

**SUBMISSION TO THE  
ECONOMIC REGULATION AUTHORITY**

**Review and Proposed Amendments of the Technical  
Rules for Western Power's South West Interconnected  
Network**

**August 2011**

## Executive Summary

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**Matter** The Technical Rules developed under Electricity Networks Access Code 2004 (**ENAC**) specify the technical requirements for connecting to and using Western Power's covered network. The Economic Regulation Authority (**Authority**) approved Western Power's current Technical Rules on 26 April 2007. These rules became effective on 1 July 2007.

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**Context** The Authority has published a review report setting out proposed amendments to the current Technical Rules. The review took into consideration a submission received from an interested party, the Technical Rules Committee's Final Report dated April 2009, advice from the Authority's technical advisers, Geoff Brown & Associates Ltd and McGill Engineering Services, and subsequent discussions with Western Power and others.

It appears the proposed amendments to the Technical Rules arise from recommendations made in the Final Report by the Technical Rules Committee, from a subsequent request by Western Power for further amendments and from unspecified sources following the Authority's subsequent discussions with various parties. Synergy notes that it would assist if the Authority, as required by clause 12.50 of the ENAC, clearly placed each of the various proposals to amend the Technical Rules on the public register.

In any event, the Authority has determined, under section 12.54(a) of the ENAC, to consult the public in accordance with Appendix 7 of the Code. Therefore, section 12.54(b) of the ENAC also applies, and the Authority must approve a proposed amendment only if the Authority considers that the amendment will not have a material adverse effect on Western Power or a User.

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**Scope** In addition to the requirements under clause 12.54(b), the Authority must, under clause 12.3, ensure that the amendments to the Technical Rules do not require any person, including Western Power (such term includes System Management) to engage in or omit to engage in an act which would contravene a written law or a statutory instrument. Finally, under clause 12.1, the amendments to the Technical Rules must be considered as have the following objectives:

- are reasonable; and
- do not impose inappropriate barrier to entry to a market; and
- are consistent with good electricity industry practice; and
- are consistent with relevant written laws and statutory instruments,

**(Technical Rules Objectives).**

This submission details Synergy's comments on the proposed amendments to the Technical Rules in light of the requirements under clauses 12.3 and 12.54(b) and having regard to the Technical Rules Objectives and other requirements under the ENAC such as the ring fencing objectives imposed on Western Power under clause 13.11.

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## Key issues

- Careful assessment required of Technical Rules that may adversely effect users.
- How will the Technical Rules comply with the ringfencing objectives.
- How do the Technical Rules interact with the Wholesale Electricity Market Rules (**Market Rules**), made under the *Electricity Industry (Wholesale Electricity Market) Regulations 2004* (WA), particularly in relation to the dispatch obligations, rights and abilities of Western Power and System Management.
- What is the effect of the West Australian distribution connection manual.
- Clarity on the operation of equipment supplying electricity into the network

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**Recommendations** In light of the contractual effect Technical Rules has, and the liabilities that are imposed on *Users* under the *Standard Access Contract*, Synergy recommends that the Authority conduct a holistic assessment of the operation and effect of the proposed amendments to the Technical Rules, giving particular regard to the *Code Objective* and the interaction, if any, between the Technical Rules and the Market Rules. In Synergy's view, it appears that no one has considered how the Technical Rules interact with the market Rules, which appears to have given rise to two separate purported rights to control the dispatch of generators.

In Synergy's view, this is a major oversight and needs to be corrected, particularly where a User could be faced with having to comply with competing obligations under each instrument, one which exposes it to civil penalties under the Market Rules and the other that exposes it to contractual liability under the ETAC. Unless the Authority can be satisfied that this will not occur, then Synergy submits the Authority is obliged by sections 12.3 and 12.54(b) to not approve the proposed amendments. In fact, in Synergy's view, the Authority should have also considered this matter when it initially approved the Technical Rules such that there is a real risk that some or all of the Technical Rules are invalid.

Synergy submits that the Authority must also carefully consider the contractual implications for Users arising from proposed amendments to the extent any proposed amendments results in exposing users to additional contractual damage claims by Western Power. Synergy notes that, given the requirements of section 12.54(b) of the ENAC, any proposed amendments that expose a User to contractual liability should be rejected, particularly given the *standard access contract* provisions where such the consequence could result in millions of dollars of liability to the user.

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## INTRODUCTION

Synergy appreciates this opportunity to provide comments on the proposed *Technical Rules*. Unless otherwise specified, words in italics or capitalised in this submission have the same meaning as in the ENAC.

## OVERARCHING CONSIDERATIONS

Section 2.2 of the ENAC relevantly requires the Minister and the Authority to have regard to the *Code objectives* when performing a function under the ENAC, whether or not the provision refers expressly to the *Code objectives*.

The *Technical Rules* is given contractual effect and is enforced on *Users* through the electricity transfer access contract (**ETAC**) or a *Contract For Services*. In particular, section 12.5 of the ENAC permits the *Technical Rules* to amend a *Contract For Services*<sup>1</sup> in order to contractually enforce compliance to the rules:

### **"Technical rules prevail over contract**

12.5 If the provisions of a *contract for services* provided by means of a *network* are inconsistent with the *technical rules* for the *network*, then the contract is by force of this section amended from time to time to the extent necessary to comply with the *technical rules* except to the extent that an exemption to the *technical rules*, granted under section 12.34 or 12.41, affects the contract."

Clauses 6.2 and 12.1 of the *Standard Access Contract* approved by the Authority require:

### **"6.2 Where the User\* is not the Controller\***

6.2(a) Subject to clause 6.2(f), if the User\* is not the Controller\* of a Connection Point\*, and the Controller\* of that Connection Point\* has not entered into a Connection Contract\* with Western Power\* in respect of the Connection Point\*, then the User\* must ensure that the Controller\* of that Connection Point\* complies, and will continue to comply, with the obligations set out in this Contract\*, to the extent that such compliance is reasonably necessary for the Parties\* to satisfy their obligations under this Contract\*, including, but not limited to:

(ii) clause 12 (Technical Rules\*); and..."

### **"12.1 Western Power\* and the User\* must comply**

Western Power\* and the User\* must each comply with the Technical Rules."

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<sup>1</sup> Unlike the *Standard Access Contract* the Authority does not approve a *Contract For Services*.

Sections 12.1 of the ENAC relevantly require:

“12.1 The objectives for *technical rules* are that they:

- (a) are reasonable; and
- (b) do not impose inappropriate barriers to entry to a market;  
and
- (c) are consistent with *good electricity industry practice*; and
- (d) are consistent with relevant *written laws and statutory instruments*.

However, in light of the contractual effect the Western Power’s proposed Technical Rules has and the liabilities it can impose on *Users* under the *Standard Access Contract*, Synergy also submits that the Authority in conducting its review conduct a holistic assessment of the operation and effect of Western Power’s proposed Technical Rules, giving particular regard to the *Code Objective*. In particular, the Authority must carefully consider the contract implications for users arising from proposed amendments to the extent any proposed amendments results in exposing users to additional contractual damage claims by Western Power. Therefore, given the requirements of section 12.54(b) of the ENAC, proposed amendments should be rejected, particularly given the *standard access contract* provisions that result in millions of dollars of liability to the user.

The Authority’s Review Report (**the Report**) appears to be simultaneously performing a review, amendment, public consultation and decision on the proposed Technical Rules. The references in the Report to clause 12.56 in particular is confusing:

## DECISION

1. The Authority has completed its review of Western Power’s proposed Technical Rules pursuant to section 12.56 of the *Electricity Networks Access Code 2004* (Access Code) and sets out the findings on its review in this document.
2. Western Power has submitted revised Technical Rules, consistent with the amendments recommended by this review, for approval under section 12.50 of the Code. Before approving the revised Technical Rules the Authority is required to consult with the public in accordance with the requirements of Appendix 7 of the Access Code if the Authority considers the amendment to be substantial.

Synergy submits that it is too late for a review of the proposed Technical Rules under section 12.56 of the ENAC to occur now. Western Power is scheduled to submit its proposed changes for the third *access arrangement (AA3)* in October 2011. Therefore, a review conducted now of the Technical Rules under section 12.56 would be a distortion of the regime and is contrary to the intent of the ENAC.

Synergy submits that section 12.56 does not provide the Authority with the power to conduct that review now. Including the power to amend the Technical Rules or consider amendments that have been deferred under section 12.52. If the Technical Rules can be reviewed now under section 12.56 then Synergy submits that the review can only be conducted on the Technical Rules as it existed at that time before the *target revisions commencement date*.

The ENAC clearly delineates a review conducted under section 12.56 and amendments proposed under section 12.50. Synergy submits that these functions may not be done at the same time, as is being contemplated by the Authority's Report. However, Synergy agrees with the Report that:

"There is a separate power in sections 12.50 to 12.54 of the Code which provides for amendments to the Technical Rules. Under section 12.50 of the Code, amendments have to be submitted by Western Power or the Chair of the Committee."

The Report also indicates that:

"...In addition, during the course of the review, further changes to the text and content of the proposed Technical Rules were suggested by Western Power, the Authority's Secretariat and others, including a Working Group set up by the Office of Energy to consider the inspection and approvals process for Small Photovoltaic Generation Systems."

"In addition, during the course of the review, further changes to the text and content of the proposed Technical Rules were suggested by Western Power, the Authority's Secretariat and others. Due to the nature of the process of consideration, it was sometimes difficult to separate those changes from the amendments suggested by the Committee. However, for the purpose of this decision the origin of the amendments is not relevant; rather it is the Authority's assessment of whether suggested amendments are consistent with Chapter 12 of the Code and the Code objective that is important."

However, the Report does not make it clear how these further changes were dealt with under section 12.50 and 12.53. Synergy submits that it is important to be clear on the origin of the further changes under section 12.50 and for these proposed changes or amendments to be placed on the *public register*.

It is in-appropriate and confusing to have a review and assessment of the Technical Rules being conducted at the same time. In addition, Synergy notes that the Authority has considered the proposed amendments to be substantial in order to require public consultation in accordance with section 12.54(a) of the ENAC.

Therefore, Synergy submits that the proposed Technical Rules and associated changes should be considered by the *Technical Rules Committee* and that the Authority, under section 12.54(b) of the ENAC:

"12.54(b) must approve the proposed amendment only if it considers that the amendment will not have a material adverse effect on the service provider or a user."

## COMMENTS ON THE PROPOSED TECHNICAL RULES

### Compliance With Ringfencing Objectives

Section 13.1(a) of the ENAC requires:

"13.1 Except to the extent that the *Authority* grants an exemption under section 13.31, a *service provider* must, in relation to a *covered network*:

(a) comply with the *ringfencing objectives*; and..."

The *ringfencing objectives* in sections 13.11(b) to (c) of the ENAC require:

"13.11 (b) subject to section 13.11(d), only *marketing staff* of the *ringfenced business* may have access to or possession of, or make use of, *commercially sensitive information*; and

13.11 (c) subject to section 13.11(d) and any *written law* including this Code, and except to the extent that the information comes into the public domain otherwise than by disclosure by the *service provider*, *commercially sensitive information*:

(i) must be used only for the purpose for which that information was developed or provided; and

(ii) must not be disclosed to any person (including any servant, consultant, independent contractor or agent of any *associate* of the *ringfenced business*) without the prior consent of the person who provided it or to whom it relates; and

13.11(d) *commercially sensitive information* may be disclosed to and used by the *service provider's senior staff* but:

(i) only to the minimum extent necessary from time to time for good corporate governance; and

(ii) where possible only in summary or aggregated form or otherwise in a form that minimises the disclosure of any commercially sensitive or confidential details; and

(iii) for use only in relation to the *ringfenced business* and only for the purpose for which it was developed or provided..."

Synergy submits that many of the proposed amendments to the Technical Rules (and in fact many of the existing provisions of the Technical Rules) appear to be based on *commercially sensitive information* being freely disclosed between Western Power's marketing staff who negotiate ETACs and System Management and from System Management to Western Power and third parties. For example, clause 1.9.1(b) will require commercially sensitive information provided under an ETAC to be shared with System Management and the Independent Market Operator:

(b) Where an exemption granted under these Rules may impact the operation or security of the power system, the Network Service Provider must consult with the Independent Market Operator and/or System Management as appropriate before deciding whether to grant the exemption.

In Synergy's submission, it is not appropriate for a subordinate legislative instrument such as the Technical Rules to impose contractual obligations on how commercially sensitive information provided by the contracting party is to be disclosed, particularly where there are several other superior legislative instruments (such as the Market Rules) that also govern the provision of information.

Synergy's review of the proposed Technical Rules, in particular the interaction between Systems Management and Western Power, appear to indicate that the rules assume that Western Power and System Management may freely collaborate to Western Power's commercial benefit. That is not the case and, to the extent such provisions appear in the Technical Rules, they should be very limited and there should be clear, significant sanctions on the misuse of the information.

There are numerous examples where the Technical Rules does not specify technical requirements and instead appear to be being used to impose general, binding contractual arrangements with no restrictions such a requirement to act reasonably, or to consider the commercial impact on a User. The Technical Rules appear to impose and enforce conditions on a contract through the Technical Rules. For example, clause 3.4.1(b) requires:

- (b) *A Consumer must operate its facilities and equipment in accordance with any and all directions given by System Management or the Network Service Provider under these Rules or under any written law.*

In addition, it also appears to deal with matters that should be administered under the Independent Market Operator.

#### **4.3.4 Involuntary Disconnection**

- (a) *The Network Service Provider or System Management may disconnect a User's facilities from the transmission or distribution system or otherwise curtail the provision of services in respect of a connection point:*
- (1) *in the case of the Network Service Provider, where directed to do so by System Management or the Independent Market Operator in the exercise or purported exercise of a power under the ~~Wholesale Electricity~~ Market Rules;*

#### **4.3.7 Obligation to Reconnect**

*The Network Service Provider or System Management must reconnect a User's facilities to a transmission or distribution transmission system as soon as practicable:*

- (a) *in the case of the Network Service Provider, where directed to do so by System Management or the Independent Market Operator in the exercise or purported exercise of a power under the ~~Wholesale Electricity~~ Market Rules;*
- (b) *if the breach of the Access Code, these Rules or a connection agreement giving rise to the disconnection has been remedied; or*
- (c) *if the User has taken all necessary steps to prevent the re-occurrence of the relevant breach and has delivered binding undertakings to the Network Service Provider or System Management, as applicable, that the breach will not re-occur.*



## 5.1 APPLICATION

This section 5 applies to the operation and coordination of the *Network Service Provider's* and *Users' facilities* to the extent not covered under the ~~Wholesale Electricity Market Rules~~. For *Market Generators* (as defined under the ~~Wholesale Electricity Market Rules~~, and generally being *Generators* the rated capacity of whose *generating system* equals or exceeds 10 MW) the rules that apply for *power system* operation and coordination are those found within the ~~Wholesale Electricity Market Rules~~.

## 5.2 INTRODUCTION

### 5.2.1 Purpose and Scope of Section 5

This section 5, which applies to, and defines obligations for, the *Network Service Provider* and all *Users*, has the following aims:

- (a) to establish processes and arrangements to enable the *Network Service Provider* to plan and conduct operations within the *power system*; and
- (b) to establish arrangements for the actual *dispatch* of *generating units* and *loads* by *Users*.

Where the Technical Rules are being used by System Management to enforce wholesale market rules, contractually via the ETAC, market participants are exposed to contractual damages or civil penalties when they fail to meet these obligations. Consequently, Synergy is concerned that there are several provisions, associated with the interaction between Western Power, Systems Management and the IMO within the proposed Technical Rules that can have a material adverse impact on a *user*. Further, many provisions in the Technical Rules appear to give System Management and even Western Power the ability to dispatch generators. Synergy would like the Authority to consider and explain how the Technical Rules are able to provide for such an outcome given the existence of the detailed dispatch provisions of the Market Rules. In Synergy's view, in the absence of any reasonable explanation, the provisions in the Technical Rules need to be revisited.

## West Australian Distribution Connection Manual

Synergy notes that the proposed changes makes several references to a West Australian Distribution Connection Manual (**Manual**) and seek to give contractual effect to this manual under the *User's Access Contract* or a *Contract For Services*.

Synergy notes that the *Technical Rules Committee* did not review this Manual. Further, that the Manual is an in house document created by Western Power, which can be amended by Western Power at any time.

Therefore, it is not clear the basis on which the Authority is able to make a determination on whether the requirements in the Manual are consistent with the ENAC, *access arrangement* and Technical Rules Objectives. In particular, it is not clear how the Authority could be satisfied of the matters under sections 12.3 or 12.54(b) of the ENAC unless it has reviewed the Manual and its operation under the *Technical Rules*, and imposes obligations on Western Power not to amend the Manual, which does not appear to be the case.

Synergy understands that this Manual is an internal Western Power document and is not subject to any statutory or regulatory oversight. In addition, this manual is not a recognised national or international standard, has not been developed with the same transparency, technical and consultative rigour of a national or international standard. In addition, such a Manual is not developed or approved by a recognised statutory authority and is subject to unilateral changes and undermines the regulated ENAC mechanism for developing and approving *Technical Rules* for a *Covered Network*.

Consequently, Synergy submits that it is contrary to the ENAC and the Technical Rules Objectives to force compliance to this manual by making reference to it under the *Technical Rules*. Such an approach would also be contrary to section 5.3 of the ENAC and would not provide for a workable *Access Contract* or a *Contract For Services*. Imposing a contractual obligation for a user to comply with a document that has no regulatory oversight and may be changed at anytime by Western Power is materially adverse to users.

Consequently, Synergy is very concerned with an approach that gives legal, technical and contractual effect to an internal monopoly *service provider's* technical manual which has been incrementally developed and maintained outside of the regulatory regime.

Synergy submits, in order to ensure there is no material adverse effects on users, the Manual can only be a guide and cannot have any statutory or legal effect under the access regime.

In addition, Synergy submits that if there are matters in the Manual Western Power would like to give legal and technical effect to under the ENAC then Western Power must describe these matters plainly and transparently in the *Technical Rules* so that it can have regulatory oversight and be subject to public consultation in accordance with the requirements of the ENAC. Synergy also submits that this is the fundamental reason the ENAC contemplates the *Technical Rules* and that the development of these rules under a statutory Authority is essential for an efficient access regime.

## OTHER ISSUES OF RELEVANCE

### Clause 3.7.4 – Metering Installation

Synergy for the reasons described above does not support the proposed change to clause 3.7.4 of the *Technical Rules*.

It is important to note that the matters dealing with the installation of meters and the measurement of electricity is regulated under the Electricity Industry Metering Code 2005 (**Metering Code**). In particular, clause 6.8(a)(i) of the Metering Code's Metrology Procedure, approved by the Authority, requires.

"6.8(a)(i) A *metrology procedure* must at least:

- (a) as a minimum, contain information on the *devices* and *methods* that are used by the *network operator* to:
  - (i) measure, or determine by means other than a device, *electricity* produced and consumed at a *metering point*, and..."

The Metering Code also places an absolute obligation on retailers and the network operator to give regard to the Metering Code objectives when performing a function under the Metering Code.

## "2.1 Code Objectives

- (1) The *Code objectives* are to:
  - (a) promote the provision of accurate metering of *electricity* production and consumption;
  - (b) promote access to and confidence in *data* of parties to commercial *electricity* transactions;
  - (c) facilitate the operation of Part 8 and Part 9 of the Act, the *Customer Transfer Code* and the *Code of Conduct*.
- (2) *Code participants* must have regard to the *Code objectives* when performing an obligation under this *Code*, whether or not the provision under which they are performing refers expressly to the *Code objectives*.

Clause 5.1 of the Metering Code also requires the Network operator to use reasonable endeavours to provide access to metering services and in particular, clause 5.1(3) clarifies the interaction between the ENAC and metering services provided under the Metering Code:

"5.1(3) This clause 5.1 does not limit the *Access Code*, and, in the event of any conflict or inconsistency between this clause 5.1 and a provision of the *Access Code*, the latter is to prevail."

Therefore, a metering service provided under the Metering Code may not limit or be inconsistent with the provision of a *Covered Service* or the *Technical Rules* under the ENAC. In addition, in order to support this principle the ENAC, under section 5.1(k), 5.27 and 5.28 also contemplates an interaction on metering matters:

"5.1 An *access arrangement* must: ...

- (k) include provisions dealing with *supplementary matters* under sections 5.27 and 5.28; and..."

"5.27 Each of the following matters is a "**supplementary matter**": ...

- (c) metering; and..."

"5.28 An *access arrangement* must deal with a *supplementary matter* in a manner which:

- (a) to the extent that the *supplementary matter* is dealt with in:
  - (i) an enactment under Part 9 of the Act; or
  - (ii) the 'market rules' as defined in section 121(1) of the Act, applying to the *covered network* — is consistent with and facilitates the treatment of the *supplementary matter* in the enactment or market rules; and
- (b) to the extent that the *supplementary matter* is dealt with:
  - (i) in a *written law* other than as contemplated under section 5.28(a); and
  - (ii) in a manner which is not inconsistent with the requirement under section 5.28(a) to the extent that it applies to the *covered network*, is consistent with and facilitates the treatment of the *supplementary matter* in the *written law*; and

(c) otherwise — in accordance with the *technical rules* applying to the *covered network* and the *Code objective*."

Consequently, the *standard access contract*, approved by the Authority, requires metering to apply as terms under the *standard access contract*:

**"23. Provisions of Access Arrangement\* on Supplementary Matters\* apply**

The provisions of the Access Arrangement\* in respect of Supplementary Matters\* apply also as terms of this Contract\*, to the extent they are relevant."

Therefore, Synergy submits that for clarity and consistency it is reasonable for the *Technical Rules* to clarify, under clause 3.7.4, the meter installation requirements in order to give effect to the *Covered Services* being provided and the technical requirements, as contemplated by section A6.1(c) of the ENAC, that must apply to the operation of the equipment connected to the network:

"A6.1 *Technical rules* must address at least the following matters:...

(c) the technical requirements that apply to the design and operation of *facilities and equipment connected to the network*; and..."

Synergy notes that the current clause 3.7.4 in the *Technical Rules* already places a positive obligation on the user to do something<sup>2</sup> when connecting and operating equipment that requires a bi-directional *Covered Service* and *Connection Point*<sup>3</sup>. In this case the current clause 3.7.4 requires the user must make provision for both an import and export meter<sup>4</sup>. Synergy submits that there must be greater clarity on what users, who require a bi-directional *Covered Service* and *Connection Point*, must do in respect of making this provision for an import/export meter and recommends that clause 3.7.4 be amended to clarify that users must install a suitable meter that meets the metering eligibility requirement for the *Covered Service* being provided, in order to connect and operate their equipment on the network. Especially, if the operation of this generation equipment is subject to an application made under the *application and queuing policy* and is intended to supply electricity into the *distribution system*.

There will be material adverse impacts on users if this clarity is not provided. Especially, if consumers interpret the current clause 3.7.4 as ambiguous and assume that the provision requires them to do nothing under *Technical Rules* in respect of making provision for an import/export meter to support the operation of their equipment and their application under the *application and queuing policy* for a bi-directional *Covered Service*. In addition, this clarity will also ensure there is consistency with relevant written laws and statutory instruments and give effect to the *Technical Rules Objectives*.

**Table 2.1 – Frequency Operating Standards For the South West Interconnected Network**

The following correction is required to the note associated with Table 2.1. The word "reminder" should be corrected to "remainder".

"...the Goldfields region and ~~reminder~~ **remainder** of the power system is broken."

<sup>2</sup> The rules place a positive obligation on the user to do something and do not allow for the users to do nothing in respect of installing and operating equipment to supply electricity into the low voltage distribution network.

<sup>3</sup> In order to supply electricity into the *distribution system*.

<sup>4</sup> Ibid.

### Clause 3.2.1 (d) – Negative Phase Sequence Voltage

This rule does not recognise that there are technologies and circumstances where the requirements cannot be practically implemented. There are already customer loads connected to the transmission system, which are not connected to all three phases of supply and, due to the nature of their operation, would not be able to be connected to all three phases.

For example, the Public Transport Authority rail traction supplies at Summers Street, Edgewater, Beckenham, Glen Iris and Parklands. These connections are single phase electrical traction loads that are typically connected across two phases of the 132 kV transmission system. Therefore, as the electric rail network is expanded, any new traction supply substations will not be compliant with the proposed drafting in this clause. It is also not reasonable for the transit operators to continue to apply for exemptions, on a case-by-case basis, under the ENAC to support the expansion of its core business.

The effect is to expose a user (both retailers and consumers) to a liability for breach of an obligation that cannot be complied with. This is contrary to section 12.54(b) of the ENAC.

Further, Synergy submits it is reasonable and consistent with *good electricity industry practice* for this rule to be amended to take into account transmission connected equipment and technology that is only connected to two phases. For example, rail traction loads and large welding loads<sup>5</sup>. Clause 3.2.1 needs to be amended so that it does not apply to these types of connections provided these connections meet the power quality and other load requirements specified in the *Technical Rules*.

### Clause 3.4.7 – Power Factor Requirements

Table 3.3 requires additional notes and clarification on matters such as the actual calculation methodology and how the customer's power factor will be measured and determined by the Network Service Provider.

The current practice has been to use the customer's electricity metering interval data to calculate the average half hour power factor values at the meter. This clause and Table 3.3 does not make it reasonable clear to customers what instrumentation and methodology, for example vector method, will be used by the Network Service Provider.

There also needs to be clarity on where physically on the *covered network* the power factor calculation will be determined or referenced to. For example, where a customer needs to determine whether this point is the connection point, NMI or the Point of Common Coupling which may not all be at the same physical location.

In addition, there also needs to be clarity on whether the stipulated 'Permissible Range' applies at all times or only during system peak periods. Compliance with this rule can become onerous during times where there are very low loads in non-peak periods, for example between the times of 1am and 4 am.

It is also important for customers to know, when measuring and determining compliance, over what period of time the measurements will be taken, for example whether it is over days, weeks or months. Customers will also then need to have clarity on whether an average power factor will be calculated and whether this calculation will be based on all the measurements taken or whether a recognised statistical method will be used which may require ignoring measurements at <10% of the customer's peak load.

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<sup>5</sup> There is also an existing welding load connected across two phases of the 66kV network that will be unable to be compliant under this proposed change.

There also needs to be clarity on the MVA rating that is specified in this rule. For example is the MVA rating specified intended to be the average value or the maximum value. For example, is clause 3.4.7(b) intending to specify:

“3.4.7(b) The *power factor* range to be met by *loads of less than 1 MVA **maximum demand*** connected to the *distribution system....*”

In addition, clause 3.4.7(d) requires:

“3.4.7(d) A *shunt capacitor* installed to comply with *power factor* requirements must comply with the *Network Service Provider’s requirements...*”

However, there is no information in the *Technical Rules* on what these Network Service Provider’s requirements are. Synergy submits the ENAC and the Technical Rules Objectives require these obligations to be transparent, plainly described in the *Technical Rules* and subject to review and approval by the Authority. Synergy submits that not describing these requirements in the Technical Rules is contrary to the ENAC and an efficient access regime.

Synergy submits there is insufficient fundamental information to conduct a reasonable technical review and insufficient information for customers to take reasonable steps to ensure they are implementing compliant arrangements. In addition, without this additional clarity it is not clear how customers can be assured there will be consistency in determining compliance of equipment and facilities connected to the *covered network*. The lack of clarity in the rules will also have other consequences under the *access arrangement* including frustrating and delaying a customer’s application process under the *Application and Queuing Policy*. In these circumstances Synergy submits that the Authority cannot be satisfied under clause 12.54(b) that the amendment will not have a material adverse effect on a User.