Draft Determination on the New Facilities Investment Test for a 66/11 kV Medical Centre Zone Substation Expansion and Voltage Conversion of the Distribution Network

Submitted by Western Power

11 December 2008

Economic Regulation Authority
WESTERN AUSTRALIA

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CONTENTS

DRAFT DETERMINATION

1. On 7 August 2008, Western Power submitted to the Economic Regulation Authority ("**Authority**") an application ("**pre-approval application**") under section 6.71 of the *Electricity Networks Access Code 2004* ("**Access Code**").[1] The application is for the Authority to determine that forecast new facilities investment proposed by Western Power, for a 66/11 kV zone substation and associated distribution works at Sir Charles Gairdner Hospital ("**proposed substation**"), meets the test under section 6.51A of the Access Code for adding new facilities investment to the capital base.[2]

2. The proposed substation was the subject of an application made to the Authority in March 2008 for the Authority to waive the requirements of the regulatory test under Chapter 9 of the Access Code.[3] The Authority subsequently waived the application of the regulatory test on the basis that it was satisfied that there were no viable alternative options to the proposed substation, and that the nature of the funding of the proposed substation would not cause a net cost to those who generate, transport and consume electricity in the covered network and any interconnected system.[4] The test under section 6.51A is a separate test under the Access Code, requiring a separate determination by the Authority.

3. In making a determination on the pre-approval application, the Authority is required to consult with the public in accordance with the requirements of Appendix 7 of the Access Code. The Authority issued an invitation for submissions on 26 September 2008, with a closing date for submissions of 13 October 2008.[5] As part of this consultation, the Authority prepared an issues paper[6] to assist interested parties in understanding the new facilities investment test and Western Power's pre-approval application. Only one submission, from Alinta Sales Pty Ltd, was received before the closing date for submissions. A second submission was subsequently received

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1 Western Power, 5 August 2008, Submission to the Economic Regulation Authority Pre-Approval of New Facilities Investment 66/11 kV Medical Centre Substation expansion and voltage conversion of distribution network (hereafter cited as the "pre-approval application").

2 At the time that Western Power submitted its pre-approval application, section 6.71 of the Access Code referred to a determination of whether proposed new facilities investment satisfies the new facilities investment test under section 6.52 of the Access Code. Amendments to the Access Code gazetted on 22 October 2008 have resulted in section 6.71 now referring to a broader test under section 6.51A. This Draft Determination has been prepared as if Western Power's pre-approval application has been made under the Access Code as amended.

3 Western Power, 24 March 2008, Submission to the Economic Regulation Authority Request for Waiver of Regulatory Test 66/11 kV Medical Centre Zone Substation expansion and voltage conversion of distribution network (hereafter cited as the "request for waiver").

4 Economic Regulation Authority, 15 April 2008, Determination on an Application from Western Power to Waive the Regulatory Test for a 66/11 kV Medical Centre Zone Substation Expansion and Voltage Conversion of the Distribution Network..

5 Submissions from interested parties to the Economic Regulation Authority are available on the Authority's web site: http://www.era.wa.gov.au/3/717/48/6611kv_medical_.pm

6 Economic Regulation Authority, 26 September 2008, Issues Paper on the New Facilities Investment Test for a 66/11 kV Medical Centre Zone Substation Expansion and Voltage Conversion of the Distribution Network.

from Western Power[7] on 21 October 2008 addressing matters raised in the Authority's Issues Paper.

4. The Authority may under section A7.21 of the Access Code consider any submissions made after the time for making submissions has expired. The Authority has decided to accept and treat Western Power's late submission in accordance with section A7.21 for the purposes of this assessment. Furthermore, the Authority is of the opinion that the information contained within Western Power's submission is of a nature that warrants the making of a draft determination (under section A7.11) and a second round of public submissions (under section A7.13), before the Authority makes a final determination.

5. Western Power's pre-approval application is for a total amount of forecast new facilities investment for the proposed substation of $28.4 million. Western Power requests that the Authority determine that an amount of $18.7 million meets the test of section 6.51A of the Access Code, by virtue of satisfying the new facilities investment test of section 6.52 of the Access Code. Western Power proposes to finance the residual amount ($9.7 million) by a capital contribution from the principal user of the proposed substation (Sir Charles Gairdner Hospital) on the basis that this residual amount does not satisfy the new facilities investment test.

6. After consideration of Western Power's pre-approval application, the submissions received from Alinta Sales and Western Power, and an independent technical report[8] commissioned by the Authority, the Authority's Draft Determination is to not approve the application by Western Power.

REASONS

7. The reasons for this Draft Determination address the following matters:

- the test of section 6.51A of the Access Code for adding new facilities investment to the capital base;
- the structure and elements of the new facilities investment test under section 6.52 of the Access Code;
- details of the proposed substation; and
- the assessment of the proposed substation investment against the requirements of the test of section 6.51A of the Access Code.

8. In summary, the Authority's Draft Determination to not approve the application by Western Power is for the reason that Western Power's forecast new facilities investment of $28.4 million exceeds the amount that would satisfy the test of section 6.52(a) of the Access Code (i.e. the amount that would be invested by a service provider efficiently minimising costs).

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[7] Western Power, 21 October 2008, Public Submission to the Economic Regulation Authority Response to Issues Paper, published by the ERA dated 26 September 2008, for the 66/11kV Medical Centre Zone Substation expansion and voltage conversion of the distribution network (hereafter cited as the "supplementary submission").

[8] Geoff Brown and Associates, 3 December 2008, New Facilities investment Test for Western Power's Medical Centre Zone Substation Technical Review. Available from the Authority's web site: http://www.era.wa.gov.au/3/717/48/6611kv_medical_.pm

9. In order for the application to be approved, the Authority considers it necessary for Western Power to substantiate a project value that is consistent with an amount that would be invested by a service provider efficiently minimising costs, having regard to the Authority's findings as set out in this draft determination.

10. The Authority's assessment also indicates that a greater amount of new facilities investment than claimed by Western Power may be considered to satisfy the new facilities investment test, which will impact on the amount of capital contribution that Western Power can charge. The Authority notes that the amount of any capital contribution charged in respect of the forecast new facilities investment for the proposed substation is a matter to be determined in accordance with the Access Code, which states that a capital contribution policy 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.

11. The Authority also notes the observations made by its technical advisor as to the limited information and analysis, provided and undertaken by Western Power in support of its pre-approval application.

Test for Adding New Facilities Investment to the Capital Base

12. Section 6.51A of the Access Code establishes a test that must be satisfied for an amount of new facilities investment to be added to the capital base.

> 6.51A New facilities investment may be added to the capital base if:
>
> (a) it satisfies the new facilities investment test; or
>
> (b) the Authority otherwise approves it being adding *[sic]* to the capital base if:
>
> (i) it has been, or is expected to be, the subject of a contribution; and
>
> (ii) it meets the requirements of section 6.52(a); and
>
> (iii) the access arrangement contains a mechanism designed to ensure that there is no double recovery of costs as a result of the addition.

13. Sections 6.71 and 6.72 of the Access Code allow a service provider to obtain a determination that either an actual amount, or forecast amount, of new facilities investment meets the test of section 6.51A.

> 6.71 A service provider may at any time apply to the Authority for the Authority to determine whether:
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> (a) actual new facilities investment made by the service provider meets the test in section 6.51A; or
>
> (b) forecast new facilities investment proposed by the service provider is forecast to meet the test in section 6.51A.
>
> 6.72 If an application is made to the Authority under section 6.71, then subject to section 6.75 the Authority must make and publish a determination (subject to conditions as the Authority may consider appropriate) within a reasonable time.

The New Facilities Investment Test

14. Section 6.52 of the Access Code sets out the new facilities investment test.

> 6.52 New facilities investment satisfies the new facilities investment test if:
>
> (a) the new facilities investment does not exceed the amount that would be invested by a service provider efficiently minimising costs, having regard, without limitation, to:
>
> (i) whether the new facility exhibits economies of scale or scope and the increments in which capacity can be added; and
>
> (ii) whether the lowest sustainable cost of providing the covered services forecast to be sold over a reasonable period may require the installation of a new facility with capacity sufficient to meet the forecast sales;
>
> and
>
> (b) one or more of the following conditions is satisfied:
>
> (i) either:
>
> A. the anticipated incremental revenue for the new facility is expected to at least recover the new facilities investment; or
>
> B. if a modified test has been approved under section 6.53 and the new facilities investment is below the test application threshold - the modified test is satisfied;
>
> or
>
> (ii) the new facility provides a net benefit in the covered network over a reasonable period of time that justifies the approval of higher reference tariffs; or
>
> (iii) the new facility is necessary to maintain the safety or reliability of the covered network or its ability to provide contracted covered services.

15. For convenience, the component tests (or elements) of the new facilities investment test are referred to below as the “efficiency test” (section 6.52(a)), “incremental revenue test” (section 6.52(b)(i)A), “net benefits test” (section 6.52(b)(ii)) and “safety and reliability test” (section 6.52(b)(iii)).

16. For the new facilities investment test to be satisfied, the new facilities investment must satisfy the efficiency test and one or more of the other tests.

Western Power’s Pre-Approval Application

17. The proposed substation comprises a 66/11 kV zone substation located at Sir Charles Gairdner Hospital and associated distribution works that include line and cable work to establish incoming supply to the substation and voltage conversion of the secondary distribution network from 6.6 kV to 11 kV.[9]

18. Western Power indicates that the main drivers for the proposed substation are:

[9] Pre-approval application, pp. 3, 4.

- a shortfall in capacity to meet forecast load growth at Sir Charles Gairdner Hospital as it undergoes major expansion;
- a shortfall in capacity at the University Substation to meet the forecast load growth at the University of Western Australia;
- a need to upgrade the distribution system in surrounding areas from 6.6 kV to 11 kV to meet the increase in general consumer demand.[10]

19. Western Power further indicates that the substation would need to be upgraded by 2020 even without load growth at the hospital.

20. Western Power indicates that the forecast capital cost of the proposed substation is $28.4 million.[11] This cost includes $25.8 million for the new substation and cable works (transmission works), and $2.6 million for the distribution voltage conversion (distribution works).

21. In its supplementary submission, Western Power provides a further breakdown of the transmission works as follows:[12]

Transmission Works	**$25.8 million**
66 kV substation work	*$16.41 million*
Western Power 11 kV substation work	*$2.39 million*
Decommissioning and removal of old medical substation	*$0.93 million*
Line work (stages 1 and 2)	*$4.47 million*
Environment and land management	*$1.29 million*
Project management	*$0.29 million*
Distribution Works	**$2.6 million**
Distribution voltage conversion	*$2.6 million*
Total Works	**$28.4 million**

22. Western Power's pre-approval application is for the Authority to determine that the amount of $2.6 million for distribution works, and $16.1 million of the amount of $25.8 million for transmission works, satisfies the test of section 6.51A of the Access Code, by virtue of satisfying the new facilities investment test.

Assessment Against the New Facilities Investment Test

23. The Authority has considered the pre-approval application under each part of the new facilities investment test as set out below.

[10] Pre-approval application, p. 3.

[11] Pre-approval application, p. 4.

[12] Supplementary submission, p. 4.

Efficiency Test

Western Power's Submission

24. Western Power submits that the forecast new facilities investment for the proposed substation meets the efficiency test of section 6.52(a) of the Access Code for reasons that:

- after considering seven alternative options the proposed substation was identified to be the only feasible solution to provide the required capacity to support both load growth due to the hospital expansion and for surrounding areas; and
- the proposed substation was determined by the Authority to meet the requirements to have the application of the regulatory test waived.

25. Western Power submits that "if the regulatory test has been satisfied or waived, then the best option has already been determined, having regard to all reasonable options. If an option is the only feasible option, then that option should also be considered to meet the requirements of [section] 6.52(a) of the [Access Code]".[13]

26. In its supplementary submission, Western Power provides further information to support its claims that the forecast cost of the proposed substation represents an efficient cost for the works necessary. Western Power submits that:

- its governance and procedures for establishing the requirement for, and the costs of, the proposed substation ensures that the investment meets the first part of the new facilities investment test (i.e. the efficiency test);
- benchmarking undertaken by the company as part of its proposed access arrangement revisions submission[14] indicates that the costs incurred by Western Power in establishing substations is consistent with those costs incurred by other Australian utilities;
- the proposed substation has been designed to be located immediately north of the existing substation, which will result in the lowest cost outcome with respect to relocating asset costs, and also allows for some assets (cables and conduits) to be reused;
- the design of the substation is in accordance with Western Power's approved Technical Rules and the decision to use gas insulated switchgear is a result of the restriction in land availability at the hospital site – the use of such switchgear reduces the land area requirement for outdoor substations, which is normally 1 hectare; and
- the forecast cost of the proposed substation is based on the costs incurred in construction of the Cook Street substation, which is the only other substation that has gas insulated switchgear installed.[15]

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[13] Pre-approval application, p. 5.

[14] Western Power, 1 October 2008, Proposed Revisions to the Access Arrangement for the South West Network owned by Western Power. Information about the review of Western Power's access arrangement is available on the Authority's web site: http://www.era.wa.gov.au/3/719/48/access_arrangem.pm

[15] Supplementary submission, pp. 3, 4.

Public Submissions

27. Alinta Sales' submission addresses the efficiency test of section 6.52(a) of the Access Code.

28. Alinta Sales does not support Western Power's claims that if the regulatory test has been satisfied or waived, then the best option has already been determined, and that this option should be considered to meet the efficiency test requirements of section 6.52(a).

29. Alinta Sales further submits that even though "the regulatory test may have identified the best option to implement… there are still a number of factors Western Power should be required to demonstrate before the new facilities investment is deemed to pass the efficiency test". Alinta submits that Western Power should demonstrate that it will minimise project costs and manage the project in accordance with best project management practices, as well as justify the use of 132 kV rated cable, the installation of higher capacity transformers and the use of gas insulated switchgear, before these costs are included as part of the investment.

Considerations of the Authority

30. In assessing whether the proposed substation meets the efficiency test of section 6.52(a) of the Access Code, the Authority has given consideration to the issues of both the choice of project, and technical efficiency (whether the costs are minimised for the particular project).

31. On the choice of project, the Authority accepts that satisfaction of the regulatory test (through the Authority's determination to waive the application of the regulatory test), is an adequate demonstration that the proposed substation represents an efficient choice of project. Furthermore, the independent technical advice obtained by the Authority concludes that "the premise that there are no viable alternative options to the proposed new substation is essentially sound".[16]

32. On technical efficiency, a demonstration of the efficiency of new facilities investment could include:

- demonstration of the optimal design and construction of the new facility, taking into account forecast demand for covered services and economies of scale and scope;
- demonstration of unit rates of construction with historical unit rates for the covered network and unit rates of similar works in other networks, taking into account trends in productivity and underlying costs; and/or
- demonstration that the procedures of construction planning, contracting and cost control are consistent with minimising costs.

33. The Authority is not satisfied that the design of the proposed substation is consistent with technical efficiency for the project. While Western Power has not provided the Authority with design reports, the limited information provided by Western Power in its pre-approval application and supplementary submission has

[16] Geoff Brown and Associates, p. 5.

been considered by both the Authority and the Authority's technical advisor.[17] On the basis of the information provided, the Authority considers that the design is inconsistent with efficiently minimising costs in several respects as indicated below.

34. First, Western Power is proposing to use 132 kV switchgear and cables even though the substation will be operated at 66 kV, indicating that 132 kV would enable the substation to be upgraded to 132 kV in the future and that 66 kV switchgear is not available with a sufficient fault rating. However, technical advice to the Authority indicates that Western Power has not demonstrated that upgrading the substation to 132 kV is sufficiently planned to justify any material additional expense of 132 kV equipment, and that 66 kV switchgear is available with the required fault rating.

35. Secondly, Western Power is proposing to utilise three incoming lines and three transformers. Technical advice to the Authority indicates that this is not justified by the forecast load for the substation, and that the necessary capability of the substation could be achieved with two incoming lines and two transformers, with the design enabling a third line and transformer to be added at a later time if necessary.

36. Thirdly, the forecast cost assumed by Western Power for environment and land management activities, while reasonable for a green field site, may be excessive given that the proposed substation is to be located adjacent to the existing substation and within an area that has already been developed, and that environmental impact assessments and approvals may be limited in extent, or unnecessary.

37. Taking these matters into account, the obtained advice on potential cost efficiencies able to be achieved for the proposed substation is indicated in the following table.

Table 1 Potential cost efficiencies achievable by Western Power[18]

	$ million
Total project cost estimated by Western Power	**28.37**
Cost saving by reduction in switchgear rating to 66kV	(0.54)
Cost saving by reduction of switchgear configuration to a two-line two transformer configuration	(0.97)
Reduction in cost allowance for environment and land management	(1.00)
Revised project cost	**25.86**

38. The Authority considers that the total forecast cost of $28.4 million exceeds the amount that would be invested by a service provider efficiently minimising costs and therefore does not meet the requirement of section 6.52(a) of the Access Code. On the basis of the information provided by Western Power and on technical advice, the Authority considers that a cost that would be consistent with the requirement of section 6.52(a) would be in the order of $25.9 million.

[17] Geoff Brown and Associates, pp. 6-8, 11, 12.

[18] Geoff Brown and Associates, p. 12.

Incremental Revenue Test

Western Power's Submission

39. Western Power relies on the incremental revenue test and safety and reliability test to demonstrate that part of the new facilities investment satisfies section 6.52(b) of the new facilities investment test. In assessing the proposed substation against the requirements of the tests under section 6.52(b) of the Access Code, Western Power has separately considered the transmission works (substation and line work, with a forecast of $25.8 million) and distribution works (voltage conversion, with a forecast cost of $2.6 million).

40. Under the incremental revenue test, Western Power submits that an amount of $2.55 million will be recovered from Sir Charles Gairdner Hospital as tariff revenue over a 15 year period, and that this revenue is additional revenue made possible from the construction of the new medical centre zone substation. Western Power contends that this amount of $2.55 million satisfies the incremental revenue test under section 6.52(b)(i)A of the Access Code.[19]

Public Submissions

41. No submissions addressed the incremental revenue test.

Considerations of the Authority

42. The Authority has examined Western Power's calculation of incremental revenue of $2.55 million and observes that Western Power has only given consideration to the incremental revenue to be recovered over a 15 year period, which is a substantially shorter period than the expected life of the substation assets, which is in the order of 50 years.

43. Based on the information available and assuming that revenue beyond 15 years is the same as expected by Western Power for year 15, the present value of incremental revenue over longer periods are determined to be $3.92 million for a 25 year period; and $5.11 million for a 50 year period.

44. The Authority considers that it is reasonable to consider incremental revenue over a longer period than that undertaken by Western Power, given a likelihood that Sir Charles Gairdner Hospital will continue to operate for many decades.

Net Benefits Test

Western Power's Submission

45. Western Power does not seek to rely on the net benefits test of section 6.52(b)(ii) of the Access Code, although it does make mention of various benefits that arise from the proposed $2.6 million investment in distribution works.

[19] Pre approval application, p. 6; Supplementary submission, p. 5.

Public Submissions

46. No submissions addressed the net benefits test.

Considerations of the Authority

47. While Western Power does not rely on the net benefits test of section 6.52(b)(ii) of the Access Code to support its claims that $18.7 million of the total new facilities investment in the proposed substation meets the new facilities investment test, it does state a number of benefits that arise as a result of the $2.6 million investment in distribution works that would fall within the scope of net benefits to be considered under section 6.52(b)(ii) of the Access Code.

48. Western Power states that the conversion of the distribution network from 6.6 kV to 11 kV, to which the Medical Centre substation will be connected, will allow for other major network reinforcements to be deferred, including a new and upgraded substation at the University of Western Australia. Western Power claims that a five-year deferral of a $20 million investment in the University substation has a present value benefit of $3.5 million.[20] Western Power also claims that further benefits would arise from the investment in upgrading the distribution system, including lower line losses; higher load supplies; less operational constraints; and a more reliable supply.

Safety and Reliability Test

Western Power's Submission

49. As mentioned, Western Power relies on the safety and reliability, and incremental revenue tests to demonstrate that part of the new facilities investment satisfies section 6.52(b) of the new facilities investment test, and in assessing the proposed substation against the requirements of the tests Western Power has separately considered the transmission works and distribution works.

50. For the transmission works, Western Power submits that replacement and upgrade of the existing substation is required by 2020, for the replacement of ageing equipment and to meet general load growth. Western Power contends that this upgrade, when it becomes necessary, would meet the safety and reliability test, as the upgrade would be necessary to maintain the safety and reliability of supply for customers in the vicinity of the substation. The requirement for the upgrade in 2010 is bought about by increased energy demand from the hospital expansion. As the additional demand from the hospital causes the investment to be bought forward in time, Western Power submits the amount that meets the safety and reliability test is the total cost of the investment adjusted for the time value of money in bringing the expenditure forward from 2020 to 2010.[21]

51. The total forecast new facilities investment for the transmission works is $25.8 million. Western Power submits that, of this, $13.55 million meets the safety and reliability test under section 6.52(b)(iii) of the Access Code, which is approximately equal to the total value of $25.8 million discounted over 10 years at a

[20] Pre-approval application, p. 6.

[21] Pre-approval application, pp. 5, 6.

real discount rate of 6.76 per cent to a present value in 2010. The residual value of transmission works ($12.25 million) is the 'brought forward' cost that is attributed directly to the hospital as a result of its expansion works.[22]

52. For the distribution works, Western Power submits that the $2.6 million of works "provides improved reliability and the ability to provide covered services to customers in areas supported by the Medical Centre substation, Nedlands substation and University of Western Australia substation".[23] Western Power further submits that the existing 6.6 kV network cannot support expected load growth over the next decade for these areas, and that work has commenced to upgrade the Nedlands substation to 11 kV. By upgrading the distribution network to 11 kV, on which the Medical Centre will be connected, load can be transferred between all three substations to support load growth and maintain safety and reliability of supply for customers in these areas.

53. Western Power states that the conversion of the distribution network has been brought forward as a result of the hospital expansion works and that the distribution works could be allocated directly to Sir Charles Gairdner Hospital, however, Western Power believes that there are other benefits from bringing forward the works, including a delay to the voltage conversion of the University substation by up to five years, with potential savings of $1.3 million per annum.[24]

54. Western Power accordingly submits that the entire amount of proposed investment, in the distribution works component of the proposed substation ($2.6 million), meets the safety and reliability test of section 6.52(b)(iii) of the Access Code.

Public Submissions

55. Alinta Sales submits that the cost of replacing the existing medical centre zone substation with a similar rated substation, as a result of the substation having reached the end of its useful life, would pass the safety and reliability test on the basis that investment in a new substation should be considered to pass the safety and reliability test if:

- the substation has reached the end of its useful life and needs replacing; and
- electricity demand in the region supplied by the substation has increased beyond its existing capacity.

56. Alinta Sales submits that the safety and reliability test should accommodate investment necessary for increases in load regardless of whether the increase in load arises from many electricity consumers, or a single electricity consumer, and accordingly, the necessity for the investment in the new substation to service additional load at the Medical Centre is sufficient reason to find that the new facilities investment satisfies the safety and reliability test.

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[22] Supplementary submission, pp. 4, 5. Western Power was subsequently advised of an observation that $3.3 million of first stage costs in the discounted cash flow analysis in its capital contribution model had been excluded. Western Power noted this observation and revised the 'brought forward' cost attributed to Sir Charles Gairdner Hospital to $14.43 million.

[23] Pre-approval application, p. 6.

[24] Supplementary submission, p. 6.

Considerations of the Authority

57. The Authority and its technical advisor have examined Western Power's contention that, in the absence of increasing load for the Medical Centre, the substation would be replaced and upgraded over the period 2020 to 2024. The Authority observes that this would imply an age of the primary transformer assets of the substation, at the time of replacement, of 64 years, which is some 15 years greater than the economic lives assumed for regulatory purposes and contrary to an asset replacement plan to replace the transformers by 2015/16.[25]

58. The Authority also observes that the method applied by Western Power to determine the amount of investment that passes the safety and reliability test is very sensitive to the assumed time of asset replacement in the absence of increasing load of the Medical Centre. If asset replacement is assumed to be undertaken in 2016 (consistent with Western Power's asset replacement plan for the transformers), the method applied by Western Power indicates an amount of approximately $16.3 million satisfying the safety and reliability test.

59. In its submission made subsequent to the Authority's Issues Paper, Alinta Sales submits that the number of users with increasing load that trigger an augmentation should not be used as a basis to determine whether an augmentation satisfies the safety and reliability test. Where an augmentation of the network is made for the purposes of only one or a few network users or loads, the Authority considers that consistency with the Code objective[26] would best be ensured by giving attention to the implications of the augmentation for the broader network and set of users separate from the new user or load and, in effect, requiring the new user to meet the cost of the augmentation to the extent that benefits accrue only to the new user.

60. Conversely, where an augmentation of the network is made for the purposes of meeting demand for services from a large number of network users or loads, cases may arise where reliance on the incremental revenue test would lead to outcomes where efficient investments are not made, which would be inconsistent with the Code objective, and attention is better given to the net benefits test in combination with the safety and reliability test.

61. Furthermore, there may be some projects that do not match these opposite examples. For these projects, the Authority considers that an appropriate application of the new facilities investment test, consistent with the Code objective, needs to be considered on a case-by-case basis.

Total Satisfying the New Facilities Investment Test

62. On the basis of the above consideration of the elements of the new facilities investment test, the Authority has determined, from available information, that an amount up to $24.9 million may satisfy the new facilities investment test (see Table 2 below). This value may be higher given a range of unquantified benefits cited by Western Power that may fall within the scope of net benefits under section 6.52(b)(ii) of the Access Code.

[25] Geoff Brown and Associates, p. 9.

[26] In particular the objective of promoting efficient investment in networks and network services.

Table 2 Assessment of amounts of new facilities investment satisfying the new facilities investment test ($ million)*

	Western Power's Application	Authority's Assessment
Section 6.52(a) – efficiency test	**28.37**	**25.86**
Section 6.52(b) – 'other tests'		
Incremental revenue test (section 6.52(b)(i)A)	2.55	Up to 5.11
Net benefits test (section 6.52(b)(ii))	0	Circa 3.5
Safety and reliability test (section 6.52(b)(iii))	16.15	16.32
Sub-total of Section 6.52(b)	**18.7**	**Up to 24.9**
Total satisfying the new facilities investment test	**18.7**	**Up to 24.9**

* For the new facilities investment test to be satisfied, the new facilities investment must satisfy the efficiency test (section 6.52(a)) and one or more of the 'other tests' in section 6.52(b).