Schedule F2A Benchmark Agreement clauses to apply following transitional period

This schedule sets out the default clause 37 and Schedule 5 of the **benchmark agreement** that must be provided to **designated transmission customers** under rule 3.1.7.1 of section II of the **Rules** and that, under rule 3.1.7.5 of section II of the **Rules**, will replace clause 37 and Schedule 5 of the **benchmark agreement** that was added as schedule F2 to section II of the **Rules** on 28 June 2006.

37. REPORTING

37.1 **Performance Reporting on Connection Asset Services:**

Transpower will report to the Customer by 30 November each year on performance in respect of each **connection location** for the preceding period from 1 July to 30 June using the following indices of performance:

(a) **Capacity of Connection Assets**:

(1) in respect of each Capacity Service Level, the number of times the Capacity Service Level was not met, except where clause 36.1(b) applies; and

(2) in respect of each **branch** listed in Schedule 5 (Service Measures), the design maximum fault level in Amps per second.

(b) **Availability of Connection Assets**:

(1) **Unavailability due to Planned Outages**:

percentage of hours per year that the aggregate Connection Assets relating to a Customer Point of Service (including Connection Assets between the Customer Point of Service and any Point of Connection relating to the Customer Point of Service) are unavailable due to a **planned outage** of any of those Connection Assets of one minute or longer, compared to the service level for annual unavailability of the Connection Assets due to **planned outages** of any of those Connection Assets of one minute or longer set out in Part A of Schedule 5 (Service Measures);

(2) **Unavailability due to Unplanned Outages**:

percentage of hours per year that the aggregate Connection Assets relating to a Customer Point of Service (including Connection Assets between the Customer Point of Service and any Point of Connection relating to the Customer Point of Service) are unavailable due to an **unplanned outage** of any of those Connection Assets of one minute or longer, compared to the service level for annual unavailability of the Connection Assets due to **unplanned outages** of any of those Connection Assets of one minute or longer set out in of Part A of Schedule 5 (Service Measures);

(3) **Unavailability due to momentary Outages**

number of times per year that the aggregate Connection Assets relating to a Customer Point of Service (including Connection Assets between the Customer Point of Service and any Point of Connection relating to the Customer Point of Service) are unavailable due to **outages** of any of those Connection Assets that are shorter than one minute.

(c) **Reliability**:

(1) **Number of Interruptions**:

A. number of Planned Interruptions, at a Customer Point of Service of one minute or longer due to a **planned outage** of Connection Assets (including Connection Assets between a Customer Point of Service and any Point of Connection relating to the Customer Point of Service) of one minute or longer, compared to the service level for the annual number of Planned Interruptions at the Customer Point of Service due to **planned outages** of the Connection Assets set out in Part A of Schedule 5 (Service Measures);

B. number of Planned Interruptions at a Customer Point of Service of one minute or longer due to a **planned outage** of **interconnection assets** of one minute or longer, compared to the service level for the annual number of Planned Interruptions at the Customer Point of Service due to **planned outages** of **interconnection assets** set out in Part A of Schedule 5 (Service Measures);

C. number of Unplanned Interruptions at a Customer Point of Service of one minute or longer due to an **unplanned outage** of Connection Assets (including Connection Assets between the Customer Point of Service and any Point of Connection relating to Customer Point of Service) of one minute or longer, compared to the service level for the annual number of Unplanned Interruptions at the Customer Point of Service due to **unplanned outages** of Connection Assets set out in Part A of Schedule 5 (Service Measures);

D. number of Unplanned Interruptions at a Customer Point of Service of one minute or longer due to an **unplanned outage** of **interconnection assets** of one minute or longer, compared to the service level for the annual number of Unplanned Interruptions at the Customer Point of Service due to **unplanned outages** of **interconnection assets** set out in Part A of Schedule 5 (Service Measures);

E. number of Interruptions at a Customer Point of Service shorter than one minute per year, due to **outages** of Connection Assets at a Customer Point of Service (including Connection Assets between the Customer Point of Service and any Point of Connection relating to Customer Point of Service) that are shorter than one minute; and

F. number of Interruptions at a Customer Point of Service shorter than one minute per year, due to **outages** of **interconnection assets** that are shorter than one minute.

(2) **Duration of Interruptions**:

Loss of Connection Minutes due to:

A. Planned Interruptions at a Customer Point of Service of one minute or longer caused by **planned outages** of Connection Assets (including Connection Assets between the Customer Point of Service and any Point of Connection relating to the Customer Point of Service) of one minute or longer;

B. Planned Interruptions at a Customer Point of Service of one minute or longer caused by **planned outages** of **interconnection assets** of one minute or longer;

C. Unplanned Interruptions at a Customer Point of Service of one minute or longer caused by **unplanned outages** of Connection Assets (including Connection Assets between the Customer Point of Service and any Point of Connection relating to the Customer Point of Service) of one minute or longer; and

D. Unplanned Interruptions at a Customer Point of Service of one minute or longer caused by **unplanned outages** of **interconnection assets** of one minute or longer.

(3) **Unserved Energy**:

Amount of Unserved Energy due to:

A. Planned Interruptions of one minute or longer caused by a **planned outage** of Connection Assets at a Customer Point of Service (including Connection Assets between the Customer Point of Service and any Point of Connection relating to the Customer Point of Service) of one minute or longer, compared to the service level for Unserved Energy caused by Planned Interruptions at the Customer Point of Service of one minute or longer caused by **planned outages** of one minute or longer of Connection Assets set out in Part A of Schedule 5 (Service Measures); and

B. Unplanned Interruptions at the Customer Point of Service of one minute or longer caused by an **unplanned outage** of Connection Assets (including Connection Assets between the Customer Point of Service and any Point of Connection relating to Customer Point of Service) of one minute or longer, compared to the service level for Unserved Energy caused by Unplanned Interruptions at the Customer Point of Service of one minute or longer caused by **unplanned outages** of one minute or longer of Connection Assets set out in Part A of Schedule 5 (Service Measures).

C. Planned Interruptions of one minute or longer caused by a **planned outage** of **interconnection assets** at a Customer Point of Service of one minute or longer, compared to the service level for Unserved Energy caused by Planned Interruptions at the Customer Point of Service of one minute or longer caused by **planned outages** of one minute or longer of **interconnection assets** set out in Part A of Schedule 5 (Service Measures); and

D. Unplanned Interruptions at the Customer Point of Service of one minute or longer caused by an **unplanned outage** of **interconnection assets** of one minute or longer, compared to the service level for Unserved Energy caused by Unplanned Interruptions at the Customer Point of Service of one minute or longer caused by **unplanned outages** of one minute or longer of **interconnection assets** set out in Part A of Schedule 5 (Service Measures).

(d) **Customer Service Measures**

For each reporting and response service level set out in Part B of Schedule 5, the number of times the service level was not met.

As part of its report under this clause 37.1, Transpower will:

(e) **Identify Source of Failure**:

to the extent practicable, identify any circumstance which may have given rise to any failure to meet a service level; and

(f) **Advise Intended Remedial Steps**:

advise on any steps that it intends to take or other options to reduce the likelihood of failing to meet the service levels in the future.

37.2 **Real time signal of demand by Region from SCADA**

Transpower must provide to the Customer information on the **regional demand** (as defined in the **transmission pricing methodology**) for each region that the Customer has a **connection location**. This information is to be derived from **SCADA**, updated at least every five minutes, and updated not more than five minutes after the **regional demand** is measured.

37.3 **Information on capacities of individual Connection Assets**

(a) Transpower must publish:

(1) for each transformer that is a Connection Asset, the overall 24 hour post contingency capacity rating of the Connection Asset in Amps and MVA, for both the summer and winter periods; and

(2) for all other Connection Assets, the overall capacity rating of the Connection Asset in Amps and MVA and, if the Connection Assets are circuits, for both the summer and winter periods.

(b) The information required under paragraph (a) above:

(1) must be consistent with the **manufacturer's specification** of the Connection Asset or with the most recent Asset Capability Statement provided by Transpower under rule 2.5 of Technical Code A of schedule C3 of part C of the Electricity Governance Rules, if this differs from the **manufacturer's specification**;

(2) must be provided in a form that allows the **branch** to which each Connection Asset belongs to be easily identified; and

(3) must be published either in the Centralised Data Set maintained under rule 11.1 of section III of part F of the Electricity Governance Rules or in the form determined by the **Board** in accordance with rule 7.2 of section VI of part F of the Electricity Governance Rules for publication of the information required under rule 7.1 of section VI of part F of the Electricity Governance Rules.

37.4 **Performance Reporting on Interconnection Asset Services:**

To the extent that the following information relates to the delivery of **electricity** to a Customer Point of Service or any Interruptions, and is required to be provided under the Electricity Governance Rules, Transpower will provide to the Customer, by 30 November each year:

(a) the information set out in the annual report on **interconnection branch** capacity and **grid** configuration that Transpower is required to **publish** under section VI of part F of the Electricity Governance Rules; and

(b) the information set out in the annual report on the asset availability and reliability of **interconnection assets** under section VI of part F of the Electricity Governance Rules that Transpower is required to **publish** under section VI of part F of the Electricity Governance Rules.

37.5 **De-energisation:**

Transpower's obligations under this Part are subject to any obligations or rights it may have under this Agreement to de-energise a Point of Connection or to require a Point of Connection to be de-energised. In addition, Transpower may de-energise a Point of Connection if directed to do so by the **Board** or the **Rulings Panel** under the Electricity Governance Regulations or the Electricity Governance Rules or by the **clearing manager** or any other person authorised to do so by the Electricity Governance Rules or the Electricity Governance Regulations and Transpower will use reasonable endeavours to notify the Customer in advance of such de-energisation if it has received sufficient notice of the direction.

37.6 **Reporting on estimated reliability of feeder branches**

(a) If requested to do so by the Customer, Transpower must provide the Customer with an estimate of the expected annual number of Unplanned Interruptions of one minute or longer at a Point of Connection due to **unplanned outages** of Connection Assets of one minute or longer or such estimate being as accurate as is reasonably practicable.

(b) The estimate under paragraph (a) must be provided within 40 Business Days of a request from the Customer unless:

A. it is not reasonably practicable for Transpower to do so, in which case Transpower must provide the information as soon as possible and must advise the Customer of the date by which the estimate will be provided; or

B. agreed otherwise between Transpower and the Customer.

SCHEDULE 5
SERVICE MEASURES

Part A: Connection location-specific service measures

1. Connection location: [*name*]

1.1 Service: Capacity of Connection Branches

1.1.1 Circuit Branch: [*Identify Circuit Branch*]

Service measure	**Service level**
Overall continuous capacity rating of the **circuit branch**	[ ] Amps and [ ] MVA [*for summer period*] and [ ] Amps and [ ] MVA [*for winter period*]
Level of impedance of the **circuit branch resistive** and **reactive** – **shunt** [*Provide for each **circuit branch** with impedance of 0.0001 PU or more using 100MVA as the base*]	[ ] PU (using 100MVA as the base)
Level of impedance of the **circuit branch resistive** and **reactive** – **series** [*Provide for each **circuit branch** with impedance of 0.0001 PU or more using 100MVA as the base*]	[ ] PU (using 100MVA as the base)
Nominal high voltage rating of the Circuit	[ ] kV
High voltage range that the **circuit branch** can operate over	Maximum: [ ] kV Minimum: [ ] kV

[*Repeat table for each **circuit branch** at the **connection location**]*

1.1.2 Transformer Branch: [*Identify Transformer Branch*]

Service measure	**Service level**
Overall 24 hour post contingency capacity rating of the **transformer branch**	2 Winding [ ] Amps and [ ] MVA [*for summer period*] and [ ] Amps and [ ] MVA [*for winter period*] 3 Winding **HV** [ ] Amps and [ ] MVA [*for summer period*] and [ ] Amps and [ ] MVA [*for winter period*]

Service measure	**Service level**
	MV [ ] Amps and [ ] MVA [*for summer period*] and [ ] Amps and [ ] MVA [*for winter period*] **LV** [ ] Amps and [ ] MVA [*for summer period*] and [ ] Amps and [ ] MVA [*for winter period*]
Continuous capacity rating	2 Winding [ ] Amps and [ ] MVA 3 Winding **HV** [ ] Amps and [ ] MVA **MV** [ ] Amps and [ ] MVA **LV** [ ] Amps and [ ] MVA
Level of impedance of the **transformer branch resistive** and **reactive** – **shunt** [*Provide for each **transformer branch***]	2 Winding [ ] PU (using 100MVA as the base) 3 Winding **HV**[ ] PU, **MV** [ ]PU, **LV** [ ] PU (using 100MVA as the base)
Level of impedance of the **transformer branch resistive** and **reactive** – **series** [*Provide for each **transformer branch***]	2 Winding [ ] PU (using 100MVA as the base) 3 Winding **HV**[ ] PU, **MV** [ ]PU, **LV** [ ] PU (using 100MVA as the base)
Nominal high voltage rating of the **transformer branch**	[ ] kV
High voltage range that the **transformer branch** can operate over	Maximum: [ ] kV Minimum: [ ] kV
Tapping steps and ranges	Tap voltage range: Maximum: [ ] kV Minimum: [ ] kV Number of tapping steps: [ ] Size of each tapping step as a percentage of nominal operating voltage range: [ ]% On-load/Off-load: [*On-load/Off-load*] On-load tapping capability [*Automatic/Manual*] [If on-load tapping capability is automatic, is it auto selected? [*Yes/No*]] [or] [If on-load tapping capability is manual, what tap step is normally set? [*Actual or expected*

Service measure	Service level
	position at winter peak demand]] [*Repeat for each tap changer on the Transformer branch*]

[*Repeat table for each* ***transformer branch*** *at the* ***connection location***]

1.2 **Service: Availability at Customer Point of Service: *[name]***

Service measure	Service level
Annual unavailability of aggregate Connection Assets relating to the Customer Point of Service due to **planned outages** of any of those Connection Assets of one minute or longer	Unavailable for no more than [ ]% of 1 July to 30 June year (pro rata for a part year), calculated by hours unavailable ÷ hours per year
Annual unavailability of aggregate Connection Assets relating to the Customer Point of Service due to **unplanned outages** of any of those Connection Assets of one minute or longer	Unavailable for no more than [ ]% of per 1 July to 30 June year (pro rata for a part year), calculated by hours unavailable ÷ per year

[Repeat table for each Customer Point of Service at the ***connection location****]*

1.3 **Service: Reliability at Customer Point of Service: *[name]***

Service measure	Service level
Annual number of Planned Interruptions at the Customer Point of Service of one minute or longer due to **planned outages** of Connection Assets (including Connection Assets between the Customer Point of Service and any Point of Connection relating to the Customer Point of Service) of one minute or longer	[*number*] per 1 July to 30 June year (pro rata for a part year)
Annual number of Planned Interruptions at the Customer Point of Service of one minute or longer due to **planned outages** of **interconnection assets** of one	[*number*] per 1 July to 30 June year (pro rata for a part year)

Service measure	**Service level**
minute or longer	
Annual number of Unplanned Interruptions at the Customer Point of Service of one minute or longer due to **unplanned outages** of Connection Assets (including Connection Assets between the Customer Point of Service and any Point of Connection relating to the Customer Point of Service) of one minute or longer	[*number*] per 1 July to 30 June year (pro rata for a part year)
Annual number of Unplanned Interruptions at the Customer Point of Service of one minute or longer due to **unplanned outages** of **interconnection assets** of one minute or longer	[*number*] per 1 July to 30 June year (pro rata for a part year)
Unserved Energy resulting from Planned Interruptions at the Customer Point of Service of one minute or longer caused by **planned outages** of one minute or longer of Connection Assets (including Connection Assets between the Customer Point of Service and any Customer Point of Connection relating to the Point of Service).	[ ] **MWh**
Unserved Energy resulting from Planned Interruptions at the Customer Point of Service of one minute or longer caused by **planned outages** of one minute or longer of **interconnection assets**	[ ] **MWh**
Unserved Energy resulting from Unplanned Interruptions at the Customer Point of Service of one minute or longer caused by **unplanned outages** of one minute or longer of Connection Assets (including Connection Assets	[ ] **MWh**

Service measure	**Service level**
between the Customer Point of Service and any Point of Connection relating to the Customer Point of Service).	
Unserved Energy resulting from Unplanned Interruptions at the Customer Point of Service of one minute or longer caused by **unplanned outages** of one minute or longer of **interconnection assets**	[ ] **MWh**

*[Repeat table for each Customer Point of Service at a **connection location**]*

2. Connection Location: [*name*]

*[Repeat above measures for each **connection location**]*

Part B: Reporting and response service measures

Service measure	**Service level**
Length of time taken by Transpower to report a breach of service levels	21 days, or such other time period as agreed between the parties.
Length of time taken by Transpower to investigate and respond to Complaints about service provided under this Agreement	21 days, or such other time period as agreed between the parties.
Length of time taken by Transpower to provide a report following an unplanned interruption to, or degradation of, its transmission service	42 days, or such other time period as agreed between the parties.