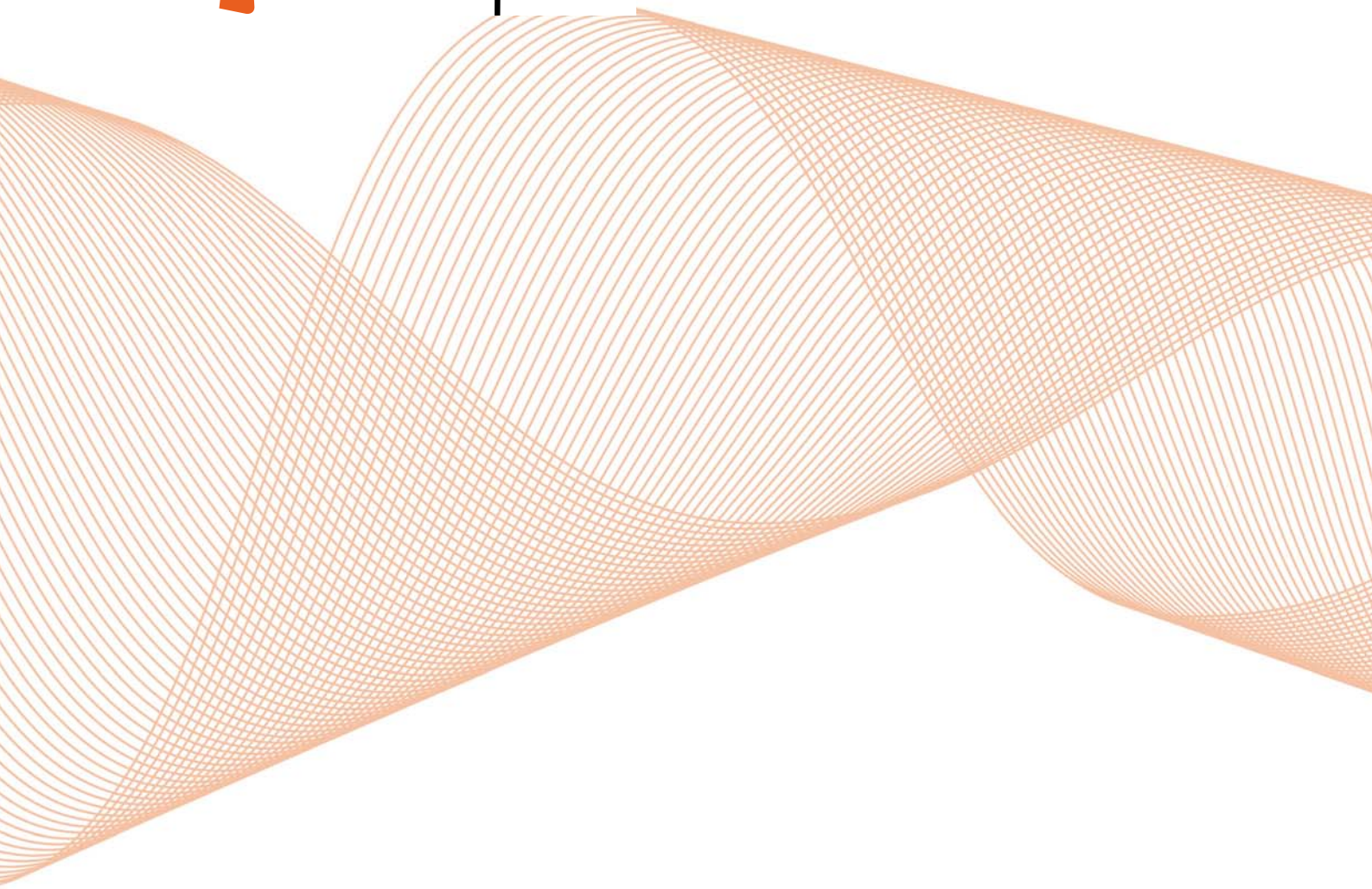
Proposed mid-term revisions to the Contributions Policy

Date: January 2012



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1 Introduction

This is Western Power's submission to the Economic Regulation Authority (the **Authority**) seeking the Authority's approval under section 4.41A of the Electricity Networks Access Code 2004 (the **Access Code**) to vary its access arrangement with respect to the Contributions Policy.

The proposed change to the Contributions Policy is to introduce a new charging methodology for distribution low voltage customers in order to address a range of issues that have been identified by customers and other stakeholders. This new methodology, called the Distribution Low Voltage Connection Scheme (**DLVCS**), will be implemented under the headworks scheme provisions of the Access Code. Further minor amendments to the Contributions Policy will also be required to accommodate the scheme.

Western Power is also seeking the Authority's approval of an additional appendix to the access arrangement that describes the methodology to derive the prices for the DLVCS. This additional appendix is to satisfy the requirements of section 5.17D (d) of the Code.

1.1 Structure of this document

Section 2 of this document summarises the review of the Contributions Policy, including the public consultation that has been conducted. Section 3 sets out the proposed changes to the Contributions Policy. It includes an assessment of the DLVCS' economic efficiency and improved outcomes for customers.

The background and rationale for the change is described in detail in Western Power's consultation proposal document (the Consultation Proposal), in Attachment A, published in August 2011.[1] Attachment B includes information provided to stakeholders during the consultation process and copies of the submissions received. While Western Power took into account all comments made, the proposal was not varied as a result of submissions and no material variations were made following the consultation.

Details of the economic justification of the DLVCS are provided in Attachment C.

The proposed changes to the Contributions Policy are marked in the draft revised policy in Attachment D (tracked version), while Attachment E details how the DLVCS complies with the Access Code.

Attachment F contains a clean version of the Contributions Policy, while the Distribution Low Voltage Connection Scheme Methodology is in Attachment G. These are both submitted for approval by the Authority.

[1] *Invitation for submissions: Proposed Distribution Low Voltage Connection*, Western Power (August 2011).

2 Background

The review of the Contributions Policy was undertaken by Western Power in response to customers' concerns about the transparency of the existing policy and the unpredictability of the required contributions amounts. For example, identical projects developed at different locations, or developed at different times at the same location, could require vastly different contributions for the same electrical demand.

The issues relate to low voltage connections to the distribution network, and customers affected include large residences and small-to-medium commercial or industrial premises. Western Power connects or upgrades between 800 and 1000 such customers per year.

Following an extensive review, the proposed approach was identified as an effective means of improving the transparency and predictability of the required contribution without affecting Western Power financially.

2.1 Issues identified by customers

As previously stated, customers' primary concerns relate to the unpredictability of the required contribution. On average over the last three years, Western Power has received 11 complaints or queries per month regarding the costs to upgrade power supplies to businesses.[2]

The main issues raised are:

- inequitable charging between customers
- inability of customers to predict charges
- that the contribution is unrelated to usage, but rather to the existing capacity at that point in the network

In November 2007, the Hon. Margaret Quirk MLA (then Minister for Small Business) wrote to the Hon. Francis Logan MLA (then Minister for Energy) requesting a review of the costs to upgrade power supplies to businesses. The request focused on the allocation of costs for the work to increase the capacity of the shared network, and the potential for an inequitable outcome with respect to future customers being able to take advantage of that work - effectively at the expense of the first customer.

As a result of the above Western Power instigated a review, commencing 2008, into the charging methodology for these new and upgraded connections.

2.2 Policy development and consultation

Western Power conducted the review recognising the requirements of the Access Code. The overarching objective for the Contributions Policy is set out in section 2.1 of the Access Code, to which all parties must have regard in performing functions under the Access Code:

> *The objective of this Code ("Code objective") is to promote the economically efficient:*
>
> *a) investment in; and*
>
> *b) operation of and use of,*
>
> *networks and services of networks in Western Australia in order to promote competition in markets upstream and downstream of the networks.*

[2] These include customer complaints, Ministerial enquiries, and queries from the Energy Ombudsman.

In addition, the Access Code provides a specific objective for the Contributions Policy in section 5.12:

> *The objectives for a contributions policy must be that:*
>
> *a) it strikes a balance between the interests of:*
>
> *i. contributing users; and*
>
> *ii. other users; and*
>
> *iii. consumers;*
>
> *and*
>
> *b) it does not constitute an inappropriate barrier to entry.*

The proposed policy has been developed under the headworks provision of the Access Code.[3] This is because the DLVCS applies to a class of users and a class of works (which are described in section 3.2), and provides standard pricing for customer connections based on the size of the customer's load and whether the customer has a transformer located on their property.

Western Power engaged with the following stakeholders during the development of the DLVCS:

- Housing Industry Association[4]
- National Electrical Contractors Association (WA Chapter)
- Master Builders Association
- Urban Development Institute of Australia
- Property Council of Australia
- Western Australian Local Government Association

The objective of this initial round of consultation was to consider the rationale for the changes to the Contributions Policy, understand customer requirements, and to test whether a DLVCS would be an acceptable solution.

Once the DLVCS had been more completely developed, further public consultation was held to test the proposal. This included a public forum and an invitation for interested parties to lodge a submission on the proposed DLVCS.

The period for public submissions was 10 August to 31 August 2011, and featured a public forum on 22 August 2011. The information provided to stakeholders during the public consultation is detailed in Attachment A.

Six submissions were received in total.[5] Four were supportive and one supported the scheme in principal. Only one submission did not support the DLVCS, questioning the legal framework in the Access Code. These public submissions are included in Attachment B.

[3] Headworks schemes are defined in clause 5.17C of the Access Code.
[4] Note that the HIA provided a letter of endorsement (dated 30/11/2010) to the Minister of Energy, with a copy to the Authority. Western Power's internal reference for this letter is DM 8293210.
[5] One of these submissions was received shortly after the consultation closing date, however it was considered by Western Power.

3 Proposed revisions to the Contributions Policy

The introduction of the DLVCS requires a revision to the Contributions Policy to accommodate the new scheme. These revisions include the introduction of a new section specific to the DVLCS and other minor amendments to accommodate the new scheme.

The proposed revisions were set out in the August 2011 consultation documents and are shown in the marked-up version in Attachment D.

This chapter describes the rationale for the change and how the DVLCS will work in practice. Section 3.1 of this document describes the current situation for relevant applicants, while section 3.2 describes the proposed scheme and indicates how the changes improve outcomes for customers. Section 3.3 discusses the economic efficiency of the proposed scheme.

Section 3.4 describes the need for approval of the proposed changes at this time, rather than as part of the approval process of Western Power's general access arrangement revisions.

The proposed changes comply with the Access Code and in particular the provisions in clauses 5.12 to 5.17D, which set out the requirements for a contributions policy including any headworks schemes. These clauses are detailed in Attachment E with an explanation of how the revised Contributions Policy complies with the provisions.

3.1 Current charging methodology for distribution low voltage customers

Under the Access Code and Contributions Policy, Western Power is required to seek an upfront contribution where the capital costs incurred in relation to the connection do not satisfy the new facilities investment test (NFIT).

The current approach to determining a capital contribution has been in place since July 2006. The current methodology is similar to the regulations that existed prior to the access arrangement (the Electricity Distribution Regulations 1997) and to charging policies used in other states around Australia. The approach determines a capital contribution based on specific augmentation costs for individual new customer connections less forecast incremental revenue.[6]

An outcome of using specific augmentation costs is that quotes can vary considerably for the same size load in different locations depending on the spare capacity of the network and the timing of the application. Loads connected to areas with low capacity, that require extensive augmentation, may result in a customer making a higher capital contribution when compared to the same load being connected to an area which has ample spare capacity and little or no argumentation is required. This can result in the situation where adjacent customers make vastly different contributions, as the first customer pays for the majority of the costs and subsequent applicants are able to connect at much reduced costs.

The variation in costs has caused concern for customers and is perceived as an inconsistent and inequitable charging policy, as suggested by the number of related complaints detailed in section 2.1.

3.2 Proposed methodology

The proposed DLVCS will allow Western Power to determine a contribution based on a set of standard charges applied to the requested customer load. The standard charges will reflect

[6] The 'incremental revenue test' in clause 6.52 (b)(i)(A) of the Code is the amount likely to be recovered in the form of new revenue gained from providing covered services to the applicant.

the average cost for the provision of capacity (kVA), taking into account factors which are discussed below. The prices will be updated annually to reflect the actual augmentation costs for works undertaken during the previous 12-month period. As with all contributions of this nature, customer charges will be net of expected additional (incremental) revenue.

The DLVCS will apply to both country and metropolitan customers connecting to the low voltage distribution system within 25 km of a zone substation. It will not apply to large industrial or commercial premises, pole-to-pillar connections, Supply Extension Scheme works, work in excess of standard requirements, temporary supplies, street-lighting, unmetered connections, relocations, undergrounding, and subdivisions.

The initial charging rates of the proposed DLVCS are shown in Table 1. These rates are set to reasonably reflect the economies of scale for the cost of connection for different levels of electricity usage. Customers supplied directly from a transformer will be charged the 'low use' rate up to the first threshold (up to 216 kVA), the 'medium use' rate up to the second threshold (217 kVA to 630 kVA), and then the 'high use' rate beyond that threshold (above 630 kVA).

Customers not connected directly to a transformer but supplied from a low voltage street feed connection will incur a higher charge, reflecting the cost of the additional low voltage assets required for the connection, depending on the amount of capacity required ('LV street feed connection').

Table 1: Proposed charging rates

Customer Category	Charged Rate ($/kVA)
Low Use Transformer Connection (0 kVA – 216 kVA)	$443.74
Medium Use Transformer Connection (217 kVA – 630 kVA)	$221.87
High Use Transformer Connection (631 kVA and above)	$110.93
LV Street Feed Connection (0 kVA – 216 kVA)	$495.63
LV Street Feed Connection (217 kVA and above)	$273.76

Western Power expects that the overall level of contributions received from customers will not change with the introduction of the DLVCS.

Actual cost of connections varies considerably. To ensure that the average charges are not unreasonably skewed by very high cost connections, eligibility for the headworks scheme charges will be subject to a simple economic test. Western Power will determine and publish a cost threshold in the form of a ‘cost per kVA’, above which the contribution will be determined using the current policy.

Recent analysis of a sample of 855 actual connections shows that only 13 (1.4%) would have been ineligible for the headworks rates and charged at actual costs. Further details of the method and application of this economic test are provided in the methodology in Attachment G.

In summary, the proposed DLVCS will:

1. lead to transparent and predictable charges to customers as the contribution is based on information more readily available to the customer, such as the size of the load and location of transformer (as opposed to the capacity of the existing network). Customers will:
    a. be able to estimate the amount of the contribution from known or readily obtainable information, and

   b. be provided with all relevant information in the quotation to understand how the charge has been calculated

2. minimise first mover disadvantages in the current process. The amount of the contribution will not vary depending on the time the customer connected to the network[7]
3. lead to faster and more accurate responses to customer applications because there will be no need to carry out a detailed design prior to being able to issue the quote.

3.3 Economic Considerations

The current charging methodology and the proposed DLVCS have each been assessed in terms of technical, allocative and dynamic economic efficiency. Attachment C presents the detailed economic analysis of the DLVCS compared to the current policy.

The current charging methodology has deficiencies in the allocation of cost and in striking the most appropriate balance between the upfront contribution and tariff payments made over time. It assumes that there is no market benefit from installing capacity surplus to the connection applicant's (the customer's) requirements, which is unavoidably added due to the limited number of capacity increments embodied in network components. This contrasts with evidence that some connection applicants clearly benefit from surplus capacity by avoiding a portion of the contribution payment that would have been required if the surplus capacity was not available.

In terms of technical and dynamic efficiency, the DLVCS is equivalent to current practice. However, the DLVCS improves allocative efficiency by striking a better balance between costs apportioned to connection applicants and other users. In short, the DLVCS will reduce the extent to which some connection applicants are paying for capacity that they do not use while others will pay more for capacity already installed from which they benefit.

Therefore, the DLVCS better meets the Access Code objectives (in promoting economic efficiency) than the current charging methodology.

3.4 Need for changes to be considered at this time

Western Power considers that the required revisions to the Contributions Policy to accommodate the DLVCS should be implemented as soon as possible. This is because:

- stakeholders have provided overwhelming support for the implementation of this policy as soon as possible. A delay until the approval of the current access arrangement revisions (AA3 revisions), which are expected in late 2012, will unnecessarily delay benefits to customers
- introduction of the new scheme assists in achieving the Access Code objective and provides for a more efficient outcome.

In order to implement the DLVCS, a minor revision to section 5.17D of the Code is required to allow the policy to be introduced. This revision has not yet been implemented but is currently being finalised by the Office of Energy for approval by the Minister for Energy.

It was assumed during the development of the AA3 submission that this Access Code change would be in place before the end of the AA2 period. Therefore, the AA3 submission is framed on the assumption that an in-period revision had taken place. However, delays to the Access Code change process did not allow this.

[7] See Attachment C for an economic analysis of this point. It is also discussed in section 3.3.

The Office of Energy has now confirmed its support for the introduction of the DLVCS and the associated minor Access Code amendment. Western Power believes it is both appropriate and necessary to make this submission now to enable the Authority to assess this proposal in advance of its draft decision on the AA3 revisions (expected February 2012), on the reasonable assumption that the Access Code amendment will be made.

As the required processes and IT systems have already been developed, following approval of these revisions to the Contributions Policy, the DLVCS will be implemented as soon as is possible. Western Power will ensure that no customers are disadvantaged as a result of the changes during the transition to the DLVCS.

In summary, Western Power believes that the benefits from the DLVCS are considerable and outweigh the disadvantages of varying the current access arrangement prior to approval of AA3. Accordingly, Western Power submits the proposed changes as a mid-term revision to the Contributions Policy, in accordance with clause 4.41A of the Access Code.

Attachment A. Material provided for public consultation

The following details:

- General information provided to stakeholders
- Invitation for submission document
- Frequently asked questions

The above information was made available in August 2011.

Note that the consultation process included a public forum on the 22nd August 2011. Further information was provided at the forum which is included in Attachment B.

A.1 General information provided to stakeholders for consultation

This attachment is the information provided on Western Power's website during the consultation process.[8]

[8] The Western Power reference for this document is DM 8811036.

Actions

Invitation for public comments

Proposed new distribution low voltage connection scheme (kVA charging scheme)

In response to comments and feedback from stakeholders Western Power is proposing to introduce a new charging scheme to determine capital contributions for new and upgraded connections. This is to be called the Distribution Low Voltage Connection Scheme, also referred to as the kVA Charging Scheme.

Western Power is required to obtain approval from the Economic Regulatory Authority (ERA), in order to introduce the scheme. As part of the approval process, Western Power is required to formally consult with stakeholders.

Your comments will form part of a consultation process which will include a public forum as detailed below and will allow Western Power to refine the scheme for submission to the ERA. Further details are available in the Discussion Paper below.

It is expected that the scheme will take effect from 1 January 2012, pending final approval from the ERA.

What is the proposed scheme?

The Distribution Low Voltage Connection Scheme (DLVCS) is an alternate scheme to the existing approach to determining capital contributions. Under the existing approach capital contributions are determined on a case by case basis and the outcome can be very different depending on the location of the part of the network to which the connection is sought. The DLVCS provides for an approach whereby the capital contribution is based on a set of standard charges that will be published on Western Power's web-site.

The standard charges reflect the average cost of connection to the network for applicants with similar electricity load requirements. The approach is transparent and provides for the applicant to be able to predict the capital contribution for both new and upgraded connections.

The scheme only applies to locations where the lot has an existing connection, and includes individual customers that have above residential standard loads plus individual commercial customers. The scheme will not apply to greenfields developments, subdivisions, high voltage (6.6kV and above) customers, primary producers and customers more than 25 km from a Western Power zone substation.

The DLVCS was produced in response to industry's request for a more consistent and transparent charging scheme and to alleviate the perception of inequity in charges for customer connections and upgrades with the current charging scheme. Western Power has engaged with industry during the scheme's development and, to date, industry feedback has been overwhelmingly positive.

Community Consultation

Western Power invites the community to comment on the proposed DLVCS charging scheme. The Discussion Paper below provides further details, or you can attend our public forum.

Western Power seeks comment on three specific aspects of the proposed changes:

1. whether the definition of DLVCS eligibility meets the requirements of customers.
2. whether the proposed rate block structure is appropriate.
3. whether the proposed exclusions to the scheme are appropriate

Further details are available in the Discussion Paper below.

Public Forum

To attend our public forum to learn more and provide comment, please register by 19 August 2011 by email

enquiry@westernpower.com.au or contact us on 131087 (TTY 1800 131 351) on business days (Monday to Friday) from 7 am to 5 pm.

- Date: Monday, 22 August 2011
- Venue: Perth Town Hall, Corner Hay and Barrack Street, Perth
- Time: TBA
- RSVP: by 19 August 2011

Email enquiry@westernpower.com.au or contact us on 131087 (TTY 1800 131 351) on business days (Monday to Friday) from 7 am to 5 pm.

Documents and links

The documents below provide further information.

- Discussion Paper (PDF 224kb)
- Contributions Policy (with tracked changes) (PDF 94kb)
- FAQ (PDF 179kb)

A copy of the Distribution Low Voltage Connection Scheme Methodology, which is referred in the Contributions Policy, is available on request.

To view PDF files you will need Adobe Acrobat Reader.

A.2 Invitation for submission document

This attachment is the invitation for submissions document provided on Western Power's website during the consultation process.[9]

[9] The Western Power reference for this document is DM 8811015.

Notice

Invitation for submissions

Proposed Distribution Low Voltage Connection Scheme

9 August 2011

Document prepared by:
Western Power GPO Box L921 Perth WA 6842 ABN 18 540 492 861

OVERVIEW

Western Power has reviewed the method of charging for low voltage connections to the distribution network in response to concerns by industry. We are inviting you to comment on the proposed new Distribution Low Voltage Connection Scheme (DLVCS) and the proposed related changes to the Contribution Policy. These changes are intended to have effect from 1 January 2012.

The DLVCS must be approved by the Economic Regulation Authority (ERA). Prior to making a formal submission to the ERA, Western Power is seeking feedback and comments from the public and interested parties to ensure that the DLVCS meets the needs of users and applicants. As part of this consultation, Western Power will hold a public forum on 22 August 2011.

Responses are requested on three specific aspects of the proposed changes:

- whether the definition of DLVCS eligibility meets the requirements of customers.
- whether the proposed rate block structure is appropriate.
- whether the proposed exclusions to the scheme are appropriate.

Please visit www.westernpower.com.au/communitycomment by 5 pm 31 August 2011 for your opportunity to comment.

Please note that Western Power will not be able to provide responses to individual submissions. A copy of the Contributions Policy (with tracked changes) can be found on Western Power's website: www.westernpower.com.au/communitycomment.

The following pages provide a summary of the DLVCS and specific areas for comment.

BACKGROUND

Western Power has reviewed the method of charging for low voltage connections to the distribution network in response to concerns by industry. Customers affected include large residential houses and small to medium commercial or industrial premises, and relate to between 800 and 1000 customer connections or upgrades per year.

Customers have commented that the current charging method results in inconsistent and inequitable financial outcomes between customers. In particular, the current method of charging allows charges to vary considerably for the same size load in different locations, depending on the spare capacity of the network.

In reviewing the method of charging, Western Power has met several objectives. The overarching objective is that, as required by legislation, the new charging method must be economically efficient. In addition, the

proposed approach provides improved transparency and more predictable and equitable outcome for customers.

In order for Western Power to offer the DLVCS, the Economic Regulation Authority (ERA) must approve changes to Western Power's Access Arrangement. This can occur "in-period" or during the usual revisions process (for example for the third Access Arrangement which will commence sometime after 1/07/2012). As the current Access Arrangement period ends on 1/06/2012, for the DLVCS to be implemented as soon as possible, Western Power must make an "in-period" submission to the ERA. This submission would seek to vary Western Power's Contributions Policy (CP) by providing the changes to the CP (attached to this Issues Paper) as well as a discussion of the methodology to create the prices used in the DLVCS.

Under legislation, the ERA will be required to undertake a formal consultation process. The consultation that Western Power is currently undertaking is to enable us to provide a method of charging that meets the needs of customers prior to the formal "in-period" submission.

EXISTING METHOD OF CHARGING

Currently, customers seeking low voltage network connections are charged for any necessary network augmentation on the basis of the individually forecast costs. An outcome of using specific forecast augmentation costs is that quotes can vary considerably for the same size load in different locations depending on the spare capacity in the local network. That is, loads connected to areas with low capacity, which require extensive augmentation, may result in a customer making a higher capital contribution when compared to the same load being connected in an area which has ample spare capacity and there is little or no augmentation required. This can result in the situation where adjacent customers have made vastly different contributions, as the first customer pays for the majority of the augmentation costs and subsequent applicants are able to connect at much reduced costs.

The main issues identified from customers regarding the current charging method are:

1. inequitable charging between customers,
2. inability for customers to predict charges,
3. non-transparency of individual contribution calculations, and
4. charges are often related to the existing capacity of the network rather than customers' usage.

DLVCS SUMMARY

The DLVCS allows for network augmentation to be charged on the basis of the requested capacity (kVA) as opposed to the specific costs of upgrading the network to facilitate the connection (the existing charging method). The DLVCS moves away from the strict 'applicant pays' principle (for this customer group) to one based on a set of standard charges applied to the requested customer load (in $/kVA).

The DLVCS will apply to both country and metropolitan customers connecting to the low voltage distribution system within 25 km of a zone substation. This will apply to between 800 and 1000 customer connections or upgrades per year. It will not apply to industrial or commercial premises connected to the high voltage distribution network, Supply Extension Scheme customers, road widening or subdivisions.

Rates will be set on a progressive scale in rate block form (as indicated in Table 1). That is, customers will be charged the low use rate up to the first threshold (up to 216 kVA), the medium use rate up to the second threshold (217 kVA to 630 kVA), and then the high use rate beyond that threshold (above 630 kVA).

Finally, as the augmentation costs for a customer connected to a low voltage street supply are greater that those connected directly to a transformer (due to larger low voltage asset costs), customers connected to a low voltage street supply will be charged a higher rate.

DEFINITION OF DLVCS ELIGIBILITY

Western Power is proposing that the DLVCS applies only to connection applications where:

(a) the proposed *connection point* is to the *distribution system low voltage network* and is within 25 kms of the *relevant zone substation*, and

(b) the *applicant*'s required electrical capacity is in excess of:

(i) the original design capacity for a greenfield development on an existing electricity serviced lot, or

(ii) the existing capacity in respect of that *connection point* for a brownfield development.

Western Power seeks comment on whether the definition of DLVCS eligibility meets the requirements of customers.

DLVCS PRICES

Under the DLVCS, the cost of the provision of electricity capacity at a particular location is a function of:

(i) the amount of incremental capacity sought by the applicant
(ii) whether the connection is directly to a transformer or to a low voltage street supply

Due to economies of scale, the costs per unit of capacity (kVA) reduce as demand increases. In order for these economies of scale to be recognised in the pricing structure thresholds are set that reflect both the cost of plant and the nature of the network required to provide the requested capacities. For

example, in general customers seeking less than 216 kVA are supplied from the low voltage distribution network, customers seeking demand between 216 kVA and 630 kVA require installation of a new transformer and may require that transformer to be installed on their lot, and in almost all circumstances customers seeking loads in excess of 630 kVA will require direct connection to a new transformer on their lot.

The price structure and prices are determined in terms of a per kVA rate and expressed in a block structure as shown in Table 1. As discussed, customers supplied from a street feed connection[1] will be charged a higher rate. Note that prices are indicative only, and will be reviewed periodically. Actual prices will be published on Western Power's website.

Table 1: Rate block structure

	Load tranche for incremental capacity	Fixed price	Variable price for incremental kVA in excess of tranche lower threshold
Direct transformer connection	0 to 216 kVA	$0	$500/kVA
Direct transformer connection	216 to 630 kVA	$108,000	$250/kVA
Direct transformer connection	Greater than 630 kVA	$211,500	$125/kVA
Low voltage street connection	0 to 216 kVA	$0	$600/kVA
Low voltage street connection	216 to 630 kVA	$129,600	$350/kVA

Western Power seeks comment on whether the proposed rate block structure is appropriate.

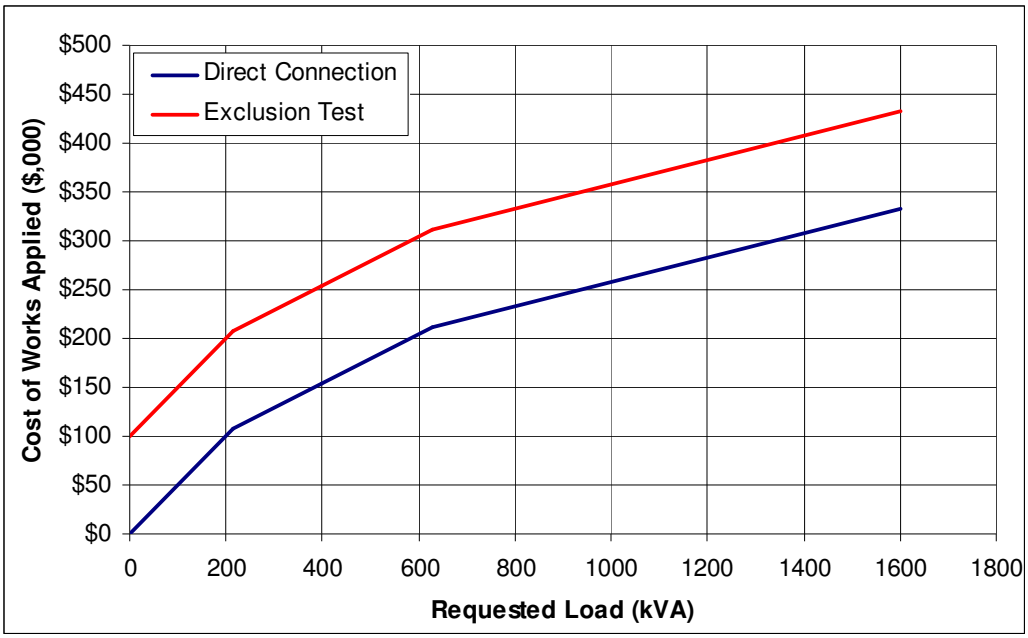
EXCLUSIONS FROM THE DLVCS

In particular circumstances, due to a customer's location, an application may require augmentation to the network at a cost substantially higher than average, in which case they are excluded from the scheme. These customers will be charged based on the existing charging method, and analysis indicates that around 1.5% of customers will be excluded from the DLVCS.

To determine whether a given application is included in the DLVCS, Western Power will compare the forecast costs to customers under the DLVCS and the existing charging method. This is shown in Figure 1. If the forecast costs under the existing charging method are greater than the exclusion test threshold (red line), the application will be excluded from the DLVCS.

[1] Street feed connections are only available for capacities less than 630 kVA.

Figure 1: DLVCS prices with exclusions test (illustration is indicative only)



The threshold is determined as follows. For each relevant application in the last twelve months, Western Power will determine the forecast costs under the existing charging method and subtract the charge for the applicant as indicated in Table 1. Where the resulting value is positive, the application will be included in the calculation set. The exclusion threshold is calculated as a dollar value equal to two standard deviations of this set.

Western Power seeks comment whether the proposed exclusions to the scheme are appropriate.

Invitation

Western Power invites submissions from stakeholders in general regarding the proposed reference services and reference tariffs and on the specific matters highlighted above.

Comments and submissions should be in either printed or electronic form, and should be received by 5 pm 31 August 2011, addressed to:
Manager
Standards, Policy & Data Quality
Western Power
GPO Box L921
Perth WA 6842
Facsimile: (08) 9326 6110
Email: dlvcs@westernpower.com.au
TTY: 1800 131351

Confidentiality

In general, all submissions from interested parties will be treated as being in the public domain and placed on either Western Power's or the ERA's website.

If an interested party wants to make a confidential submission, it should clearly indicate the confidential sections of their submission and outline in reasonable detail the request for the confidentiality.

The receipt and publication of any submission on Western Power's or the ERA's website shall not be taken as indicating that Western Power or the ERA have knowledge, either actual or constructive, of the contents of a particular submission. In particular, whether the submission in whole or in part contains information of a confidential nature and no duty of confidence will arise for the Western Power or the ERA in these circumstances.

General enquiries
Phone: 131087 (TTY 1800 131 351)
Email: enquiry@westernpower.com.au.

Media enquiries
Miriam Borthwick
1300 139 240

A.3 Frequently asked questions

This attachment is the FAQ provided on Western Power's website during the consultation process.[10]

[10] The Western Power reference for this document is DM 8811018.

Frequently Asked Questions

Invitation for public comments on the proposed new distribution low voltage connection scheme (kVA charging scheme)

What is the DLVCS?

The DLVCS is a fairer, more equitable and consistent charging policy which allows for the cost the network expansion/augmentation to be shared amongst all applications based on their requested capacity (kVA). The DLVCS will also allow Western Power to produce a more accurate estimate for your application.

How does the DLVCS differ from the existing charging scheme?

The DLVCS will provide a 'one-off' charge on the basis of requested capacity (kVA) rather than the traditional method of whether the current network will have to be expanded as a consequence of the submitted application.

It is often the case that the local network will need to undergo expansion /augmentation once capacity in the local area is fully utilised. The DLVCS allows for the cost of that expansion/augmentation to be shared by all participants.

Participants contribute to the average cost of network augmentation per kVA, rather than the entire cost that is applied to the first application exceeding the existing capacity.

Will the DLVCS apply to me?

The scheme will apply to individual customers that have above residential standard loads plus individual commercial customers.

The scheme will not apply to subdivisions, high voltage (6.6kV and above) customers, primary producers and customers more than 25 km from a Western Power zone substation.

The DLVCS will apply to (must meet all requirements):

- Individual low voltage connections and upgrades. This will apply to industrial/ commercial applications as well as residential applications above standard supply.
- Applications where the point of connection is within 25km of a Western Power zone substation.
- Applications that pass the required economic assessment (determined upon submission of your application).

Frequently Asked Questions

What is a standard supply?

A standard supply at 240 V single-phase or 415 V three-phase is defined as:

- 63 Amps single-phase (urban areas)
- 32 Amps single-phase (rural areas and towns)
- 32 Amps multi-phase
- a maximum consumer mains size of 35mm²

A standard supply connection is sufficient for the typical metropolitan suburban home.

How long will the application process take?

The processing of your application will not be changed by the introduction of the DLVCS. Your eligibility and calculation under the DLVCS will be determined after your application has been submitted.

What will the cost be?

The DLVCS will only affect the cost of works allocated to your application. Applicants eligible for the DLVCS will have their cost of works calculated based on the kVA rates advertised instead of the network augmentation undergone as a result of the application. The new cost of works will automatically be issued on your quote letter.

Applicants should be aware that an offset against expected future revenue of up to the cost of works may apply to the application. The offset may mean your final payment could be significantly different to your allocated cost of works.

If you wish to obtain an estimate of your final costs, it is recommended that you seek an estimate from Western Power.

Attachment B. Consultation summary and submissions received

The following details:

- summary of the consultation process
- material provided during the consultation process
- submissions received (during the consultation period)

Note that this document[11] is revised and has been updated compared to that published on the Western Power website.

Note that following the conclusion of the consultation period, an additional submission was received. The submission, from the National Electrical and Communications Association (NECA) supports the proposed DLVCS and is attached.

[11] The Western Power reference for this document is DM 8811021.

Distribution Low Voltage Connection Scheme - consultation process and outcomes

Document prepared by:
Western Power GPO Box L921 Perth WA 6842 ABN 18 540 492 861

Table of Contents

1 Consultation

Western Power invited comments on the proposed DLVCS charging scheme.[1] In particular, comments were sought on the following items:

- whether the definition of DLVCS eligibility meets the requirements of customers.
- whether the proposed rate block structure is appropriate.
- whether the proposed exclusions to the scheme are appropriate.

The consultation period commenced on Wednesday 10 August 2011, and closed on 31 August 2011.

As part of the consultation process, Western Power held a public forum on 22 August 2011. Western Power invited several organisations, as indicated in section 3. The presentation given at the forum is provided in section 4. The forum was attended by 10 delegates from the following organisations:

- Office of Energy
- MBA
- Consult Australia
- NECA
- SKM
- WALGA
- Dickie Architects

A full list of attendees is provided in section 5, while a summary of questions and answers provided at the forum is attached in section 6.

2 Written submissions

Six written submissions were received as part of the consultation process, and appear in section 7.[2] A summary of the submissions appears below.

The Master Builders Housing Council supported the DLVCS.

Dickie Architects, as well as The Australian Institute of Architects, indicated their support for the DLVCS, and indicated that the definition of DLVCS eligibility was logical and straightforward and met their requirements, that the proposed rate block structure is clear and easy to calculate, and that the proposed exclusions to the scheme are appropriate. No changes were suggested.

The Urban Development Institute of Australia (UDIA) indicated in-principle support for the DLVCS. The UDIA expressed a concern about the possibility of escalating prices due to the lack of market forces and suggested a yearly audit of costs. While Western Power considers the Code provisions with respect to efficient network investment to be sufficient, we suggest that a requirement for audit will not affect the definition or the make-up of the DLVCS as such, and therefore no changes are proposed.

[1] For full details, see the discussion paper (DM 8385947, published at: http://www.westernpower.com.au/documents/ssres/kva_charging_invitation_for_submissions.pdf).
[2] Note that one submission (from NECA) was received following the completion of the consultation period.

Synergy provided comments on the DLVCS and the amendment to the Code. Synergy's main concerns appear to refer to the legislative background of headworks schemes (that is the Code). Synergy indicated that insufficient information on how the DLVCS will meet the requirements of the Code was provided. Western Power considers that sufficient information was made available during the consultation period, and that further information on Code compliance will be made available as part of the "in-period" submission to the ERA. Synergy did not suggest any revisions to the DLVCS, other than a concern that the definition of DLVCS does not sufficiently indicate how the scheme meets the Code requirements of preventing a geographic extension of the network, and ensuring that "double-recovery" is prevented. Western Power submits that the current definition of the scheme sufficiently ensures that these requirements are met, and does not propose any changes. A detailed response was provided to Synergy.

3 Public Forum Organisations Invited

APD

CCF

CCI

Consult Australia

Dickie Architects

Energy Safety

Engineers Australia

HIA

Institute of Public Works Engineering Australia

MBA

NECA

Norman Disney & Young

Office of Energy

PCA

SKM

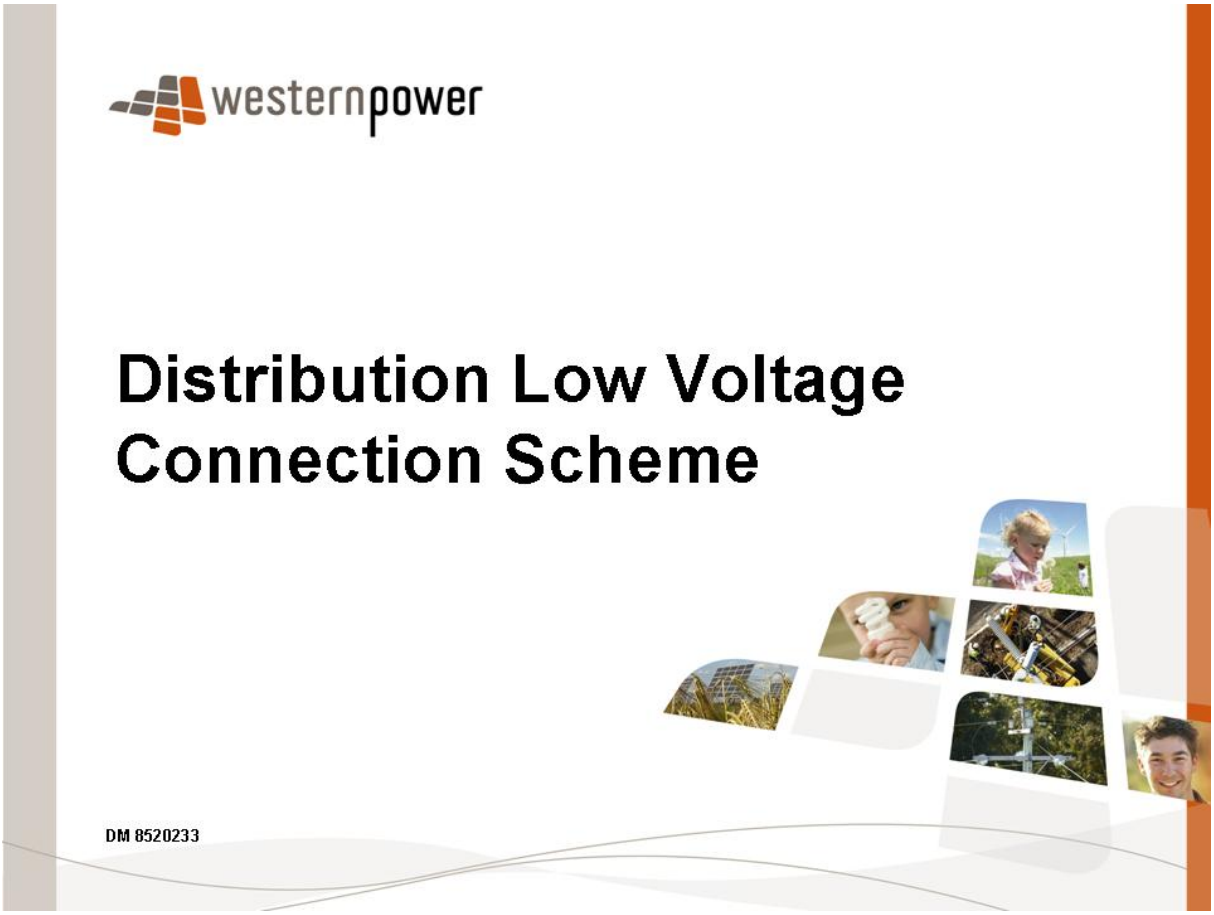
Synergy

UDIA

WALGA

Wood & Grieve

4 Public Forum presentation[3]



[3] The Western Power reference for this document is DM 8520233.

Introduction to the Scheme

Gavin Forrest
Branch Manager
Standards, Policy and Data Quality

DM 7375305

Existing charging method

- Consistent with operating in an economically efficient manner, charges based on 'applicant pays'
- Customer pays full cost for extension less projected revenue for network augmentation
- First and subsequent customers always pay for percentage use of the transformer, but not for other components ie HV & LV cables and switchgear
- This method is similar to that used throughout Australia

Charge to customer = (**Cost to augment network** − **Network Revenue**)* + **Full Cost Items**

*to a minimum of $0

Identified issues

- Quotes can vary considerably for same size load in different locations
  - First customer may pay higher cost, where significant augmentation required
  - Subsequent customers may pay considerably less, as they use the existing infrastructure
- Main issues identified by customers are:
  - Inequitable charging between customers
  - Inability for customers to predict charges
  - Non-transparency of individual contribution calculations
  - Charges are often related to existing capacity of the network rather than customers' usage

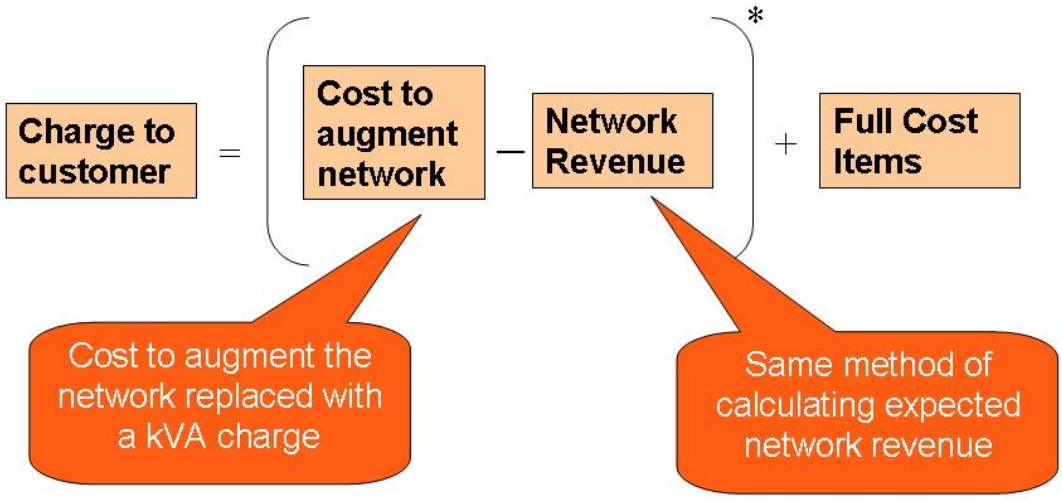
4

Proposed charging scheme

Distribution Low Voltage Connection Scheme (DLVCS)

- Charge a fixed dollar value per unit (kVA) of electricity required
- The charges vary depending on the amount of network used, and not spare capacity
- Scheme will be mandatory. That is, customers will not be able to opt in or out of the scheme
- The rates charged are adjusted to keep ensure the scheme reflects the average costs
- Scheme is revenue neutral to Western Power

Calculation



*to a minimum of $0

Price overview

- Direct Connections
  - Transformer on the same lot as Customer
  - Three rates of charges,
    - Direct Connection ≤ 216kVA (300 Amps)
    - Direct Connection > 216kVA & ≤ 630kVA
    - Direct Connection > 630kVA
- Street Feed Connections
  - Transformer on a lot separate to the Customer
  - Two rates of charges,
    - Street Feed Connection ≤ 216kVA
    - Street Feed Connection > 216kVA

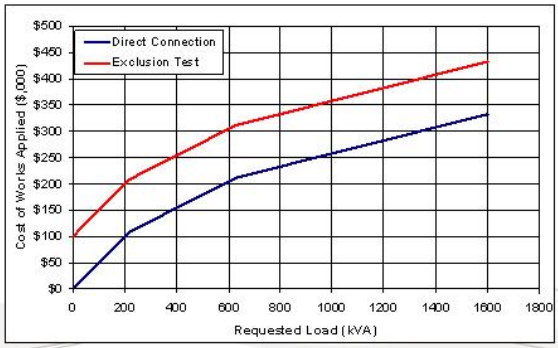
Rate block price structure

All prices remain preliminary

	Load tranche for incremental capacity	Fixed Price	Variable price for incremental kVA in excess of tranche lower threshold
Direct transformer connection	0 to 216 kVA	$0	$460/kVA
Direct transformer connection	216 to 630 kVA	$99,360	$230/kVA
Direct transformer connection	Greater than 630 kVA	$194,580	$115/kVA
Street Feed Connection	0 to 216 kVA	$0	$540/kVA
Street Feed Connection	216 to 630 kVA	$116,640	$310/kVA

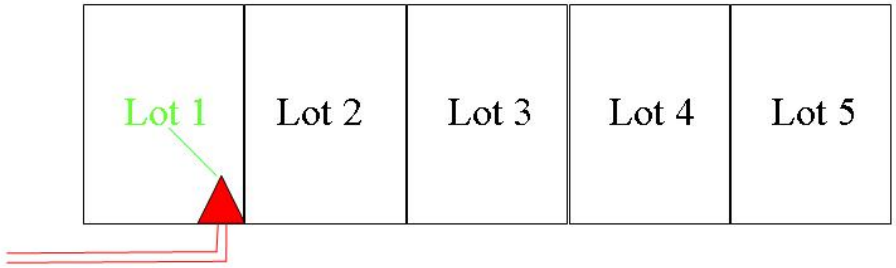
Economic Test

- To avoid connections requiring a significant augmentation unfairly impacting on the average cost
- Connections above the economic exclusion test are charged under the current full cost policy (typically less than 1.5% of jobs).
- The exclusion test is based on a set variance (two standard deviations) from the DLVCS rate



Case Study 1: First Customer

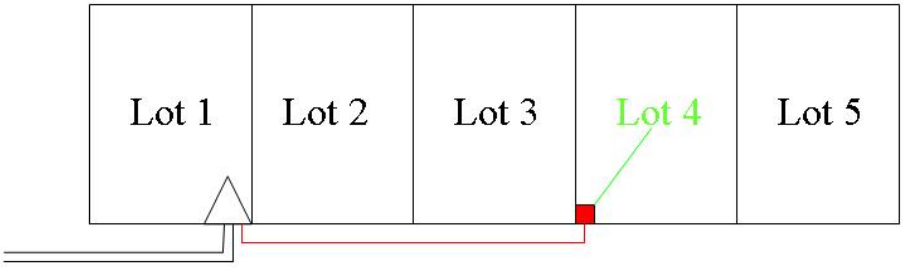
- Customer requests additional 180 kVA (250 Amps) on Lot 1
- Job requires installation of 630 kVA transformer on the customers property and 400m of HV cable



Existing Method	Proposed Method
• Charge for assets used (transformer is proportioned based on requested load) = $160,000 • Less $70,000 revenue offset • Final charge to the customer = $90,000	• DLVCS charge (transformer is on the customers property, therefore charged the Direct Connection Rate) = 180kVA x $460 = $82,800 • Less $70,000 revenue offset • Final charge to the customer = $12,800

Case Study 2: Subsequent Customer

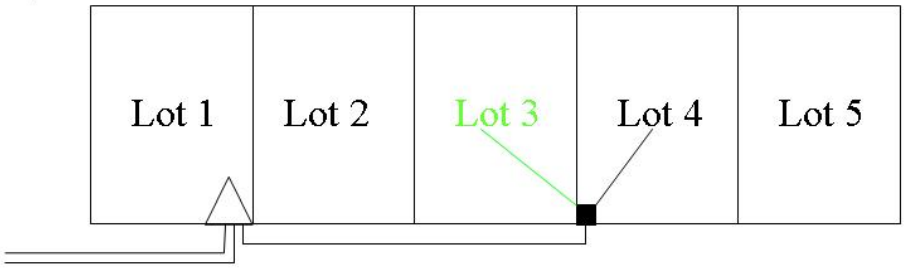
- Customer requests additional 180 kVA (250 Amps) on Lot 4
- Utilise the existing HV cable and transformer on Lot 1 and install 50m of LV cable + pillar on Lot 4



Existing Method	Proposed Method
• Charge for assets used (transformer is proportioned based on requested load) = $26,000 • Less $70,000 revenue offset • Final charge to the customer = $0	• DLVCS charge (transformer is not on the customers property, therefore charged the Street Feed Rate) = 180kVA x $540 = $97,200 • Less $70,000 revenue offset • Final charge to the customer = $27,200

Case Study 3: Subsequent Customer # 2

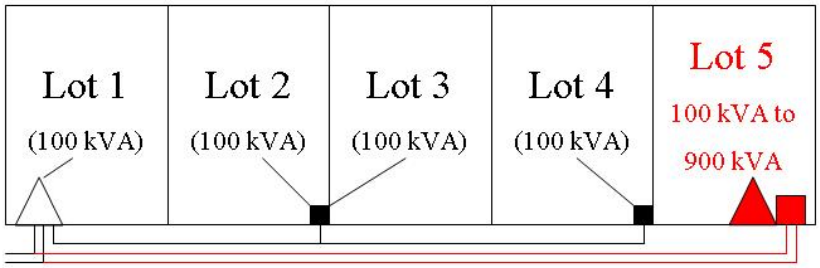
- Customer requests additional 180 kVA (250 Amps) on Lot 3
- Utilise the existing HV cable and transformer on Lot 1 plus LV cable and pillar on Lot 4



Existing Method	Proposed Method
• Charge for assets used (transformer is proportioned based on requested load) = $14,000 • Less $70,000 revenue offset • Final charge to the customer = $0	• DLVCS charge (transformer is not on the customers property, therefore charged the Street Feed Rate) = 180kVA x $540 = $97,200 • Less $70,000 revenue offset • Final charge to the customer = $27,200

Case Study 4: Existing supply allowance

- Customer requests upgrade from 100kVA supply to 900kVA on Lot 5
- Required to install 200m HV cable plus 1000 kVA transformer and switchgear on lot 5



Existing Method	Proposed Method
• Charge for assets used (transformer is proportioned based on requested load) = $240,000 • Less $180,000 revenue offset • Final charge to the customer = $60,000	• DLVCS charge (transformer is on the customers property, therefore charged the Direct Connection Rate) = $214,130 (see next slide) • Less $180,000 revenue offset • Final charge to the customer = $34,130

Case Study 4: Calculation of Costs

- Upgrade from 100 kVA to 900 kVA = Additional supply requirement of 800 kVA

	Load tranche for incremental capacity	Fixed Price	Variable price for incremental kVA in excess of tranche lower threshold	DLVCS Charge
Direct transformer connection	Greater than 630 kVA	$194,580	$115/kVA x 230kVA	$214,130

Note : Customers are only charged for the additional load requirements. i.e. in this case the customer is not charged for the initial 100 kVA.

List of eligible connections

- New and upgrading low voltage connections,
- Loads above standard supply (32 Amps 3 phase),
- Customers within 25km of a WP zone substation, and
- Connections that pass an economic test.

Connections that are not eligible

- High voltage customers, such as large shopping centres or CBD high-rise buildings
- Non-capacity projects, such as road widening and asset relocations
- Subdivisions
- Domestic pole to pillar jobs
- Customers beyond 25km from a WP zone substation
- Streetlights
- SES

westernpower

Regulatory process

Greg Turnbull
Open Access Engineer
Regulation, Pricing & Access Development

DM 7375305

Overview

- What is the regulatory process for introducing the scheme
- Overview of associated documentation
- How you can assist

Regulatory background

- Western Power is a regulated business
  - Electricity Networks Access Code (the **Code**) - sets the rules
  - Western Power prepares an access arrangement (AA) which conforms to the requirements of the Code
  - AA includes Western Power's **"contributions policy"** The ERA approves the AA
- Current AA runs from July 2009 to June 2012
- Next AA will run from July 2012 to June 2017
- The new DLVCS will be part of the "contributions policy" and will have to be approved by the ERA

Regulatory process (cont)

- The DLVCS will sit under the **"headworks"** provisions of the Code (sections 5.17C and 5.17D)
- "Headworks" key Code provisions require:
  - Users to be a member of a class
  - Works must fit into a "class of works"
  - Total revenue must not exceed 1% of Western Power's revenue
- 1% is being amended to 5% to allow for this scheme
  - Consultation process by the Office of Energy closes 31 August 2011
  - Code amendment to be gazetted by end of September
  - Invite people to make a submission

In period submission

- Western Power to submit to the ERA an "in-period" revision to the AA to request a change to the "contributions policy"
- In period submission will follow gazettal of Code changes
- Before approving the change the ERA must:
  - determine whether the "advantages of making the change to the AA outweigh the disadvantages"
  - conduct a formal public consultation
- This Western Power consultation process is to ensure that all issues are identified and resolved prior to the "in-period" submission
- We encourage you to make a submission to the ERA in support of the change
- Intention is to commence the new policy from January1, 2012

In period submission

- Will include the following documents:
  - Covering submission that will:
    - Describe the new policy including the economic justification for the change,
    - Explain how the policy meets the provisions of the Code,
    - Provide detail on the public consultation
    - Revised "contributions policy" (copy provided)
  - New Appendix to the AA describing the methodology to determine the prices (copy available on request)
- Documents will be finalised following this consultation process

Contributions Policy - definitions

"distribution low voltage connection scheme application" means a *connection application* where:

- the proposed *connection point* is to the *distribution system low voltage network* and is within 25 kms of the *relevant zone substation*, and
- the *applicant*'s required electrical capacity is in excess of:
  - the original design capacity for a greenfield development on an existing electricity serviced lot, or
  - the existing capacity in respect of that *connection point* for a brownfield development.

Contributions policy

Do not propose to go through the "contributions policy" changes in detail although happy to do so or to answer questions.

- Application (clause 7.1)
- Contribution (clause 7.2)
- Distribution low voltage connection scheme base charge (clause 7.3)
- Prices (clause 7.4)
- Exclusion (clause 7.5)

How you can help

- Submission to the OOE Code change public consultation process (closes 31 Aug 2011)
- Review the information and provide a response to this Western Power public consultation process (closes 31 Aug 2011)
- Submission to the ERA public consultation process

Wrap-up

James MacAskill

5 Public Forum attendees[4]

Name	Organisation
Arianwyn Lowe	Office of Energy
Gavan Forster	MBA
Laurie Curro	SKM
Liliana Mironov	Consult Australia
Lita Geros	Office of Energy
Lou Piscicelli	NECA
Martin Dickie	Dickie Architects
Ryan Davey	SKM
Sam Nevill	Office of Energy
Vanessa Jackson	WALGA

[4] The Western Power reference for this document is DM 8486343.

6 Public Forum Questions and Answers[5]

Question, Liliana Mironov

Revenue - is this to be applied to all customers and what is the method of calculations. Any progress on a typical estimation of the actual cost to the costumers and not just the full price based on $/kVA.

Answer, Robert Rogerson

There are two main components that determine the cost to a customer, these being the cost to augment Western Power's network to provide the supply less the expected additional network revenue. The DLVCS addresses only the augmentation element.

The augmentation element is linked to removing concerns and inconsistency associated with development costs.

The revenue offset calculations is unchanged from the methodology used presently. The customers that presently receive a revenue offset will continue to do so.

Western Power is looking to review the revenue element at a later stage.

Question, Liliana Mironov

Limit of distance – Is there any feedback for customers that are more than 25km away from the zone substation e.g. country customers).

Answer, Robert Rogerson

The rationale for implementing the DLVCS to jobs within 25km of a Western Power zone substation was twofold. Firstly there is already another scheme in place for customers more than 25km away from zone substations, e.g. head works scheme. Secondly, there are very few customers outside the 25km of a Western Power zone substation that fall into the customer types that are eligible for the new scheme.

That said, it does not preclude, should there be a significant customer demand, the investigation, at a later stage, of customers beyond 25km of a Western Power zone substation.

Question, Liliana Mironov

WPC fees and charges - please provide update on fees and charges for delivering quotes to customers, is the fee already included in the $/kVA charge?

Answer, Robert Rogerson

As is Western Power's current practice the up front fees and charges will remain. When the quote is issued the upfront fees and charges will be deducted from the kVA charge.

Question, Liliana Mironov
Are the fees and charges included?

[5] The Western Power reference for this document is DM 8560810.

Answer, Robert Rogerson

Yes

Question, Liliana Mironov

How is it (fees and charges) charged?

Answer, Robert Rogerson

Same as current

Question, Liliana Mironov

Timing - the FAQ says no change but can you please confirm/elaborate on the expected quote time and various options (prepaid fee, etc).

Answer, Robert Rogerson

This scheme is not only designed to be simple for the customer but will also reduce the amount of time for generating quotes. That said, there will be a period of time when the process needs to be embedded within Western Power, however it is expected that the quote generation time will be reduced.

Question, Liliana Mironov

Upgrades (not new connections) - please confirm customers will pay only for the additional kVA based on the new charges and not total of kVA required.

Answer, Robert Rogerson

This can be confirmed

Question, Liliana Mironov

Exclusions – when will customers be notified if they do not meet the criteria for the new charges, how we can avoid the situation where we advise client of the expected charge based on $/kVA less revenue and after waiting a certain time for a quote to find out that the charge is not applicable due to economic criteria is not met?

Answer, Robert Rogerson

The initial estimate will be provided promptly, reducing the risk of the (above) situation occurring

Question, Liliana Mironov

Will we test every job?

Answer, Robert Rogerson

It is important that we test jobs to ensure that there is no negative impact on the scheme. It is expected the percentage of jobs that will be tested will decrease over time, as the designers become more familiar with what will pass and no pass the economic test, but effectively every job will be tested.

Question, Liliana Mironov

Rates - what rate will apply to a customer with street connection that needs an upgrade and there is not sufficient capacity in the network (require upgrade or new transformer)?

Answer, Robert Rogerson

The rates used in the examples today have shown how the rates will apply. The final rates will be finalised closer to the scheme being put in place. These rates will be available on or just prior to expected go live date of 1st January 2012

Question, Arianwin Lowe

Can you explain how to identify full cost items?

Answer, Robert Rogerson

There is no change in how Western Power presently identifies full cost items. Full cost items are for non standard work for a job, for example Native Titles surveys and Flora and Fauna Surveys, etc.

A second example of non standard equipment arrangements is where equipment is positioned in non standard locations as defined in the Distribution siubsataion manual. Non standard locations are typically where equipment is needs to be moved from the property boundary which is either more expensive to Western Power or restricts other customer's access to the transformer or pillar.

Question, Arianwin Lowe

Which zone substations will the 25km radius apply to?

Answer, Robert Rogerson

All Western Power zone substations, not customer substations

Question, Arianwin Lowe

How many people would be affected by this scheme?

Answer, Robert Rogerson

It will vary depending on the economic conditions but it could be 500-800 customers per year.

7 Written submissions received[6]

"Gavan Forster" <Gavan@mbaws.com>
19/09/2011 12:15 PM

To "Distribution Low Voltage Connection Scheme" <dlvcs@westernpower.com.au>
cc
bcc
Subject Proposed Low Voltage Connection Scheme

Thank you for the opportunity to provide comments on the proposed DLVCS. Master Builders Housing Council supports the changes which we believe will bring greater equity and transparency into Western Power's network augmentation charges policy. If you require any further information kindly contact me. From Gavan Forster. MBA Housing Director.

[6] The Western Power reference for this document is DM 8644619.

SUBMISSION TO THE

OFFICE OF ENERGY

ECONOMIC REGULATION AUTHORITY

AND WESTERN POWER

Interim Amendments To The Electricity Networks Access Code 2004

Issues Paper July 2011

Executive Summary

Matter

The Electricity Networks Access Code 2004 (**ENAC**) establishes the framework for access to distribution and transmission network services in Western Australia, including access to Western Power's covered network, and how augmentations to this covered network may be funded and regulated.

Context

Western Power has proposed two amendments to the ENAC:

1. To give legal effect to a decision made by the Economic Regulation Authority (**Authority**), on Western Power's second access arrangement, permitting the recovery of deferred revenue.
2. A five fold increase in the headwork charges that Western Power may directly recover from users connected to the network.

On the 19 July 2011 the Authority published a notice advising that the Office of Energy (**OOE**) had released an issues paper on Western Power's proposed amendments. The OOE has requested public comments on the matters raised in the issues paper including any other issues considered to be of relevance.

On the 10 August Western Power published for comment their Low Voltage Connections Scheme designed to take advantage of the proposed amendment to the ENAC to increase the headwork charges that may be recovered directly from customers. This scheme is proposed to be implemented on 1 January 2012.

Scope

On the 19 July 2011 the Authority published a notice advising that the OOE had released an issues paper on the proposed ENAC amendments. The OOE's issues paper supports the proposed amendments and invited comments on the matters raised in the issues paper. This submission details Synergy's comments on the matters raised in the OOE's issues paper and Western Power's proposed Low Voltage Connection Scheme.

Key issues

Synergy has not commented on the first proposed amendment to the ENAC relating to giving effect to the Authority's decision, in the second access arrangement review, to permit Western Power's recovery of deferred revenue.

Synergy, in relation to the second proposed ENAC amendment, notes that the recovery of the headworks charges and the associated increase is not subject to regulatory oversight. In addition, there is scant substantiation for this five fold increase or why it is required. In particular Synergy would have expected to see material on how such an increase benefits customers and better achieves the ENAC aims and objectives.

synergy
energy solutions you can use

Synergy is also concerned that the material increase to the size and number of the arrangements that may be covered by the headworks scheme under the ENAC, particularly in light of the proposed LVCS under the proposed access arrangement, may:

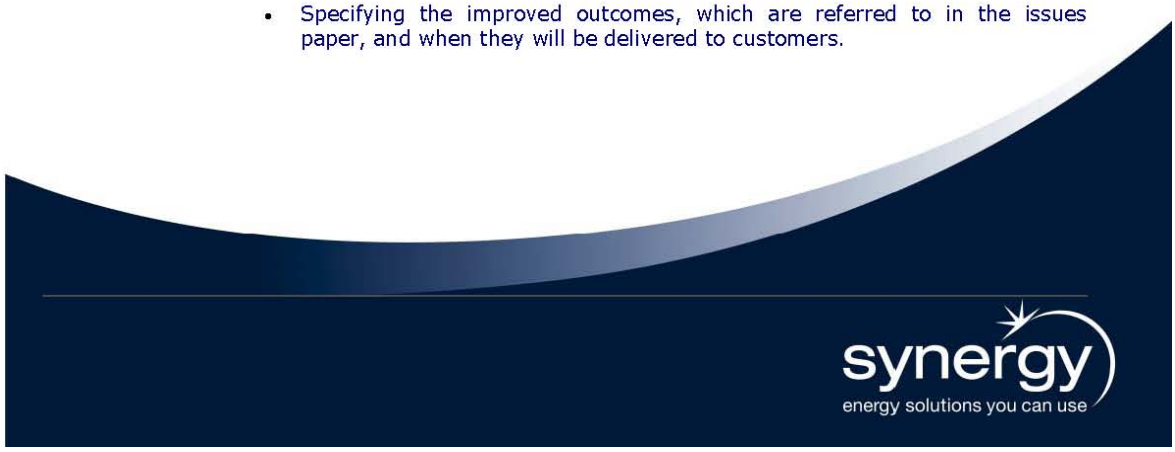
1. result in the access regime embodied by the ENAC no longer meeting the requirements for certification as an effective access regime under Part IIIA of the *Competition and Consumer Act 2010* (Cth) (**Competition Act**).
2. encourage conduct that would otherwise contravene the anti hindering provision under section 115 of the *Electricity Industry Act 2004* (WA).

Recommendations

Synergy recommends there be a holistic assessment of the effect of the second proposed ENAC amendment and the apparent associated proposed access arrangement changes. In Synergy's view, given the interaction between access arrangement issues and statutory issues under the ENAC, the review be conducted jointly by the OOE and the Authority, with appropriate input from other key stakeholders such as Western Power. In conducting such a review Synergy would expect the matters detailed in section 26(1) of the *Economic Regulation Authority Act 2003* (WA) to be taken into account and addressed.

In addition, Synergy also recommends that, if the second amendment is to be sent to the Minister for approval, the OOE give careful consideration to and advise interested and affected parties of the OOE's views on the following:

- How the headworks scheme will operate under Western Power's proposed new contribution policy.
- How the increase in headworks charges will impact consumers and which class of consumers will, or is likely to be affected.
- Whether and if so how the increase in charges will result in real benefits to consumers, including substantiating how Western Power, in providing these benefits, is to efficiently minimise costs.
- Considering whether, and if so how the increase will better achieve the objectives set out in section 2.1 of the ENAC (**Code Objectives**).
- Any controls that need to be in place in order to ensure there is no double recovery of charges, as required by section 5.17D(d)(iv).
- Why there needs to be a "…new low voltage customer charging policy" and how it will financially impact customers. Whether the need for this policy should be subject to public consultation.
- Specifying the improved outcomes, which are referred to in the issues paper, and when they will be delivered to customers.



- How to give legal effect under the ENAC to ensure "…any new headworks schemes will be the subject of extensive consultation and scrutiny by the Authority", including what matters the Authority must give regard to and what decisions it can make with respect to approving or not approving a new headworks activity.
- How the Authority will ensure the LVCS is not applied to geographic extensions of the network and that there is no double recovery.

Any queries may be made to:

Mr Karthi Mahalingam
Manager Networks Regulatory and Compliance
Corporate Services
Synergy
Phone: (08) 6212 1129
Email: karthi.mahalingham@synergy.net.au

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INTRODUCTION

Synergy appreciates this opportunity to provide comments on the OOE's issues paper[1] (**Issues Paper**) and proposed amendments to the ENAC.

Synergy understands Western Power's proposed changes for the third access arrangement period (**AA3**) will be made available for public review in October 2011 and that the proposed amendments may be necessary to support or give effect to further changes proposed in AA3.

In addition, it is also important to note 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*.

Unless otherwise specified, words in italics in this submission have the same meaning as in the ENAC.

PROPOSED AMENDMENT 1 – DEFERRAL OF REVENUE

Synergy has not provided a submission on this matter.

PROPOSED AMENDMENT 2 – FIVE FOLD INCREASE TO HEADWORKS CHARGES

BACKGROUND

In July 2008 the OOE proposed urgent amendments to the ENAC, which included the introduction of a headworks scheme. The headworks scheme (**Scheme**) amendment was subsequently approved and gazetted on 22 October 2008.

The Scheme permits Western Power to recover additional charges from a class of *users*, including customers, in respect of any activity that is undertaken on the network whether or not the work is required by the *user*.

> "5.17C Despite section 5.14, the *Authority* may approve a *contributions policy* that includes a **"headworks scheme"** which requires a *user* to make a payment to the *service provider* in respect of the *user's* capacity at a *connection point* on a *distribution system* because the *user* is a member of a class, whether or not there is any *required work* in respect of the *user."*

In addition the Scheme operates separately from the price and tariff control requirements under Chapter 6 of the ENAC and is not subject to section 6.4 (c) of the ENAC, which is aimed at avoiding price shocks.

The Scheme detailed under Western Power's current *contribution policy* permits Western Power to recover up to 1% of the *distribution system target revenue.*

The ENAC amendment proposes a five fold increase to this amount from 1% to 5%, which will correspondingly increase the cost of electricity supply to some consumers.

[1] Office of Energy – Interim Amendments to the Electricity Networks Access Code 2004 – Issues Paper July 2011.

Further, given the nature of the ENAC headworks provisions, the effect of the proposed amendment is to increase the cost of supply to a class of *users* in respect of any capacity related activity or work that is undertaken on the network.

Finally, and unlike any other costs Western Power is able to seek from *users* under the current access regime, there is no independent third party, such as the Authority, monitoring how these increased costs are imposed nor does a *user* have any right to seek review by an independent third party of the manner in which these increased charges are imposed or their quantum. In other words a *user* has no choice but to pay these increased costs, as determined by Western Power, if it wants access (including continued access) to electricity.

Synergy understands that this increase will be recovered under the new *contributions policy* in AA3[2]. However, the proposed changes to the new *contributions policy* have not been published by the Authority and its impact has not been assessed. Therefore, in the absence of these matters being covered in the Issues Paper, there is no way of knowing what the effect of the amendments will be, including who will be affected and to what extent.

However, on the 10 August 2011 Western Power, apparently in anticipation of the amendment being approved, published for comment their Low Voltage Connections Scheme (**LVCS**) and proposed changes to the contributions policy, which appears designed to take advantage of the proposed amendment to the ENAC to increase the headwork charges that may be recovered directly from customers.

Western Power's LVCS and new *contributions policy* is proposed to be implemented in 5 months on 1 January 2012.

THE NEED FOR MORE INFORMATION AND CAREFUL CONSIDERATION

It is important for there to be transparency in any decision making process that involves public consultation. Synergy submits that no information has been published establishing why such a large increase to the headworks charges is necessary. In particular, there is no information on why the network operator cannot undertake and fund augmentations to the network in accordance with the existing requirements of the ENAC including, ensuring that the associated costs satisfies the new facilities investment test (**NFIT**). Given the importance of the NFIT to open and transparent access regimes, Synergy would expect that this aspect be addressed before the amendment was progressed.

It is important the OOE ensure that the Scheme is not being used as a mechanism to bypass the relevant regulatory mechanisms for ensuring the network operator is *efficiently minimising costs*. If this were the case then the Scheme and the mechanism for increasing and recovering charges may be contrary to the operation of an effective access regime as required by Part IIIA of the Competition Act.

[2] However, on the 10 August 2011 Western Power published changes to the contribution policy and indicated its intent to commence recovery, prior to the implementation of AA3, on 1 January 2012.

In addition, the issues paper does not provide information on which interested parties can assess how the increase in headwork charges will affect *users*, including which class of *users* (including potentially vulnerable consumers such as small business and residential consumers) will be affected under the proposed changes to the *access arrangement*[3]. Consequently, Synergy submits that it is premature to support this amendment until the impact of Western Power's proposed changes to the *contribution policy*[4] has been carefully and holistically assessed.

The Issues Paper also does not specify or substantiate the corresponding benefits that are to be delivered to *users* and consumers, particularly how the imposition of the additional costs, which are to be recovered from some consumers, better achieves the *Code Objectives*.

Section 5.17D(d)(iv) of the ENAC requires a headworks scheme to contain a mechanism that ensures there is no double recovery of charges:

> "5.17D(d) set out the method for calculating the *headworks charge,* which method:
>
> (iv) must contain a mechanism designed to ensure that there is no double recovery of costs in all the circumstances, including the manner of calculation of other *contributions* and *tariffs*;..."

The current *access arrangement* does not contain such a mechanism. Therefore, careful consideration must be given to additional controls or regulations that might need to be put in place to ensure that *users* and consumers are protected and not charged twice. In particular, the additional controls and regulations required under the ENAC in respect of the *headworks scheme* and *headworks charge* that will promote regulatory outcomes that are in the public interest and ensure an effective access regime.

The Issues Paper also suggests that "... that any new headworks schemes will be the subject of extensive consultation and scrutiny by the Authority". However, the Scheme as it is currently outlined under the ENAC, does not require any new headworks scheme to be subject to public consultation or any economic tests that demonstrates the network operator is *efficiently minimising costs*. Therefore, Synergy submits, that in order to ensure that there is adequate consultation, the proposed amendment must also require that any new headworks scheme or *works* is a *matter of consultation* and must be subject to public consultation under Appendix 7 of the ENAC.

[3] However, Western Power's information, subsequently published on the 10 August 2011, indicates that only 1.5% of customers will be **excluded** from the scheme and presumably the headwork charges. In other words, it appears the vast majority of people who consumer electricity in the SWIS will be affected by these changes.
[4] Including the associated charges. Synergy notes that the charges have not been finalised and that Western Power will maintain a list of the charges, customers will incur, on its web site,

In addition, it is important to note that even if the proposed new headwork activities were subject to public consultation the Authority does not appear to have any power to in any way regulate or approve these activities. The Authority's powers under the ENAC appear to be limited to only approving or not approving the Scheme framework under the *contribution policy*. Consequently, consideration also needs to be given to whether the Authority, subject to public consultation and economic considerations, has the power to decide and approve the execution of a proposed new headwork activity. In the absence of any such oversight of the activities and/or the associated costs being imposed, Western Power is able to refuse access to the *network* unless and until a consumer pays an amount determined by Western Power in respect of unspecified, but potentially a very broad range of, activities, also determined by Western Power.

Therefore, having regard to these issues and the magnitude of the proposed costs Western Power can recover under the headworks scheme, Synergy submits that it would be unlikely for the ENAC to be capable of certification as an effective access regime under the Competition Act if the proposed changes[5] to Western Power's contribution policy were incorporated into the *model contributions policy*.

Synergy notes the OOE "…generally supports this amendment". However, Synergy submits that, before this amendment is recommended to the Minister for approval, more information is required and careful consideration should be given to:

- How the Scheme will operate under Western Power's proposed new *contribution policy*.
- How the increase in headworks charges will impact consumers and which class of consumers will be affected.
- Substantiating the increase in charges in terms of real benefits to consumers. Including demonstrating how Western Power, in providing these benefits is *efficiently minimising costs*.
- Clearly demonstrating how the increase will better achieve the *Code Objectives*
- The controls that need to be in place in order to ensure there is no double recovery of charges.
- Why there needs to be a "…new low voltage customer charging policy" and how it will financially impact customers. Whether the need for this policy should be subject to public consultation[6].
- What the improved outcomes, referred to in the Issues Paper, are and when they will be delivered to consumers.
- How to give legal effect under the ENAC to ensure "…any new headworks schemes will be the subject of extensive consultation and scrutiny by the Authority". Including what matters the Authority must give regard to and what decisions they can make with respect to approving or not approving a new headworks activity and associated costs and charges.
- Whether the ENAC would be capable of certification as an effective access regime under the Competition Act if Western Power's proposed changes to the contribution policy were incorporated into the *model contributions policy*.
- How the Authority will ensure the LVCS is not applied to geographic extensions of the network and that there is no double recovery.

[5] For example, Western Power's proposed LVCS.

[6] The contribution policy will be the mechanism on how Western Power will implement and enforce the LVCS on customers. Synergy understands that changes to the *contributions policy* may be subject to public consultation however, Synergy submits there needs to be public consultation on whether there is a need for the LVCS.

OTHER ISSUES OF RELEVANCE

THE EFFECT OF INCREMENTAL CHANGES TO THE WEST AUSTRALIAN ACCESS REGIME CONTRARY TO THE CERTIFICATION OF AN EFFECTIVE ACCESS REGIME

On the 10 August 2011 Western Power published for comment its proposed LVCS and associated changes to the *access arrangement*. The LVCS is intended to take advantage of the proposed amendments to the ENAC currently being assessed by the OOE.

In addition, Western Power plans to implement its LVCS in the next 5 months, subject to the Authority's approval of the scheme and in anticipation of the OOE's support in approving the additional funding for the LVCS.

Synergy is concerned that:

- the matters and corresponding impacts associated with the ENAC and *access arrangement* amendments; and
- funding is being proposed, managed and approved,

in an incremental and uncoordinated way by several different organisations with no single organisation apparently being responsible or considering the total effect of the proposed changes such that there is a real risk that the long term interests of consumers and the fundamental aims of the ENAC are not met or that the ENAC ceases to meet the requirements of Part IIIA of the Competition Act.

Synergy believes it is important to note the fundamental aims and objectives of the ENAC are to:

1. Be consistent with the National Electricity Code and National Gas Code; and
2. Be capable of certification as an effective access regime under Part IIIA of the Competition Act.
3. Establish a framework for third party access to electricity transmission and distribution networks with the objective of promoting the economically efficient investment in, and operation and use of, networks and services of networks in Western Australia in order to promote competition in markets upstream and downstream of the networks.

It is also important to note that 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.

In addition, section 26(1) of the Economic Regulation Authority Act 2003 outlines the matters the Authority must give regard to:

> "26(1) In performing its functions, other than the functions described in section 25(c) and (d), the Authority must have regard to —
>
> (a) the need to promote regulatory outcomes that are in the public interest;
>
> (b) the long-term interests of consumers in relation to the price, quality and reliability of goods and services provided in relevant markets;
>
> (c) the need to encourage investment in relevant markets;
>
> (d) the legitimate business interests of investors and service providers in relevant markets;
>
> (e) the need to promote competitive and fair market conduct;
>
> (f) the need to prevent abuse of monopoly or market power;

(g) the need to promote transparent decision-making processes that involve public consultation…"

Synergy submits the current incremental and differing mechanisms for funding[7] and approving the augmentation of the network do not lead to a thorough and holistic assessment of these matters. In addition, it also does not promote transparency in the decision making process or associated public consultation on the matters dealing with proposed ENAC amendments and changes to the *access arrangement* scheduled to take effect on 1 January 2012.

In particular, the incremental and divided nature of how these initiatives are being progressed through the ENAC and *access arrangement* does not promote regulatory outcomes that are in the public interest.

For example, the NFIT is a fundamental element that underpinned the certification of the Western Australian access regime for electricity network services as an effective regime under the Competition Act. However, the incremental approach to amending the ENAC has now introduced an alternative mechanism[8], which is not subject to regulatory oversight or the economic efficiency tests such as NFIT, for funding a covered service sought in an access application. In this respect the total quantum of the funding for Western Power's proposed LVCS scheme will in effect be approved by the OOE and not the Authority. Further, the individual amounts Western Power is able to charge customers will be determined and implemented by Western Power with no oversight by either the Authority or the OOE.

Therefore, the Western Australian access regime now has two different mechanisms for funding a *covered service* sought in an access application by a customer. One economically regulated by the Authority; the other not subject to economic regulation and, subject to overall recommendation by the OOE and approved by the Minister. This alternative mechanism for funding the provision and augmentation of *covered services* is a material change to the ENAC and Synergy submits that the capability of the ENAC for certification as an effective access regime under the Competition Act now needs to be re-assessed.

Under the ENAC the definition of *covered services* includes a *connection service*, which means the right to connect facilities and equipment at a connection point. This means that an access seeker can invoke the arbitration process contained in Chapter 10 of the code in the event of a dispute over terms and conditions for interconnection with a *covered network*. This right of appeal feature is another fundamental element that underpins the certification of the Western Australian access regime as an effective regime. However, it now appears that the *headwork scheme* operating together with the LVCS under the proposed *access arrangement* may deprive customers of the ability to effectively have a dispute on this matter heard. If so, the effect of the *headwork scheme* operating together with the LVCS may also be contrary to the anti hindering provisions under section 115 of the Electricity Industry Act 2004, assuming they apply. Alternatively, if they do not apply, in Synergy's submission the lack of an appeal mechanism also weighs against the regime continuing to meet the certification requirements of the Competition Act.

[7] The LVCS funding in particular not being subject to relevant regulatory oversight and economic tests.
[8] For example, the headworks scheme and the LVCS.

GEOGRAPHIC EXTENSION OF THE DISTRIBUTION NETWORK

Under sections 5.17C and D of the ENAC, a *headworks scheme* is only in respect of a *user's* capacity at a connection point and must not include a geographic extension of the network or any *works* which affect a geographic extension of the network.

However, there is insufficient transparency and regulatory oversight on the proposed LVCS to ensure that an application for covered services, in particular a new connection request, is not subject to a geographic extension of the distribution network.

The proposed LVCS also does not make it clear how there will be no double recovery.

LVCS has assumed that if an application is received for a connection point within 25 kilometers of a relevant zone substation it will not require or be subject to a geographic extension of the network. Synergy submits that this is an incorrect assumption.

Geographic extensions to the network can and do occur within 25 kilometres of a substation. The LVCS does not contain any regulatory oversight to ensure that the increased headwork funding will not be applied to a geographic extension to the network, contrary to the provisions of the ENAC.

Synergy notes that a geographic extension is not a defined term under the ENAC and may make it difficult for users to dispute situations where they believe a *headworks scheme* and *headworks charge* has been inappropriately applied.

Therefore, Synergy submits the ENAC should also contain a further amendment that requires the Authority to verify that applications for *covered services* received under a *headworks scheme* are not subject to a geographic extension of the network or double recovery.

In addition, section 5.17D makes it optional whether the *headwork scheme* includes a rebate mechanism as contemplated by the ENAC. However, Synergy questions whether this policy is still reasonable as the proportion of network augmentation funded under the *headworks scheme* is proposed to increase materially and this increase will not be subject to regulatory and economic scrutiny. Synergy's concerns are exacerbated if there is a potential it may be applied to geographic extensions of the network.

Therefore, Synergy submits that the material increase in the funding of non-regulated augmentations under the headwork scheme together with the LVCS requires that there be appropriate regulatory oversight. At the very least regulation that addresses the issues associated with:

- A *headwork scheme* like the LVCS not containing an appropriate rebate mechanism
- Ensuring no double recovery is satisfied.
- Ensuring that an application subject to a *headworks charge* is not also associated fully or partially with a geographic extension to the network.

This regulatory oversight is necessary because it appears that with progressive and incremental amendments to the ENAC the *headworks scheme* may be used as a mechanism to fund an increasing proportion of the network augmentation.

33 Broadway
Nedlands WA 6009
T +618 9287 9900
F +618 9287 9909
wa@raia.com.au
architecture.com.au

30th August 2011

Australian Institute of Architects

The Manager
Standards, Policy and Data Quality
Western Power
GPO Box L921,
PERTH WA 6842

Text sent by email on 30th August to dlvcs@westernpower.com.au

Dear Sir

Re: Proposed Distribution Low Voltage Connection Scheme

Further to the Public Forum at the Perth Town Hall on 22nd August the Australian Institute of Architects (WA Chapter) would like to support Western Power's proposals for a new Distribution Low Voltage Connection Scheme.

Existing methods of charging appear to be unfair and arbitrary and the costs involved can be considerable. The greater predictability which a fixed rate, based on demand, will bring will be a benefit to owners of domestic premises across a great range of architectural practices. The specific matters on which comment was requested are addressed as follows:

Eligibility
The proposed categories of eligible applications are supported since they are logical and straightforward.

Exclusion
A small number of high cost remote applications for supply should be excluded from the new scheme since the costs to all applicants would be increased if they are included. We therefore support the proposed exclusions.

Rates
The proposed rate block structure is clear and easy to calculate and appears to result in substantially lower costs which will be fairer to clients.

Yours sincerely

David Karotkin.

David Karotkin RAIA
State President

The Royal Australian Institute of Architects
trading as Australian Institute of Architects
ABN 72 000 023 012

Dickie
architects
architecture, landscape + urban design
23 Alfreton Way Duncraig Western Australia 6023 / T 08 9448 4806 / E dicarch@iinet.net.au
The Dickie Trust trading as Dickie Architects / ABN 20 743 506 022 / Martin Dickie / Reg No. 1345

30th August 2011

The Manager
Standards, Policy and Data Quality
Western Power
GPO Box L921
Perth
WA 6842

Text sent by email on 30th August to dlvcs@westernpower.com.au

Dear Sir

re: Proposed Distribution Low Voltage Connection Scheme

I attended the Public Forum at the Perth Town Hall on 22nd August. I would like to register the support of my practice to Western Power's proposals for a new Distribution Low Voltage Connection Scheme.

The existing charging method is not only unfair it appears to the applicant to be arbitrary and the amounts quoted can have a significant adverse effect on project finances. The move to a fixed rate based on demand will benefit our clients across the board and will allow loans to be established more reliably.

Eligibility
The proposed categories of eligible applications are logical and straightforward and are supported.

Exclusion
It is evidently necessary that some high cost remote applications for supply should be excluded from the new scheme since the costs to all applicants would be increased if they are included. It seems likely that the number of such applicants will be small and the vast majority of our clients will be included. We therefore support the proposed exclusions as well.

Rates
The proposed rate block structure is clear and easy to calculate and appears to result in substantially lower costs which will be fairer to our clients.

Yours sincerely

Martin Dickie

Martin Dickie
Principal, Dickie Architects

e udia@udiawa.com.au
t 08 9321 1101
f 08 9321 1102
w www.udiawa.com.au

Urban Development Institute of Australia
(Western Australia)
Level 5, 150 St Georges Terrace,
Perth, Western Australia 6000

31st August 2011

Manager
Standards, Policy and Data Quality
Western Power
GPO Box L921
Perth WA 6842

By email: dlvcs@westernpower.com.au

To whom it may concern

Proposed Distribution Low Voltage Connection Scheme

The Urban Development Institute of Australia (WA) is pleased to make this submission to Western Power on the Proposed Distribution Low Voltage Connection Scheme. UDIA (WA) is the peak body representing the urban land development industry in Western Australia and we are a member of the Land Development Strategic Reference Group.

UDIA is a membership organisation with members drawn from the development, planning, valuation, engineering, environmental, market research and urban design professions. Our membership also includes a number of key State Government agencies and Local Government Authorities from across the state. Nationally, UDIA represents the interests of thousands of members and includes all the major land development companies, both public and private, and specialist consultancy firms.

UDIA offers in principle support for Western Power to review the method of charging for low voltage connections to the distribution networks. We are aware that the existing system has had widely variable outcomes resulting in an inequitable distribution of costs, a lack of predictability of the magnitude of the charges and a lack of transparency regarding the individual contribution calculations. We acknowledge that this needs to be resolved and while we support the proposal, we believe it will only succeed where it adheres to the following principles:

- Equity – the DLVCS charges must be applied equitably among customers so that no one customer is disadvantaged more than any other;
- Consistency – the DLVCS must be applied consistently so that customers can predict the quantum of the charges;
- Transparency - the DLVCS must allow customers to understand how charges are applied through the quotation process;
- Accuracy – the charges applied must be accurate and adhered to through the quotation process.
- Competitive – the charges must be seen to be, and actually be, competitive in an open-tender sense. This must be apply to each and all aspects and then the components of the cost that is derived for each project.

.../2

UDIA's principal concern with the proposal is the risk of costs escalating which Western Power has experienced in other areas, specifically the HV pool. The reason for our concern is that the normal market mechanism of cost control does not exist in Western Power because the application of charges is purely an internal process not subject to responses from the market. The absence of market checks means that Western Power will have to be particularly vigilant about tracking changes in the charges to avoid an uncontrolled escalation of costs. In the interests of the principles of equity, transparency, consistency and accuracy, we recommend that an audit of the costs over the first and then each subsequent twelve month period be undertaken so that Western Power has a clear understanding of cost change over time which should allow it to better control cost escalations should they occur.

UDIA is hopeful that the proposed changes to the DLVCS will provide greater consistency and equity amongst customers and eliminate the existing unpredictability of the quotation process.

We appreciate the opportunity to comment and presume that the above will make a useful contribution to Western Power's own submission to the Economic Regulatory Authority.

Yours sincerely

Debra Goostrey
Chief executive Officer

neca
Western Australia

Western Australia | national electrical and communications association
18 - 20 /199 Balcatta Road, Balcatta, Western Australia 6021
PO Box 782, Balcatta, Western Australia 6914
telephone 1300 NECA WA facsimile +61 8 9240 4866
email necawa@necawa.asn.au website www.neca.asn.au
ABN 19 295 806 769

28 September 2011

Mr Doug Aberle
Chief Executive Officer
Western Power
363 Wellington Street
PERTH WA 6000

Dear Mr Aberle,

Proposed Amendments to the Distribution Low Voltage Connection Scheme (DLVCS)

We write in relation to the aforementioned proposal to amend the DLVCS that is currently before the Economic Regulatory Authority (ERA) for consideration.

We acknowledge and thank your organisation for the presentation made to us and our members on this issue on 7 September 2011 by Nigel Frost, Stephen Grose and Joe Woodlock of your office. This presentation helped to explain and clarify the proposals excellently.

NECA supports the Distribution Low Voltage Connection Scheme (DLVCS) as presented, as we believe that it will provide greater transparency and openness to how upgrades are priced.

Firstly, the proposed scheme ought to remove the disparity in pricing for customers who request the same scope of works yet get charged dramatically different prices. Our members will appreciate this change, as it is often they who get the blame for this inequity.

Secondly, the $/kVa method of charging will be a fairer system for all as it will give customers more predictability for pricing and will reduce the incidence of 'tyre kickers' who only cause blockages in the process.

We do however ask that you provide some further clarity to us with respect to the 'revenue offset'. This element of the pricing structure remains uncertain and lacks transparency, which makes it hard for customers to calculate. We understand that you are working towards clarifying this aspect currently, but we note it as an outstanding issue nonetheless.

Once again, we thank you for this initiative and the frank and receptive way in which your organisation has communicated with us and our members on this.

Kind regards,

Kyle Kutasi
General Manager

NECA National Ph: 02 9439 8523
NECA Victoria Ph: 03 9645 5533
NECA Western Australia Ph: 1300 NECA WA
NECA New South Wales Ph: 02 9744 1099
NECA Tasmania Ph: 03 6236 3656
NECA Nothern Territory Ph: 08 8922 9666
NECA Australian Capital Territory Ph: 02 6280 5580
NECA South Australia Ph: 08 8272 2966
NECA Queensland Ph: 1300 794 846

Attachment C. Economic analysis of the proposed scheme

This attachment details the economic justification for the DLVCS.[12]

[12] The Western Power reference for this document is DM 8304769.

Economic analysis of the Low Voltage Customer Charging Policy

June 2011

Document release information

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Document prepared by:

Western Power
ABN 18540492861

363 Wellington St, Perth

Prepared by: Grant Coble-Neal	:

Table of contents

Executive Summary

This report presents an economic analysis of the proposed Distribution Low Voltage Connection Scheme (DLVCS).[1] In short, the DLVCS describes a new charging policy that relates to small-scale new customer connections that are connected either by a street-feed or a transformer to the South West Interconnected Network.

The DLVCS proposes to address the substance of concerns raised by new low voltage connection customers (referred to as connection applicants throughout this report). The key concerns expressed by connection applicants are:

- The high degree of variability of connection charges.
- The high cost of connection.
- The lack of predictability in connection costs.

This report is focused on assessing how well the DLVCS promotes economic efficiency, which is the objective defined in the *Electricity Networks Access Code 2004* (the Code). This involves assessing both the current charging policy and the proposed charging policy against the following facets of economic efficiency:

- Technical efficiency
- Allocative efficiency
- Dynamic efficiency

The evidence and analysis contained in this report demonstrates that, in absolute efficiency terms, the current charging policy has deficiencies related to cost allocation and in striking the balance between upfront customer contribution payments and tariff payments made over time.

Moreover, the current charging policy assumes that there is no market benefit of installing capacity that is surplus to the connection applicants' requirements. The assumption of no market benefit contrasts with the evidence that some connection applicants clearly benefit from surplus capacity. The main benefit is the avoidance of a portion of the contribution payment that would have been required if the surplus capacity was not available. Note that the additional capacity is unavoidably added due to the limited number of capacity increments embodied in network components. Current practice is consistent with the provisions of the new facilities investment test with respect to economies of scale and scope and forecast sales.

In terms of technical and dynamic efficiency, the DLVCS is equivalent to current practice. However, it does improve allocative efficiency by striking a better balance between connection applicants and between connection applicants and all other users. In short, the proposal will reduce the extent to which some connection applicants are paying for capacity that they do not use while others will pay more for capacity already installed.

Therefore, this report concludes that the DLVCS better promotes economic efficiency than the current charging policy.

[1] As described in the business case (DM# 7111617).

1 Introduction

1.1 Purpose

1. This document presents an economic analysis of Western Power's proposed Low Voltage Customer Charging Policy (**DLVCS**).

2. The primary motivation for the economic analysis is to evaluate whether the proposed DLVCS promotes the objective set out in s2.1 of the Electricity Networks Access Code 2004 (**the Code**). The objective is "…to promote the economically efficient:

   - investment in; and
   - operation of and use of,

   networks and *services of networks* in Western Australia in order to promote competition in markets upstream and downstream of the *networks*…"[2]

1.2 Report overview

3. This report is structured along the following lines. The remainder of the introduction section defines Western Power terms and explains what they mean. It then defines economic efficiency and discusses its application to the evaluation of the DLVCS proposal.

4. Section 2 (Current situation) describes the current low voltage charging scheme and evaluates it in terms of how well it promotes economic efficiency. Section 3 (The proposed) describes the proposed charging method and evaluates it against the same economic efficiency criteria. Section 4 (Report conclusion and recommendations) summarises the analysis and provides recommendations for action.

1.3 Western Power connection cost definitions

5. This section defines terms used by Western Power that explain how connection cost is allocated.

1.3.1 Relationship between terms

6. The following equations are intended to concisely show how the total connection cost is partitioned and the relationship between cost components:

   i. Total Cost = Connection Asset Cost + Shared Asset Cost

   ii. Full Cost Items = Minimum Connection Asset Cost + Extra Connection Asset Cost

   iii. Full Cost Items ≡ Connection Asset Cost
   [Note: "≡" means "is identical to"]

   iv. Applied Shared Asset Cost = (1-p) x Shared Asset; p = portion of cost allocated to other users, 0≤ p ≤ 1

   v. Applied Shared Asset Cost ≡ External Variable Cost Applied

   vi. Contribution Towards External Variable Cost Applied = Max(Applied Shared Asset Cost (or External Variable Cost Applied) – {Inc. Rev. – Opex}, 0)

[2] The italicised words are defined terms in the Access Code.

[Note: Max chooses the maximum value; used to exclude negative values]

vii. Customer Contribution = Full Cost Items + Contribution Towards External Variable Cost Applied

1.3.2 Terms explained

Total Cost: is the total cost of the connection works.

Connection Asset Cost: is the cost of the connection asset. Note that Connection Asset is defined in the Access Code. That is, connection assets are all of the *network assets* that are used only in order to provide *covered services* at the *connection point*. Examples of low voltage connection assets are:

- Universal pillar
- Mini pillar
- LV frame
- LV Box
- Sole use transformer (occasional)

Shared Asset Cost: is the cost of the Shared Asset. Note that Shared Asset is defined in the Access Code. That is, shared assets are those *network assets* which are not *connection assets*. Examples of shared assets are:

- Transformer (except for sole use transformers)
- LV cables
- HV cables

Full Cost Items: is the sum of the minimum connection asset cost and an additional amount that reflects the connection applicant's preferences (e.g. in locating the connection assets).

Minimum Connection Asset Cost: is the cost of the minimum practical connection works required to connect an applicant.

Extra Connection Asset Cost: this refers to the cost of discrete items or portions of discrete items that are required by the connection applicant and exceed the cost of the minimum practical works. For example, a connection applicant may insist on a transformer being placed in a location that is different to the location determined to deliver the minimum efficient cost.

Applied Shared Asset Cost: refers to the portion of shared asset cost that is allocated to the connection applicant. This is the portion of cost in which the incremental revenue offset is applied.

External Variable Cost Applied: an alternative term to the Applied Shared Asset Cost.

Contribution Towards External Variable Cost Applied: the residual amount left if the incremental revenue likely to be earned over time from the connection applicant is insufficient to cover the Applied Shared Asset Cost.

Customer Contribution: is the upfront cost charged to the connection applicant.

1.4 Economic efficiency defined

7. In short, the term economic efficiency refers to the use of resources in a way that maximizes the production of goods and services. However, the concept is multi-faceted:[3]

   i. Technical efficiency: a measure of the effectiveness of a given set of production inputs to produce a given output *at a specific point in time*. A firm that is technically efficient will minimise the quantity of inputs used to achieve the target production level.

   ii. Allocative efficiency: a measure of how well resources (goods and services) are allocated across competing uses *at a specific point in time*.[4] A firm that allocates production inputs efficiently minimises the quantity of inputs (e.g. network resources) used to produce goods and services to customers.

   iii. Dynamic efficiency: a measure of how well a firm uses production inputs to produce a given output series *over time*. A firm will choose the investment stream that minimises the inputs used to produce required output over time.[5]

8. These distinct facets of economic efficiency are reflected in a firm's productivity. Productivity growth indicates that a firm is: (a) reducing the cost of its output; and/or (b) increasing the level of output for a given set of inputs.

9. In practice, the universally optimal efficiency outcome can be difficult to identify and may not be known with certainty if achieved. Often, it is easier to identify inefficient outcomes or when a change in efficiency has occurred. I

10. When evaluating economic efficiency, it is important to acknowledge the possibility that an improvement in one of the three forms of efficiency can occur at the expense of the other forms of efficiency. For example, Western Power often faces the choice of either:

    - install just enough capacity to meet immediate requirements at each point in time; or
    - install capacity that is surplus to immediate requirements, but allows faster expansion of output in the future.

11. Both cases may yield the same long-term cost outcome, but imply different efficiency outcomes. The first option is technically efficient but, compared to the second option, is dynamically inefficient. By contrast, the second option is technically inefficient at specific points in time but, compared to the first option, may be dynamically more efficient because it allows the firm to increase output to meet demand in a shorter timeframe.[6] Such

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[3] A useful reference on economic efficiency concepts as they are applied to the firm is Coelli, T.J., D.S. Prasada, C.J. O'Donnell and G.E. Battese, *An introduction to efficiency and productivity analysis*, second edition, New York, N.Y.: Springer.

[4] The concept of allocative efficiency is often applied to the assessment of how effective a market is at allocating scarce resources between market participants (i.e. buyers and sellers). But the concept can also be applied to the firm, which is the focus of this report.

[5] The concept of dynamic efficiency is sometimes linked to competitive pressure brought about in the market. In some circumstances, competitive pressure can influence a firm to invest. For example, to protect market share. However, it is the investment that delivers the benefits to customers, not competition. Competition is merely a disciplining mechanism that can drive firms to make appropriate investments.

[6] On the other hand, building too early increases the cost more than necessary. In the end, the dynamic efficiency issue comes down to balancing the waste in terms of the time-lag to connect a customer against the waste in costs being higher than strictly necessary. This balancing act will impact on Western Power and its customers differently.

efficiency trade-offs need to be carefully evaluated, particularly when capacity is fixed for extended periods of time. The allocation of costs and capacity rights across the market will be an important consideration in choosing which option to implement.

12. Such trade-offs can be reconciled by applying a benefit-cost analysis (**BCA**), which focuses on economic efficiency.[7] Applying BCA assesses the benefits and costs of alternative ways of delivering outcomes within a transparent framework in which underlying assumptions are clearly identified. This report applies a BCA to compare the relative merits of the proposed DLVCS against the existing pricing policy.[8]

13. In short, if it can be demonstrated that the DLVCS delivers an economically more efficient outcome than existing practice, then it will be deemed to better promote economic efficiency.

2 Current situation

2.1 Low voltage connections defined

14. Western Power routinely establishes new low voltage connections or connection upgrades to the South West Interconnected Network (SWIN). Low voltage connections are those that are:

    i. for three phase, in excess of 32 amps per phase, or

    ii. for single phase, in excess of 63 amps.

15. Such connections exclude most households. Typical connections that satisfy the above criteria are large household, commercial, and light industrial connections.

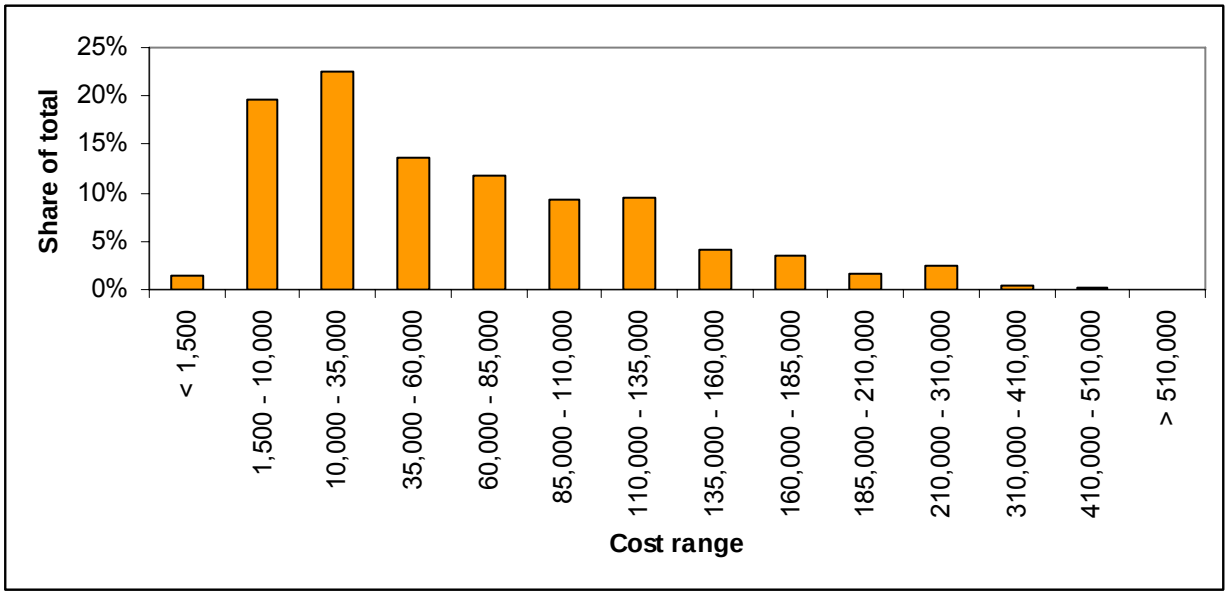
16. The cost of establishing new low voltage connections is highly variable. Western Power typically charges a cost that is reflective of the actual cost of connection. A significant cause of cost variation across new connections is the available network capacity at the nearest point of connection. Loads connected to areas with low or no spare capacity typically means that the cost of connection is higher than in areas where there is a significant degree of spare capacity.

17. Figure 1 presents a sample of 855 low voltage connection quotes. This sample spans the years 2006 to 2009, inclusive. All jobs contained in DQM for that period were extracted. This sample is a subset of the data extract based on the need to examine jobs that: were finished at the time of extract; contained actual cost information; and is considered reliable data.

[7] See Department of Finance and Deregulation, *Introduction to Cost-Benefit Analysis*, CBA Unit Office of Best Practice Regulation, www.finance.gov.au/obpr/docs/BPR.ppt.

[8] A BCA can be performed either qualitatively, quantitatively or a mixture of both. A good quantitative BCA is demanding and sometimes cannot be fully realised within the required timeframe. Also, it is important to note that not all benefits and costs can be readily quantified. In such circumstances, it may be reasonable to conduct a partly qualitative assessment.

Figure 1: Low voltage connection costs

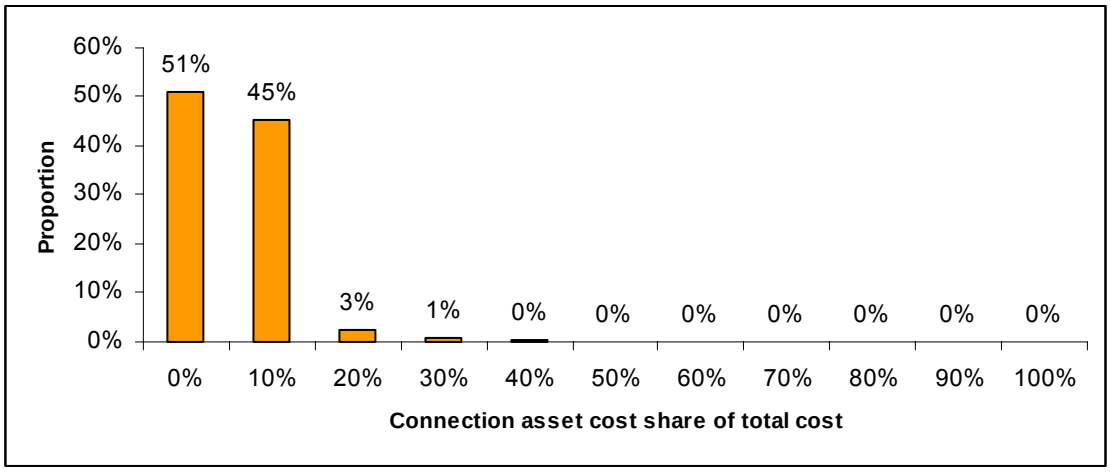


Source: DM# 7331560v7, worksheet: Report Data, total external cost.

18. As is clearly evident, the sample data is skewed. The lowest quote is $772 and the highest is $490,197. Approximately 56 percent of the estimated cost is within a range from $10,000 to $60,000.

19. Figure 2 presents the share of connection asset cost to the total cost. The figure indicates that the cost of connection assets typically represents 10 percent or less of the total cost. This implies that the shared asset cost accounts for most of the cost in most low voltage connection cases.

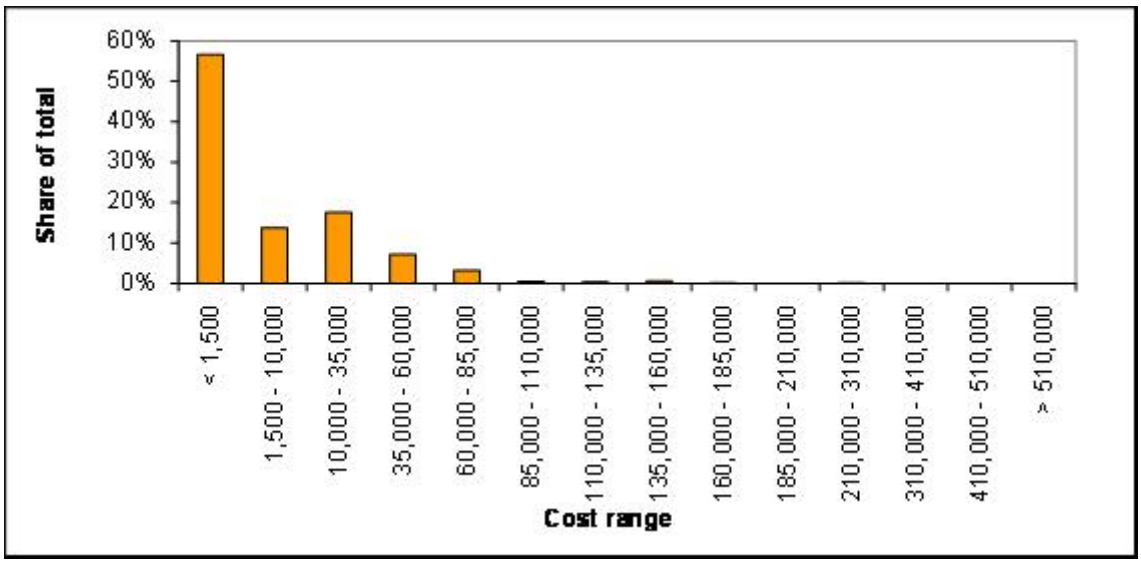
Figure 2 Connection asset cost as share of total cost



Source: DM# 7331560v7, worksheet: Report Data, Full Cost Proportions to Total External Cost.

20. Figure 3 presents the distribution of upfront contribution payments allocated to recovering shared asset cost. Almost 60 percent of connection applicants paid less than $1,500. However, in nearly 30 per cent of cases, the upfront payment towards shared asset cost was more than $10,000.

Figure 3 Contribution payments towards shared asset cost



Source: DM# 7331560v7, worksheet: Report Data and data collated from contributions calculations

2.2 Causes of cost variation across customers

21. In all cases, Western Power determines the minimum efficient cost of implementing the low voltage connection, taking into account economies of scope and scale and forecast sales. Typically, Western Power will select each item required to implement the connection from a pick list of standard items. Choice of standard items facilitates efficient cost minimisation by streamlining inventory, enabling Western Power to capture volume discounts.

    - Often Western Power identifies sufficient surplus capacity at the point of the new connection. When this occurs, the cost of installing items that would be required if there was not any surplus capacity is avoided. This provides a direct, if unseen, benefit to the connection applicant.
    - The opportunity to avoid connection costs raises the possibility of employing location-based price signals to maximize utilization of existing network capacity. However, for most customers, the location decision is not variable. In these cases, the opportunity to reduce connection costs by relocating to a different network connection point cannot be realized (or the cost of relocation is more than the avoided connection cost).

22. Note that there is often not an exact match between the capacity required by the connection applicant and the capacity of the chosen items. It is a reality that items are generally only available in discrete capacities, irrespective of whether Western Power chooses custom or standard items. For example, suppose that transformers are only available in two discrete capacities: 50 kVA; and 100 kVA. A customer may require 75 KVA, which means that the 100 kVA transformer will be required. In most cases, the 100 kVA transformer will be more expensive than the 50 kVA transformer. To the extent that the customer has control over their load, there is an in-built incentive to reduce the load requirement in order to reduce the connection cost.

    In areas where Western Power anticipates multiple low voltage connections within a reasonable timeframe, Western Power may choose to install more capacity than is required by the connecting customer. In these cases, Western Power will add the portion of the

asset cost not allocated to the connection applicant to the capital base.[9] These assets are subject to future contribution payments as the capacity is used up by other applicants. This is reflected in the term Applied Shared Asset Cost, which scales down the portion of shared asset cost allocated to connection applicants.

23. In many cases, the contribution charge applied to customers is based on less than the total cost of the works. The contribution varies from the total cost due to the following factors:

    i. A portion of the cost is deducted to match the present value of incremental revenue that will be earned via the new connection over time. The incremental revenue period is typically fixed at 15 years.[10] Parameters used to calculate and discount the incremental revenue are contained in the contributions calculator.

    ii. A portion of the cost is deducted if it is likely that new assets will be shared by other users. The cost reduction is typically applied individually to each of the main assets such as: transformer; switchgear; and cable. The primary reason for deducting a different portion of the cost from each asset is that the surplus capacity required by the low voltage connection customer varies according to the asset.

24. In summary, key causes of cost variation across low voltage connections are:

    - the degree of existing spare capacity at the point of connection;
    - the incremental revenue offset against the cost of shared assets;
    - the customer's demand (measured in kVA) against the discrete capacity choices for available connection items; and
    - the portion of new asset capacity that will not be used by the connecting customer and is available to other customers connecting at the same connection point.

2.3 Evaluation of current low voltage connection pricing practice

25. The cost of implementing the connection works is the cost of the minimum practical works plus any additional works required by the connection applicant. All works are implemented using technical standards that are consistent with the Technical Rules and applicable Australian standards. This is consistent with technical efficiency and, therefore, satisfies the technical efficiency test.

26. The current method applied to low voltage customer connections is based on allocating the cost across the connection applicant and all other customers.[11] There are situations in which the connection applicant will pay for more of the shared assets than are being utilised by that connection applicant. By contrast, subsequent connection applicants utilising spare capacity created in connecting the first applicant are not paying a charge that fully reflects the cost of provision of their capacity. This is inconsistent with allocative efficiency to the

[9] The minimum efficient capacity is the maximum of: the customer's load requirement; and the minimum installable capacity.
[10] The choice of timeframe is potentially contentious. However, in Western Power's experience over several decades, 15 years provides a reasonable reflection of the average use of assets taking into account factors such as load growth and asset redundancy. Moreover, this timeframe is widely accepted by customers, facilitating timely connection in a way that minimises administrative and legal costs.
[11] The phrase "all other customers" is used to refer to the other parties to a connection application. All other customers are affected by a market transaction between the connection applicant and Western Power. Given that Western Power always recovers its efficient costs, it is all other customers that ultimately pay for shared assets not paid for by the connection applicant.

extent that there is a mismatch between use of network assets (a benefit) and the cost allocation of assets to individual connection applicants.

27. Within the BCA framework, the most dynamically efficient outcome is the choice that maximises net present value. In this case, minimising net present cost is equivalent to maximising net present value.

28. From the firm's perspective, dynamic efficiency is concerned with how well Western Power meets demand from connection applicants over time. The ideal outcome is an exact match between the timing and amount of incremental network capacity available with connection applicants' needs. While Western Power implements the minimum practical works, this sometimes leads to installation of more capacity than required by the connection applicant. This is dynamically inefficient since the cost is higher than the benefit being derived by connection applicants who are seeking a lower amount of capacity than being supplied.

2.3.1 Higher contribution payment required in areas with insufficient capacity

29. The business case (DM# 7111617) states that:

> "…loads connected to areas with low/no spare capacity, which require extensive augmentation, may result in a customer making a higher capital contribution when compared to the same load being connected to an area which has high spare capacity, as there is little or no augmentation required…" (p. 1).

30. This suggests that there is insufficient recognition of the benefit of capacity to connection applicants in areas where there is high spare capacity. While connection applicants in areas with low or no spare capacity are prepared to pay the higher cost, there is no reason to believe that connection applicants paying less for capacity in areas of high surplus capacity value it less.

31. The key issue is how this situation could be remedied. One option would be for Western Power to improve the allocation of costs to applicants who take advantage of the spare capacity previously installed in response to the original application (a rebate scheme). In practice this is very difficult to achieve administratively because it requires detailed historical information to be kept on every element of the network. This approach is considered to not be achievable.

2.4 Evaluation summary of the existing scheme

32. The evidence and analysis contained in this report indicates that, in absolute terms, Western Power's existing low voltage charging scheme satisfies the technical efficiency test, but fails both the allocative efficiency test and the dynamic efficiency test.

33. The allocative efficiency test is failed whenever a connection applicant is required to pay for more shared asset capacity than they are likely to use.

34. The dynamic inefficiency occurs due to the limited number of discrete capacity increments. In practise, this is unavoidable.

3 The proposed DLVCS

3.1 Outline of the proposal

35. Western Power has proposed an alternative low voltage connection charging scheme, which is referred to in this report as the DLVCS. The following summary of the proposal are sourced from the business case (DM# 7111617).

36. The proposed policy would charge connection applicants the augmentation cost based on a set of standard prices that reflect the average cost of supply related to the connection applicant's required capacity taking into account economies of scale.

37. The proposed policy provides a mechanism whereby all costs are allocated to each applicant to reflect their usage of the network (on a kVA basis). The kVA rates would be updated regularly and set at a level that ensures revenue neutrality. That is, the revenue under the proposed scheme would be the same revenue that would be derived under the existing charging scheme. This would be assured by simultaneously applying the existing and proposed charging scheme calculations. The proposed scheme charges would be periodically adjusted to match the existing scheme revenue (DM# 7111617, p. 2).

38. Connection applicants supplied via the LV feeder cable will pay a higher rate than connection applicants connecting directly to a transformer. This higher rate reflects the cost of supplying additional network infrastructure required to connect a customer via LV street feed (DM# 7111617, p.4).

39. All connection applicants would pay progressively lower rates depending on their requested load. These progressive rates reflect the economies of scale for supplying larger loads (DM# 7111617, p. 5).

40. To ensure that no job eligible for the DLVCS will significantly and unfairly increase the average charge, jobs must first pass an economic test to determine their eligibility. The economic test is a measured assessment that will exclude a customer from inclusion in the policy if the cost per kVA for the job is too high. Jobs excluded from the policy will be charged under the current method (DM# 7111617, p. 5).

3.2 Evaluation of the proposal

41. The proposed DLVCS will retain the practice of implementing the minimum practical works. Therefore, there is no change in technical efficiency.

42. The proposed DLVCS cannot address the unavoidable cause of the dynamic inefficiency. Therefore, there is no change in dynamic efficiency.

    Under the proposal, connection applicants will pay an upfront contribution in accordance with the prices as described in paragraph 36. This assists in addressing the identified issue of some customers paying for shared asset capacity that is not utilised by the connection applicant. The use of an average cost means that all other customers are temporarily absorbing the cost of shared assets not utilised by connection applicants.

43. Across connection applicants, it is clear that the proposed DLVCS would improve cost allocation compared to the existing charging scheme. There are two aspects to this:

    - A reduction in over-payment for capacity not utilised by some connection applicants.

- A reduction in under-payment for capacity utilised by other connection applicants in the case when there is sufficient capacity to connect without augmentation of the shared network.

44. The DLVCS in effect charges the connection applicant for a portion of existing unutilised capacity. However, for connection applicants who would pay the residual cost under the existing scheme, the net impact is likely to be a reduction in upfront payment. For customers who could have connected with no augmentation of the shared network, the charge will be higher. However, this reduces the extent of "free-riding" and better reflects the opportunity cost of capacity used. Also note that connection applicants who are able to secure a connection without waiting for the shared network to be augmented receive a benefit from a reduced connection lead time.

45. Therefore, it is reasonable to conclude that the proposed DLVCS represents an improvement in allocative efficiency.

3.3 Evaluation summary of the proposed scheme

46. In summary, the proposed DLVCS is equivalent to the existing charging scheme on technical efficiency and dynamic efficiency grounds. However, the DLVCS reduces the extent of allocative inefficiency between connection applicants.

4 Report conclusion and recommendations

47. In conclusion, the evidence and analysis presented in this report demonstrates that the proposed DLVCS better promotes economic efficiency than existing practice.

48. The assessment of current charging practice shows that there is a wide degree of variability in connection charges across connection applicants. A portion of this variability has been found to be avoidable but this would involve significant increase in administrative complexity and cost.

49. Compared to current charging practice, the DLVCS will reduce the level of allocative inefficiency.

50. Therefore, the proposed DLVCS better promotes economic efficiency than current practice.

Attachment D. Proposed changes to the Contributions Policy (with changes tracked)

This attachment is the Contribution Policy (with changes visible) and is not for approval.[13]

[13] The Western Power reference for this document is DM 8835511.

Contributions Policy

ELECTRICITY NETWORKS CORPORATION

("WESTERN POWER")

ABN 18 540 492 861

{Outline: This contributions policy is included in Western Power's access arrangement in accordance with section 5.1(h) of the Code.}

{Note: This policy has been prepared in accordance with the requirements of the Electricity Networks Access Code 2004~~, including proposed Electricity Networks Access Code Amendments (No 2) 2008~~}

CONTENTS

1. Introduction

1.1. Definitions

In this *contributions policy*, unless the contrary intention is apparent:

"access arrangement" means the current *access arrangement* approved in respect of the *network* under the *Code*.

"access contract" has the same meaning given to "access agreement" in the *Code*.

{Note: Under the *Code* "access agreement" has the meaning given to it in part 8 of the *Act*, and under section 13.4 (d) of the *Code* includes a "*deemed access contract*". The definition of "**access agreement**" under the *Act* is "an agreement under the Code between a network service provider and another person (a "network user") for that person to have access to services".}

"Act" means the *Electricity Industry Act 2004*.

"additional revenue" has the same meaning as given to it in the *Code*.

{Note: Under the Code "additional revenue" has the meaning given to it in section 6.42 of the *Code* when used in section 6.41 of the *Code*.}

"adjusted capacity requirement" means the capacity requirement determined in accordance with clause 6.3(a) with respect to a *connection application*.

"**alternative options**" means alternatives to part or all of a *network* enhancement, including demand-side management and generation solutions (such as distributed generation) either instead of or in combination with a *network* enhancement.

"alternative option contribution" means a contribution made, or to be made, by an *applicant* in respect of an *alternative option*.

"alternative option test", in respect of the *network*, means the test set out in section 6.41 of the *Code*.

"**anticipated incremental revenue**" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "anticipated incremental revenue" for a new facility means "the present value (calculated at the *rate of return* over a reasonable period) of the increased *tariff* income reasonably anticipated to arise from the increased sale of *covered services* on the network to one or more users (where "increased sale of *covered services*" means sale of *covered services* which would not have occurred had the *new facility* not been commissioned),

minus

the present value (calculated at the *rate of return* over the same period) of the best reasonable forecast of the increase in *non*-capital costs directly attributable to the increased sale of the covered services (being the covered services referred to in the expression "increased sale of *covered services*" in paragraph (a) of this definition)".}

“Appendix 8 work” has the same meaning given to it in the *Code.*

{Note: Under the *Code* "appendix 8 work" means "work in connection with the *Western Power Network* of a type specified in clause 8.2 of appendix 8".}

“applicant” means a person (who may be a *user*, a *customer* or a *developer*) who has lodged, or intends to lodge, a *connection application*, and includes a person who does so on behalf of another person.

“applications and queuing policy” means the applications and queuing policy (as defined in the *Code*) in the *access arrangement*.

“augmentation” has the same meaning as given to it in the *Code*.

{Note: Under the *Code* "augmentation" in relation to a *covered network*, means "an increase in the capability of the *covered network* to provide *covered services*".}

“Authority” has the same meaning as given to it in the *Code.*

{Note: Under the *Code* "*Authority*" means the Economic Regulation Authority established by the *Economic Regulation Authority Act 2003*.}

“bidirectional point” has the same meaning given to it in the *applications and queuing policy*.

{Note: Under the *applications and queuing policy* "bidirectional point" means "a single, indivisible (except as allowed under this applications and queuing policy) point, that for purposes under the access arrangement involving the transfer of electricity, is deemed to consist of a single attachment point, connected or to be *connected* to a user’s connection point, with a single meter (regardless of the actual configuration of network assets making up the *bidirectional point*), at which electricity is to be transferred into and out of the network".}

“bidirectional service” means a *covered service* provided by Western Power at a *connection point* under which the *user* may transfer electricity into and out of the *network* at the *connection point*.

“capital contribution” has the same meaning given to it in the *Code.*

{Note: Under the *Code* "capital contribution" means “a payment or provision in kind made, or to be made, by a *user* in respect of any *new facilities investment* (or *forecast new facilities investment*) in *required work*”.}

“Code” means the *Electricity Networks Access Code 2004* (as amended).

“connect” has the same meaning given to it in the *Code***.**

{Note: Under the *Code* "connect" means "to form a physical link to or through a *network*".}

“connection application” means an application lodged with Western Power under the *applications and queuing policy* that has the potential to require a modification to the *network*, including an application to:

(a) *connect facilities and equipment* at a new *connection point*; or

(b) increase *consumption* or *generation* at an existing *connection point*; or

(c) materially modify *facilities and equipment connected* at an existing *connection point*; or

(d) augment the *network* for any other reason,

{Note: this might be, for example, to service a subdivision.}

and includes any additional information provided by the *applicant* in regard to the application.

"connection assets" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "connection assets" for a *connection point*, means "all of the *network assets* that are used only in order to provide *covered services* at the *connection point*".}

"connection point" means an *exit point* or an *entry point* or a *bidirectional point* identified or to be identified as such in an *access contract*.

"consume" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "consume" means "to consume electricity".}

"consumption", for a *connection point*, means the amount of electricity *consumed* at the *connection point*, and is measured in Watt-hours.

"contracted capacity" means the maximum rate at which a *user* is permitted to transfer electricity at a *connection point* under the *user's access contract*.

"contribution" has the same meaning given to it in the *Code*, but also includes an *alternative option contribution*.

{Note: Under the *Code* "contribution" in relation to a *covered network*, means "a *capital contribution*, a *non-capital contribution* or a *headworks charge*".}

"contributions policy" has the same meaning given to it in the *Code.*

{Note: Under the *Code* "contributions policy" means "a policy in an *access arrangement* under section 5.1(h) dealing with *contributions* by users".}

"contributions rate of return" means the rate of return most recently approved by the *Authority* for use in *price control* for the *network*.

"covered service" has the same meaning given to it in the *Code* but also includes a *bidirectional service*.

{Note: Under the *Code* "covered service" means "a service provided by means of a *covered network*, including:

(a) a *connection service*; or

(b) an *entry service* or *exit service*; or

(c) a network use of system service; or

(d) a *common service*; or

(e) a *service* ancillary to a *service* listed in paragraph (a) to (d) above,

but does not include an *excluded* service".}

"cpi" means the "all capitals consumer price index" as defined by the Australian Bureau of Statistics.

"customer" has the meaning given to it in the *Act*.

"distribution low voltage connection scheme" means the scheme described in clause 7 of this *contributions policy*.

"distribution low voltage connection scheme application" means a *connection application* where:

(a) the proposed *connection point* is to the *distribution system low voltage network* and is within 25 kms of the *relevant zone substation*, and

(b) the *applicant's* required electrical capacity is in excess of:

(i) the original design capacity for a greenfield development on an existing electricity serviced lot as determined by Western Power's policies and procedures from time to time, or

(ii) the existing capacity in respect of the relevant *connection point* for a brownfield development.

"distribution low voltage connection scheme base charge" means the value determined in accordance with section 7.3 of this *contributions policy*.

"distribution low voltage connection scheme contribution" means a *contribution* in respect of the *distribution low voltage connection scheme*.

"distribution low voltage connection scheme works" with respect to a *distribution low voltage connection scheme application,* means *works* on the *distribution system* reasonably adjacent to the *connection point* (to which the *distribution low voltage connection scheme application* relates) that directly provides for delivery of electricity capacity to that *connection point* and that may include switchgear, *HV* cable, transformers, *low voltage* cable and ancillary equipment.

"distribution system" has the same meaning given to it in the *Code*, but excludes equipment within zone substations used for the transportation of electricity at nominal voltage of less than 66 kV.

{Note: Under the *Code* "distribution system" means "any apparatus, equipment, plant or buildings used, or to be used, for, or in connection with, the transportation of electricity at nominal voltages of less than 66 kV."}

"entry point" has the same meaning given to it in the *applications and queuing policy*.

{Note: Under the *applications and queuing policy* "entry point" means "a single, indivisible (except as allowed under this *applications and queuing policy*) point, that for purposes under the *access arrangement* involving the transfer of electricity, is deemed to consist of a single *attachment point,* connected to or to be connected to a *user's connection point*, with a single *meter* (regardless of the actual configuration of *network assets* making up the entry point), at which electricity is more likely to be transferred into the *network* than out of the *network*".}

"entry service" has the same meaning given to it in the *applications and queuing policy*.

{Note: Under the *applications and queuing policy* "*entry service*" means "a *covered service* provided by Western Power at a *connection point* under which the *user* may transfer electricity into the *network* at the *connection point*".}

"exit point" has the same meaning given to it in the *applications and queuing policy*.

{Note: Under the applications and queuing policy "exit point" means "a single, indivisible (except as allowed under this applications and queuing policy) point, that for purposes under the access arrangement involving the transfer of electricity, is deemed to consist of a single attachment point, connected to or to be connected to a user's connection point, with a single meter (regardless of the actual configuration of network assets making up the entry point), at which electricity is more likely to be transferred out of the network than into the network".}

"exit service" has the same meaning given to it in the *applications and queuing policy*.

{Note: Under the *applications and queuing policy* "*exit service*" means "a *covered service* provided by Western Power at a *connection point* under which the *user* may transfer electricity out of the *network* at the *connection point*".}

"facilities and equipment" has the same meaning given to it in the *Code*.

{Note: Under the *Code*, "facilities and equipment" in relation to a *connection point*, means "the apparatus, equipment, plant and buildings used for or in connection with *generating*, *consuming* and *transporting* electricity at the *connection point*".}

"feeder diversity factor" means the factor applied to the *capacity requirement* that reflects the effective contribution of the *connection* capacity to the feeder peak load.

"forecast costs" means any or all of the *forecast new facilities investment* or the forecast *alternative option costs*, as applicable, to be incurred by Western Power with regards to *works*.

"forecast new facilities investment" has the same meaning given to it in the *Code*.

{Note: Under the Code "forecast new facilities investment" for a *covered network* means "the capital costs forecast to be incurred in developing, constructing and acquiring new *network assets* for the *covered network*".}

"generation", for a *connection point*, means the amount of electricity *generated* at the *connection point*, and is measured in kilowatts.

"good electricity industry practice" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "good electricity industry practice" means "the exercise of that degree of skill, diligence, prudence and foresight that a skilled and experienced person would reasonably and ordinarily exercise under comparable conditions and circumstances consistent with applicable *written laws* and *statutory instruments* and applicable recognised codes, standards and guidelines".}

"low voltage" means the low voltage level of the *distribution system network* where the voltage is less than 1 kV.

"headworks" means enhancements required to the existing *HV* three-phase *distribution system* that provides for an increase in capacity of that system.

"headworks charge" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "headworks charge", in respect of a *headworks scheme*, means "the amount payable by a *user* to a *service provider* under the *headworks scheme* in respect of a *connection point*".}

"headworks scheme" means the scheme described in clause 6 of this *contributions policy*.

"HV" means the high voltage level of the distribution network where the voltage is greater than 6 kV and less than 66 kV.

"minimum practical works" with regard to *covered services* sought by an *applicant*, means the minimum *works* Western Power must undertake, acting efficiently in accordance with *good electricity industry practice*, to provide only those *covered services* required by that *applicant*.

"mixed zone" has the meaning given to it in section 5.3 of the *price list information* in the *access arrangement*.

"network" has the meaning given to "Western Power Network" in the *Code*.

{Note: Under the *Code* "Western Power Network" means "the *covered network* that is *covered* under section 3.1". The "Western Power Network" is the portion of the SWIN that is owned by the Electricity Networks Corporation.}

"network assets" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "network assets", in relation to a *network* means "the apparatus, equipment, plant and buildings used to provide or in connection with providing *covered services* on the *network*, which assets are either *connection assets* or *shared assets*".}

"new facilities investment" has the same meaning as given to it in the *Code*.

{Note: Under the *Code* "new facilities investment" means "for a new facility, means the capital costs incurred in developing, constructing and acquiring the new facility".}

"new facilities investment test" has the same meaning as given to it in the *Code*.

{Note: Under the *Code* "new facilities investment test" means "in respect of a covered network, means the test set out in section 6.52".}

"new revenue" means the *anticipated incremental revenue* or *additional revenue* or both, as applicable, with respect to *works*.

"nominated capacity requirement" means the capacity requirement nominated under clause 6.4 in a *connection application* with respect to that *connection application.*

"non-capital contribution" means a payment or provision in kind made, or to be made, by a *user* in respect of any *non-capital costs* (or forecast *non-capital costs*) of *required work*.

"non-capital costs" means the *non-capital costs* (as defined in the *Code*), but excluding *alternative option costs*, to be incurred by Western Power with regards to *works*.

"price components" means the price components in clause 6.8.

"price control" has the same meaning as given to it in the *Code.*

> {Note: Under the *Code* "*price control*" means the provisions in an *access arrangement* under section 5.1(d) and Chapter 6 of the *Code* which determine *target revenue*.}

"price list information" has the same meaning given to it in the *Code*.

"reasonable and prudent person" means a person acting in good faith and in accordance with *good electrify industry practice*.

"reasonable time" means the time determined in accordance with clause 5.3.

"relevant area" with respect to *connection applications* in relation to the *distribution system* means any area where the *relevant connection point* is located at a distance along the line feeder route equal to or greater than 25 km from the *relevant zone substation* within the *network* in the *rural zone* or *mixed zone*.

"relevant connection point" means, with respect to a *connection application*, the appropriate *connection point* as determined under clause 6.5.

"relevant distribution transformer" with respect to the *distribution low voltage connection scheme* and a *connection application* means the transformer from which the new or upgraded *connection* (to which that *connection application* relates) will be supplied under normal system operating conditions.

"relevant zone substation" means the zone substation to which the new or upgraded *connection* will be connected under normal system operating conditions.

"required work" means *work* which is necessary in order to provide a *covered service* sought in a *connection application*.

"retailer" has the meaning given to it in the *Act*.

"rural zone" has the meaning given to it in section 5.3 of the *price list information* in the *access arrangement*.

"scheme" has the same meaning as given to it in Appendix 8 of the *Code*.

"service provider" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "service provider" in relation to a *network* means "a person who owns or operates the *network*".}

"shared assets" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "shared assets" means "those *network assets* which are not *connection assets*".}

"SWIS" has the meaning given to it in the *Code*.

{Note: Under the *Code* "SWIS" has the meaning as given to it in the Act, being "the interconnected transmission and distribution systems, generating works and associated works -

(a) located in the South West of the State and extending generally between Kalbarri, Albany and Kalgoorlie; and

(b) into which electricity is supplied by -

(i) one or more of the electricity generation plants at Kwinana, Muja, Collie and Pinjar; or

(ii) any prescribed electricity generation plant".}

"technical rules" means the *technical rules* (as defined in the *Code*) applying from time to time to the *network* under Chapter 12 of the *Code*, as modified in accordance with the *Code*.

"transmission system" has the same meaning given to it in the Code, but also includes equipment within zone substations used for the transportation of electricity at nominal voltage of less than 66 kV.

"user" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "user" means "a person, including a *generator* or a *consumer*, who is a party to an [*sic*.] contract for services with a *service provider*, and under section 13.4(e) includes another *business* as a party to a *deemed access contract*".}

"works" includes *headworks* and *distribution low voltage connection scheme works* and all works required to be undertaken to provide an *applicant* with the *covered services* sought by the *applicant* in a *connection application*, including works associated with:

(a) *augmentation* of *connection assets*;

(b) *augmentation* of *shared assets*;

(c) *alternative options*; and

(d) other non-capital works.

1.2. Interpretation

(a) Unless the contrary intention is apparent:

(i) a rule of interpretation in the *Code*; and

(ii) the Interpretation Act 1984,

apply to the interpretation of this *contributions policy*.

(b) Unless:

(i) the *contrary* intention is apparent: or

(ii) the term has been redefined in clause 1.1,

a term with a defined meaning in the *Code* has the same meaning in this *contributions policy*.

2. Application of this contributions policy

(a) Subject to (b), and (c) below, this *contributions policy* applies if it is necessary for Western Power to perform *works* to provide *covered services*.

(b) If the *works* required for Western Power to provide the *covered services* sought by an *applicant* are *Appendix 8 works*, then the *contribution* for those *works* is the amount determined under and in accordance with Appendix 8 of the *Code.* For the avoidance of doubt, any such *contribution* is to be paid in addition to any *contribution* payable under this *contributions policy.*

(c) An *applicant* is required to pay a *contribution* for *works* in any (including any combination of) the following circumstances:

(i) in the case of *new facilities investment,* where the capital costs incurred in relation to the relevant *works* do not satisfy the *new facilities investment test*;

(ii) in the case of *works* related to *alternative options*, where the *non-capital costs* associated with such *works* do not satisfy the requirements of clause 6.41(b) of the Code;

(iii) in the case of non-capital *works* including *alternative options*, where the costs of the *works* were not included, and could not reasonably have been included, in forecasts of *non-capital costs* taken into account in setting the *price control*,

(iv) where the *works* meet the requirements of clause 6 of this *policy* (*distribution headworks scheme*).

(v) where the *works* meet the requirements of clause 7 of this *contributions policy* (*distribution low voltage connection scheme*).

3. Lowest sustainable cost

A *contribution* with respect to *covered services* sought by an *applicant* must not exceed the amount that would be required by a prudent *service provider* acting efficiently, in accordance with *good electricity industry practice* seeking to achieve the lowest sustainable cost of providing the *covered services*.

4. Applicant must make contribution

4.1. Applicant must make contribution

(a) Subject to paragraph (b) of this clause 4.1, if the application of this *contributions policy* in relation to the *works* produces a *contribution* amount that is greater than zero, Western Power is not required to undertake the *works* in respect of a *connection application* for a *covered service* until the *applicant* enters into a contract with Western Power under which the *applicant* agrees to provide the *contribution*, including any GST liability, to Western Power in accordance with this *contributions policy*:

(b) If the work *falls* within the class of *headworks*, Western Power must undertake and fund the *work* whether or not the *work* is a *required work*. This does not excuse the *applicant* from any obligations to make a *contribution* under this *contributions policy*.

4.2. *Payment of GST*

The payment of a *contribution* may be subject to GST and, if so, Western Power will request a *customer* to pay an additional amount equal to Western Power's GST liability. Western Power may request payment of this additional amount at the time Western Power's GST liability arises.

4.3. *Applicant* must provide *security* for *new revenue*

(a) Where the *forecast costs* with respect to a *connection application* are greater than $50,000, but less than $15,000,000, Western Power may require the *applicant* to procure before the commencement of the *works*, and maintain for a period of 18 months after the commencement of the associated *exit service, entry service,* or *bidirectional service*, an unconditional, irrevocable bank guarantee, or equivalent financial instrument, in terms acceptable to Western Power (acting as a *reasonable and prudent person*), guaranteeing the portion of *new revenue* that was used to calculate the *contribution* and is expected to come from providing an *exit service, entry service,* or *bidirectional service* using the *works*.

(b) Where an *applicant* has provided security under clause 4.3(a), then after 12 months, Western Power may:

(i) re-determine the *contribution* under this *contributions policy*, and recover from, or rebate to, the *applicant* any difference from the amount of the original *contribution*; or

(ii) require the *applicant* to maintain the bank guarantee or equivalent financial instrument for a further 12 months before re-determining the *contribution* in accordance with clause 4.3(b)(i).

(c) Where the *forecast costs* with respect to a *connection application* are equal to or greater than $15,000,000, Western Power may require the applicant to procure before the commencement of the *works*, an unconditional, irrevocable bank guarantee, or equivalent financial instrument, in terms acceptable to Western Power (acting as a *reasonable and prudent person*), guaranteeing the portion of *new revenue* that was used to calculate the *contribution* and is expected to come from providing an *exit service, entry service,* or *bidirectional service*, using the *works*.

5. Amount of Contribution

5.1. Interpretation

(a) For the avoidance of doubt, this clause 5 is to be read subject to the provisions of clauses 2, ~~and~~ 6 and 7 of this *contributions policy*.

(b) For the purposes of this clause 5: -

(i) the definition of '*new facilities investment test*' is that set out in section 6.52 of the *Code*, but without having regard to subsection 6.52(b)(i) thereof; and

(ii) the definition of '*alternative option test*' is that set out in section 6.41 of the *Code*, but without having regard to subsection 6.41(b)(i) thereof.

5.2. Calculation of *contribution*

The *contribution* payable in respect of any *works* to which this *policy* applies is calculated by:

(a) determining the appropriate portion of any of the *forecast costs* of the *works* (excluding *distribution low voltage connection scheme works* but including any *works* relating to a *distribution low voltage connection scheme application* excluded from clause 7 by clause 7.5) which do not meet the *new facilities investment test* or the *alternative option test* (as applicable) to allocate to the *applicant* under clause 5.4;

(b) adding any applicable amount calculated under clause 6 (*headworks contribution*), ~~and~~

(c) adding any applicable amount calculated under clause 7.3 (*distribution low voltage connection scheme base charge*), and

~~(c)~~(d) adding any applicable amount calculated under clause 8.4(a)~~7.4(a)~~,

~~(d)~~(e) deducting the amount likely to be recovered in the form of *new revenue* gained from providing *covered services* to the *applicant*, or, if the *applicant* is a *customer*, to the *customer's retailer*, as calculated over the ~~reasonable time~~*reasonable time*, at the *contributions rate of return*; and

~~(e)~~(f) adding any applicable amount calculated under clause~~s~~ 8.1~~7.1~~, 8.2, ~~to~~ 8.3~~7.3~~ ~~inclusive~~ and 8.5~~7.5~~.

5.3. *Reasonable time*

For the purposes of this *contributions policy*~~clause 5.2(d)~~, the *reasonable time* is to be determined by Western Power, as a *reasonable and prudent person*, having regard to:

(a) the anticipated commercial life of the *works*, up to a maximum of 15 years; and

(b) the purpose for which the *applicant* requires the *covered services*.

{Note: For example, if the *applicant* is proposing to build a plant with an expected 5 year operating life, then the *reasonable time* might be 5 years or less.}

5.4. Amount of *forecast costs*

(a) Western Power may, acting as a *reasonable and prudent person*, determine that the amount of the *forecast costs* to be allocated to the *applicant* for the purposes of clause 5.2 (a) is:

(i) the full amount of the *forecast costs*; or

(ii) an amount determined under clauses 5.4(b) to 5.4(e).

(b) If Western Power chooses to undertake *works* in excess of the *minimum practical works* to provide *covered services* sought by an *applicant*, then Western Power will determine that the amount of costs allocated to the *applicant* are the *forecast costs* of the *minimum practical works*.

(c) If:

(i) Western Power reasonably expects to receive *tariff* income from future *applicants*, because of *works* to provide *covered services* sought by an *applicant*, within a period of 10 years, (or such longer period as reasonably determined by Western Power acting as a *reasonable and prudent person*), of the original *applicant's connection application*; or

(ii) an *applicant* seeks a *covered service* that will make use of *works* undertaken to provide *covered services* to a previous *applicant*, within a period of 10 years, (or such longer period as reasonably determined by Western Power under clause 5.4(c)(i)), of the original *applicant's connection application*, and for which the original *applicant* paid a *contribution* calculated under clause 5.4(c)(i);

then Western Power will apportion the costs based on the relative use of the *works* by the *applicant* compared to the relative use of the *works* expected to be sought by those future *applicants*, or the relative use of the *works* sought by previous *applicants*, or both, as applicable.

(d) If Western Power has received more than one *connection application* requiring the same *works*, then Western Power may negotiate with the *applicants* under the *applications and queuing policy* to apportion the *forecast costs* of the *works* between the *applicants*, based on the relative use of the *works* sought by each *applicant*.

(e) If *works* to provide *covered services* to an *applicant* provide specific savings to Western Power in performing its legal obligations, then Western Power will determine that the costs to be allocated to the *applicant* are the *forecast costs* less the amount saved.

6. Distribution headworks scheme

The methodology used to develop the distribution headworks prices that apply in this distribution headworks scheme is described in Appendix 9 of this Access Arrangement.

6.1. Application

This headworks scheme applies to:

(a) the class of *works* falling within the definition of *headworks* in this *policy*; and

(b) the class of *users* who make a *connection application* in relation to the *distribution system* within a *relevant area*.

6.2. Headworks contribution

(a) If,

(i) in accordance with good electricity practice, Western Power reasonably considers that the forecast costs of *headworks* required for a *relevant area* over a 25 year period exceeds the amount of *new revenue* likely to be gained from providing *covered services* to *applicants* over that period, and

(ii) the *relevant connection point* is less than 160 kms from the *relevant zone substation* and the *nominated capacity requirement* is less than 2,000 kVA, or the *relevant connection point* is greater than 160 kms from the *relevant zone substation* and the *nominated capacity requirement* is less than 1,000 kVA,

then, upon receiving a *connection application* in relation to a *relevant area,* Western Power will, in accordance with this clause 6, require a *headworks contribution* from the *applicant*.

(b) Where a *headworks contribution* is made by an applicant in accordance with clause 6.2(a) no further *contribution* shall be required from the *applicant* in relation to *headworks*.

(c) For the purpose of this *contributions policy* the *headworks contribution* is a *capital contribution*.

6.3. Calculation of the *headworks contribution*

A *headworks contribution* for a *connection application* is calculated by:

(a) determining the *adjusted capacity requirement* with respect to the *connection application* in accordance with clause 6.4;

(b) determining the distance from the *relevant connection point* to the *relevant zone substation* in accordance with clause 6.6;

(c) determining the *relevant voltage* in accordance with clause 6.7;

(d) applying the parameters determined under 6.3(a) and (b) to the applicable *price components,* with respect to the *relevant voltage* determined under 6.3(c), and

(e) deducting the amount likely to be recovered in the form of *new revenue* gained from providing *covered services* to the *applicant*, as calculated over the *reasonable time*, at the *contributions rate of return*.

6.4. Adjusted capacity requirement

The adjusted capacity requirement is determined by multiplying the nominated capacity requirement, by the relevant feeder diversity factor identified in the table below:

***Connection* Type**	**Feeder Diversity Factor**
Residential	60%
Commercial	50%

6.5. Relevant connection point

The *relevant connection point* is:

(a) for an application for *connection* to the *HV* single-phase *network,* the point on the three-phase *HV* network to which the single-phase line is connected. The length of any single-phase line is not taken into account;

(b) for an application for *connection* to the low voltage 240-volt *network*, the *HV* terminals of the transformer with respect to the *connection application*. Where the transformer is connected to the single-phase network, the relevant *connection point* is that determined under paragraph (a); and

(c) for a *connection application* that requires an extension to the three-phase *HV network,* the point on the existing three-phase *HV network* to which the new extension is made.

6.6. Determination of the distance to the relevant connection point from the relevant zone substation

The distance from the *relevant connection point* to the *relevant zone substation* is the shortest length of three-phase *network* line connecting those two points.

6.7. Relevant voltage

The *relevant voltage* with respect to a *connection application* is:

(a) for an application for *connection* to the *HV* single-phase *network,* the voltage at the point on the three-phase *HV network* to which the single-phase line is connected;

(b) for an application for *connection* to the *HV* three-phase *network,* the voltage at the point of connection on the three-phase *HV network*; and

(c) for an application for *connection* to the low voltage 240-volt *network*, the voltage at the *HV* terminals of the transformer with respect to the *connection application* determined under paragraphs (a) or (b) whichever is applicable.

6.8. Price components for calculation of headworks contribution

(a) The price components comprise two parts, being:

(i) a price based on the capacity sought in terms of $ per kVA; and

(ii) a price based on the capacity sought and the distance from the *relevant zone substation* to the *relevant connection point*, less 25 kms, in terms of $ per kVA.km,

(b) Separate prices will be determined for 22 kV connections and 33 kV connections.

7. Distribution low voltage connection scheme

7.1. Application

Subject to clause 7.5 this *distribution low voltage connection scheme* applies to a *connection applicant* that falls within the class of *applicant* that may make a *distribution low voltage connection scheme application* and where the *works* required to meet the requirements of the *connection application* of that *connection applicant* are *distribution low voltage connection scheme works*.

7.2. Distribution low voltage connection scheme contribution

(a) If, in accordance with *good electricity industry practice*, Western Power reasonably considers that the forecast costs of *distribution low voltage connection scheme works* (required to meet the requirements of the *connection application* of a *connection applicant*) over a 15 year period exceed the amount of *new revenue* likely to be gained from providing *covered services* using those *distribution low voltage connection scheme works* to *distribution low voltage connection scheme applicants* over that period, then, upon receiving ~~a~~the *distribution low voltage connection scheme application* of that *connection applicant*, Western Power will, in accordance with this clause 7, require a *distribution low voltage connection scheme contribution* from the *applicant*.

(b) Where a *distribution low voltage connection scheme contribution* is made by an *applicant* no further *contribution* shall be required from the applicant for the *distribution low voltage connection scheme works* for which that *distribution low voltage connection scheme contribution* was made.

(c) For the purpose of this *contributions policy* ~~the~~a *distribution low voltage connection scheme contribution* is a *capital contribution*.

7.3. Determination of the *distribution low voltage connection scheme base charge*

The *distribution low voltage connection scheme base charge* is determined by:

(a) identifying the *applicant's* incremental electrical capacity requirement by deducting from the *applicant*'s required electrical capacity:

(i) the original design capacity for a greenfield development on an existing electricity serviced lot as determined by Western Power's policies and procedures from time to time, or

(ii) the existing capacity in respect of the relevant *connection point* for a brownfield development.

(b) determining whether the location of the *connection point* (to which the *connection application* relates) is on a land lot separate from the *relevant distribution transformer*, and

(c) applying the parameters determined under 7.3(a) and 7.3(b) to the prices determined in clause 7.4.

7.4. Distribution low voltage connection scheme prices

The methodology used to develop the *distribution low voltage connection scheme* prices is described in Appendix 10 (Distribution Low Voltage Connection Scheme Methodology) of this Access Arrangement.

(a) The *distribution low voltage connection scheme* price is expressed as $ per kVA.

(b) The *distribution low voltage connection scheme* prices will vary depending on:

(i) whether the incremental capacity requirement at the *connection point* determined under clause 7.3 (a) is:

(A) less than 216 kVA or

(B) between 216 kVA and 630 kVA or

(C) greater than 630 kVA, and

(ii) whether the location of the *connection point* is on a land lot separate from the *relevant distribution transformer*.

7.5. Exclusion from distribution low voltage connection scheme

The methodology used to develop the *distribution low voltage connection scheme* exclusion threshold is described in Appendix 10 (Distribution Low Voltage Connection Scheme Methodology) of this Access Arrangement.

A *distribution low voltage connection scheme application* is excluded from the provisions of this clause 7 where the *forecast costs* of *works* (as determined assuming clause 5.4 applies to those *works*) is in excess of the *distribution low voltage connection scheme base charge* plus the exclusion threshold. For the purposes of applying this clause 7.5, only the cost of those *works* which would otherwise fall within the *distribution low voltage connection scheme* apply.

Where a *distribution low voltage connection scheme application* is excluded, the *contribution* is determined under this *contributions policy* excluding the provisions of this clause 7.

~~7.~~8. General provisions

For the avoidance of doubt, this clause ~~8~~7 is to be read subject to the provisions of clause 2 of this *contributions policy*.

~~7.1.~~8.1. *Connection assets*

The *applicant* must pay the full *forecast costs* of any *works* to provide *connection assets*.

~~7.2.~~8.2. *Non-capital costs*

The *applicant* must pay to Western Power the full amount of any *non-capital costs* that Western Power incurs in performing *works*, which in any case must not exceed such costs that would be incurred by a prudent *service provider* acting efficiently in accordance with *good electricity industry practice*.

{Note: these costs might include, for example, adjusting protection settings, reprogramming computer equipment and so on.}

~~7.3.~~8.3. *Works* over and above standard *works*

If an *applicant* seeks a *covered service* that is better or different in some respect than an equivalent *service* in the *technical rules* or an equivalent *reference service* in the *access arrangement*, then the *applicant* must pay to Western Power:

(a) a *contribution* calculated under this *contributions policy* for the equivalent *service*; and

(b) the difference between the *forecast costs* of the *works* required to provide the equivalent *service* and the *forecast costs* of the *works* required to provide the better or different *service*, to the extent that the better or different *service* does not otherwise meet those parts of the *new facilities investment test* dealing with *net benefit*, safety or reliability.

{Note: this could be, for example, a design philosophy delivering increased security of supply}

~~7.4.~~8.4. Costs related to *technical rules* compliance

(a) The *applicant* must pay a *contribution* calculated under this *contributions policy* in respect of any *works* required to upgrade the fault level ratings of *network assets*, or any other *works* required to ensure that Western Power complies with the *technical rules* with respect to the *network assets*.

(b) The *applicant* must pay all of its own costs in relation to ensuring that its *facilities and equipment* comply with the *technical rules*.

~~7.5.~~8.5. Temporary supplies

The *contribution* to be paid by an *applicant* who seeks a temporary supply is, if no applicable amount is published on Western Power's website, an amount equal to the full *forecast costs* of the *required works*.

~~8.~~9. Manner of contribution

~~8.1.~~9.1. Options for payment

A *contribution* may be made:

(a) by the *applicant* by way of a financial payment comprising either:

(i) periodic financial payments, subject to clause 9.2~~8.2~~; or

(ii) an upfront financial payment;

(b) by the Western Australian Government under any appropriate government policy, or

(c) by the *applicant* undertaking the *augmentation* and transferring ownership of the *augmentation,* subject to clause 9.4~~8.4~~.

Where the *contribution* is greater than $1,000,000, the *applicant* and Western Power may negotiate to adjust the *contribution* to reflect actual costs of the *required works* determined after the completion of the *works*. This does not exclude the *applicant* from any obligations to pay a *contribution* under this *contributions policy.*

~~8.2.~~9.2. When *applicant* may choose periodic payment

The *applicant* may not elect under clause 9.1(a)(i)~~8.1(a)(i)~~ to make the *contribution* by way of a periodic financial payment unless the total amount of the *contribution* exceeds $50,000.

~~8.3.~~9.3. Terms and amount of periodic payment

(a) If the *applicant* elects to make a *contribution* by way of periodic financial payment under clause 9.2~~8.2~~, then:

(i) the maximum term over which the periodic payments may be made is 5 years;

(ii) interest will be payable on each periodic payment, at a reasonable commercial rate to be negotiated between Western Power and the *applicant*; and

(iii) Western Power (acting as a *reasonable and prudent person*) may require the *applicant* to procure an unconditional, irrevocable bank guarantee, or equivalent financial instrument, in terms acceptable to Western Power, guaranteeing the *contribution.*

~~8.4.~~9.4. *Augmentations* undertaken by *applicants*

(a) An *applicant* may, with Western Power's approval, construct an *augmentation* of the *network*.

(b) Where an *applicant*, in accordance with (a) above, constructs an *augmentation* of the *network*, the *applicant* shall agree to transfer the ownership of the *augmentation* to Western Power on such reasonable terms and conditions as may be stipulated by Western Power (after Western Power has tested the *augmentation* and certified that it meets the applicable technical standards) but in no circumstance will Western Power become obliged to make any payment to the *applicant* or any other person with respect to the *augmentation*.

{Note: An *applicant* is required to pay to Western Power the fees set by Western Power from time to time associated with Western Power testing the *augmentation* to establish that it meets the applicable technical standards for the *augmentation* to *connect* to the *network*.}

~~9.~~10. Rebates and recoupment

~~9.1.~~10.1. This clause ~~10~~9 does not apply to *contributions* made under clause 6 (*Distribution headworks scheme*) or under clause 7 (*distribution low voltage connection scheme*) of this *policy*.

~~9.2.~~10.2. Parties may negotiate a rebate

(a) Where:

(i) an applicant has paid a contribution, or is paying a contribution in the form of periodic payments, for *works* with respect to a connection point; and

(ii) the value of the *contribution* is in excess of $1,000,000,

then Western Power and the *applicant* may negotiate to require Western Power to provide a rebate in circumstances where a subsequent *applicant* associated with a different *connection point* benefits from the *works* or a part of the *works* in respect of the original *connection point*. The rebate can only be in relation to assets, the costs of which were included in the calculation of the original *contribution* under this *contributions policy*.

(b) Where:

(i) an *applicant* has paid a *contribution*, or is paying a *contribution* in the form of periodic payments, for *works* with respect to a *connection point* for which the full *forecast costs* of the *works* were allocated to the *applicant* under clause 5.4;

(ii) at the time that the *works* are carried out, it is only the *applicant* who will benefit from the *works* in relation to that *connection point*; and

(iii) the value of the *contribution* is in excess of $200,000 but less that $1,000,000;

then Western Power and the *applicant* may negotiate to require Western Power to provide a rebate in circumstances where a subsequent *applicant* associated with a different *connection point* benefits from the *works* or a part of the *works* in respect of the original *connection point*.

(c) Where:

(i) an *applicant* has paid a *contribution*, or is paying a *contribution* in the form of periodic payments, for *works* with respect to a *connection point* for which the full *forecast costs* of the *works* were allocated to the *applicant* under clause 5.4;

(ii) at the time that the *works* are carried out, it is only the *applicant* who will benefit from the *works* in relation to that *connection point*;, and

(iii) the value of the *contribution* is less than or equal to $200,000;

then Western Power and the *applicant* may negotiate to require Western Power to provide a rebate in circumstances where a subsequent *applicant* associated with a different *connection point* benefits from the *works* or a part of the *works* within 10 years of the date that the *contribution* was paid, or periodic payments of the *contribution* began, in respect of the original *connection point*.

(d) Any negotiated rebate will be payable to the *customer* or the *user* associated with that *connection point* at the time of the *rebate* being payable.

(e) The amount of a rebate given to a *user* or *customer* under clause 10.1~~9.1~~(c) is determined by apportioning the amortised *contribution* paid in respect of the original *connection point* between the *user* or *customer* associated with the original *connection point* and each subsequent *applicant* based on the relative *contracted capacity* of each party, where the *contribution* is amortised completely in a straight line over 10 years.

(f) Western Power is not under any obligation to pay any rebate for a *contribution* to any *user* or *customer* under any circumstance other than that expressly provided for under clause 10.2(a)~~9.2(a)~~, (b) and (c).

~~9.3.~~10.3. New *applicants* must pay rebate

Where Western Power must pay a rebate to a *user* or a *customer* in respect of a *connection point* under clause 10.2~~9.2~~, each subsequent *applicant* that triggers such a rebate must pay to Western Power an upfront amount equivalent to the rebate.

~~9.4.~~10.4. *Scheme* rebates determined under appendix 8 of the *Code*

Nothing in this clause 10~~9~~ affects the obligations of Western Power to pay a member of a *scheme* a rebate in accordance with the provisions of appendix 8 of the *Code*.

~~10.~~11. Obligation to provide information

Upon request from an *applicant*, and in respect of a *contribution* for *works*, Western Power will provide the *applicant* with the following information.

(a) where the *contribution* is in respect of *new facilities investment*, details of assessment of the *new facilities investment* against the requirements of the *new facilities investment test* and details of the calculation of the amount that does not meet the *new facilities investment test*;

(b) where the *contribution* is made in respect of *non-capital costs* related to *alternative options*, details of assessment of the *non-capital costs* against the *alternative options test* and details of the calculation of the amount that does not satisfy the *alternative options test*;

(c) details of assumptions and calculations applied in the apportionment of any forecast cost of *works* between the *user* or *applicant* and other *users* or *applicants* or Western Power under clause 5.4 of this *contributions policy*; ~~and~~

(d) details of the calculation of a *headworks* contribution under clause 6 of this *contributions policy*, and

(e) details of the calculation of a *distribution low voltage connection scheme contribution* under clause 7 of this *contributions policy*.

Attachment E. Code compliance of the DLVCS

This attachment details the relevant clauses of the Code and explains how the revised CP complies with the relevant Code provisions.

5.12 The objectives for a contributions policy must be that:

(a) it strikes a balance between the interests of:

(i) contributing users; and

(ii) other users; and

(iii) consumers;

and

(b) it does not constitute an inappropriate barrier to entry.

The proposed revisions comply with this requirement.

The interests of contributing users, other users and consumers are more appropriately balanced under the DLVCS with regard to simplicity, predictability and transparency

In addition, the DLVCS reduces the barriers to entry for relevant customers, and, as discussed in section 3.3, it strikes a better balance between the interests of contributing users and other users.

5.13 A contributions policy must facilitate the operation of this Code, including:

(a) sections 2.10 to 2.12; and

(b) the test in section 6.51A; and

(ba) sections 5.14 and 5.17D; and

(c) the regulatory test.

The proposed revisions comply with this requirement. For a discussion relating to clauses 5.14 and 5.17D, see below. Otherwise, the revisions do not vary the compliance of the existing Policy with these clauses.

With respect to facilitating the operation of section 6.51A of the Code, the operation of the mechanism is as follows:

- Clause 6.51A (b) (iii) of the Code requires that a capital contribution can only be added to the capital base if the access arrangement contains a mechanism designed to ensure that there is no double recovery of costs as a result of the addition.
- The current access arrangement does not contain a mechanism described in clause 6.51A (b) (iii) of the Code. Therefore, contributions cannot be added to the capital base.
- Headworks are capital contributions (refer to CP clause 7.2(c)).

5.14 Subject to section 5.17A and a headworks scheme, a contributions policy:

(a) must not require a user to make a contribution in respect of any part of new facilities investment which meets the new facilities investment test; and

(b) must not require a user to make a contribution in respect of any part of noncapital costs which would not be incurred by a service provider efficiently minimising costs; and

(c) may only require a user to make a contribution in respect of required work; and

(d) without limiting sections 5.14(a) and 5.14(b), must contain a mechanism designed to ensure that there is no double recovery of new facilities investment or non-capital costs.

The proposed scheme, despite being a headworks scheme and therefore not required to comply with clause 5.14, is generally consistent with this clause. In particular section 5.17D (d) of the Code sets the requirements for the new facilities investment to be undertaken efficiently.

Consistent with 5.14 (a) of the Code, forecast incremental revenues are excluded from contributions (clause 5.2 of the CP).

Consistent with 5.14 (b) of the Code, a contribution must not exceed the amount that would be required by a prudent service provider acting efficiently. The existing CP details this at clause 3, which is not varied by the proposed scheme.

Consistent with 5.14 (d) of the Code, contributions are not able to be included in the regulated asset base. The existing CP functions in this manner, through the operation of clause 6.51A of the Code, which is not varied by the proposed scheme.

5.15 A contributions policy must set out:

(a) the circumstances in which a contributing user may be required to make a contribution; and

(b) the method for calculating any contribution a contributing user may be required to make; and

(c) for any contribution:

(i) the terms on which a contributing user must make the contribution; or

(ii) a description of how the terms on which a contributing user must make the contribution are to be determined.

The proposed revisions comply with this requirement. The proposed scheme identifies the circumstances in which a contributing user is required to make a contribution and the method for calculating the contribution, which satisfies clauses 5.15 (a) and 5.15 (b).

Compliance of the CP with clause 5.15 (c) is unchanged by the proposed scheme.

5.16 A contributions policy may:

(a) be based in whole or in part upon the model contributions policy, in which case, to the extent that it is based on the model contributions policy, any matter which in the model contributions policy is left to be completed in the access arrangement, must be completed in a manner consistent with:

(i) any instructions in relation to the matter contained in the model contributions policy; and

(ii) sections 5.12 to 5.15; and

(iii) the Code objective;

and

(b) be formulated without any reference to the model contributions policy and is not required to reproduce, in whole or in part, the model contributions policy.

{Note: The intention of this section 5.16(b) is to ensure that the service provider is free to formulate its own contributions policy which complies with sections 5.12 to 5.15 but is not based on the model contributions policy.}

The proposed revisions comply with this requirement. In accordance with clause 5.16 (b), the proposed scheme is not based on the model contributions policy.

5.17 The Authority:

(a) must determine that a contributions policy is consistent with sections 5.12 to 5.15 and the Code objective to the extent that it reproduces without material omission or variation the model contributions policy; and

(b) otherwise must have regard to the model contributions policy in determining whether the contributions policy is consistent with sections 5.12 to 5.15 and the Code objective.

This clause is not relevant to this submission.

5.17A Despite section 5.14, Electricity Networks Corporation may require a contribution for Appendix 8 work of up to the maximum amount determined under Appendix 8 for the relevant type of Appendix 8 work.

This clause is not relevant to this submission.

5.17B From 1 July 2007 until the first revisions commencement date for the Western Power Network access arrangement, section 5.17A prevails over any inconsistent provision of the Western Power Network access arrangement.

This clause is not relevant to this submission.

5.17C Despite section 5.14, the Authority may approve a contributions policy that includes a "headworks scheme" which requires a user to make a payment to the service provider in respect of the user's capacity at a connection point on a distribution system because the user is a member of a class, whether or not there is any required work in respect of the user.

The proposed scheme is a headworks scheme, which the Authority may approve under clause 5.17C.

5.17D A headworks scheme must:

(a) identify the class of works in respect of which the scheme applies, which must not include any works on a transmission system or any works which effect a geographic extension of a network; and

The proposed revisions comply with this requirement.

The class of users is defined in the proposed CP in clause 7.1 and refers to the definition of “distribution low voltage connection scheme works”. The definition precludes any works on the transmission system (see the definition of “distribution low voltage connection scheme works”) as well as a geographic extension of the network (see the definition of "distribution low voltage connection scheme application" which requires that applicants must already have an electricity-serviced lot; that is any new un-serviced lot cannot be included in the proposed scheme).

5.17D A headworks scheme must:

(b) not seek to recover headworks charges in an access arrangement period which in aggregate exceed 1% of the distribution system target revenue for the access arrangement period; and

The proposed revisions comply with this requirement.

The proposed scheme does not seek to recover headworks charges which exceed 5% of the distribution system target revenue for the access arrangement period. This is in accordance with the proposed variation to the Code (Interim Code Amendment 2) expected to be gazetted imminently.

For clarity the following should be noted:

- The existing distribution headworks scheme (clause 6 of the current CP) recovers no more than 1% of Western Power's distribution system target revenue for the access arrangement period.
- The addition of the proposed scheme will recover no more than 5% of the distribution system target revenue for the access arrangement period.
- While the prices for both the proposed scheme and the distribution headworks scheme are designed to recover the full cost of related works and this is in excess of 5% of the distribution system target revenue for the access arrangement period, clause 5.2 of the CP acts to reduce the actual headworks charges to no more than 5% through a reduction due to forecast incremental revenue. The incremental revenue is included in the capital base, thus avoiding any double recovery of costs.

5.17D A headworks scheme must:

(c) identify the class of users who must make a payment under the scheme; and

The proposed revisions comply with this requirement. The class of users is defined in the proposed CP in clause 7.1 and refers to the definition of "distribution low voltage connection scheme application".

5.17D A headworks scheme must:

(d) set out the method for calculating the headworks charge, which method:

(i) must have the objective that headworks charges under the headworks scheme will, in the long term, and when applied across all users in the class referred to in section 5.17D(c), recover no more than the service provider's costs (such as would be incurred by a service provider efficiently minimising costs) of any headworks; and

The proposed revisions comply with this requirement. The proposed scheme has the objective required by clause 5.17D (d) (ii) which is described in section 2.2 and section 3 of the methodology in Attachment G.

5.17D A headworks scheme must:

(d) set out the method for calculating the headworks charge, which method:

(ii) must have the objective that the headworks charge payable by one user will differ from that payable by another user as a result of material differences in the users' capacities and the locations of their connection points, unless the Authority considers that a different approach would better achieve the Code objective; and

The proposed revisions comply with this requirement. The proposed scheme has the objective required by clause 5.17D (d) (ii), in that:

- The pricing depends on the user's required incremental capacity, and charges therefore differ based on the users' capacities.
- The physical location of the connection point determines the application of the street-feed charge, and charges therefore differ based on the users' locations.

This is described in clause 7.4 of the CP and in section 2.2 of the methodology in Attachment G.

5.17D A headworks scheme must:

(d) set out the method for calculating the headworks charge, which method:

(iii) may use estimates and forecasts (including long term estimates and forecasts) of loads and costs; and

The proposed revisions comply with this requirement. The proposed scheme is based on estimates and forecasts (including long term estimates and forecasts) of loads and costs, in accordance with clause 5.17D (d) (iii). This is described in section 2.2 of the methodology in Attachment G.

5.17D A headworks scheme must:

(d) set out the method for calculating the headworks charge, which method:

(iv) must contain a mechanism designed to ensure that there is no double recovery of costs in all the circumstances, including the manner of calculation of other contributions and tariffs; and

The proposed revisions comply with this requirement. The existing CP complies with this requirement, and the proposed scheme does not vary this arrangement. Therefore the proposed scheme contains the mechanism described in clause 5.17D (d) (iv).

The operation of the mechanism is as follows:

- Clause 6.51A (b) (iii) of the Code requires that a capital contribution can only be added to the capital base if the access arrangement contains a mechanism designed to ensure that there is no double recovery of costs as a result of the addition.
- The current access arrangement does not contain a mechanism described in clause 6.51A (b) (iii) of the Code. Therefore, contributions cannot be added to the capital base.

5.17D A headworks scheme must:

(d) set out the method for calculating the headworks charge, which method:

(v) may exclude a rebate mechanism (of the type contemplated by clauses A4.13(d) or A4.14(c)(ii) of Appendix 4) and may exclude a mechanism for retrospective adjustments to account for the difference between forecast and actual values.

The proposed revisions comply with this requirement. The proposed scheme excludes a rebate mechanism as defined in clause 10 of the CP (which is unchanged by this proposal).

The proposed scheme does not include a mechanism for retrospective adjustments to account for the difference between forecast and actual values.

Attachment F. Revised Contributions Policy

This attachment is the Contribution Policy (with NO changes visible) for approval.[14]

[14] The Western Power reference for this document is DM 8835516.

Contributions Policy

ELECTRICITY NETWORKS CORPORATION

("WESTERN POWER")

ABN 18 540 492 861

{Outline: This contributions policy is included in Western Power's access arrangement in accordance with section 5.1(h) of the Code.}

{Note: This policy has been prepared in accordance with the requirements of the Electricity Networks Access Code 2004.}

CONTENTS

1. Introduction

1.1. Definitions

In this *contributions policy*, unless the contrary intention is apparent:

“access arrangement” means the current *access arrangement* approved in respect of the *network* under the *Code*.

“access contract” has the same meaning given to "access agreement" in the *Code*.

> {Note: Under the *Code* “access agreement” has the meaning given to it in part 8 of the *Act*, and under section 13.4 (d) of the *Code* includes a "*deemed access contract*". The definition of “**access agreement**” under the *Act* is "an agreement under the Code between a network service provider and another person (a “network user”) for that person to have access to services".}

“Act” means the *Electricity Industry Act 2004*.

“additional revenue” has the same meaning as given to it in the *Code*.

> {Note: Under the Code "additional revenue" has the meaning given to it in section 6.42 of the *Code* when used in section 6.41 of the *Code*.}

“adjusted capacity requirement” means the capacity requirement determined in accordance with clause 6.3(a) with respect to a *connection application*.

“**alternative options**" means alternatives to part or all of a *network* enhancement, including demand-side management and generation solutions (such as distributed generation) either instead of or in combination with a *network* enhancement.

“alternative option contribution” means a contribution made, or to be made, by an *applicant* in respect of an *alternative option*.

“alternative option test”, in respect of the *network*, means the test set out in section 6.41 of the *Code*.

“**anticipated incremental revenue**" has the same meaning given to it in the *Code*.

> {Note: Under the *Code* "anticipated incremental revenue" for a new facility means “the present value (calculated at the *rate of return* over a reasonable period) of the increased *tariff* income reasonably anticipated to arise from the increased sale of *covered services* on the network to one or more users (where “increased sale of *covered services*” means sale of *covered services* which would not have occurred had the *new facility* not been commissioned),
>
> minus
>
> the present value (calculated at the *rate of return* over the same period) of the best reasonable forecast of the increase in *non*-capital costs directly attributable to the increased sale of the covered services (being the covered services referred to in the expression “increased sale of *covered services*” in paragraph (a) of this definition)".}

“Appendix 8 work” has the same meaning given to it in the *Code.*

{Note: Under the *Code* "appendix 8 work" means "work in connection with the *Western Power Network* of a type specified in clause 8.2 of appendix 8".}

“applicant” means a person (who may be a *user*, a *customer* or a *developer*) who has lodged, or intends to lodge, a *connection application*, and includes a person who does so on behalf of another person.

“applications and queuing policy” means the applications and queuing policy (as defined in the *Code*) in the *access arrangement*.

“augmentation” has the same meaning as given to it in the *Code*.

{Note: Under the *Code* "augmentation" in relation to a *covered network*, means "an increase in the capability of the *covered network* to provide *covered services*".}

“Authority” has the same meaning as given to it in the *Code.*

{Note: Under the *Code* "*Authority*" means the Economic Regulation Authority established by the *Economic Regulation Authority Act 2003*.}

“bidirectional point” has the same meaning given to it in the *applications and queuing policy*.

{Note: Under the *applications and queuing policy* "bidirectional point" means "a single, indivisible (except as allowed under this applications and queuing policy) point, that for purposes under the access arrangement involving the transfer of electricity, is deemed to consist of a single attachment point, connected or to be *connected* to a user’s connection point, with a single meter (regardless of the actual configuration of network assets making up the *bidirectional point*), at which electricity is to be transferred into and out of the network".}

“bidirectional service” means a *covered service* provided by Western Power at a *connection point* under which the *user* may transfer electricity into and out of the *network* at the *connection point*.

“capital contribution” has the same meaning given to it in the *Code.*

{Note: Under the *Code* "capital contribution" means “a payment or provision in kind made, or to be made, by a *user* in respect of any *new facilities investment* (or *forecast new facilities investment*) in *required work*”.}

“Code” means the *Electricity Networks Access Code 2004* (as amended).

“connect” has the same meaning given to it in the *Code***.**

{Note: Under the *Code* "connect" means "to form a physical link to or through a *network*".}

“connection application” means an application lodged with Western Power under the *applications and queuing policy* that has the potential to require a modification to the *network*, including an application to:

(a) *connect facilities and equipment* at a new *connection point*; or

(b) increase *consumption* or *generation* at an existing *connection point*; or

(c) materially modify *facilities and equipment connected* at an existing *connection point*; or

(d) augment the *network* for any other reason,

{Note: this might be, for example, to service a subdivision.}

and includes any additional information provided by the *applicant* in regard to the application.

“connection assets” has the same meaning given to it in the *Code*.

{Note: Under the *Code* "connection assets" for a *connection point*, means "all of the *network assets* that are used only in order to provide *covered services* at the *connection point*".}

“connection point” means an *exit point* or an *entry point* or a *bidirectional point* identified or to be identified as such in an *access contract*.

“consume” has the same meaning given to it in the *Code*.

{Note: Under the *Code* "consume" means "to consume electricity".}

“consumption”, for a *connection point*, means the amount of electricity *consumed* at the *connection point*, and is measured in Watt-hours.

“contracted capacity” means the maximum rate at which a *user* is permitted to transfer electricity at a *connection point* under the *user’s access contract*.

“contribution” has the same meaning given to it in the *Code*, but also includes an *alternative option contribution*.

{Note: Under the *Code* "contribution" in relation to a *covered network*, means “a *capital contribution*, a *non-capital contribution* or a *headworks charge*”.}

“contributions policy” has the same meaning given to it in the *Code.*

{Note: Under the *Code* "contributions policy" means “a policy in an *access arrangement* under section 5.1(h) dealing with *contributions* by users”.}

“contributions rate of return” means the rate of return most recently approved by the *Authority* for use in *price control* for the *network*.

“covered service” has the same meaning given to it in the *Code* but also includes a *bidirectional service*.

{Note: Under the *Code* "covered service" means "a service provided by means of a *covered network*, including:

(a) a *connection service*; or

(b) an *entry service* or *exit service*; or

(c) a network use of system service; or

(d) a *common service*; or

(e) a *service* ancillary to a *service* listed in paragraph (a) to (d) above,

but does not include an *excluded* service".}

“cpi” means the “all capitals consumer price index” as defined by the Australian Bureau of Statistics.

“customer” has the meaning given to it in the *Act*.

“distribution low voltage connection scheme” means the scheme described in clause 7 of this *contributions policy*.

“distribution low voltage connection scheme application” means a *connection application* where:

(a) the proposed *connection point* is to the *distribution system low voltage network* and is within 25 kms of the *relevant zone substation*, and

(b) the *applicant’*s required electrical capacity is in excess of:

(i) the original design capacity for a greenfield development on an existing electricity serviced lot as determined by Western Power's policies and procedures from time to time, or

(ii) the existing capacity in respect of the relevant *connection point* for a brownfield development.

"distribution low voltage connection scheme base charge” means the value determined in accordance with section 7.3 of this *contributions policy*.

“distribution low voltage connection scheme contribution” means a *contribution* in respect of the *distribution low voltage connection scheme*.

“distribution low voltage connection scheme works” with respect to a *distribution low voltage connection scheme application,* means *works* on the *distribution system* reasonably adjacent to the *connection point* (to which the *distribution low voltage connection scheme application* relates) that directly provides for delivery of electricity capacity to that *connection point* and that may include switchgear, *HV* cable, transformers, *low voltage* cable and ancillary equipment.

“distribution system” has the same meaning given to it in the *Code*, but excludes equipment within zone substations used for the transportation of electricity at nominal voltage of less than 66 kV.

{Note: Under the *Code* "distribution system" means “any apparatus, equipment, plant or buildings used, or to be used, for, or in connection with, the transportation of electricity at nominal voltages of less than 66 kV.”}

“entry point” has the same meaning given to it in the *applications and queuing policy*.

{Note: Under the *applications and queuing policy* "entry point" means "a single, indivisible (except as allowed under this *applications and queuing policy*) point, that for purposes under the *access arrangement* involving the transfer of electricity, is deemed to consist of a single *attachment point,* connected to or to be connected to a *user's connection point*, with a single *meter* (regardless of the actual configuration of *network assets* making up the entry point), at which electricity is more likely to be transferred into the *network* than out of the *network*".}

"entry service" has the same meaning given to it in the *applications and queuing policy*.

{Note: Under the *applications and queuing policy* "*entry service*" means "a *covered service* provided by Western Power at a *connection point* under which the *user* may transfer electricity into the *network* at the *connection point*".}

"exit point" has the same meaning given to it in the *applications and queuing policy*.

{Note: Under the applications and queuing policy "exit point" means "a single, indivisible (except as allowed under this applications and queuing policy) point, that for purposes under the access arrangement involving the transfer of electricity, is deemed to consist of a single attachment point, connected to or to be connected to a user's connection point, with a single meter (regardless of the actual configuration of network assets making up the entry point), at which electricity is more likely to be transferred out of the network than into the network".}

"exit service" has the same meaning given to it in the *applications and queuing policy*.

{Note: Under the *applications and queuing policy* "*exit service*" means "a *covered service* provided by Western Power at a *connection point* under which the *user* may transfer electricity out of the *network* at the *connection point*".}

"facilities and equipment" has the same meaning given to it in the *Code*.

{Note: Under the *Code*, "facilities and equipment" in relation to a *connection point*, means "the apparatus, equipment, plant and buildings used for or in connection with *generating*, *consuming* and *transporting* electricity at the *connection point*".}

"feeder diversity factor" means the factor applied to the *capacity requirement* that reflects the effective contribution of the *connection* capacity to the feeder peak load.

"forecast costs" means any or all of the *forecast new facilities investment* or the forecast *alternative option costs*, as applicable, to be incurred by Western Power with regards to *works*.

"forecast new facilities investment" has the same meaning given to it in the *Code*.

{Note: Under the Code "forecast new facilities investment" for a *covered network* means "the capital costs forecast to be incurred in developing, constructing and acquiring new *network assets* for the *covered network*".}

"generation", for a *connection point*, means the amount of electricity *generated* at the *connection point*, and is measured in kilowatts.

"good electricity industry practice" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "good electricity industry practice" means "the exercise of that degree of skill, diligence, prudence and foresight that a skilled and experienced person would reasonably and ordinarily exercise under comparable conditions and circumstances consistent with applicable *written laws* and *statutory instruments* and applicable recognised codes, standards and guidelines".}

"low voltage" means the low voltage level of the *distribution system network* where the voltage is less than 1 kV.

"headworks" means enhancements required to the existing *HV* three-phase *distribution system* that provides for an increase in capacity of that system.

"headworks charge" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "headworks charge", in respect of a *headworks scheme*, means "the amount payable by a *user* to a *service provider* under the *headworks scheme* in respect of a *connection point*".}

"headworks scheme" means the scheme described in clause 6 of this *contributions policy*.

"HV" means the high voltage level of the distribution network where the voltage is greater than 6 kV and less than 66 kV.

"minimum practical works" with regard to *covered services* sought by an *applicant*, means the minimum *works* Western Power must undertake, acting efficiently in accordance with *good electricity industry practice*, to provide only those *covered services* required by that *applicant*.

"mixed zone" has the meaning given to it in section 5.3 of the *price list information* in the *access arrangement*.

"network" has the meaning given to "Western Power Network" in the *Code*.

{Note: Under the *Code* "Western Power Network" means "the *covered network* that is *covered* under section 3.1". The "Western Power Network" is the portion of the SWIN that is owned by the Electricity Networks Corporation.}

"network assets" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "network assets", in relation to a *network* means "the apparatus, equipment, plant and buildings used to provide or in connection with providing *covered services* on the *network*, which assets are either *connection assets* or *shared assets*".}

"new facilities investment" has the same meaning as given to it in the *Code*.

{Note: Under the *Code* "new facilities investment" means "for a new facility, means the capital costs incurred in developing, constructing and acquiring the new facility".}

"new facilities investment test" has the same meaning as given to it in the *Code*.

{Note: Under the *Code* "new facilities investment test" means "in respect of a covered network, means the test set out in section 6.52".}

“new revenue” means the *anticipated incremental revenue* or *additional revenue* or both, as applicable, with respect to *works*.

“nominated capacity requirement” means the capacity requirement nominated under clause 6.4 in a *connection application* with respect to that *connection application.*

“non-capital contribution” means a payment or provision in kind made, or to be made, by a *user* in respect of any *non-capital costs* (or forecast *non-capital costs*) of *required work*.

“non-capital costs” means the *non-capital costs* (as defined in the *Code*), but excluding *alternative option costs*, to be incurred by Western Power with regards to *works*.

“price components” means the price components in clause 6.8*.*

“price control” has the same meaning as given to it in the *Code.*

> {Note: Under the *Code* "*price control*" means the provisions in an *access arrangement* under section 5.1(d) and Chapter 6 of the *Code* which determine *target revenue*.}

“price list information” has the same meaning given to it in the *Code*.

“reasonable and prudent person” means a person acting in good faith and in accordance with *good electrify industry practice*.

“reasonable time” means the time determined in accordance with clause 5.3.

“relevant area” with respect to *connection applications* in relation to the *distribution system* means any area where the *relevant connection point* is located at a distance along the line feeder route equal to or greater than 25 km from the *relevant zone substation* within the *network* in the *rural zone* or *mixed zone*.

“relevant connection point” means, with respect to a *connection application*, the appropriate *connection point* as determined under clause 6.5.

“relevant distribution transformer” with respect to the *distribution low voltage connection scheme* and a *connection application* means the transformer from which the new or upgraded *connection* (to which that *connection application* relates) will be supplied under normal system operating conditions.

“relevant zone substation” means the zone substation to which the new or upgraded *connection* will be connected under normal system operating conditions.

“required work” means *work* which is necessary in order to provide a *covered service* sought in a *connection application*.

“retailer” has the meaning given to it in the *Act*.

“rural zone” has the meaning given to it in section 5.3 of the *price list information* in the *access arrangement*.

“scheme” has the same meaning as given to it in Appendix 8 of the *Code*.

“service provider” has the same meaning given to it in the *Code*.

{Note: Under the *Code* "service provider" in relation to a *network* means "a person who owns or operates the *network*".}

“shared assets” has the same meaning given to it in the *Code*.

{Note: Under the *Code* "shared assets" means "those *network assets* which are not *connection assets*".}

“SWIS” has the meaning given to it in the *Code*.

{Note: Under the *Code* "SWIS" has the meaning as given to it in the Act, being "the interconnected transmission and distribution systems, generating works and associated works -

(a) located in the South West of the State and extending generally between Kalbarri, Albany and Kalgoorlie; and

(b) into which electricity is supplied by -

(i) one or more of the electricity generation plants at Kwinana, Muja, Collie and Pinjar; or

(ii) any prescribed electricity generation plant".}

“technical rules” means the *technical rules* (as defined in the *Code*) applying from time to time to the *network* under Chapter 12 of the *Code*, as modified in accordance with the *Code*.

“transmission system” has the same meaning given to it in the Code, but also includes equipment within zone substations used for the transportation of electricity at nominal voltage of less than 66 kV.

“user” has the same meaning given to it in the *Code*.

{Note: Under the *Code* "user" means "a person, including a *generator* or a *consumer*, who is a party to an [*sic*.] contract for services with a *service provider*, and under section 13.4(e) includes another *business* as a party to a *deemed access contract*".}

“works” includes *headworks* and *distribution low voltage connection scheme works* and all works required to be undertaken to provide an *applicant* with the *covered services* sought by the *applicant* in a *connection application*, including works associated with:

(a) *augmentation* of *connection assets*;

(b) *augmentation* of *shared assets*;

(c) *alternative options*; and

(d) other non-capital works.

1.2. Interpretation

(a) Unless the contrary intention is apparent:

(i) a rule of interpretation in the *Code*; and

(ii) the Interpretation Act 1984,

apply to the interpretation of this *contributions policy*.

(b) Unless:

(i) the *contrary* intention is apparent: or

(ii) the term has been redefined in clause 1.1,

a term with a defined meaning in the *Code* has the same meaning in this *contributions policy*.

2. Application of this contributions policy

(a) Subject to (b), and (c) below, this *contributions policy* applies if it is necessary for Western Power to perform *works* to provide *covered services*.

(b) If the *works* required for Western Power to provide the *covered services* sought by an *applicant* are *Appendix 8 works*, then the *contribution* for those *works* is the amount determined under and in accordance with Appendix 8 of the *Code.* For the avoidance of doubt, any such *contribution* is to be paid in addition to any *contribution* payable under this *contributions policy.*

(c) An *applicant* is required to pay a *contribution* for *works* in any (including any combination of) the following circumstances:

(i) in the case of *new facilities investment,* where the capital costs incurred in relation to the relevant *works* do not satisfy the *new facilities investment test*;

(ii) in the case of *works* related to *alternative options*, where the *non-capital costs* associated with such *works* do not satisfy the requirements of clause 6.41(b) of the Code;

(iii) in the case of non-capital *works* including *alternative options*, where the costs of the *works* were not included, and could not reasonably have been included, in forecasts of *non-capital costs* taken into account in setting the *price control*,

(iv) where the *works* meet the requirements of clause 6 of this *policy* (*distribution headworks scheme*),

(v) where the *works* meet the requirements of clause 7 of this *contributions policy* (*distribution low voltage connection scheme*).

3. Lowest sustainable cost

A *contribution* with respect to *covered services* sought by an *applicant* must not exceed the amount that would be required by a prudent *service provider* acting efficiently, in accordance with *good electricity industry practice* seeking to achieve the lowest sustainable cost of providing the *covered services*.

4. Applicant must make contribution

4.1. Applicant must make contribution

(a) Subject to paragraph (b) of this clause 4.1, if the application of this *contributions policy* in relation to the *works* produces a *contribution* amount that is greater than zero, Western Power is not required to undertake the *works* in respect of a *connection application* for a *covered service* until the *applicant* enters into a contract with Western Power under which the *applicant* agrees to provide the *contribution*, including any GST liability, to Western Power in accordance with this *contributions policy*:

(b) If the work *falls* within the class of *headworks*, Western Power must undertake and fund the *work* whether or not the *work* is a *required work*. This does not excuse the *applicant* from any obligations to make a *contribution* under this *contributions policy*.

4.2. *Payment of GST*

The payment of a *contribution* may be subject to GST and, if so, Western Power will request a *customer* to pay an additional amount equal to Western Power's GST liability. Western Power may request payment of this additional amount at the time Western Power's GST liability arises.

4.3. *Applicant* must provide *security* for *new revenue*

(a) Where the *forecast costs* with respect to a *connection application* are greater than $50,000, but less than $15,000,000, Western Power may require the *applicant* to procure before the commencement of the *works*, and maintain for a period of 18 months after the commencement of the associated *exit service, entry service,* or *bidirectional service*, an unconditional, irrevocable bank guarantee, or equivalent financial instrument, in terms acceptable to Western Power (acting as a *reasonable and prudent person*), guaranteeing the portion of *new revenue* that was used to calculate the *contribution* and is expected to come from providing an *exit service, entry service,* or *bidirectional service* using the *works*.

(b) Where an *applicant* has provided security under clause 4.3(a), then after 12 months, Western Power may:

(i) re-determine the *contribution* under this *contributions policy*, and recover from, or rebate to, the *applicant* any difference from the amount of the original *contribution*; or

(ii) require the *applicant* to maintain the bank guarantee or equivalent financial instrument for a further 12 months before re-determining the *contribution* in accordance with clause 4.3(b)(i).

(c) Where the *forecast costs* with respect to a *connection application* are equal to or greater than $15,000,000, Western Power may require the applicant to procure before the commencement of the *works*, an unconditional, irrevocable bank guarantee, or equivalent financial instrument, in terms acceptable to Western Power (acting as a *reasonable and prudent person*), guaranteeing the portion of *new revenue* that was used to calculate the *contribution* and is expected to come from providing an *exit service, entry service,* or *bidirectional service*, using the *works*.

5. Amount of Contribution

5.1. Interpretation

(a) For the avoidance of doubt, this clause 5 is to be read subject to the provisions of clauses 2, 6 and 7 of this *contributions policy*.

(b) For the purposes of this clause 5: -

(i) the definition of '*new facilities investment test'* is that set out in section 6.52 of the *Code*, but without having regard to subsection 6.52(b)(i) thereof; and

(ii) the definition of '*alternative option test*' is that set out in section 6.41 of the *Code*, but without having regard to subsection 6.41(b)(i) thereof.

5.2. Calculation of *contribution*

The *contribution* payable in respect of any *works* to which this *policy* applies is calculated by:

(a) determining the appropriate portion of any of the *forecast costs* of the *works* (excluding *distribution low voltage connection scheme works* but including any *works* relating to a *distribution low voltage connection scheme application* excluded from clause 7 by clause 7.5) which do not meet the *new facilities investment test* or the *alternative option test* (as applicable) to allocate to the *applicant* under clause 5.4;

(b) adding any applicable amount calculated under clause 6 (*headworks contribution*),

(c) adding any applicable amount calculated under clause 7.3 (*distribution low voltage connection scheme base charge*), and

(d) adding any applicable amount calculated under clause 8.4(a),

(e) deducting the amount likely to be recovered in the form of *new revenue* gained from providing *covered services* to the *applicant*, or, if the *applicant* is a *customer*, to the *customer's retailer*, as calculated over the *reasonable time*, at the *contributions rate of return*; and

(f) adding any applicable amount calculated under clauses 8.1, 8.2, 8.3 and 8.5.

5.3. *Reasonable time*

For the purposes of this *contributions policy*, the *reasonable time* is to be determined by Western Power, as a *reasonable and prudent person*, having regard to:

(a) the anticipated commercial life of the *works*, up to a maximum of 15 years; and

(b) the purpose for which the *applicant* requires the *covered services*.

{Note: For example, if the *applicant* is proposing to build a plant with an expected 5 year operating life, then the *reasonable time* might be 5 years or less.}

5.4. Amount of *forecast costs*

(a) Western Power may, acting as a *reasonable and prudent person*, determine that the amount of the *forecast costs* to be allocated to the *applicant* for the purposes of clause 5.2 (a) is:

(i) the full amount of the *forecast costs*; or

(ii) an amount determined under clauses 5.4(b) to 5.4(e).

(b) If Western Power chooses to undertake *works* in excess of the *minimum practical works* to provide *covered services* sought by an *applicant*, then Western Power will determine that the amount of costs allocated to the *applicant* are the *forecast costs* of the *minimum practical works*.

(c) If:

(i) Western Power reasonably expects to receive *tariff* income from future *applicants*, because of *works* to provide *covered services* sought by an *applicant*, within a period of 10 years, (or such longer period as reasonably determined by Western Power acting as a *reasonable and prudent person*), of the original *applicant's connection application*; or

(ii) an *applicant* seeks a *covered service* that will make use of *works* undertaken to provide *covered services* to a previous *applicant*, within a period of 10 years, (or such longer period as reasonably determined by Western Power under clause 5.4(c)(i)), of the original *applicant's connection application*, and for which the original *applicant* paid a *contribution* calculated under clause 5.4(c)(i);

then Western Power will apportion the costs based on the relative use of the *works* by the *applicant* compared to the relative use of the *works* expected to be sought by those future *applicants*, or the relative use of the *works* sought by previous *applicants*, or both, as applicable.

(d) If Western Power has received more than one *connection application* requiring the same *works*, then Western Power may negotiate with the *applicants* under the *applications and queuing policy* to apportion the *forecast costs* of the *works* between the *applicants*, based on the relative use of the *works* sought by each *applicant*.

(e) If *works* to provide *covered services* to an *applicant* provide specific savings to Western Power in performing its legal obligations, then Western Power will determine that the costs to be allocated to the *applicant* are the *forecast costs* less the amount saved.

6. Distribution headworks scheme

The methodology used to develop the distribution headworks prices that apply in this distribution headworks scheme is described in Appendix 9 of this Access Arrangement.

6.1. Application

This headworks scheme applies to:

(a) the class of *works* falling within the definition of *headworks* in this *policy*; and

(b) the class of *users* who make a *connection application* in relation to the *distribution system* within a *relevant area*.

6.2. Headworks contribution

(a) If,

(i) in accordance with good electricity practice, Western Power reasonably considers that the forecast costs of *headworks* required for a *relevant area* over a 25 year period exceeds the amount of *new revenue* likely to be gained from providing *covered services* to *applicants* over that period, and

(ii) the *relevant connection point* is less than 160 kms from the *relevant zone substation* and the *nominated capacity requirement* is less than 2,000 kVA, or the *relevant connection point* is greater than 160 kms from the *relevant zone substation* and the *nominated capacity requirement* is less than 1,000 kVA,

then, upon receiving a *connection application* in relation to a *relevant area,* Western Power will, in accordance with this clause 6, require a *headworks contribution* from the *applicant*.

(b) Where a *headworks contribution* is made by an applicant in accordance with clause 6.2(a) no further *contribution* shall be required from the *applicant* in relation to *headworks*.

(c) For the purpose of this *contributions policy* the *headworks contribution* is a *capital contribution*.

6.3. Calculation of the *headworks contribution*

A *headworks contribution* for a *connection application* is calculated by:

(a) determining the *adjusted capacity requirement* with respect to the *connection application* in accordance with clause 6.4;

(b) determining the distance from the *relevant connection point* to the *relevant zone substation* in accordance with clause 6.6;

(c) determining the *relevant voltage* in accordance with clause 6.7;

(d) applying the parameters determined under 6.3(a) and (b) to the applicable *price components,* with respect to the *relevant voltage* determined under 6.3(c), and

(e) deducting the amount likely to be recovered in the form of *new revenue* gained from providing *covered services* to the *applicant*, as calculated over the *reasonable time*, at the *contributions rate of return*.

6.4. Adjusted capacity requirement

The adjusted capacity requirement is determined by multiplying the nominated capacity requirement, by the relevant feeder diversity factor identified in the table below:

***Connection* Type**	**Feeder Diversity Factor**
Residential	60%
Commercial	50%

6.5. Relevant connection point

The *relevant connection point* is:

(a) for an application for *connection* to the *HV* single-phase *network,* the point on the three-phase *HV* network to which the single-phase line is connected. The length of any single-phase line is not taken into account;

(b) for an application for *connection* to the low voltage 240-volt *network*, the *HV* terminals of the transformer with respect to the *connection application*. Where the transformer is connected to the single-phase network, the relevant *connection point* is that determined under paragraph (a); and

(c) for a *connection application* that requires an extension to the three-phase *HV network,* the point on the existing three-phase *HV network* to which the new extension is made.

6.6. Determination of the distance to the relevant connection point from the relevant zone substation

The distance from the *relevant connection point* to the *relevant zone substation* is the shortest length of three-phase *network* line connecting those two points.

6.7. Relevant voltage

The *relevant voltage* with respect to a *connection application* is:

(a) for an application for *connection* to the *HV* single-phase *network,* the voltage at the point on the three-phase *HV network* to which the single-phase line is connected;

(b) for an application for *connection* to the *HV* three-phase *network,* the voltage at the point of connection on the three-phase *HV network*; and

(c) for an application for *connection* to the low voltage 240-volt *network*, the voltage at the *HV* terminals of the transformer with respect to the *connection application* determined under paragraphs (a) or (b) whichever is applicable.

6.8. Price components for calculation of headworks contribution

(a) The price components comprise two parts, being:

(i) a price based on the capacity sought in terms of $ per kVA; and

(ii) a price based on the capacity sought and the distance from the *relevant zone substation* to the *relevant connection point*, less 25 kms, in terms of $ per kVA.km,

(b) Separate prices will be determined for 22 kV connections and 33 kV connections.

7. Distribution low voltage connection scheme

7.1. Application

Subject to clause 7.5 this *distribution low voltage connection scheme* applies to a *connection applicant* that falls within the class of *applicant* that may make a *distribution low voltage connection scheme application* and where the *works* required to meet the requirements of the *connection application* of that *connection applicant* are *distribution low voltage connection scheme works*.

7.2. Distribution low voltage connection scheme contribution

(a) If, in accordance with *good electricity industry practice*, Western Power reasonably considers that the forecast costs of *distribution low voltage connection scheme works* (required to meet the requirements of the *connection application* of a *connection applicant*) over a 15 year period exceed the amount of *new revenue* likely to be gained from providing *covered services* using those *distribution low voltage connection scheme works* to *distribution low voltage connection scheme applicants* over that period, then, upon receiving the *distribution low voltage connection scheme application* of that *connection applicant*, Western Power will, in accordance with this clause 7, require a *distribution low voltage connection scheme contribution* from the *applicant*.

(b) Where a *distribution low voltage connection scheme contribution* is made by an *applicant* no further *contribution* shall be required from the applicant for the *distribution low voltage connection scheme works* for which that *distribution low voltage connection scheme contribution* was made.

(c) For the purpose of this *contributions policy* a *distribution low voltage connection scheme contribution* is a *capital contribution*.

7.3. Determination of the *distribution low voltage connection scheme base charge*

The *distribution low voltage connection scheme base charge* is determined by:

(a) identifying the *applicant's* incremental electrical capacity requirement by deducting from the *applicant*'s required electrical capacity:

(i) the original design capacity for a greenfield development on an existing electricity serviced lot as determined by Western Power's policies and procedures from time to time, or

(ii) the existing capacity in respect of the relevant *connection point* for a brownfield development.

(b) determining whether the location of the *connection point* (to which the *connection application* relates) is on a land lot separate from the *relevant distribution transformer*, and

(c) applying the parameters determined under 7.3(a) and 7.3(b) to the prices determined in clause 7.4.

7.4. Distribution low voltage connection scheme prices

The methodology used to develop the *distribution low voltage connection scheme* prices is described in Appendix 10 (Distribution Low Voltage Connection Scheme Methodology) of this Access Arrangement.

(a) The *distribution low voltage connection scheme* price is expressed as $ per kVA.

(b) The *distribution low voltage connection scheme* prices will vary depending on:

(i) whether the incremental capacity requirement at the *connection point* determined under clause 7.3 (a) is:

(A) less than 216 kVA or

(B) between 216 kVA and 630 kVA or

(C) greater than 630 kVA, and

(ii) whether the location of the *connection point* is on a land lot separate from the *relevant distribution transformer*.

7.5. Exclusion from distribution low voltage connection scheme

The methodology used to develop the *distribution low voltage connection scheme* exclusion threshold is described in Appendix 10 (Distribution Low Voltage Connection Scheme Methodology) of this Access Arrangement.

A *distribution low voltage connection scheme application* is excluded from the provisions of this clause 7 where the *forecast costs* of *works* (as determined assuming clause 5.4 applies to those *works*) is in excess of the *distribution low voltage connection scheme base charge* plus the exclusion threshold. For the purposes of applying this clause 7.5, only the cost of those *works* which would otherwise fall within the *distribution low voltage connection scheme* apply.

Where a *distribution low voltage connection scheme application* is excluded, the *contribution* is determined under this *contributions policy* excluding the provisions of this clause 7.

8. General provisions

For the avoidance of doubt, this clause 8 is to be read subject to the provisions of clause 2 of this *contributions policy*.

8.1. *Connection assets*

The *applicant* must pay the full *forecast costs* of any *works* to provide *connection assets*.

8.2. *Non-capital costs*

The *applicant* must pay to Western Power the full amount of any *non-capital costs* that Western Power incurs in performing *works*, which in any case must not exceed such costs that would be incurred by a prudent *service provider* acting efficiently in accordance with *good electricity industry practice*.

{Note: these costs might include, for example, adjusting protection settings, reprogramming computer equipment and so on.}

8.3. *Works* over and above standard *works*

If an *applicant* seeks a *covered service* that is better or different in some respect than an equivalent *service* in the *technical rules* or an equivalent *reference service* in the *access arrangement*, then the *applicant* must pay to Western Power:

(a) a *contribution* calculated under this *contributions policy* for the equivalent *service*; and

(b) the difference between the *forecast costs* of the *works* required to provide the equivalent *service* and the *forecast costs* of the *works* required to provide the better or different *service*, to the extent that the better or different *service* does not otherwise meet those parts of the *new facilities investment test* dealing with *net benefit*, safety or reliability.

{Note: this could be, for example, a design philosophy delivering increased security of supply}

8.4. Costs related to *technical rules* compliance

(a) The *applicant* must pay a *contribution* calculated under this *contributions policy* in respect of any *works* required to upgrade the fault level ratings of *network assets*, or any other *works* required to ensure that Western Power complies with the *technical rules* with respect to the *network assets*.

(b) The *applicant* must pay all of its own costs in relation to ensuring that its *facilities and equipment* comply with the *technical rules*.

8.5. Temporary supplies

The *contribution* to be paid by an *applicant* who seeks a temporary supply is, if no applicable amount is published on Western Power's website, an amount equal to the full *forecast costs* of the *required works*.

9. Manner of contribution

9.1. Options for payment

A *contribution* may be made:

(a) by the *applicant* by way of a financial payment comprising either:

(i) periodic financial payments, subject to clause 9.2; or

(ii) an upfront financial payment;

(b) by the Western Australian Government under any appropriate government policy, or

(c) by the *applicant* undertaking the *augmentation* and transferring ownership of the *augmentation,* subject to clause 9.4.

Where the *contribution* is greater than $1,000,000, the *applicant* and Western Power may negotiate to adjust the *contribution* to reflect actual costs of the *required works* determined after the completion of the *works*. This does not exclude the *applicant* from any obligations to pay a *contribution* under this *contributions policy.*

9.2. When *applicant* may choose periodic payment

The *applicant* may not elect under clause 9.1(a)(i) to make the *contribution* by way of a periodic financial payment unless the total amount of the *contribution* exceeds $50,000.

9.3. Terms and amount of periodic payment

(a) If the *applicant* elects to make a *contribution* by way of periodic financial payment under clause 9.2, then:

(i) the maximum term over which the periodic payments may be made is 5 years;

(ii) interest will be payable on each periodic payment, at a reasonable commercial rate to be negotiated between Western Power and the *applicant*; and

(iii) Western Power (acting as a *reasonable and prudent person*) may require the *applicant* to procure an unconditional, irrevocable bank guarantee, or equivalent financial instrument, in terms acceptable to Western Power, guaranteeing the *contribution.*

9.4. *Augmentations* undertaken by *applicants*

(a) An *applicant* may, with Western Power's approval, construct an *augmentation* of the *network*.

(b) Where an *applicant*, in accordance with (a) above, constructs an *augmentation* of the *network*, the *applicant* shall agree to transfer the ownership of the *augmentation* to Western Power on such reasonable terms and conditions as may be stipulated by Western Power (after Western Power has tested the *augmentation* and certified that it meets the applicable technical standards) but in no circumstance will Western Power become obliged to make any payment to the *applicant* or any other person with respect to the *augmentation*.

{Note: An *applicant* is required to pay to Western Power the fees set by Western Power from time to time associated with Western Power testing the *augmentation* to establish that it meets the applicable technical standards for the *augmentation* to *connect* to the *network*.}

10. Rebates and recoupment

10.1. This clause 10 does not apply to *contributions* made under clause 6 (*Distribution headworks scheme*) or under clause 7 (*distribution low voltage connection scheme*) of this *policy*.

10.2. Parties may negotiate a rebate

(a) Where:

(i) an applicant has paid a contribution, or is paying a contribution in the form of periodic payments, for *works* with respect to a connection point; and

(ii) the value of the *contribution* is in excess of $1,000,000,

then Western Power and the *applicant* may negotiate to require Western Power to provide a rebate in circumstances where a subsequent *applicant* associated with a different *connection point* benefits from the *works* or a part of the *works* in respect of the original *connection point*. The rebate can only be in relation to assets, the costs of which were included in the calculation of the original *contribution* under this *contributions policy*.

(b) Where:

(i) an *applicant* has paid a *contribution*, or is paying a *contribution* in the form of periodic payments, for *works* with respect to a *connection point* for which the full *forecast costs* of the *works* were allocated to the *applicant* under clause 5.4;

(ii) at the time that the *works* are carried out, it is only the *applicant* who will benefit from the *works* in relation to that *connection point*; and

(iii) the value of the *contribution* is in excess of $200,000 but less that $1,000,000;

then Western Power and the *applicant* may negotiate to require Western Power to provide a rebate in circumstances where a subsequent *applicant* associated with a different *connection point* benefits from the *works* or a part of the *works* in respect of the original *connection point*.

(c) Where:

(i) an *applicant* has paid a *contribution*, or is paying a *contribution* in the form of periodic payments, for *works* with respect to a *connection point* for which the full *forecast costs* of the *works* were allocated to the *applicant* under clause 5.4;

(ii) at the time that the *works* are carried out, it is only the *applicant* who will benefit from the *works* in relation to that *connection point*;, and

(iii) the value of the *contribution* is less than or equal to $200,000;

then Western Power and the *applicant* may negotiate to require Western Power to provide a rebate in circumstances where a subsequent *applicant* associated with a different *connection point* benefits from the *works* or a part of the *works* within 10 years of the date that the *contribution* was paid, or periodic payments of the *contribution* began, in respect of the original *connection point*.

(d) Any negotiated rebate will be payable to the *customer* or the *user* associated with that *connection point* at the time of the *rebate* being payable.

(e) The amount of a rebate given to a *user* or *customer* under clause 10.1(c) is determined by apportioning the amortised *contribution* paid in respect of the original *connection point* between the *user* or *customer* associated with the original *connection point* and each subsequent *applicant* based on the relative *contracted capacity* of each party, where the *contribution* is amortised completely in a straight line over 10 years.

(f) Western Power is not under any obligation to pay any rebate for a *contribution* to any *user* or *customer* under any circumstance other than that expressly provided for under clause 10.2(a), (b) and (c).

10.3. New *applicants* must pay rebate

Where Western Power must pay a rebate to a *user* or a *customer* in respect of a *connection point* under clause 10.2, each subsequent *applicant* that triggers such a rebate must pay to Western Power an upfront amount equivalent to the rebate.

10.4. *Scheme* rebates determined under appendix 8 of the *Code*

Nothing in this clause 10 affects the obligations of Western Power to pay a member of a *scheme* a rebate in accordance with the provisions of appendix 8 of the *Code*.

11. Obligation to provide information

Upon request from an *applicant*, and in respect of a *contribution* for *works*, Western Power will provide the *applicant* with the following information.

(a) where the *contribution* is in respect of *new facilities investment*, details of assessment of the *new facilities investment* against the requirements of the *new facilities investment test* and details of the calculation of the amount that does not meet the *new facilities investment test*;

(b) where the *contribution* is made in respect of *non-capital costs* related to *alternative options*, details of assessment of the *non-capital costs* against the *alternative options test* and details of the calculation of the amount that does not satisfy the *alternative options test*;

(c) details of assumptions and calculations applied in the apportionment of any forecast cost of *works* between the *user* or *applicant* and other *users* or *applicants* or Western Power under clause 5.4 of this *contributions policy*;

(d) details of the calculation of a *headworks* contribution under clause 6 of this *contributions policy*, and

(e) details of the calculation of a *distribution low voltage connection scheme contribution* under clause 7 of this *contributions policy*.

Attachment G. Distribution Low Voltage Connection Scheme Methodology

This attachment is the methodology for approval.[15]

[15] The Western Power reference for this document is DM 8020703.

Distribution Low Voltage Connection Scheme Methodology

ELECTRICITY NETWORKS CORPORATION
("WESTERN POWER")

ABN 18 540 492 861

{Note: This methodology has been prepared in accordance with the requirements of the Electricity Networks Access Code 2004.}

1. Definitions

In this methodology document the following terms are used and have the same meaning as given in the *contributions policy* or the *Code* (reproduced below for convenience).

"Code" means the *Electricity Networks Access Code 2004* (as amended).

"connection application" has the same meaning given to it in the *contributions policy*.

{Note: Under the *contributions policy* "connection application" means "an application lodged with Western Power under the *applications and queuing policy* that has the potential to require a modification to the *network".}*

"connection point" has the same meaning given to it in the *contributions policy*.

{Note: Under the *contributions policy* "connection point" means "an *exit point* or an *entry point* or a bi-*directional point* identified or to be identified as such in an *access contract".*}

"contribution" has the same meaning given to it in the *Code*, but also includes an *alternative option contribution*.

{Note: Under the *Code* "contribution" in relation to a *covered network*, means "a *capital contribution*, a *non-capital contribution* or a *headworks charge*".}

"contributions policy" has the same meaning given to it in the *Code*.

{Note: Under the Code "contributions policy" means "a policy in an access arrangement under section 5.1(h) dealing with contributions by users".}

"distribution low voltage connection scheme" means the scheme described in clause 7 of the *contributions policy*.

"distribution low voltage connection scheme application" has the same meaning given to it in the *contributions policy*.

{Note: Under the *contributions policy* "distribution low voltage connection scheme application" means a *connection application* where:

(a) the proposed *connection point* is to the *distribution system low voltage network* and is within 25 kms of the *relevant zone substation*, and

(b) the *applicant's* required electrical capacity is in excess of:

(i) the original design capacity for a greenfield development on an existing electricity serviced lot, or

(ii) the existing capacity in respect of that *connection point* for a brownfield development.}

"distribution low voltage connection scheme base charge" has the same meaning given to it in the *contributions policy*.

{Note: Under the *contributions policy* "distribution low voltage connection scheme base charge" means the dollar value defined in section 7.3 of this *contributions policy*.}

“distribution low voltage connection scheme works” has the same meaning given to it in the *contributions policy*.

{Note: Under the *contributions policy* “distribution low voltage connection scheme works” with respect to a *distribution low voltage connection scheme application,* means *works* on the *distribution system* reasonably adjacent the *connection point* that directly provides for delivery of electricity capacity to that *connection point* and that may include switchgear, *HV* cable, transformers, *low voltage* cable and equipment.}

“distribution system” has the same meaning given to it in the *contributions policy*.

{Note: Under the *contributions policy* “distribution system” has the same meaning given to it in the *Code*, but excludes equipment within zone substations used for the transportation of electricity at nominal voltage of less than 66 kV.}

“forecast costs” has the same meaning given to it in the *contributions policy*.

{Note: Under the *contributions policy* “forecast costs” means “any or all of the *forecast new facilities investment* or the forecast *alternative option costs*, as applicable, to be incurred by Western Power with regards to *works”*.}

“headworks” has the same meaning given to it in the *Code*.

{Note under the *Code* “headworks” in respect of a *headworks scheme* means “the class of *works* identified under section 5.17D (a) as the class in respect of which the *headworks scheme* applies”.}

“headworks charge” has the same meaning given to it in the *Code*.

{Note: Under the *Code* "headworks charge", in respect of a *headworks scheme*, means “the amount payable by a *user* to a *service provider* under the *headworks scheme* in respect of a *connection point*".}

“headworks scheme” has the same meaning given to it in the *Code*.

{Note: Under the *Code* “headworks scheme” means “a scheme under section 5.17C”.}

“load” has the same meaning given to it in the *Code*.

{Note: Under the *Code* “load” means “the amount of electrical power transferred out of a *network* at a *connection point* at a specified time”.}

“low voltage” has the same meaning given to it in the *contributions policy*

{Note: Under the *Contributions Policy “low voltage”* means "the low voltage level of the distribution network where the voltage is less than 1 kV.}

“network” has the same meaning given to “Western Power Network” it in the *Code*.

{Note: Under the *Code* "Western Power Network" means "the *covered network* that is *covered* under section 3.1”. The “Western Power Network” is the portion of the SWIN that is owned by the Electricity Networks Corporation.}

“relevant distribution transformer” has the same meaning given to it in the *contributions policy*.

{Note: Under the *contributions policy* "relevant distribution transformer" with respect to the *distribution low voltage connection scheme* means the transformer from which the new or upgraded *connection* will be supplied under normal system operating conditions.}

"relevant zone substation" has the same meaning given to it in the *contributions policy*.

{Note: Under the *contributions policy* "relevant zone substation" means the zone substation to which the new or upgraded *connection* will be connected under normal system operating conditions.}

"scheme" means the *distribution low voltage connection scheme* as defined in the *contributions policy*.

"street feed" means a *connection* to the *distribution network* which is not contiguous to the *relevant distribution transformer*.

"SWIS" has the meaning given to it in the *Code*.

{Note: Under the *Code* "SWIS" has the same meaning as given to it in the *Electricity Industry Act 2004*, being "the interconnected transmission and distribution systems, generating works and associated works -

(a) located in the South West of the State and extending generally between Kalbarri, Albany and Kalgoorlie; and

(b) into which electricity is supplied by -

(i) one or more of the electricity generation plants at Kwinana, Muja, Collie and Pinjar; or

(ii) any prescribed electricity generation plant".}

"user" has the same meaning given to it in the *Code*.

{Note: Under the *Code* "user" means "a person, including a *generator* or a *consumer*, who is a party to a contract for services with a *service provider*, and under section 13.4(e) includes another *business* as a party to a *deemed access contract*".}

"works" has the same meaning given to it in the *contributions policy*.

{Note: Under the *contributions policy* "works" includes "*headworks* and all works required to be undertaken to provide an *applicant* with the *covered services* sought by the *applicant* in a *connection application*".}

2. Introduction

This document explains Western Power's *distribution low voltage connection scheme* methodology used to determine the prices that may be applied under the *Contributions Policy*, as provided for under sections 5.17C and 5.17D of the *Code*. This *distribution low voltage connection scheme* complies with those Code provisions which apply to all *headworks schemes*.

2.1 Code Requirements

The following *Code* provisions apply to a *headworks scheme*.

5.17C Despite section 5.14, the Authority may approve a *contributions policy* that includes a "**headworks scheme**" which requires a *user* to make a payment to the *service provider* in respect of the *user's* capacity at a *connection point* on a *distribution system* because the *user* is a member of a class, whether or not there is any *required work* in respect of the *user*.

5.17D A *headworks scheme* must:

(a) identify the class of *works* in respect of which the scheme applies, which must not include any works on a *transmission system* or any *works* which effect a geographic extension of a *network*; and

(b) not seek to recover *headworks charges* in an *access arrangement period* which in aggregate exceed 5% of the *distribution system target revenue* for the *access arrangement* period; and

(c) identify the class of *users* who must make a payment under the scheme; and

(d) set out the method for calculating the *headworks charge*, which method:

(i) must have the objective that *headworks charges* under the *headworks scheme* will, in the long term, and when applied across all *users* in the class referred to in section 5.17D (c), recover no more than the *service provider's* costs (such as would be incurred by a *service provider efficiently minimising costs*) of any *headworks*; and

(ii) must have the objective that the *headworks charge* payable by one *user* will differ from that payable by another *user* as a result of material differences in the *users'* capacities and the locations of their *connection points*, unless the *Authority* considers that a different approach would better achieve the *Code objective*; and

(iii) may use estimates and forecasts (including long term estimates and forecasts) of loads and costs; and

(iv) must contain a mechanism designed to ensure that there is no double recovery of costs in all the circumstances, including the manner of calculation of other *contributions* and *tariffs*; and

(v) may exclude a rebate mechanism (of the type contemplated by clauses A4.13(d) or A4.14(c)(ii) of Appendix 4) and may exclude a mechanism for retrospective adjustments to account for the difference between forecast and actual values.

This methodology document explains how the requirements of sections 5.17D (d) (i), (ii) and (iii) have been met in the *contributions policy*.

2.2 Code compliance of the methodology with section 5.17D (d)

With respect to section 5.17D (d) (i), the *distribution low voltage connection scheme* is designed to recover the *forecast costs* of *distribution low voltage connection scheme works*. The prices of the

distribution low voltage connection scheme are to be reviewed not less than once every 18 months to reflect the actual costs of the provision of *distribution low voltage connection scheme works*.

With respect to section 5.17D (d) (ii), the *distribution low voltage connection scheme* is designed such that the *contribution* for an *applicant* depends on their individual required electricity demand, and the point of the network to which they are connected. Consequently, *headworks charges* for each applicant will differ as a result of differences in the users' capacity requirements and the locations of their connection points.

With respect to section 5.17D (d) (iii), the *distribution low voltage connection scheme* prices are based on estimates and forecasts (including long term estimates and forecasts) of loads and costs.

2.3 Overview of the distribution low voltage connection scheme

(a) The *distribution low voltage connection scheme* and associated prices apply to the provision of *distribution low voltage connection scheme works* only. The class of applicants must meet the following criteria:

(i) the proposed connection point is to the distribution system low voltage network and is within 25 kms of the relevant zone substation, and

(ii) the *applicant*'s required electrical capacity is in excess of:

(A) the original design capacity for a greenfield development on an existing electricity serviced lot, or

(B) the existing capacity in respect of that *connection point* for a brownfield development.

(b) The prices are in terms of $/kVA.

(c) The *headworks charge* that an *applicant* pays depends on their required electricity demand and whether there will be a distribution transformer on the lot where the *connection point* is located.

3. Objectives of the Distribution Low Voltage Connection Scheme

This section sets out the objectives used in determining the Distribution Low Voltage Connection Scheme.

(a) The *distribution low voltage connection scheme* has been designed to meet the high-level objectives described below.

(i) Comply and be consistent with the regulatory framework;

(ii) Provide a method for allocating the costs of the provision of *distribution low voltage connection scheme works* in a fair and equitable manner;

(iii) Be as cost reflective as is reasonable to reflect the network *user's* utilisation of the network capacity;

(iv) Be as simple and straight forward as is reasonable taking into account other objectives; and

(v) Provide price stability and certainty to enable network users to make informed investment decisions.

(b) The methodology must ensure *contributions* from the *scheme* will, in the long term, recover no more than Western Power's costs of *distribution low voltage connection scheme works*.

4. Methodology Overview

This section provides an overview of the methodology used in determining the *distribution low voltage connection scheme* prices. It is noted that the cost of the provision of electricity capacity at a particular location is a function of:

(i) the amount of capacity sought by an *applicant*; and

(ii) whether the location of the connection point is contiguous to the location of the transformer, or whether the connection point is supplied from the low voltage street network.

On this basis, the approach taken to develop the *distribution low voltage connection scheme* prices is as follows.

(a) Western Power determines the costs of *distribution low voltage connection scheme works* for connection of applicants that meet the eligibility criteria for the *distribution low voltage connection scheme* over a period of 12 months.

(b) The costs of *distribution low voltage connection scheme works* determined under (a) have been allocated to categories as follows:

(i) whether the incremental capacity requirement at the connection point determined under clause 7.3 (a) of the *contributions policy* is:

- less than 216 kVA or
- between 216 kVA and 630 kVA or
- greater than 630 kVA, and

(ii) whether the location of the connection point is on a lot separate from the location of the transformer, or whether the connection point is supplied from the low voltage street network.

(c) From the costs of *distribution low voltage connection scheme work* and the incremental electricity demand associated with the categories defined in (b) above, the total costs of supply for each tranche can be determined in terms of $ per kVA.

(d) The price structure and prices are then derived to reflect the average costs derived under (a) and (b) above. Prices are expressed in a block structure that provides for a continuous price path. Note that there is a separate price path for connections with a contiguous transformer to those connected to the low voltage street network.

5. Methodology detail

This section provides additional detail with respect to the price determination process.

5.1 Price tranche thresholds

Western Power has developed standard *distribution low voltage connection scheme* prices based on modelling of *connections* over the past 12 month period. Costs per unit of capacity (kVA) reduce as the demand increases due to economies of scale. Those economies reflect the following factors;

- fixed costs including cable trenching, reinstatement, traffic management, mobilisation costs and installation costs are incurred regardless of capacity supplied,
- increased utilisation of installed assets, and
- reduction in the per unit cost of transformers in terms of dollars per kVA of capacity. (transformers are purchased in standard sizes, typically 315 kVA, 630 kVA and 1000 kVA and on a per kVA basis the costs of these transformers reduce significantly as the size increases).

In order for these economies of scale to be recognised in the pricing structure thresholds are set that reflect both the cost of plant and the nature of the network required to provide the requested capacities. For example, in general customers seeking less than 216 kVA are supplied from the low voltage distribution network, customers seeking demand between 216 kVA and 630 kVA require installation of a new transformer and may require that transformer to be installed on their lot, and in almost all circumstances customers seeking loads in excess of 630 kVA will require direct connection to a new transformer on their lot. Consequently the thresholds identified are:

(a) Tranche 1 - for the first 216 kVA of requested *load,*

(b) Tranche 2 - for additional units of *load* from 216 kVA to 630 kVA, and

(c) Tranche 3 - for additional units of *load* above 631 kVA.

5.2 Price setting

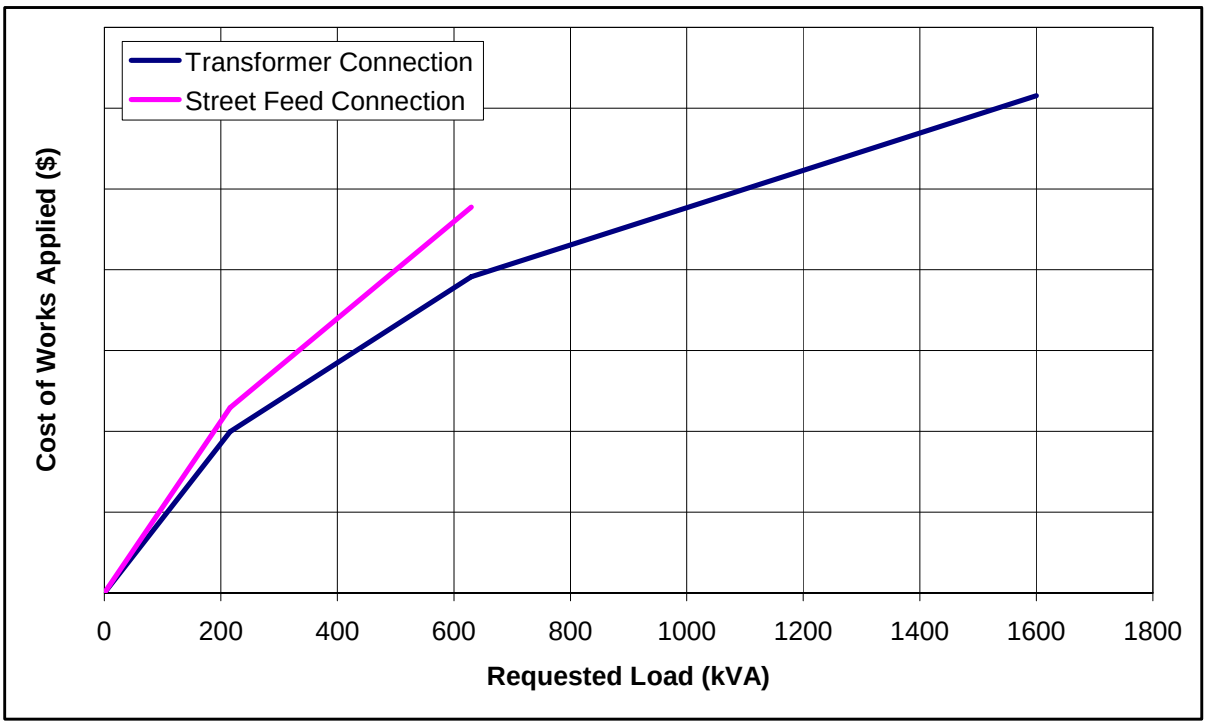
Prices are set within each tranche to only recover Western Power's costs over the long term, when applied across all distribution low voltage connection scheme applicants.

5.3 Separate prices for transformer direct connection and low voltage street connection

Direct connection to transformers avoids the cost of the low voltage street network and as such, the prices for these connections reflect this lower cost. Connection to the low voltage street network involves increased cost and consequently separate prices are put in place.

The difference between the two sets of prices is based on the average cost of the low voltage network. Figure 5.1 below illustrates the price tranches applied to both transformer direct connections and low voltage street connections.

Figure 5.1 – Modelling of the cost of works applied to the customer for Transformer Connections and Street Feed Connections.



5.4 Price structure

Two sets of prices are provided in block structure that reflects the separate price tranches for direct transformer connection and low voltage street connection. Prices are illustrative only. Actual prices will be published on Western Powers website as detailed in this document.

	Load tranche for incremental capacity	Fixed price	Variable price for incremental kVA in excess of tranche lower threshold
Direct transformer connection	0 to 216 kVA	$0	$500/kVA
Direct transformer connection	216 to 630 kVA	$108,000	$250/kVA
Direct transformer connection	Greater than 630 kVA	$211,500	$125/kVA
Low voltage street connection	0 to 216 kVA	$0	$600/kVA
Low voltage street connection	216 to 630 kVA	$129,600	$350/kVA

6. Exclusion

A distribution low voltage connection scheme application is excluded from the provisions of the distribution low voltage connection scheme where the distribution low voltage connection scheme base charge plus the exclusion threshold is less than the forecast costs of works as determined under clause 5.4 of the contributions policy.

The methodology for determining the exclusion threshold is as follows:

(a) For all *works* in the *last twelve months* Western Power will:

  (i) determine the amount of the *forecast costs* of the *works* applied to the customer as per section 5.4 of the *contributions policy*,

  (ii) subtract from the amount in section 1.1(a) the *distribution low voltage connection scheme base charge*,

(b) The exclusion threshold is equal to two standard deviations of all instances where the value in section 1.1(a)(ii) is positive.

Western Power will publish the amount of the exclusion threshold as detailed in this document.

7. Publishing and review of prices and exclusion threshold

Western Power publishes the *distribution low voltage connection scheme* prices as a price list and the exclusion threshold on its website. The price list is as illustrated in section 0.

Prices and the exclusion threshold will be reviewed periodically to reflect changes in the cost of provision of network assets. Any adjustments will apply for a minimum of six months.