System Control Technical Code – Section 7 – Power System Incident Reporting Procedures

Note – The marked up changes in this document reflect the differences between the wording in the Current SCTC (Version 6.0) and the new wording for the Proposed SCTC. We have not marked up where we have changed the location of a clause. Instead, we have noted in the 'Comments' column the location and clause number in the Current SCTC.

| Clause reference | Proposed changes to clause | Comments |
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| 7.1 Purpose Contents | This section sets out the procedures which govern the notification and investigation of power system incidents and the Power System Controller's and other System Participant's power system reporting obligations. The procedures include provisions dealing with: (a) the establishment and maintenance of the Power System Incident Reporting Guideline and the proposed content of the guideline; (b) the requirement for System Participants to report the occurrence of | This was clause 7.1 in the Current SCTC. These amendments reflect the approach adopted in the National Electricity Rules (NER). We have added a definition for <i>Power System Incident Reporting Guideline</i> in the Glossary. |
| | (c) the requirement for the Power System Controller to assess power system incidents, determine whether they constitute reportable incidents and classify reportable incidents by reference to the criteria set out in this Section 7 and the Power System Incident Reporting Guideline; | |
| | (d) the requirement for System Participants to investigate and report on reportable incidents where required by the Power System Controller or the Power System Incident Reporting Guideline; | |
| | (e) the Power System Controller's obligation to investigate and report on reportable incidents and the obligation of System Participants to cooperate with and assist the Power System Controller in relation to that process; | |
| | (f) the power of the Power System Controller to make recommendations in reports issued by the Power System Controller under this Section 7 and the obligation of System Participants to comply with recommendations contained within those reports; and | |
| | (g) the role of the Utilities Commission with respect to the matters covered by this Section 7 and the Power System Incident Reporting Guideline. | |
| | These procedures are critical to the proper performance of the <i>Power System Controller's</i> function of monitoring and controlling the operation of the <i>power system</i> with a view to ensuring that the <i>power system</i> operates reliably, safely and securely. | |
| | Power system incident reporting procedures include: (a) investigation and reporting process; | |

| | (b) the Power System Controller's obligation to investigate and report on incidents; and role of the Utilities Commission. | |
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| 7.2 Definitions | | New clause heading. There is no equivalent clause heading in the Current SCTC. The terms and concepts that need to be explained in order to understand Section 7, should be included at the beginning of Section 7. |
| | | The terms 'incident' and 'event' are currently used interchangeably in Section 7. We think that the term 'incident' should be used as this is more consistent with the current drafting of Section 7 and clause 4.8.15 of the NER. |
| 7.2.1 Reportable incident | A reportable incident is a power system incident event that: (a) had, or could reasonably be expected to have had, an significant adverse effect on power system security or the reliability of the power system; or (b) caused, or could reasonably be expected to have caused, a material impact (within the meaning of the Power System Incident Reporting Guideline) on reliability of electricity supply to customers, and includes, amongst other things, a due to an power system incident event that affectsing: (a)(c) the energy production capability or capacity of a electricity generatingen assets system; or (b)(d) the energy transport capability or capacity of a transmission network or distribution network to transport energy to customers the electricity transmission and distribution networks assets. | This is clause 7.3.1 of the current SCTC. We have used the defined term 'power system security'. The term 'reliability', as defined in the Glossary (the definition in the Glossary is the same as the definition in the NER), needs to be linked to a system, device, plant or equipment to make sense. The defined term 'supply' means 'the delivery of electricity' so the word 'electricity needs to be deleted. We have also included a reference to customers because delivery of electricity to customers' is a primary focus of the later definitions. This 'electricity generation assets' should use the defined term 'generating system'. The definitions of 'transmission network' and 'distribution network' should be used as these terms pick up apparatus, equipment and plant. |
| 7.2.2 Major reportable incident | A major reportable incident is: includes an event that caused: (a) a reportable incident which involves: (1) loss of load shedding arising from thea failure of a generatingen systemasset; | This is clause 7.3.2 in the current SCTC. This definition should be linked to the concept of a <i>reportable incident</i> and should be definitive not simply inclusive. Additions to the list should be done via the <i>Power System Incident Reporting Guideline</i> processes. The definition of <i>load</i> in the Glossary differs from the definition in the NT NER and the difference means that these words would mean 'loss of the amount of electrical <i>energy</i> delivered at a defined instant at a <i>connection point</i> or aggregated over a group of <i>connection points</i> ' whereas the NT NER definition would mean 'loss of a <i>connection point</i> or defined set of <i>connection points</i> at which power is delivered to a person or to another <i>network</i> .' We have amended this definition to reflect the definition of the term in the NT NER. |
| | (2) loss of load shedding lasting longer than 0.1 system minutes arising from athe failure of a transmission networkasset (or | Amending the definition of <i>load</i> will not impact other references to <i>load</i> in the SCTC. |

| equivalent) of more than 0.1 system minute, excluding any incident-where the load shedding is shed-under an agreement between a Network Operator and Network User, or as agreed by contract; (3) an outage of any transmission network element lasting longer than 15 minutes arising from equipment failure or operator error in a zone substation and which has a material impact (within in the meaning of the Power System Incident Reporting Guideline) on the supply to customers; and | This uses the defined term 'load shedding' here instead. |
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| (4) an outage lasting longer than six hours affecting more than 200 customers and that, in the opinion of the Power System Controller, should be classified as a major incident requiring comprehensive investigation; or an outage lasting longer than 30 minutes affecting more than 1000 customers and that, in the opinion the Power System Controller, should be classified as a major incident requiring | |
| (b) a reportable incident not referenced in paragraph (a), that the Power System Controller determines, in accordance with the process specified in the Power System Incident Reporting Guideline, should be classified as a major reportable incident. | |
| A minor reportable incident is a reportable incident that is not a major reportable incident and is not otherwise classified by the Power System Controller as a major reportable incident in accordance with the Power System Incident Reporting Guideline and includes an event that caused: | This is clause 7.3.3 in the current SCTC. We have added a definition for 'customer minutes' in the glossary. |
| (a) an outage which lasts longer than the number of customer minutes specified in the Power System Incident Reporting Guideline lasting longer than six hours affecting more than 200 customers and that, in the reasonable opinion of the Power System Controller, should ean be classified as a minor reportable incident, or.; (b) a reportable incident not referenced in paragraph (a), that the Power System Controller determines, in accordance with the process specified in the Power System Incident Reporting Guideline, should be classified as a minor reportable incident. | The thresholds are proposed to be defined within the Power System Incident Reporting Guidelines. |
| | incident where the load shedding is shed under an agreement between a Network Operator and Network User, or as agreed by centract; (3) an outage of any transmission network element lasting lenger than 15 minutes arising from equipment failure or operator error in a zone substation and which has a material impact (within in the meaning of the Power System Incident Reporting Guideline) on the supply to customers; and (4) an outage lasting lenger than six hours affecting more than 200 customers and that, in the opinion of the Power System Centroller, should be classified as a major incident requiring eemprehensive investigation; or an outage lasting lenger than 30 minutes affecting more than 1000 customers and that, in the opinion the Power System Centroller, should be classified as a major incidentrequiring comprehensive investigation (b) a reportable incident not referenced in paragraph (a), that the Power System Controller determines, in accordance with the process specified in the Power System Incident Reporting Guideline, should be classified as a major reportable incident is a reportable incident. A minor reportable incident is a reportable incident that is not a major reportable incident and is not otherwise classified by the Power System Controller as a major reportable incident and includes an event that caused: (a) an outage which lasts lenger than the number of customer minutes specified in the Power System Incident Reporting Guideline lasting lenger than six hours affecting more than 200 customers and that, in the reasonable opinion of the Power System Controller, should ean-be classified as a minor reportable incident, or; (b) a reportable incident not referenced in paragraph (a), that the Power System Controller determines, in accordance with the process specified in the Power System Incident Reporting |

| 7.2.4 Brief and Final Reports | Brief Report means a report that is required to be provided by: (a) a System Participant in accordance with clause 7.4.1(c); or (b) the Power System Controller in accordance with clause 7.4.2(g), which report must meet the requirements of the Power System Guideline (including as to form and content). Final Report means a report that is required to be provided by: (c) the System Participant in accordance with clause 7.4.1(e); or (d) the Power System Controller in accordance with clause 7.4.2(h), which report must meet the requirements of the Power System Guideline (including as to form and content). | |
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| 7.3 Notification and classification obligations | | We have grouped the operative provisions under separate headings that deal with notification, investigation and reporting. |
| 7.3.1 Reporting Notification by a System Participant | (a) System Participants are to advise must notify the Power System Controller as soon as reasonably practicable after becoming aware of the occurrence a power system incidentan event, which has the potential to be where there is potential for that event to be classified as a reportable incident. (b) The notice from the System Participant must meet the requirements (including as to form, content, timing and manner of notification) specified in the Power System Incident Reporting Guideline for that type of notice. (c) The Network Operator is responsible for liaising with Network Users to obtain all necessary information in relation to the occurrence of a power system incident involving the plant or equipment of a Network User which has the potential to be classified as a reportable incident. (d) If the Power System Controller becomes aware of the occurrence of a power system incident which the Power System Controller believes on reasonable grounds is related to plant or equipment operated or controlled by: (1) a System Participant; or (2) a Network User whose plant and equipment is connected to the System Participant's plant or equipment, | This is clause 7.4.2 of the current SCTC. |

| | the Power System Controller may notify the System Participant of that view and require the System Participant to provide a notice under clause 7.3.1(b) with respect to that power system incident. (b)(e) Nothing in this clause 7.3.1 prevents a System Participant notifying the occurrence of a power system incident which involves the plant or equipment of another System Participant or a Network User to the Power System Controller. | |
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| 7.3.2 Classification of power system incidents and reportable incidents | (a) If the Power System Controller forms the view that a power system incident is a reportable incident, the Power System Controller must determine whether that reportable incident is not paragraph (a) will be made in accordance with the process, criteria and time frames set out in the Power System Incident Reporting Guideline. (b) The determination referred to in paragraph (a) will be made in accordance with the process, criteria and time frames set out in the Power System Incident Reporting Guideline. (c) The Power System Controller may request a System Participant to provide such additional information and assistance as is reasonably required by the Power System Incident or a reportable incident. (d) Each System Participant must co-operate with the Power System Controller to determine the classification for a power system incident or a reportable incident. Including by providing the information and assistance requested by the Power System Controller under paragraph (c) above. (e) The Power System Controller may at any time prior to concluding an investigation with respect to a reportable incident, change its classification of a power system incident or a reportable incident fit the Power System Controller forms the view on reasonable grounds, and after taking into account the requirements (if any) governing the re-classification of a power system incident on longer satisfies the criteria for a reportable incident (i.e. that the power system incident no longer reflects the nature of the reportable incident no longer reflects the nature of the reportable incident no longer reflects the nature of the reportable incident incident on sensitive and an amor reportable incident inciden | d |

| 7.3.3 Notification of a reportable incident classification by the Power System Controller | (a) | The Power System Controller must notify the classification of a reportable incident (and any change to that classification made in accordance with clause 7.3.2(e)) to is to advise relevant System Participants and the Utilities Commission as soon as reasonably practicable after making that determination or change, the event occurred that an event was a reportable incident, and that an investigation will be conducted. | This is clause 7.4.1 of the current SCTC. |
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| | (b) | A notice from the <i>Power System Controller</i> referred to in paragraph (a) must meet the requirements (including as to form, content, timing and manner of notification) specified in the <i>Power System Incident Reporting Guideline</i> for the relevant type of notice. A notice issued by the <i>Power System Controller</i> under this clause may also include a request for the relevant <i>System Participant</i> to provide further information or to instigate an investigation in relation to the reportable incident. The form and manner of the notification of a reportable incident is to be determined by the <i>Power System Controller</i> in accordance with any conditions specified in the <i>Incident Reporting Guideline</i> . | |
| 7.4 Investigation and reporting obligations | | | |
| 7.4.1 System Participant's investigation and reporting obligations | (a) (b) | If requested by the Power System Controller, a Relevant-System Participants should must investigate the occurrence of a reportable incident that is related to its plant or equipment and provide a written report to the Power System Controller which sets out the findings of that investigation and includes such other information as the Power System Controller's request or the Power System Incident Reporting Guideline specify must be included in that type of report., with detail appropriate to the consequences or potential consequences of an incident, to the Power System Controller on an event and incident. The Power System Controller's request or the Power System Incident Reporting Guideline may also specify the particular issues or matters which the Power System Controller requires the System Participant to investigate and the Power System Controller's expectations concerning the level and extent of the investigation process. within seven working days or Subject to paragraph (d) below, the System Participant must conduct and complete the investigation | This wording was in the second half of clause 7.4.2 of the current SCTC. As currently drafted, this clause requires <i>System Participants</i> to report on reportable incidents if requested by the <i>Power System Controller</i> . This would include major reportable incidents and minor reportable incidents. In addition to elaborating on the process and scoping the <i>Power System Incident Reporting Guidelines</i> , the timeline for <i>System Participants</i> to provide reports has been specified with flexibility delayed reporting by exception. The requirement for <i>System Participants</i> to submit a Brief Report has been revised from 7 to 5 business days and is still subject to delivery with a revised scope if the cause has not yet been identified. |
| | | System Participant must conduct and complete the investigation and deliver a Brief Report to the Power System Controller in accordance with the requirements of the Power System Controller's request and the Power System Incident Reporting Guideline, as soon as reasonably practicable after receipt of the Power System | |

| Controller's notice under clause 7.3.3 and in any event within 75 | | |
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| business days of receipt of that noticenotification of a reportable | | |
| incident by the Power System Controller. | | |

- (b)(d) If it is not reasonably possible for the System Participant to complete the investigation and provide a Brief Report within the timeframe specified in paragraph (c) (for example, if the investigation has not been able to identify the cause of the reportable incident), the System Participant must provide a Brief Report before the end of that period unless the Power System Controller waives this requirement. A System Participant should provide an interim written report when there is no clear finding of cause of fault and an investigation is ongoing.
- (e) Where a System Participant provides a Brief Report for a reportable incident under paragraph (d) above and that Brief Report relates to a major reportable incident, a Final Report must be provided to the Power System Controller as soon as reasonably practicable but in any event within 3020 business days after receipt of a notification concerning the occurrence of the reportable incident, unless otherwise required by the Power System Controller. For the avoidance of doubt, a System Participant will not be required to provide a Final Report in respect of a minor reportable incident unless otherwise requested by the Power System Controller.

7.4.2 <u>Power System</u> <u>Controller's</u> investigation and reporting <u>obligations</u>process

(a) The Power System Controller shall-must:

- (1) investigate;
- (2) conduct a review of; and
- (3) and report on,

every reportable operating incident which is notified to the Power System Controller, or of which the Power System Controller becomes aware of.

(b) The purpose of the investigation, review and report under paragraph

(a) above is in order to assess the adequacy of the provision and response of facilities or services and whether the facilities and services were appropriately established, and the appropriateness of actions (including remedial actions) taken to restore or maintain power system security, the reliability of the power system or supply to customers or electricity supply.

This is clause 7.4 of the current SCTC.

The deadline for *Power System Controller's* Brief Reports has been reduced from 14 to 10 business days.

Introduced a deadline for the *Power System Controller's* Final Reports at 90 business days to provide sufficient time to analyse the outcomes of reports from multiple *System Participants*, resolve any conflicts between investigations and agree on recommendations with *System Participants*.

- (c) The Power System Guideline may specify the factors and other considerations to be taken into account in assessing the matters referred to in paragraph (b).
- (d) The Power System Controller may request a System Participant to provide such information and assistance as is reasonably required by the Power System Controller to conduct and complete its investigations, review and report under paragraph (a) above.
- (a)(e) Each System Participant must co-operate with the Power System

 Controller for the purposes of conducting and completing its
 investigations, review and report under paragraph (a) above,
 including by using its reasonable endeavours to provide the
 information and assistance requested by the Power System
 Controller under paragraph (d) above.
- (f) The Power System Incident Reporting Guideline may specify requirements applying to the conduct of the Power System

 Controller's investigation and review and the form and content of the report.
- The Power System Controller is to must provide the Utilities

 Commission with an initial Brief Rreport to the Utilities Commission within 4410 business working days of receipt of a notification for a minor reportable incident or a major reportable incident event and incident (or otherwise becoming aware of the occurrence of such a reportable incident), containing key details of the reportable incident, and the scope of the investigation and the Power System Controller's recommendations concerning the reportable incident.
- (b)(h) The Power System Controller is to must provide a major reportable incident investigation detailed report to System Participants and the Utilities Commission as soon as reasonably practicable and in any event within 6090 business days after the event occurred of receipt of a notification of a major reportable incident (or otherwise becoming aware of the occurrence of such an incident). For the avoidance of doubt, the Power System Controller will not be required to provide a detailed report in respect of a minor reportable incident.
- (c) The Power System Controller is to report on minor reportable incidents in its half yearly reports to the Utilities Commission.
- (d)(i) Information included in reports on reportable incidents by the Power System Controller and System Participants should must reflect good electricity industry practice and should-include such minimum information as the Power System Controller may specify in athe Power System Incident Reporting Guideline Guideline. In

This is clause 7.4.3 of the current SCTC.

| | investigating, reviewing and reporting on reportable incidents, The Power System Controller is towill be guided by good electricity industry practice and the requirements of the Power System Incident Reporting Guideline. For investigating and reporting on reportable incidents, including in regard to the level of investigation appropriate to the consequences or potential consequences of an incident. Subject to the requirements of this Code, the Power System Controller may develop and maintain a guideline describing the investigation and reporting process. | |
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| 7.5 Power System Incident Reporting Guideline | | |
| 7.5.1 Obligation to develop and maintain Power System Incident rReporting gGuideline | Subject to this provision, The Power System Controller shall must develop and maintain a guideline (to be known as the Power System Incident Reporting Guideline). The purpose of the Power System Incident Reporting Guideline is to facilitate the proper discharge of the rights and obligations of the Power System Controller and System Participants under this Section 7 and to provide further detail concerning the various processes referred to in this Section 7. In developing or amending the Power System Incident Reporting Guidelinea guideline describing reportable incidents, the Power System Controller shall-must take into account good electricity industry practice, -consider the need for consistency between this Code and the Power System Incident Reporting Guideline and consult with the Utilities Commission and System Participants. The Power System Incident Reporting Guideline will include provisions which describe or specify (amongst other things): (a) describing additional criteria for classifying a reportable incident events as reportable incidents (the Incident Reporting Guideline). (b) the form, manner and content of notifications and reports that are required to be provided under this Section 7; (c) the level of investigation required with respect to different types of reportable incidents; (d) the Power System Controller's obligations relating to the investigation of reportable incidents; | This is clause 7.3.4 of the current SCTC. |

| | (e) how the requirements of this Section 7 and the Power System Incident Reporting Guideline are to apply to different power systems; (f) how extensions to timeframes will be assessed in different circumstances: (g) The Power System Controller shall include in the Incident Reporting Guidelines the obligation of the Power System Controller and relevant System Participants to notify previsions for advising un-licenced Network Users who are not System Participants of the occurrence of a power system incidents which has where they are affected or potentially affected the plant or equipment of that Network Userby power system emergency conditions: and other requirements, considerations or matters which are reasonably required to efficiently and effectively manage the identification, classification, investigation and reporting of reportable incident in accordance with good electricity industry practice and the Power System Controller's function. | |
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| 7.5.2 Compliance with Power System Incident Reporting Guideline | (a) The Power System Controller and all other System Participants must comply with the Power System Incident Reporting Guideline. (b) Each Network Operator must ensure that each of its connection agreements with Network Users require each Network User to support and assist the Network Operator in complying with this Section 7 and the Power System Incident Reporting Guideline to the extent that a power system incident is caused by the Network Users plant or equipment. | |
| 7.5 Public Reporting | (a) Nothing in this Code prevents the publication of a public-report by the Power System Controller or by the Utilities Commission. The Power System Controller shall include in the Incident Reporting Guidelines provisions for advising un-licenced Network Users of power system incidents where they are affected or potentially affected by power system emergency conditions. | This is clause 7.5 of the current SCTC. |
| 7.6 Process for and agreeing actions | (a) Without limiting the Power System Controller's rights under this Code, the System Control Licence and the Electricity Reform Act, following the completion by the Power System Controller of its investigation and reporting obligations under this Section 7 in respect of a reportable incident, the System Participants affected | |

| | (b) | by the reportable incident and the Power System Controller must meet with the view to negotiating in good faith and agreeing any actions to be undertaken by the System Participant that are reasonably required to prevent a repetition of the reportable incident, and the timeframe for undertaking those actions. The System Participant must undertake and complete any actions that have been agreed with the Power System Controller under clause 7.6(a) within the agreed timeframe for undertaking those actions. If: | |
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| | | the System Participants and the Power System Controller are unable to reach agreement on the matters referred to in paragraph (a) within 15 business days of commencing negotiations; or a System Participant fails to undertake an action that is agreed under paragraph (a) within the required timeframe. the Power System Controller may refer the matter to the Utilities Commission. | |
| | (a) (d) | | |
| 7.7 Independent investigation of a reportable incident | <u>(a)</u> | Without limiting the <i>Power System Controller's</i> obligations and rights to investigate and report on <i>reportable incidents</i> under this Section 7, the <i>Power System Controller</i> must, if directed by ‡the <i>Utilities Commission</i> , may direct the <i>Power System Controller</i> to engage an independent expert to: undertake an investigation and prepare the final report. (1) investigate; (2) conduct a review of; and (3) report on, a reportable incident. | This is clause 7.6 of the current SCTC. As currently drafted, there is no obligation, and only a right of the <i>Utilities Commission</i> . |
| | (a) (b) | | |
| | <u>(c)</u> | The Power System Controller and each System Participant must co-operate with the independent expert for the purposes of | |

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As the Half Yearly reporting collates incident reports among other matters, it was considered appropriate to clarify the scope of this report and provide it to System Participants. Consequently, the quarterly reports can be made redundant.

| Clause reference | Proposed changes to clause | Comments |
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| 8.4 Power System Controller Reports | The Power System Controller shall report on the following operational matters: (1) new System Participants and the relevant installations; (2) system security problems; (3) system black; (4) excess use of Network; (5) loss of generation/major transmission lines; (6) under-frequency load shedding; and lack of Reserve/low in Reserve. (1) | This content has been merged into clause 8.4.1. |
| 8.4.1 Half yearly report to the <i>Utilities Commission</i> | (a) The Power System Controller shall-must submit a half yearly Report to the Utilities Commission and System Participants which setsting out: (1) the performance of the power system and details of any reportable incidents of the power system; (2) details of any new System Participants and their facilities; (3) details of any issues causing or resulting in a risk to power system security; (4) details of any black system which occurred; (5) any excess use of the Network; (6) any loss of generation/major transmission lines; (7) the occurrence of any under-frequency load shedding; and (8) the occurrence of any lack of reserve/low reserve. | We have combined what are currently clauses 8.4 and 8.4.1 to clarify that the Power System Controller is required to report on the matters listed in clause 8.4.1 in the half yearly reports to the Commission and System Participants. |

| | during the 6 months before the submission of the report. (a)(b) The report will must be issued on or before 31 January and 31 July each year. | |
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| 8.4.2 Quarterly report to System Participants | The Power System Controller shall make available to System Participants a report setting out the performance and major incidents of the System Participant and other major incidents related to the System Participant. The report will be issued on or before 31 July, 31 October, 31 January and 30 April each year. | Quarterly reports provided limited value as they contained a subset of the information provided in half yearly reports and involved a considerable degree of effort to produce. As Half Yearly are now issued to System Participants the removal of quarterly reports does not change the information received by System Participants. |
| 8.4. <u>3-2</u> Annual reports | The Power System Controller shall-may contribute (as resources allow and as requested by the a System Participants) in relation to information for that System Participant's a Annual Rreports. | This is currently clause 8.4.3. |

Attachment 1 – Glossary of Terms of the Code

| Clause reference | Proposed changes to clause | Comments, responses and questions |
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| load | A connection point or defined set of connection points at which electrical power is delivered to a person or to another network or ‡the amount of electrical energy delivered at a defined instant at a connection point or aggregated over a group-defined set of connection points. | We have amended this definition to reflect the definition of the term in the NT NER. |
| Power System Incident Reporting Guideline | The guideline developed by the <i>Power System Controller</i> under clause 7.5.1. | |
| system minute | equals the energy equivalent of 1 minute of supply at maximum historical demand for the power system. | |
| customer minute | in relation to an <i>outage</i> of any <i>plant</i> or <i>equipment</i> forming part of a <i>power</i> system, equals the duration of the <i>outage</i> in minutes multiplied by the number of <i>customers</i> affected by that <i>outage</i> . | |