distributor can pass on to its End-Users."

Article 3.4 of the PDC provides further that "the Distributor shall submit to the ERC an application for the approval of its Administrative Loss. The allowance for Administrative Loss shall be approved by ERC, after due notice and hearing, based on connected essential Load."

SECTION 3. Scope. This Guidelines shall apply to all electric power Distribution Utilities, including but not limited to the following:

- (a) Privately-owned Distribution Utilities;
- (b) Electric Cooperatives;
- (c) Local government unit owned-and-operated Distribution Utilities;
- (d) Entities duly authorized to own, operate and maintain distribution facilities within the economic zones; and
- (e) Other duly authorized entities engaged in the Distribution of Electricity.

SECTION 4. Definition of Terms. The following words and phrases shall have the meanings set forth below in this Guidelines:

(a) Administrative Loss. The component of Distribution System Losses that accounts for the electric Energy used by the Distribution Utility in the proper operation of the Distribution System

(b) Burden. The electrical load of metering equipment including the instrument transformers and associated wirings

(c) Customer. Any person or entity supplied with electric service under a contract with a Distributor.

(d) Distribution Development Plan (DDP). The plan prepared and submitted by the Distribution Utility to the Department of Energy that contain Distribution System expansion, Reinforcement and improvement projects based on historical and forecasted planning data.

(e) Distribution of Electricity. The conveyance of electric power by a Distribution Utility through its Distribution System pursuant to the provision of Republic Act No. 9136.

(f) Distribution System. The system of wires and associated facilities belonging to a franchised Distribution Utility, extending between the delivery points on the transmission or Subtransmission System or generator connection and the point of connection to the premises of the End-User.

(g) Distribution System Losses. The electric Energy input including those delivered to the Distribution System by the Transmission System, Embedded Generating Plants, other Distribution Systems, and User Systems with generating facilities minus the electric Energy output (i.e., electric Energy delivered to the Users of the Distribution System) for a

specified billing period.

(h) Distribution Utility. Any Electric Cooperative, private corporation, government-owned utility, or existing local government unit, which has an exclusive franchise to operate a Distribution System in accordance with its franchise and Republic Act No. 9136.

(i) Distributor. Has the same meaning as Distribution Utility.

(j) Electric Cooperative. A Distribution Utility organized pursuant to Presidential Decree No. 269, as amended, or otherwise provided in Republic Act No. 9136.

(k) Embedded Generating Plant. A Generating Plant that is connected to a Distribution System or the System of any User and has no direct connection to the Transmission System.

(l) End-User. Any person or entity requiring the supply and delivery of electricity for its own use.

(m) Energy. The integral of power with respect to time, measured in Watt-hour (Wh) or multiples thereof.

(n) Energy Regulatory Commission (ERC). The regulatory agency created by Section 38 of Republic Act No. 9136.

(o) Energy Input. Energy delivered to the Distribution System by the Transmission System, Embedded Generating Plants, other Distribution Systems, and User Systems with generating facilities.

(p) Energy Output. Energy delivered to the Users of the Distribution System.

(q) Instrument Transformer. A potential and/or current transformer for metering and control that reproduces in its secondary circuit, in a definite and known proportion, the voltage or current of its primary circuit, with the phase relation substantially preserved.

(r) Load. An entity or electrical equipment that consumes electric Energy.

(s) Load Loss. The electrical loss due to the resistance of conductors that varies with the square of the electric current.

(t) Load Model. The representation of electrical load in Load Flow simulations for the purpose of calculating Technical Losses.

(u) Metering Equipment. The electrical measurement devices including instrument transformers, wiring, communications, and other auxiliary devices associated with metering.

(v) Network Model. The equivalent electrical circuit that

mathematically represent an electrical system (e.g., Distribution System) for purposes of calculating electrical parameters or simulating its behavior or performance. It consists of resistances and reactances of the electrical equipment, devices and conductors.

(w) No-Load Loss. The fixed loss incurred in electrical equipment regardless of the loading level. This includes the fixed loss dissipated in transformers, voltage regulators, capacitors, inductors and other electrical equipment.

(x) Non-Technical Loss. The component of Distribution System Losses that is not related to the physical characteristics and functions of the electrical System, and is caused primarily by human error, whether intentional or not. Non-Technical Loss includes the electric Energy lost due to pilferage, tampering of meters, and erroneous meter reading and/or billing.

(y) Philippine Distribution Code (PDC). A compilation of rules and regulations governing the electric utilities in the operation and maintenance of their Distribution Systems which includes, among others, the standards for service and performance, and defines and establishes the relationship of the Distribution Systems with the facilities or installations of the parties connected thereto.

(z) Rate of Distribution System Losses. The Distribution System Losses expressed as a percentage of the total electric Energy input to the Distribution System.

(aa) Republic Act No. 9136. The "*Electric Power Industry Reform Act of 2001.*"

(bb) Responsible Person. The person authorized by virtue of his official designation, Board Resolution, or any other basis of authorization to certify and be held responsible for the accuracy and validity of the submitted data.

(cc) System. A group of components connected or associated in a fixed configuration to perform a specified function.

(dd) Technical Loss. The component of Distribution System Losses that is inherent in the physical delivery of electric Energy. It includes conductor loss, transformer core loss, and potential current coils in metering equipment.

(ee) Three-Phase Load Flow. The analytical tool that simulates the power flows in an unbalanced three-phase Distribution System.

(ff) Transmission System. The high voltage backbone System of interconnected transmission lines, substations, and related facilities for the conveyance of bulk power. The Transmission system is also known as the Grid.

(gg) User. A person or entity that uses the Distribution System and related Distribution facilities.

(hh) User System. A System owned or operated by a User of the Distribution System.

ARTICLE II

Segregation of Distribution System Losses

SECTION 1. Components of Distribution System Losses. Distribution System Losses shall be segregated into the following components as specified in Article 3.4 of the Philippine Distribution Code:

- (a) Technical Loss;
- (b) Non-Technical Loss; and
- (c) Administrative Loss.

The Technical Loss includes the Load and No-Load (or Fixed) Losses in the following:

- (a) Sub-transmission Lines;
- (b) Substation Power Transformers;
- (c) Primary Distribution Lines;
- (d) Distribution Transformers;
- (e) Secondary Distribution Lines;
- (f) Service Drops;
- (g) Voltage Regulators;
- (h) Capacitors;
- (i) Reactors; and
- (j) All other electrical equipment necessary for the operation of the Distribution System.

Losses in Metering Equipment, including the electrical Burdens of Instrument Transformers, shall be considered part of the Technical Loss.

For purposes of this Guidelines, the Load Loss due to electric Energy pilferage shall be considered part of the Non-Technical Loss.

Administrative Loss includes the electric Energy consumption of connected essential electrical Loads in the following facilities, subject to the approval of the ERC:

- (a) Distribution Substations;
- (b) Offices of the Distribution Utility;
- (c) Warehouses and Workshops of the Distribution Utility;
- (d) Other essential electrical Loads of the Distribution Utility.

SECTION 2. Calculation of the Total Distribution System Losses. The Total