

Consultation Summary for Parallel GXP's Technical Guidelines Document.

| Comments From | Date Received | Comments | SO response | Outcome |
|-----------------------|---------------|--|--|--|
| Orion | 6/05/2005 | <p>Notification requirements- Require further guidance on situations where advance notification is not required, and which situations require realtime co-ordination.</p> <p>Switching Device- paralleling at lower voltages may often be performed with switch/fuse units or disconnectors. In some situations single phase operation may not cause sensitive earth fault protection to operate.</p> <p>Frequency of paralleling.- hundreds of parallel connections may be required in any year and it may not be practical to evaluate all operations on a case by case basis.</p> | <p>SO agrees -this is now detailed in the draft document "Process for Assessment of Parallel GXP applications."</p> <p>SO agrees -it is the responsibility of each asset owner to operate their assets as they see fit. Purpose of this being in the technical guidelines is to raise the awareness of the situation.</p> <p>SO agrees -this is now detailed in the draft process document. Once a parallel connection/situation has been assessed, the assessment remains valid for two years. Providing sufficient notice is given the parallel connection can then be made at any time.</p> | <p>Refer to document Process for Assessment of Parallel GXP applications.</p> <p>n/a</p> <p>Refer to document Process for Assessment of Parallel GXP applications.</p> |
| Contact Energy | 5/07/2005 | <p>Financial consequence -Load transfer between GXP's can have price consequence where nodal price at GXP's is different. This is work in progress for EC Reconciliation Implementation Project Team which have an interest in defining the known places of tying and load transfer.</p> <p>Reverse Power & Metering -Retailers are most affected in situations where metering does not recognise reverse power situations (as opposed to distributors). Require stronger recommendations on situations where this may occur.</p> <p>Switching device -tying devices need to ensure they do not result in earth fault protection mal-operation due to the effects of pole scatter.</p> | <p>SO appreciates the consequence this can have, and the resulting inconsistencies this creates for pricing and reconciliation. The SO supports the work being done by the EC's Reconciliation Implementation team and hopes the parallel GXP's process will assist this.</p> <p>SO agrees -Reverse power situations can impact on both the distributor and retailer. Section revised.</p> <p>SO agrees -it is the responsibility of each asset owner to operate their assets as they see fit. Purpose of this being in the technical guidelines is to raise the awareness of the situation.</p> | <p>n/a</p> <p>Section revised</p> <p>Refer to document Process for Assessment of Parallel GXP applications.</p> |
| Northpower | 7/07/2005 | Purpose of the document is not clear. | SO agrees- The document "Process for Assessment of Parallel GXP applications" is now available which outlines the EGR obligations on participants for managing parallel GXP situations. | Refer to document Process for Assessment of Parallel GXP applications. |

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| | | <p>There is little evidence of parallel GXP situations causing subsequent trippings and operational issues.</p> <p>Given the amount of parallel switching that occurs, and that it has been happening for quite some time, we not sure of why there is a need to re-visit this aspect of network operations.</p> <p>A third type of parallel is quite common where parallel feeders from opposite sides of a GXP bus can be tied at a zone sub or major industrial.</p> <p>Switching Device- paralleling at lower voltages may often be performed with switch/fuse units or disconnectors. Any mal-operation of sensitive earth fault protection is an issue for the distributor to manage.</p> <p>Reverse power flow & metering. -Situations where reverse flow can occur will require the use of bi-directional metering.</p> | <p>There have been instances where parallel situations have compromised system and asset operation. Given the complexities and inter-dependence of the Distributor, Grid Owner and System Operator interface in these situations, the purpose of the proposed assessment process, is to provide a mechanism which allows participants to meet their EGR obligations for managing parallel GXP situations.</p> <p>see above</p> <p>SO agrees however the main concern is situations where paths parallel to the grid can be created by tying separate GXP's</p> <p>SO agrees -it is the responsibility of each asset owner to operate their assets as they see fit. Purpose of this being in the technical guidelines is to raise the awareness of the situation.</p> <p>SO agrees -Reverse power situations can impact on both the distributor and retailer. Section revised.</p> | <p>Refer to document Process for Assessment of Parallel GXP applications.</p> <p>Section revised.</p> <p>Section revised.</p> |
| Powerco | 11/07/2005 | <p>Process administration and switching time. -concern with the administration requirements where there are a high number of parallel switching operations that occur. Switching time can be quite lengthy where rural networks are concerned.</p> <p>Power Angle and Magnitude checks. -Ensuring checks are made before parallels occur may not be possible as equipment required to check this may not be installed at distribution levels.</p> | <p>SO agrees -whilst not wanting to create administrative burden a process is required to facilitate participants in meeting their EGR obligations. Implications of switching time will be assessed on a per case basis in the assessment process.</p> <p>SO agrees -the expectation is that this would be assessed during the assessment process. If this were an issue and required a specific system configuration to be in place during switching, then this would be detailed in the agreement.</p> | <p>Refer to document Process for Assessment of Parallel GXP applications.</p> <p>Refer to document Process for Assessment of Parallel GXP applications.</p> |
| Vector | 12/07/2005 | <p>Primary focus of guidelines should be on maintaining grid security. Addressing any safety concerns needs to be done in a different context.</p> <p>The safety issue described could be eliminated by the installation of an intertrip.</p> | <p>SO agrees -Use of reasonable and prudent practice is the sole responsibility of the respective asset owner.</p> <p>SO agrees -A situation like this would be resolved in the application assessment process</p> | <p>Refer to document Process for Assessment of Parallel GXP applications.</p> |

The security of distribution and sub-transmission networks is the sole responsibility of the respective distributor.

SO agrees however given the complexities and inter-dependence of the Distributor, Grid Owner and System Operator interface in these situations, the purpose of the proposed assessment process, is to provide a mechanism which allows participants to meet their EGR obligations for managing parallel GXP situations.

Refer to document Process for Assessment of Parallel GXP applications.

Paralleling of LV network should not be an issue as any circulating flows would be limited by the impedances of the network.

This would be determined on a per case basis in the application assessment process.

Refer to document Process for Assessment of Parallel GXP applications.

Guidelines should clearly state that SO, GO & dist all need to be involved in risk assessment and setting of protection requirements.

SO agrees.

Refer to document Process for Assessment of Parallel GXP applications.

Power system angle and magnitude indications could be made available through SCADA to ensure there are no abnormal power flows prior to tying large / significant GXP's

SO agrees. -use of magnitude and angle indications could be a condition of the application agreement.

Refer to document Process for Assessment of Parallel GXP applications.

Consultation Summary for Parallel GXP's Technical Guidelines Document (V2) and Process for Assessment of Parallel Grid Exit Point Applications

| Comments From | Date Received | Comments | SO response | Outcome |
|---------------|---------------|---|---|-----------------|
| Orion | 9/09/2005 | Comments on Guideline for Parallel Grid Exit Point Connection(Rev 2) | | |
| | | Switching Device- Some ambiguity in text. Suggested new wording. | SO agrees - new comments included in revision 3. | Section revised |
| | | Tie Duration - Suggestion that the tie duration be 10 minutes. Provided reasons. | SO agrees - new comments included in revision 3. | Section revised |
| | | Comments on Process for Assessment of Parallel Grid Exit Point Applications. | | |
| | | Introduction added info on why parallel connections are required. | SO agrees - new comments included in revision 2. | Section revised |
| | | Assessment Process confusion over whether SO wanted applications on ties between TP supply buses or TP feeders at different voltages. | SO does want applications of supply buses and feeders at different voltage levels. | Section revised |
| | | Expiry of proposals after 2 years will introduce unnecessary level of compliance with associated compliance costs | SO appreciates this concern but is concerned that when there are changes to the grid or distributors systems that these applications to parallel will not be reassessed. Having them expire after 2 years forces a reassessment. If nothing has changed then it will be a simple process to approve them. | |
| | | Mitigation of Risk - this issue should be addressed during assessment stage. | SO agrees - paragraph has been included in revision 3 of the guidelines. | Section revised |
| | | Additional process steps to include SO part of the process | SO agrees - new comments included in revision 2. | Section revised |
| | | Information requirements - Concerned that the amount of load to be transferred will not be know at the time of the application. At application time an estimated range of load be provided and the actual amount of load be provided by 10 am on the day before switching is to take place. | SO agrees - new comments included in revision 2. | Section revised |

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| | | <p>Timetable - doesn't cover emergency situations. As long as application for paralleling has not indicated that special mitigating measures are required then the distributor may take independent action and advise the SO as soon as practicable</p> <p>The process does not cover the situation where the GO wished the Distributor to parallel GXP's</p> <p>GO does not need to get approval to parallel via its own system</p> | <p>SO agrees - new comments included in revision 2.</p> <p>There are numerous reasons to parallel GXP's of which this is one. In this situation the GO would identify that for an outage GXP load may need to be managed or reduced. In consultation with the Distributor the solution may be to transfer load by paralleling GXP's. An assessment will then be required to ensure the respective asset owners obligations are met.</p> <p>If the Grid Owner instructs the SO to operate the system in a particular configuration, the GO needs to ensure that it's assets are capable. The SO then ensures it's PPO's can be met for the offered configuration.</p> | Section revised |
| Northpower | 30/08/2005 | <p>Comments on Guidelines for Parallel Grid Exit Point Connection(Rev 2)</p> <p>Document needs a Scope and Purpose</p> <p>Only briefly address benefits attained by paralleling.</p> <p>System Power Angle and Magnitude - how is this checked in practice?</p> <p>Reverse power flow - disagree with statement that says that 'there is always a risk reverse power flow could occur during tying'. This would be impossible when tied at an 11 kV level.</p> <p>Fault Level - TP the only company he knows that has switchgear in situations where the fault level is greater than the duty of the equipment</p> | <p>SO agrees - a purpose has been added to Revision 3</p> <p>The purpose of the document is not to review the need for paralleling GXP's, but to outline some of the technical issues that must be considered, and to provide a process whereby the GO and the Distributor can reach agreement on where this can occur.</p> <p>This would be checked during the assessment process. This section has been revised to reflect that</p> <p>Although reverse power flow may not always occur when GXP's are paralleled, there is the risk of a fault occurring on a parallel path which could then result in reverse power flow occurring.</p> <p>SO has included this in the document as a check before paralleling can take place. As this is an 'abnormal' operating condition fault levels must be considered.</p> | <p>Section revised.</p> <p>Section revised.</p> <p>Section revised.</p> <p>Section revised.</p> |

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| | | Change in fault levels - protection sensitivity is fixed by CT ratio and protection relay settings so won't change. | SO agrees - reference to protection sensitivity has been removed from Revision 3 | Section revised. |
| | | Parallel paths - protection tripping is not all bad as it is doing what it is designed to do. | The Distributor needs to be aware that this protection operation is a possibility. | |
| | | Comments on Process for Assessment of Parallel Grid Exit Point Applications | | |
| | | New revision does not give any instances to highlight the circumstances where paralleling of GXP's has caused problems. A simple summary would justify need for the document. | Although there have been instances where GXP's being paralleled have caused protection mal-operation on the Grid, the prupose of this document is to set out a process whereby Distributors, the Grid Owner and the System Operator can ensure their respective obligations are being met. | New section included. |
| | | An underlying concern that SO wants to dictate how Distributors should operate there networks | The SO is only concerned with system security of the core grid. Both the SO and the GO need to ensure they are being reasonable and prudent in meeting their respective obligations. | |
| | | Time frames unclear. | Have tried to make the timeframes clearer in the revised document. Once an application to parallel a GXP is approved then the Distributor can parallel without having to go through the detailed assessment process again. As long as any risk mitigation measures are in place then the Distributor needs to notify the SO by 10 am, the day before paralleling and again, through the RO just before paralleling is to take place. | Section revised |
| | | The new process would need to have a 12 week lead in time to give Distributors time to prepare there applications. | The SO agrees that time frame for implementing the new process will have to give the Distributor and the GO time to prepare and assess the applications. | |
| | | The process must bind the GO and the SO to giving the Distributor 12 weeks notice of when they want the Distributor the parallel there network due the work on the grid assets | The SO agrees that this is something that must be considered when planning the work. Bearing in mind that once an agreemnt is reached to parallel two GXP's, those GXP's can then be tied at any time providing the SO recieves sufficient notice. | Section revised |

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| | | The voltage levels that the assessment process applies to needs to be more prominent. The situation where Supply points at different voltages are tied also needs to be addressed. | The SO agrees. Revision 2 of the documents has clarified this. | Section revised |