

PROPOSAL for AMENDMENTS to the PLANNING CODE and PLANNING CODE
APPENDIX, in relation to USERS of the TRANSMISSION SYSTEM who are DEMAND
CUSTOMERS

The following shows the complete new text only for each existing or new section or subsection of the Grid Code which is amended. The text it replaces is not given here. This is to avoid excessive detail, in accordance with subsection 18.2 of the **Proposed Constitution and Rules of the Grid Code Review Panel.**

Amendments :

The Distribution System Operator, ESB, and the Transmission System Operator, ESBNG, have jointly reviewed the measured and forecast data. Arising from that review, we jointly propose the following changes to the Grid Code.

- *state that TSO shall notify all Users in advance of SLR day .*

- *clarify measurement and forecast clauses that pertain to the Distribution System Operator.*
 - *Allow data to be provided at measurement point(s) that is not necessarily the point of connection. (PC.A3.3.1)*
 - *This means that the DSO and TSO can agree to provide separate load measurement and forecasts for each 110kV station including where a number of such stations are fed from a single point of connection.*
 - *This also supersedes the requirement on the User to modify the load readings and forecasts for transformer losses.*
 - *When forecasting the load at each measurement point, care shall be taken to use the correct value for the current year. (PC.A3.3.2)*
 - *The current year's peak load is usually not the same as the load measurement. It is usually necessary to "forecast" this year's peak before forecasting next year's peak.*
 - *Treatment of embedded generation on the distribution network. (PC.A3.3.6)*
 - *Treatment of expected transformer reinforcement. (PC.A3.3.8)*
 - *Treatment of expected permanent load transfer. (PC.A3.3.9)*
 - *This may or may not be associated with proposed 110kV stations.*
 - *Distribution System Operator to continue to provide Special Load Reading data (PC.A3.3.10)*
 - *Revise data template for Distribution System Operator (PC.A3.3.11)*

The only purpose of the existing Section A3.3 Measured and Forecast Data is to refer to Section A3.11 Demand and Demand Forecast Data. It makes sense to consolidate these requirements.

- *Combine section A3.3 and section A3.11.*
 - *New section to be PC.A3.3.*
 - *Delete section PC.A3.11.*
 - *In PC.6.6.2, change reference from section PC.A3.11 to PC.A3.3.*

PC.A3.3 Measured and Forecast Data

This section details the measurements of demand and 10-year demand forecasts that are required from each **User** of the **Transmission System** who is a **Demand Customer** in respect of each infeed from the **Transmission System** to the Customer's network(s).. This section applies equally to the **Distribution System Operator (DSO)**.

The **TSO** shall notify each **User** who is a **Demand Customer** in advance of each load reading day. These load reading days are winter peak, summer and summer minimum as specified in sections **PC.A3.3.2**, **PC.A3.3.3** and **PC.A3.3.4** respectively.

The measurements of demand and 10-year demand forecasts should be submitted by the end of calendar week 9 of each year.

PC.A3.3.1 Measurement Point

Demand measurements and forecasts for each infeed from the **Transmission System** shall relate to the appropriate **Measurement Point**.

PC.A3.3.2 Winter 12.30 and 18.00 - Load Readings and Forecast

A coincident set of measurements of MW and MVA_r values both at 12.30 and 18.00 hours on the second Thursday in December is required. If the second Thursday in December is the 8th, then the measurements should be taken on the following Tuesday, December 13th. The readings should be taken with both the transmission and distribution networks intact, and with normal sectionalising of the **Distribution System**, i.e. under normal feeding conditions. The load reading shall take account of embedded generation as detailed in section **PC.A3.3.6**.

A forecast of the expected MW and MVA_r winter peak demand at the **Measurement Point** at 12.30 and 18.00 hours for the next ten (10) years is required. For example, the forecasts to be received by calendar week 9 of 2003 should cover years 2003 through 2012. The load forecast shall take account of sections **PC.A3.3.6** through **PC.A3.3.9** dealing with embedded generation, description of forecast methodology, transformer reinforcements and permanent load transfer.

The **DSO**, in preparing the forecast for winter peak load, shall bear in mind that the coincident load readings taken on the second Thursday in December may be lower than at system peak.

PC.A3.3.3 Summer 12.30 - Load Readings and Forecast

A coincident set of measurements of MW and MVA_r values at 12.30 hours on the fourth Thursday in June is required. The load reading shall take account of embedded generation as detailed in section **PC.A3.3.6**.

A corresponding 10-year forecast of the MW and MVA_r demand at the **Measurement Point** in June at 12.30 hours for the next ten (10) years is also required. For example, the forecasts to be received by calendar week 9 of 2003 should cover years 2003 through 2012. The load forecast shall take account of sections **PC.A3.3.6** through **PC.A3.3.9** dealing with embedded generation, description of forecast method, transformer reinforcements and permanent load transfer.

PC.A3.3.4 Summer Night Valley - Load Reading and Forecast

A coincident set of measurements of MW and MVA_r values at 06.00 hours on the Sunday preceding the early August Monday Public Holiday is required. The load readings shall take account of embedded generation as detailed in section **PC.A3.3.6**.

A corresponding 10-year forecast of the MW and MVA_r minimum demand at the **Measurement Point** in August at 06.00 hours for the next ten (10) years is also required. For example, the forecasts to be received by calendar week 9 of 2003 should cover years 2003 through 2012. The load forecast shall take account of sections **PC.A3.3.6** through **PC.A3.3.9** dealing with embedded generation, description of forecast method, transformer reinforcements and permanent load transfer.

PC.A3.3.5 Non Coincident Peak Demand - Load Reading and Forecast

Each **User** of the **Transmission System** who is a **Demand Customer**, including the **DSO**, is required to specify by calendar week 9 of each year, the MW and MVA_r values corresponding to the maximum MVA demand which occurred at the **Measurement Point** during the previous year. The date and time of the occurrence of this maximum demand should be stated by the **User**.

PC.A3.3.6 Embedded Generation

All load readings shall specify, separately, the MW and MVA_r contribution from significant embedded generation. The **User** should indicate whether the generator is producing or absorbing MVA_r from the system. The type or types of significant embedded generation should be specified – hydro, wind, CHP, biomass, diesel or other.

All load forecasts shall specify, separately, the installed capacity of existing and projected significant embedded generation. Both MW and MVA_r capability should be given, indicating the MVA_r limits both for production and absorption. The type or types of embedded generation should be specified – hydro, wind, CHP, biomass, diesel or other.

PC.A3.3.7 Load Forecast - Methodology

The **User** shall provide, with the forecast data, a brief description of the basis for the forecast.

PC.A3.3.8 Load Forecast - Transformer Reinforcements

The **User** shall provide, with the forecast data, details of planned changes in transformer capacity between the **Measurement Point** and the **Connection Point**.

PC.A3.3.9 Load Forecast - Permanent Load Transfer

There are two separate characteristics of **Distribution System** load forecasts; expected load growth and expected permanent load transfer between infeeds from the **Transmission System**. In order to identify separately the load growth, the **DSO** demand forecasts shall be prepared for the load at each **Measurement Point** without taking account of any proposed load transfers.

Then, in order to identify separately the proposed load transfer, the **DSO** shall provide, with the forecast data, details of each planned load transfer as follows:-

- Date of transfer
- Reason for transfer, e.g. proposed 110kV station, transformer capacity, etc.
- MW and MVA_r at each of the measurement points expected to be transferred
- Existing source of supply for the load to be transferred.

Only proposed permanent load transfers for which there is a firm commitment should be included. For example, proposed 110kV stations should be included only where there is a connection agreement between **ESBNG** and the **DSO**.

For a proposed new 110kV station which will supply new load and for which there is a connection agreement between **ESBNG** the **DSO**, a load forecast is required.

PC.A3.3.10 Special Load Reading

The **DSO** shall continue to provide **ESBNG** with the **DSO** special load readings.

PC.A3.3.11 Data Templates

For uniformity of data capture, and to facilitate **Users** of the **Transmission System** who are **Demand Consumers**, **ESBNG** will provide to each such **User** prepared templates with data validation to facilitate entry of the required data.

Users shall provide data to **ESBNG** using these data templates or in such other form as may be agreed by **ESBNG**.

GLOSSARY

The following shall be added to the Glossary.

Measurement Point	The Measurement Point shall be the Connection Point to the Transmission System or such other point or points as may be agreed between ESBNG and the User .
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The following section shall be deleted, sufficient reference to embedded generation being made in section PC.A.3.3

PC.A3.4 Impact of Embedded Generation

Accordingly, the following sections shall be renumbered, without any change in content. The new headings are as follows.

PC.A3.4 User Network Data

PC.A3.5 Standby Supply Data

PC.A3.6 Fluctuating Loads

PC.A3.7 Disturbing Loads

PC.A3.8 Grid Connected Transformer

PC.A3.9 Shunt Capacitor / Reactor Data

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15/May/2003