Determination: Allowable Revenue and Forecast Capital Expenditure for System Management

2013/14 to 2015/16

March 2013

Economic Regulation Authority

WESTERN AUSTRALIA

Economic Regulation Authority
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Disclaimer

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Determination

1. On 30 November 2012, System Management (a segregated business unit of Western Power) submitted to the Economic Regulation Authority (**Authority**) a proposal for System Management's Allowable Revenue and Forecast Capital Expenditure (**proposal**) for the period 2013/14 to 2015/16 (**third review period**).[1] The proposal was submitted in accordance with the requirements of clause 2.23.3 of the *Wholesale Electricity Market Rules* (**Market Rules**) under which the Authority is required to periodically determine the Allowable Revenue and Forecast Capital Expenditure of System Management for periods of three years duration.

2. System Management's submission is available on the Authority's website.[2]

3. On 20 December 2012, the Authority issued a notice inviting submissions on the proposed Allowable Revenue and an issues paper to assist interested parties in understanding and making submissions on the proposal. Six submissions were received, including one from System Management. All submissions received have been published on the ERA's website.

4. In making its determination, the Authority has taken into account the matters set out in clause 2.23.12 of the Market Rules.

5. The Authority has determined that System Management's Allowable Revenue should be less than the amounts proposed by System Management. The Authority has also determined that Forecast Capital Expenditure should be less than the proposed Forecast Capital Expenditure.

6. The Authority has retained the previous practice of determining Allowable Revenue in nominal terms. Any under or over spends should continue to be managed via the annual budgeting process which is approved by the Minister.

7. The values of Allowable Revenue and Forecast Capital Expenditure proposed by System Management (restated in nominal terms for comparison purposes) and the values determined by the Authority are shown in Table 1.

[1] System Management, 30 November 2012, ERA Submission Proposal for Allowable Revenue and Forecast Capital Expenditure 1 July 2013 to 30 June 2016. The "first review period" was the three year period 2007/08 to 2009/10 and was the subject of determination of allowable revenue by the Authority in March 2007 (Economic Regulation Authority, 30 March 2007, Allowable Revenue Determination- System Management) and the "second review period" was the three year period 2010/11 to 2012/13 and was the subject of determination of allowable revenue by the Authority in March 2010 (Economic Regulation Authority, 30 March 2010, Allowable Revenue Determination - System Management).

[2] ERA website, System Management – ERA Submission Proposal for Allowable Revenue and Forecast Capital Expenditure 1 July 2013 to 30 June 2016, http://www.erawa.com.au/markets/electricity-markets/determination-of-the-imo-and-system-management-allowable-revenue-and-ancillary-service-parameters/

Table 1 System Management Allowable Revenue - 2013/14 to 2015/16 (nominal $'000)

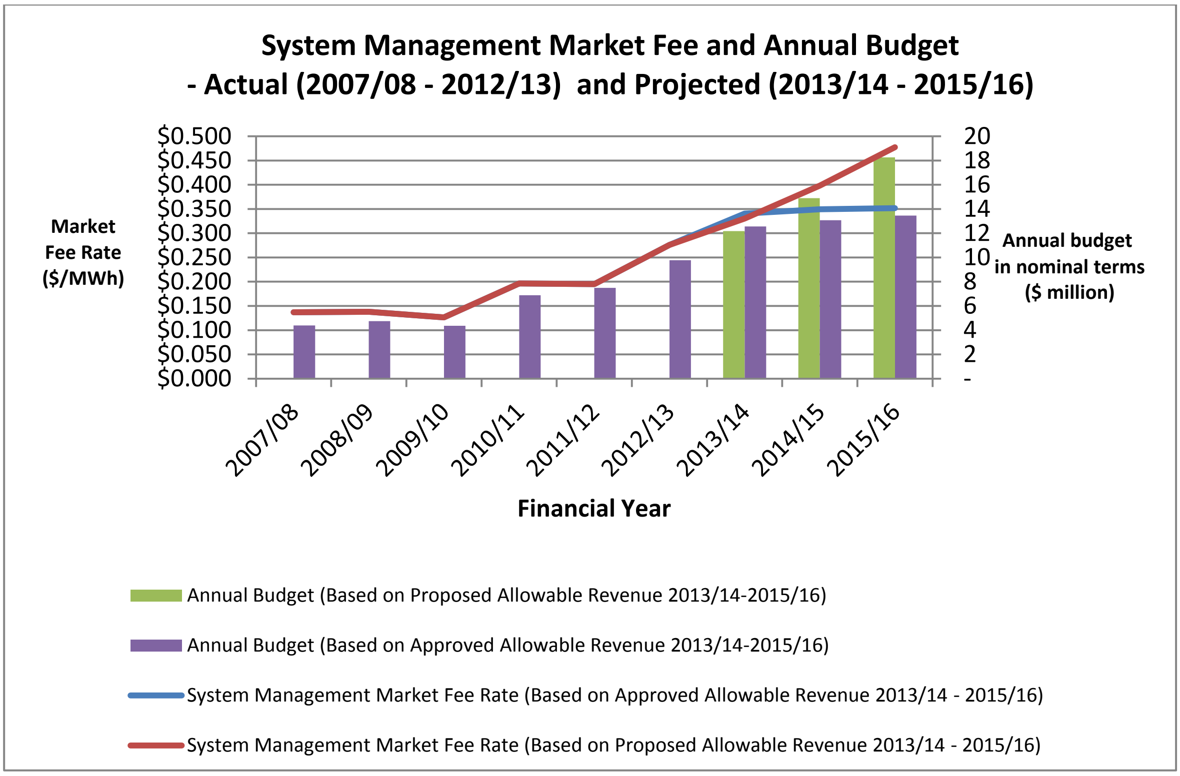
Description	2013/14	2014/15	2015/16	Total
System Management proposal:				
Allowable revenue[3]	12,177	14,901	18,265	45,343
Forecast capital expenditure[4]	2,488	1,859	1,158	5,504
Authority Determination:				
Allowable revenue	12,559	13,200	13,647	39,405
Forecast capital expenditure	2,139	1,333	527	3,999

8. The Authority's determination includes the following amendments:
   - all costs have been calculated in nominal terms;
   - the revenue profile is based on actual costs in each year rather than the smoothed profile proposed by System Management which results in a slightly higher revenue in 2013/14 but lower overall;
   - System Management's calculation of an under recovery of revenue in relation to the First and Second Review Periods has been excluded as the Market Rules require adjustments relating to prior periods to be dealt with during the annual budget process;
   - capital expenditure in relation to uncertain projects has been excluded;
   - asset lives have been adjusted in light of advice from the Authority's technical consultant;
   - borrowing costs in relation to undepreciated capital expenditure have been included but System Management's proposed return on investment has been excluded; and
   - revisions to Allowable Revenue have resulted in forecast taxation costs of nil.

9. Forecast Market Fees based on forecast market supply and demand load set out in the IMO's 2012 Statement of Opportunities are shown in the chart below together with actual charges for earlier years.

3 Based on smoothed revenue (as set out in Table 31 of System Management's proposal) indexed by System Management's forecast CPI of 2.5 per cent per annum.

4 Based on total capital expenditure (as set out in Table 16 of System Management's proposal) indexed by System Management's forecast CPI of 2.5 per cent per annum. During the review minor errors were found in relation to cost escalation calculations. System Management provided revised figures which have been incorporated in the Authority's revised Forecast Capital Expenditure.



10. The reasons for this determination are set out below.

Reasons for the Determination

Legislative Requirements

11. The *Electricity Industry (Wholesale Electricity Market) Regulations 2004* provide for the Market Rules to confer on an entity the function of operating the South West Interconnected System (**SWIS**) in a secure and reliable manner. Clause 2.2.1 of the Market Rules confers this function on the Electricity Networks Corporation (**Western Power**), acting through the segregated business unit known as System Management.

12. Clause 2.2.2 of the Market Rules lists the following further functions of System Management in relation to the Wholesale Electricity Market (**WEM**):

- to procure adequate Ancillary Services where the Electricity Generation Corporation (**Verve Energy**) cannot meet the Ancillary Service Requirements;
- to assist the Independent Market Operator (**IMO**) in the processing of applications for the participation and for the registration, deregistration and transfer of facilities;
- to develop Market Procedures, and amendments and replacements for them, where required by the Market Rules;
- to release information required to be released by the Market Rules;
- to monitor Rule Participants' compliance with the Market Rules relating to dispatch and Power System Security and Power System Reliability; and

- to carry out any other functions or responsibilities conferred, and perform any obligations imposed, on it under the Market Rules.

13. Clause 2.23 of the Market Rules requires the Authority to determine amounts of Allowable Revenue and Forecast Capital Expenditure for System Management to provide services defined in clause 2.23.1 of the Market Rules, being system operation services, including all of System Management's functions and obligations under the Market Rules except for the provision of Ancillary Services.

14. Clause 2.23.3 of the Market Rules establishes the requirements for the Authority's determination of Allowable Revenue and Forecast Capital Expenditure:

    - System Management must submit a proposal for its Allowable Revenue and Forecast Capital Expenditure by 30 November prior to the start of the review period;
    - the Authority must undertake a public consultation process in approving the Allowable Revenue and Forecast Capital Expenditure, which must include publishing an issues paper and issuing an invitation for public submissions; and
    - by 31 March of the year in which the review period commences, the Authority must determine the Allowable Revenue and Forecast Capital Expenditure for the review period.

15. Clause 2.23.12 of the Market Rules sets out the following factors that the Authority must take into account in determining amounts of Allowable Revenue and Forecast Capital Expenditure for System Management:

    - The Allowable Revenue and Forecast Capital Expenditure must be sufficient to cover the forward looking costs of providing the relevant services in accordance with the following principles:
        - Recurring expenditure requirements and payments are recovered in the year of expenditure;
        - Capital expenditures are to be recovered through the depreciation and amortization of the assets acquired by the capital expenditure in a manner that is consistent with generally accepted accounting principles;
        - Costs incurred by System Management that are related to market establishment, as designated by the Minister, are to be recovered over a period determined by the Minister from "energy market commencement"; and
        - Notwithstanding paragraphs (i), (ii) and (iii), expenditure incurred and depreciation and amortization charged, in relation to any "Declared Market Project" are to be recovered over the period determined for that Declared Market Project.
    - The Allowable Revenue and Forecast Capital Expenditure must include only costs that would be incurred by a prudent provider of the services, acting efficiently, seeking to achieve the lowest practically sustainable cost of delivering the services in accordance with the Market Rules, while effectively promoting the Wholesale Market Objectives.
    - Where possible, the Authority should benchmark the Allowable Revenue and Forecast Capital Expenditure against the costs of providing similar services in other jurisdictions.

16. The Authority's determination of Allowable Revenue and Forecast Capital Expenditure is one of two external oversight mechanisms provided for in the Market

Rules. The Market Rules requires System Management to prepare an annual budget for the coming financial year and provide the IMO with a copy by 30 April each year. The IMO must review the budget proposal and submit a report containing advice on whether System Management's budget is consistent with the Allowable Revenue and Forecast Capital Expenditure for the Review Period approved by the Economic Regulation Authority, including the reasons why, to the Minister by 31 May each year.

17. Clause 2.23.7 of the Market Rules requires that where the revenue received via System Operation Fees in the previous financial year is greater than or less than System Management's expenditure for that financial year, the current year's budget must take this into account by decreasing the budgeted revenue by the amount of the surplus or adding to the budgeted revenue the amount of any shortfall, as the case may be. This ensures System Management is able to recover its actual costs incurred and does not retain any revenue in excess of that amount.

18. System Management is only required to apply to the Authority to reassess Allowable Revenue if the budget proposal, after taking into account any adjustments under clause 2.23.7 is likely to result in revenue recovery over the relevant Review Period, more than 15 per cent greater than the Allowable Revenue determined by the Authority. As a consequence, an annual budget may vary from the amount forecast in Allowable Revenue by greater than 15 per cent providing the total expenditure over a review period only varies by up to 15 per cent.[5]

19. The budget proposal must be reflected in the Statement of Corporate Intent for Western Power and must be consistent with the segregation of System Management from other business units of Western Power. The IMO must publish the approved budget by 30 June each year.

Proposed Allowable Revenue and Forecast Capital Expenditure

20. System Management has proposed a revised methodology for determining Allowable Revenue which includes:

- establishing a capital base which is indexed for inflation at the beginning of each Review Period and earns a return based on a weighted average cost of capital (**WACC**) using benchmark gearing levels;
- applying a post tax WACC and adding forecast taxation costs to allowable revenue;
- setting allowable revenue in real dollar values (rather than the existing approach which uses nominal values);
- a formula for calculating allowable revenue each financial year which includes a number of adjustment factors for differences in actual revenues, operating costs, capital expenditure and inflation;
- applying the proposed post tax WACC to all adjustments to allowable revenue; and
- smoothing the revenue profile over the review period.

[5] System Management is also required to apply to the Authority to reassess Forecast Capital Expenditure if it changes by more than 10 per cent.

21. System Management's proposed Allowable Revenue and Forecast Capital Expenditure is shown in Table 2.

Table 2 System Management's proposed Allowable Revenue and Forecast Capital Expenditure for the Review Period 2013/14 to 2015/16 ($'000 real at 30 June 2013)

Description	2013/14	2014/15	2015/16	Total
Allowable Revenue	11,880	14,183	16,961	43,024
Forecast Capital Expenditure	2,426.9	1,768.9	1,074.8	5,270.6

22. In its submission to the Authority, System Management presented its proposed allowable revenue as a sum of cost line items, as set out in Table 3.

Table 3 System Management's proposed Allowable Revenue for the third review period (2013/14 to 2015/16) ($'000 real at 30 June 2013)[6]

Description	2013/14	2014/15	2015/16	Present Value
Total Operating Costs	8,270	8,609	8,670	22,466
Depreciation	3,766	4,125	4,387	10,772
Return on investment	814	725	568	1,870
Tax payable	0	544	1,674	1,857
Imputation Credits	0	-136	-418	-464
Forward-looking costs	**12,850**	**13,867**	**14,881**	**36,500**
Adjustments for AR1 & AR2	1,154	0	0	1,082
Allowable revenue (unsmoothed)	**14,004**	**13,867**	**14,881**	**37,582**
Allowable revenue (smoothed)	**11,880**	**14,183**	**16,961**	**37,582**

23. System Management's submission includes a summary description of the forecast costs and their derivation. System Management separately provided the Authority with supporting documentation for the derivation of forecast costs, and responses to additional requests for information. This supporting documentation has not been published by the Authority; however, it is referred to in this determination where relevant.

Public Submissions

24. In accordance with clause 2.22.3(b) of the Market Rules, the Authority undertook public consultation on System Management's proposed allowable revenue, including publishing an issues paper on 20 December 2012 and issuing an invitation for public submissions. The closing date for public submissions was 8 February 2013.

25. Submissions were received from:

- Alinta Energy;

[6] Independent Market Operator, 30 November 2012, ERA Submission Proposal for Allowable Revenue and Forecast Capital Expenditure 1 July 2013 to 30 June 2016, Appendix 2.

- Community Electricity;
- Griffin Power;
- Synergy;
- System Management; and
- WA Independent Power Association.

26. The issues raised in submissions are discussed below.

Approach to Assessment

27. The purpose of the Authority's determination on the Allowable Revenue for System Management is to ensure that only the forward looking costs that would be incurred by a prudent provider who acts efficiently and seeks to achieve the lowest practicably sustainable cost of delivering the services, are allowed for the relevant services provided.

28. As System Management has proposed a revised methodology for setting Allowable Revenue, the Authority has reviewed its proposal to determine whether it ensures the objective set out in paragraph 27 above is met.

29. The process that the Authority has followed in its determination of Allowable Revenue for System Management is to assess the proposals against the costs in the previous two Review Periods, with additional consideration of items of capital expenditures that underlie amounts of depreciation and amortisation in Allowable Revenue.

30. The assessment of the proposals against costs in the previous two Review Periods has been applied to costs of a recurrent nature and involved:

    - establishing base costs from the actual costs incurred by System Management over the previous two Review Periods, corrected for any abnormal or non-recurring costs during the periods;
    - identifying and assessing the changes in costs embodied in the Allowable Revenue proposals that are in the nature of "trend changes", reflecting cost drivers such as an increasing scale of operations and inflation of unit costs; and
    - identifying and assessing the changes in costs embodied in the Allowable Revenue proposals that are in the nature of "step changes", reflecting changes in the nature of activities being undertaken (such as where new functions or activities are assumed), or changes in the manner in which activities are undertaken (such as transfers of certain activities from being undertaken in-house to being undertaken by contractors).

31. For approving the Forecast Capital Expenditure proposed by System Management, the Authority considered actual and Forecast Capital Expenditures over the three Review Periods. The Authority sought further supporting information for capital projects to ensure information is sufficient to demonstrate the expenditures to be consistent with costs that would be incurred by a prudent provider of services, acting efficiently and seeking to achieve the lowest practicably sustainable cost of delivering these services. The Authority also undertook an assessment of whether the amounts of depreciation and amortisation included in the Allowable Revenue have been appropriately determined from capital expenditure.

32. Geoff Brown and Associates (**GBA**) was engaged by the Authority to provide technical advice and assistance to the Authority in assessing the efficiency and appropriateness of System Management's proposed operating and capital expenditure.[7]

Benchmarking

33. Sub-clause 2.23.12(c) of the Market Rules requires the Authority, where possible, to benchmark the Allowable Revenue of System Management against the costs of providing similar services in other jurisdictions.

34. Two submissions made to the Authority commented on the use of benchmarking:

- Griffin Power believes the performance of the IMO and System Management, relative to the cost of providing their services, should be benchmarked to evaluate if the direction the IMO and System Management propose to proceed will result in more efficient and sustainable outcomes and that the net result of projects already implemented has in fact been successful. It considers the Authority could possibly engage consultants in the energy field to identify a similar service for benchmarking or to support an independent finding that none exist.
- The WA Independent Power Association considers that it is important to understand the market cost of electricity traded in WA on a comparable basis with other jurisdictions. It believes such an exercise could be done on a tracking basis at least to see how WA compares from year to year, going back to the start of the market, rather than just as a one-off review.

35. Due to the unique nature of the Western Australian energy market, the Authority notes there are no directly comparable entities to the IMO and System Management in other jurisdictions in terms of scale of operations, the structure of the businesses and the nature of activities.

36. In the first Allowable Revenue review period (2007/08 to 2009/10), the Authority, with the assistance of Stamfords Consultants, sought to undertake a benchmarking study pursuant to the requirements of the Market Rules. However, due to the incompatibility between the services provided by the IMO and System Management, and the service providers in other jurisdictions, no useful conclusion was deduced from the benchmarking study in the first review period.

37. In the second Allowable Review period (2010/11 to 2012/13), the Authority conducted preliminary analysis of the Australian Energy Market Operator's (**AEMO**) costs for providing services as the National Electricity Market's (**NEM**) market and system operator, and also the combined costs of the IMO and System Management as the Wholesale Electricity Market's (**WEM's**) market operator and system operator, respectively.

38. Although the AEMO is not a directly comparable entity to the IMO and System Management, the Authority considers it is useful to compare the AEMO's costs over the period 2007/08 to 2012/13 with the combined costs of the IMO and System Management. As there are differences in the manner in which these costs have been recovered from market participants, it is not possible to directly compare

[7] Geoff Brown and Associates Ltd, Technical Review of Allowable Revenue for System Management for 1 July 2013 to 30 June 2016, 26 March 2013.

market fees between the WEM and the NEM. Table 4 below provides a comparison of unit costs based on customer load.

Table 4 Comparison of Costs with the AEMO

Financial year	Annual Costs		Market customer load forecast		Cost/Customer Load	
	NEM[8]	WEM[9]	NEM	WEM[10]	NEM	WEM
	$ million	$ million	GWh	GWh	$/MWh	$/MWh
2007/08	69.25	14.73	190,561	16,052	0.36	0.92
2008/09	70.05	14.11	195,514	17,200	0.36	0.82
2009/10	73.71	13.52	189,232	17,239	0.39	0.78
2010/11	76.08	17.94	193,083	17,517	0.39	1.02
2011/12	74.14	20.03	190,639	19,185	0.39	1.04
2012/13	72.03	25.30	181,107	17,706	0.40	1.43

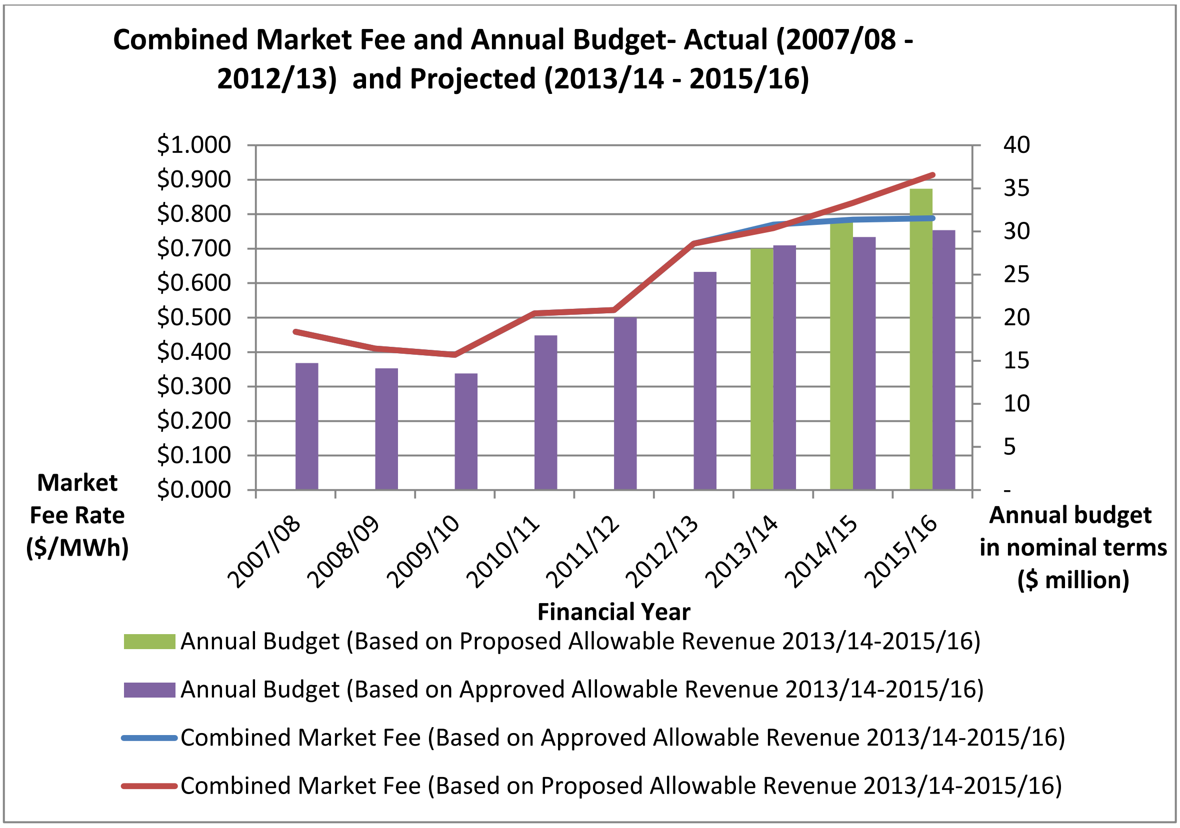
39. As can be seen in Table 4 above, the annual costs of the WEM are considerably less than those in the NEM. However, the unit cost comparison shows the WEM as more expensive than the NEM. It is also noted that the unit rate in relation to the NEM has only increased slightly over the period whilst the unit rate in the WEM has increased substantially. The increase in the WEM unit rate is primarily driven by the substantial changes to the operation of the WEM during this period.

40. The Authority has also calculated projected market fee rates for the review period (2013/14 – 2015/16) using projected market supply and demand load set out in the IMO's 2012 Statement of Opportunities, and the sum of the IMO's and System Management's Allowable Revenue. The results are shown in the chart below. The Market Rules require the fees to be based on spreading the total required revenue over both the total generation and the total consumption of electricity in the market, consequently the Market Fees shown in the chart below are half the unit costs shown in Table 4 above.

8 Includes general fees and allocated fees as set out in the AEMO's annual budgets.

9 Includes the IMO and System Management

10 Based on half the IMO reported forecast of generation and consumption of energy to approximate customer load.



41. The chart illustrates the historical market fee rates for 2007/08 to 2012/13 and projected market fee rates for 2013/14 to 2015/16 proposed by the IMO and System Management. The chart also shows the combined Allowable Revenue for the period 2007/08 to 2015/16.

42. As shown in the chart, there is a substantial uplift in market fee rates from the first review period (2007/08 to 2009/10) to the current review period (2013/14 to 2015/16). This uplift is mainly attributable to costs arising from implementation of the Market Evolution Plan (**MEP**) during the Second Review Period.

43. It should also be noted that forecast energy dropped substantially from 2011/12 to 2012/13 which is a further significant reason for the increase in market fees from 2012/13. Reasons for this included:

- The impact of photovoltaics' load forecast was taken into account in 2012/13 for the first time and was estimated to reduce load by 327 GWh.
- The impact of block loads was forecast to reduce load by 594 GWh, primarily due to revised demand requirements from the Karara and Simcoa sites. Additionally, the Boddington site's demand has not increased in line with previous forecasts.

44. Given that there are no directly comparable entities to the IMO and System Management in other jurisdictions and the substantial changes to the WEM over the last few years make comparisons with earlier years difficult, the Authority does not consider benchmarking can be used at this point in time to assess the efficiency of the IMO's or System Management's costs. However, the analysis above demonstrates that the WEM is becoming increasing costly, both in relation to its own historical costs and to the NEM. The Authority considers this makes it imperative that a robust cost benefit analysis is conducted before committing to any further developments of the WEM. The Authority intends to give further consideration to this matter in its next triennial report to the Minister on the

effectiveness of the WEM pursuant to section 128 of the *Electricity Industry Act 2004*.

Revised Methodology Proposed by System Management

System Management's Proposal

45. As noted above, System Management has proposed a revised methodology for determining allowable revenue which includes:

- establishing a capital base which is indexed for inflation at the beginning of each Review Period and earns a return based on a WACC using benchmark gearing levels;
- applying a post tax WACC and adding forecast taxation costs to allowable revenue;
- setting Allowable Revenue in real dollar values (rather than the existing approach which uses nominal values);
- a formula for calculating allowable revenue each financial year which includes a number of adjustment factors for differences in actual revenues, operating costs, capital expenditure and inflation;
- applying the proposed post tax WACC to all adjustments to allowable revenue; and
- smoothing the revenue profile over the review period.

Public Submissions

46. A number of public submissions raised comments regarding System Management's proposed methodology:

- The WA Independent Power Association notes System Management's adoption of the "building block methodology" and concurs with the Authority's view expressed in the Issues Paper that it is not immediately apparent why this was necessary, particularly in relation to the inclusion of tax payments and return on capital.
- Community Electricity also notes that System Management has not explained why it has proposed changing the approach for calculating Allowable Revenue, including the addition of tax payments and a return on capital employed. It considers that Western Power should only be compensated for "fit-for-purpose costs". It raises concerns that the new proposal for payment of a return on capital is "an attempt to grasp unwarranted funding according to the bidding of its parent".
- Synergy notes that System Management, by including a return on its asset base, has introduced a major change in regard to seeking to make a profit through the supply of non-contestable services required under the Market Rules. Synergy notes that in the previous two Review Periods, Allowable Revenue included only an interest charge on undepreciated capital expenditure and that the IMO has continued to apply this approach. Synergy queries whether the Market Rules contemplate that the costs incurred by System Management in providing the required market operation services can be extended to include a post tax margin or profit. If this is found to be the case, Synergy considers that the determination

of the WACC should reflect System Management's distinct risk profile (which may be different to Western Power's). Synergy also considers allowing System Management to make a profit will marginally increase costs borne by the market for no apparent or observable efficiencies to the market.

- Griffin Power considers it is not unreasonable to claim a return on capital for any component of costs which are not already funded by market participants but notes that System Management used a WACC of 6.66% compared with the Authority's recent decision of 3.6% when assessing Western Power's Access Arrangement. Griffin Power is concerned is that the Authority and System Management are not comparing 'apples with apples' for the forward years 2013/14 to 2015/16.
- The WA Independent Power Association states that there does not seem to be a good argument as to why the WACC should differ from that applied to Western Power as a whole.
- Alinta Energy does not consider it appropriate that System Management receive a return on capital as this may result in a conflict of interest when it comes to advising on the benefits of capital expenditures. Alinta Energy expresses that it is unaware of any other system operators that receive an allowance for returns on investment in Australia. Alinta Energy also states that if the Authority considers System Management should receive a return on capital, it is not appropriate for System Management to apply a WACC of 6.6% given the Authority's application of a WACC of 3.6% in Western Power's recent Access Arrangement decision; and the IMO's application of a WACC of 5.95% for determining the Maximum Reserve Capacity price for the 2015/16 Capacity Year (which was approved by the Authority).

47. System Management's submission to the public consultation notes that the regulatory framework requires that the Allowable Revenue recovers the costs of providing system operation services, and that the Authority recognises that there is a financing cost to System Management of undertaking capital projects as it included financing costs in the second Allowable Revenue determination. System Management considers the Authority's second Allowable Revenue decision assumed the capital program was 100% debt funded. System Management notes that it is not 100% debt funded, and that capital investment during the third Allowable Revenue period will be funded via a mix of debt and equity. System Management considers that Western Power will have a disincentive to invest in System Management functions if not provided with an appropriate cost of capital allowance. Further, as System Management is not 100% debt funded, Western Power would incur the difference between System Management's financing costs and the interest costs provided for by the Authority.

Authority's Considerations

48. The methodology proposed by System Management is similar to the building block approach often used by regulators to determine target revenue for service providers operating under an incentive based regulatory regime. Such an approach is typically used in situations where there is no competitive market, such as is the case with monopoly network providers, and prices are required to be regulated. The broad objective of such a mechanism is, in the absence of competition, to incentivise service providers to increase efficiencies by enabling them to retain a portion of the benefits arising thus eventually leading to lower costs for consumers.

49. Under the building block incentive based regime, the return on investment ensures the service provider is able to raise sufficient capital (via a combination of debt and equity) to fund investment. Typically returns are based on benchmark gearing levels (rather than actual) to provide incentives for service providers to adopt efficient financing strategies.

50. Use of the building block approach, in particular in relation to providing a return on investment, is appropriate for setting target revenue in circumstances where the regulator is substituting for competitive market forces and seeking to ensure prices are set efficiently.

51. For example, the price control requirements for Western Power as network service provider set out in the *Electricity Networks Access Code 2004* states that the price control must give the service provider an opportunity to earn target revenue which meets the forward-looking and efficient costs including a return on investment commensurate with the commercial risks involved. The price control is also required to include an incentive mechanism to the extent necessary to reward the service provider for efficiency gains and innovation, along with a number of other incentive mechanisms.

52. As outlined above, the *Electricity Industry (Wholesale Electricity Market) Regulations 2004* provide for the Market Rules to confer on an entity the function of operating the SWIS in a secure and reliable manner. Clause 2.2.1 of the Market Rules confers this function on the Electricity Networks Corporation (Western Power), acting through the segregated business unit known as System Management.

53. Clause 2.23.12 of the Market Rules states that allowable revenue must be sufficient to cover System Management's forward looking costs for performing its functions and obligations under the Market Rules. The clause further states that recurring expenditure requirements and payments should be recovered in the year of expenditure whereas capital expenditure should be recovered through the depreciation and amortisation of the assets acquired by the capital expenditure in a manner that is consistent with generally accepted accounting principles. No mention is made of a return on investment or any element of profit.

54. System Management is required by legislation to operate the SWIS in a secure and reliable manner and is also entitled under legislation to recover its costs for doing so. Accordingly, the Authority is of the view that the purpose of the Allowable Revenue determination is akin to a cost recovery mechanism. As such, whilst it is legitimate for it to recover any borrowing costs in relation to capital expenditure which is yet to be recovered via depreciation charges, it is not entitled to make a profit in relation to providing this service and, therefore, should not earn a return on equity. The Authority notes this is in line with the arrangements in respect to the IMO and the AEMO which only recover actual borrowing costs.

55. In relation to System Management's view that it will have a disincentive to invest if not provided with an appropriate cost of capital, the Authority notes that Western Power's ring fencing standard which defines the requirements under which the ring fencing of System Management from the remainder of Western Power can be administered, states that the cost of funding and cash flow management is dealt with by appropriately allocating interest between the separately regulated financial statements. No mention, and nor should there be, is made in relation to attributing dividend payments to System Management.

56. The Authority notes System Management's proposal to include taxation costs in allowable revenue. Whilst it disagrees with System Management's reasoning for this (i.e. that Allowable Revenue should include a return on equity including an element for taxation costs on that return), the Authority accepts that any legitimate taxation costs arising solely from System Management's operations should be passed on to Market Participants. The Authority has considered this further in paragraphs 127 to129 below.

57. System Management has proposed setting allowable revenue in real dollar values and including a formula to index the amount by CPI each year. Under the current methodology, Allowable Revenue is set in nominal values. As described above in paragraph 16, the Market Rules require System Management to prepare annual budgets which are used to set System Operation Fees. System Management is only required to apply to the Authority to reassess Allowable Revenue if the budget proposal is likely to result in revenue recovery over the relevant Review Period, more than 15 per cent greater than the Allowable Revenue determined by the Authority. The Authority considers a tolerance factor of 15 per cent is more than adequate to cover any expenditure variations in relation to changes in CPI. Furthermore, setting Allowable Revenue in real terms and using a formula to index costs each year duplicates what is already covered by the annual budget process.

58. System Management has proposed using a formula for calculating Allowable Revenue each financial year which includes a number of adjustment factors for differences in actual revenues, operating costs, capital expenditure and inflation. It also proposes applying its assessment of post tax WACC to any such adjustments to "hold System Management and users financially neutral for differences between forecasts and actuals" by taking account of the effects of actual inflation and the time value of money as reflected by its assessment of its WACC.

59. As described in paragraph 17 above, clause 2.23.7 of the Market Rules requires that where the revenue received via System Operation Fees in the previous financial year is greater than or less than System Management's expenditure for that financial year, the current year's budget must take this into account by decreasing the budgeted revenue by the amount of the surplus or adding to the budgeted revenue the amount of any shortfall, as the case may be. The Market Rules do not provide for any financing adjustments in relation to inflation or time value of money.

60. Similar to the view it has taken in relation to setting allowable revenue in real dollar values, the Authority considers the tolerance factor of 15 per cent allowed for in the annual budgeting process is more than adequate to cover any variances between forecast and actual expenditure. Furthermore, setting Allowable Revenue in real terms and using a formula to index costs each year duplicates what is already covered by the annual budget process. The Authority also notes the Market Rules do not contemplate financing adjustments in relation to inflation or time value of money during a review period. As such adjustments do not form part of forward looking costs, the Authority does not consider such matters fall within the approval process for Allowable Revenue.

61. Generally the Authority considers System Management's proposed new methodology adds unnecessary complication and is inappropriate for what is, essentially, a cost recovery mechanism. It also mixes the processes of determining allowable revenue and adjusting for actual expenditure which the Market Rules currently treat as two distinct processes requiring approval by different parties (i.e. the Authority approves forward looking costs in Allowable Revenue and the Minister

approves annual revenue budgets including adjustments for variances between forecast and actual expenditure.) The Authority also notes that the provisions in the Market Rules in relation to budgets and fees are identical for both the IMO and System Management. Consequently, the Authority considers the methodology used by the IMO and System Management should be consistent.

62. The decision which the Authority is required to make relates to ensuring Allowable Revenue is sufficient to meet forward looking costs. The Market Rules provide for adjustments in relation to actual expenditure to be dealt with in the annual budgeting process which falls outside the scope of the Authority's decision. The Authority considers that, if the current process for determining annual budgets, including adjustments in relation to variations between forecast and actual, is causing difficulties for System Management then it should propose a Rule Change to address such difficulties.

63. For the reasons outlined above, the Authority has determined Allowable Revenue for the Third Review Period in nominal dollar values, consistent with previous determinations and has not included a return on assets, other than borrowing costs in relation to undepreciated capital expenditure, or adjustment factors in relation to variations between forecast and actual expenditure.

Costs of the First and Second Review Period

64. A key issue for the Authority to consider is the extent to which costs for previous review periods can be used as a base for determining allowable revenue and forecast capital expenditure for the third review period.

65. Annual figures for allowable revenue and actual expenditure are shown in Table 5 and Table 6 respectively. The variances between approved Allowable Revenue and actual costs for the first and second review periods are set out in Table 7.

Table 5 System Management approved Allowable Revenue for the first and second review periods (nominal $'000)

Description	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Labour	2,890	3,063	3,247	3,691	3,877	4,149
Functional Costs	350	300	320	486	526	556
Legal Costs	300	330	363	375	385	400
Insurance Costs	100	100	100	0	0	0
IT Operating Costs[11]	100	110	120	715	1,045	1,102
Total operating expenditure	**3,740**	**3,903**	**4,150**	**5,267**	**5,833**	**6,207**
Depreciation	652	908	1,062	1,253	1,193	1,249
Borrowing Costs	0	0	0	48	96	74
Total Expenditure	**4,392**	**4,811**	**5,212**	**6,568**	**7,122**	**7,529**

[11] Incorporates amounts relating to windfarm forecasting, dispatch decision support simulator and dispatch training simulator.

Table 6 System Management actual costs for the first and second review periods (nominal $'000)[12]

Description	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13 (f/cast)
Labour	2,130	3,034	3,023	3,446	3,635	4,119
Functional Costs	344	476	782	686	853	1,572
Legal Costs	292	339	192	182	133	200
Insurance Costs	165	165	200	-	-	-
IT Operating Costs	105	98	42	271	398	177
Business Support Costs	-	-	-	-	-	916
Windfarm Forecasting Software Tool	-	-	-	-	77	-
Dispatch Decision Support Simulator	-	-	-	-	118	60
Dispatch Training Simulator	-	-	-	-	-	321
SMARTS	-	-	-	402	1,109	912
Total operating expenditure	**3,036**	**4,112**	**4,239**	**4,986**	**6,323**	**8,277**
Depreciation	652	972	527	518	340	1,121[13]
Borrowing Costs	-	-	-	-	25	74
Total Expenditure	**3,688**	**5,084**	**4,766**	**5,504**	**6,688**	**9,472**

[12] Actual operating expenditure and borrowing costs are based on information provided by System Management. System Management has also provided reconciliations of total operating expenditure with the annual Regulatory Financial Statements for 2010/11 and 2011/12. Depreciation for the years 2009/10 to 2011/12 has been extracted from the annual Regulatory Financial Statements. Prior to this, System Management (Markets) was not separately identified in the Regulatory Financial Statements, so depreciation has been derived from the annual budget papers submitted to the IMO.

[13] Based on information provided by System Management during the review.

Table 7 System Management variance between approved allowable revenue and actual costs for the first and second review periods (nominal $'000)

Description	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Labour	(760)	(29)	(224)	(245)	(242)	(30)
Functional Costs	(6)	176	462	200	327	1,016
Legal Costs	(8)	9	(171)	(193)	(252)	(200)
Insurance Costs	65	65	100	-	-	-
IT Operating Costs	5	(12)	(78)	(444)	(647)	(925)
Business Support Costs	-	-	-	-	-	916
Windfarm Forecasting Software Tool	-	-	-	-	77	-
Dispatch Decision Support Simulator	-	-	-	-	118	60
Dispatch Training Simulator						321
SMARTS				402	1,109	912
Total operating expenditure	**(704)**	**209**	**89**	**(281)**	**490**	**2,070**
Depreciation	-	64	(535)	(735)	(853)	(128)
Borrowing Costs	-	-	-	(48)	(71)	-
Total Expenditure	**(704)**	**273**	**(446)**	**(1,063)**	**(434)**	**1,943**
% variance from approved allowable revenue	**(16%)**	**5.7%**	**(8.6%)**	**(16.2%)**	**(6%)**	**25.8%**
Cumulative % variance from approved allowable revenue	**(16%)**	**(4.7%)**	**(6.1%)**	**(9.2%)**	**(8.4%)**	**(1.2%)**

66. As can be seen in Table 7 above, the actual expenditure incurred by System Management has generally been lower than the amounts approved by the Authority. Expenditure in 2012/13 is forecast to be 25.8 per cent greater than Approved Revenue; this is offset by underspends in earlier years which results in the cumulative variance remaining below 15 per cent and therefore not requiring System Management to apply to the Authority to reassess Allowable Revenue.

67. System Management has provided detailed information in its proposal explaining the variations from Approved Allowable Revenue. Taking account of this information and the advice provided by its technical consultant, the Authority is satisfied that the 2011/12 costs provide a reasonable base for the purposes of forecasting future costs.

Costs of the Third Review Period

Segregation from Western Power and Budgeting Processes

68. In its decision on the second review period, the Authority formed the view that there were significant deficiencies in accounting arrangements for segregating System Management from the remainder of Western Power's business. In particular, the Authority noted:

- To the extent of developing System Management's proposed allowable revenue, there was a lack of evidence of accounting separation between System Management and the remainder of Western Power's business.
- For some of Western Power's overhead costs (accommodation costs and corporate overheads), there was no transparent allocation of cost to System Management, thereby reducing the transparency of costing of System Management's activities and the recovery of those costs from Market Participants.
- There did not appear to be a rigorous process for jointly forecasting costs for System Management and the larger Western Power business, and for allocating costs to System Management. It was found that System Management had included an allocation of costs from the insurance costs of Western Power, despite Western Power recovering the full amount of costs through network tariffs under the terms of the access arrangement for the Western Power Network.

69. The Authority also took the view that there were substantial deficiencies in the budgeting processes applied by System Management in developing its proposed allowable revenue and made the following general observations:

- System Management did not appear to have any rigorous internal processes of scrutiny and approval of the forecasts of costs underlying the proposed Allowable Revenue, but rather appeared to rely on the Authority to undertake this role; and
- Some supporting information requested by the Authority and subsequently supplied by System Management appeared to have only been developed in response to the Authority's request for information and after submission of the proposed allowable revenue, indicating a lack of rigour in System Management's assessment of Allowable Revenue.

70. In view of the deficiencies in accounting separation, transparent cost allocation and budgeting processes, the Authority at the last review was unable to rely on a presumption of a robust and transparent budgeting process in assessing the proposed Allowable Revenue.

71. The current proposal (which was submitted by the General Manager of System Management) notes that it is important to differentiate between System Management and System Management (Markets). It notes that System Management is the division of Western Power that has the function of operating the SWIS in a secure and reliable manner and that System Management (Markets) sits within the System Management Division with responsibility under the Market Rules clause 2.23.1(a) for the provision of system operation services under the Market Rules.

72. The proposal states that System Management (Markets) operates within a ring-fence that was established under chapter 13 of the *Electricity Networks Access Code* (2004) and notes that the intention of the ring-fence is twofold. Firstly, System Management (Markets) must ensure that the broader Western Power business, as owner of the Western Power Network, is treated on an arms-length basis. Secondly, Western Power must ensure that there is appropriate cost allocation between System Management (Markets) and the broader Western Power business.

73. In its report to the Authority, GBA suggests that the Market Rules lack clarity as to the extent to which System Management (Markets) should be segregated from

Western Power, the ring fencing arrangements that should apply and how shared overhead costs should be allocated to the segregated business unit.

74. The Authority notes that the entity "System Management (Markets)" is not explicitly referred to in the *Electricity Industry (Wholesale Electricity Market) Regulations 2004* or the Market Rules which refer only to "System Management" which is defined in the Market Rules as being a segregated business unit of Western Power Corporation responsible for dispatching the power system.

75. In the absence of specific guidance in the Market Rules, the Authority considers the current arrangements adopted by Western Power are practicable. The Authority notes that following the last Allowable Revenue review, Western Power has developed a Ring Fencing Standard, Ring Fencing Procedures and a Cost and Revenue Allocation Method (CRAM). In the absence of specific guidance in the Market Rules regarding the extent to which System Management should be segregated and how shared overhead costs should be allocated, the Authority considers the policies and processes set out in Western Power's Ring Fencing Standard, Ring Fencing Procedures and CRAM are reasonable and result in a significant improvement in accounting separation, transparency of cost allocations and budgeting processes.

76. The proposal notes that System Management (Markets) has two market participant registrations under the Market Rules:

- SM - System Management
- SMNTP - System Management Non Trading

77. SMNTP acts as an intermediary between Simcoa and the IMO. Simcoa provides a spinning reserve service to the market. System Management (Markets) pays Simcoa for this service and recovers the cost directly from the IMO through the SMNTP.

78. The proposal notes that the costs and revenue associated with SMNTP have not been included in the Allowable Revenue submission as they are subject to a separate approvals process. However, the submission notes, Western Power's regulatory financial statements include the costs and revenue for SMNTP within the System Management (Markets) category. Consequently, the amounts reported in the annual regulatory financial statements are not consistent with the actual expenditure incurred in relation to Allowable Revenue. The Authority considers it would be more transparent if the regulatory financial statements reported SMNTP separately from System Management (Markets).

Governance

79. The Authority requested GBA to undertake a review of System Management's governance framework. GBA reviewed the policies that System Management uses to:

- set expenditure budgets and develop annual operating plans;
- formulate new projects and programs and approve them for implementation;
- control the actual cost of approved projects and programs; and
- forecast its capital and operating expenditure requirements for the third review period.

80. GBA examined key projects and programs, taken from those implemented during the second review period and those proposed for the third review period to evaluate how well governance principles have been applied in practice. GBA gave particular consideration to:

- the alignment of the policies, procedures and processes for the management of expenditure with System Management's overall business objectives;
- the extent to which System Management's policies and procedures are consistent with good practice; and
- the extent to which System Management's policies and procedures are implemented in practice.

81. The review by GBA also took account of the requirements set out in the Market Rules in relation to expenditure approvals, budget processes and reporting requirements.

82. GBA considers that System Management has sound procedures, processes and practices in place to manage its budget expenditure. However, GBA notes that System Management does not appear to have a formal IT Strategy document setting out the strategic objectives of its IT investment. Whilst recognising that it is clear from the detail included with its tactical projects that System Management has an IT strategy moving forward, GBA considers a formal documented strategy would provide transparency and improve the overall governance of System Management's IT investments. In relation to the management of IT projects, GBA considers Western Power's Improvement Portfolio Governance Model (IPGM) provides a good framework for improved and efficient investment outcomes.

83. In summary, GBA considers System Management is subject to a governance framework which is reasonably robust in terms of external budget preparation and reporting processes.

Recurrent Costs

84. The annual costs proposed by System Management for the Third Review Period are set out in Table 8 below with a comparison against expenditure during the second review period.

Table 8 System Management proposed operating expenditure for the third review period compared with actual costs for the second review period (nominal $'000)

Description	Second Review Period			Third Review Period		
	2010/11 (actual)	2011/12 (actual)	2012/13 (f/cast)	2013/14 (f/cast)	2014/15 (f/cast)	2015/16 (f/cast)
Labour	3,445.6	3634.6	4,118.6	5,371.1	5,637.5	5,781.8
Functional Costs	685.7	852.7	1,571.7	810.8	1,033.5	1,080.5
Legal Costs	182.0	132.7	200.0	205.0	210.1	215.4
Insurance Costs	0	0	0	395.9	405.8	415.9
Business Support	0	0	916.0	574.1	610.7	666.6
IT Operating Costs	672.5	1,702.0	1,469.8	1,119.5	1,147.5	1,176.2
Total operating expenditure	**4,985.8**	**6,322.0**	**8,276.1**	**8,476.4**	**9,045.2**	**9,341.9**
Overall % change		**26.8%**	**30.9%**	**2.4%**	**6.7%**	**3.2%**

85. Operating expenditure has increased significantly over the Second Review Period and is forecast to increase further during the Third Review Period, particularly in 2013/14. Most of this is due to the implementation of the Market Evolution Program (MEP), which commenced in 2010 following the 2009 market participant endorsed Market Rules Evolution Plan and the Government commissioned Verve Energy review. This led to the introduction of new balancing and load following ancillary service (**LFAS**) markets which allow market participants to bid for generation dispatch in near real time and allow market participants other than Verve Energy to provide balancing and load following services. To facilitate these new markets, System Management has been required to make substantial changes to its operations and IT systems and has implemented its new System Management automated real time systems (SMARTS) during the Second Review Period. As the need for this investment arose subsequent to the Authority's approval of Allowable Revenue for the Second Review Period, the Authority had no involvement in approving the expenditure and no provision was included in forecast expenditure for the Second Review Period.

86. Introducing the MEP and developing SMARTS will continue to impact on expenditure during the Third Review Period as a result of the increase in the scope and scale of System Management's activities and the recovery of capital expenditure incurred during the Second Review Period.

87. A number of submissions commented on forecast expenditure. Griffin Power, Alinta Energy and the WA Independent Power Association consider that more work needs to be done in terms of cost benefit analysis and justification of further developments:

- Griffin Power has concerns that the improvements made by the IMO and System Management are not being adequately evaluated to determine the success in delivering net benefits to the market and compared against any forecast cost-benefit analysis to determine their effectiveness. It considers that this needs to be done before commencing further development and to support any further claims for related costs.
- Alinta Energy notes that further market design developments planned to occur during the next three years are likely to lead to further increases in fees. Alinta Energy considers that only those costs which are outweighed by a significant

benefit to the market should be incurred and that an overarching review of the WEM should be undertaken to ensure an effective market design that does not result in unnecessary costs and provides appropriate investment signals. Alinta Energy also supports post-project implementation review to be conducted to ensure that the anticipated benefits have been realised for industry following the commencement of initiatives such as the balancing market.

88. Whilst the Authority notes these are valid issues, cost benefit analysis of the design of the wholesale market is not a matter for this decision. For the purposes of this decision, the Authority is required to determine whether the IMO's forecast costs for delivering the services it is required to provide are efficient. The Authority intends to give further consideration to the efficiency of the design of the energy market in its next triennial report to the Minister on the effectiveness of the WEM pursuant to section 128 of the *Electricity Industry Act 2004*.

89. Griffin Power and Synergy consider that the investment in new systems should eventually lead to lower costs going forward:

- Griffin Power raises concerns that the Allowable Revenue requested in 2015/16 is 42 per cent higher than the 2013/14 period and considers that, if this is attributable to the implementation of systems and process in relation to the MEP, costs should be reducing by 2015/16 rather than increasing. Griffin anticipates that automated systems should require less operational expense going forward, rather than more.
- Community Electricity notes that System Management has proposed costs of $1.2 million in relation to insurance costs compared with zero insurance costs in the current Review Period.

90. Community Electricity considers that when assessing Allowable Revenue it should be born in mind that the "respective costs are an infinitesimal proportion of the total cost of supply to an end-user, and a very small proportion of the net reductions achieved via the two new markets". Community Electricity considers it is important that the costs of the new responsibilities should be properly funded with an emphasis on encouraging fit-for-purpose innovation, rather than impeding it through "penny pinching".

91. In forecasting recurrent costs for the Third Review Period, System Management states it has:

- used actual 2011/12 costs as the efficient base year;
- removed non-recurring 2011/12 costs;
- adjusted for relevant step changes related to known future changes in practices, functions, obligations and the operating environment as identified through the 2012/13 budget process; and
- applied input cost escalation to adjust for movements in the market price of labour.

92. GBA has reviewed this process in detail and notes that the calculations and assumptions underlying the forecasts are well documented and appear reasonable to the extent that it can offer an opinion on certain specialist areas. Each of the expenditure categories is discussed below.

Labour Costs

93. System Management's forecast of labour costs provides for a significant increase in labour in the first year of the third review period followed by more modest increases in the following two years. Table 9 sets out System Management's proposal, including details of the proposed increases, compared with actual expenditure during the second review period.

Table 9 System Management proposed labour costs for the third review period compared with actual costs for the second review period

	Second Review Period			Third Review Period		
Description	2010/11 (actual)	2011/12 (actual)	2012/13 (f/cast)	2013/14 (f/cast)	2014/15 (f/cast)	2015/16 (f/cast)
Labour ($'000 real as at 30 June 2013)	3,590.7	3,743.6	4,118.6	5,240.1	5,365.9	5,368.9
% change		4.3%	10%	27.2%	2.4%	-
Labour ($'000 nominal)	3,445.6	3,634.6	4,118.6	5,371.1	5,637.5	5,781.8
% change		5.5%	13.3%	30.4%	4.9%	2.6%

94. Labour costs include costs associated with the employment of permanent staff that perform market-related System Management activities. The increase in costs reflects:

- additional staff to support the new balancing markets which also requires extended hours of operation;
- additional staff to support the operation of System Management's SMARTS system and other new IT systems; and
- labour escalation factors consistent with those provided for in Western Power's third access arrangement.

95. Based on the information provided by System Management and the advice from GBA, the Authority considers System Management's forecast labour expenditure, adjusted to nominal prices, is reasonable.

Functional Costs

96. Functional costs incorporate direct costs incurred on items such as consultants and contractors (non-IT related), travel, staff development and auditing.

Table 10 System Management proposed functional costs for the third review period compared with actual costs for the second review period

Description	Second Review Period			Third Review Period		
	2010/11 (actual)	2011/12 (actual)	2012/13 (f/cast)	2013/14 (f/cast)	2014/15 (f/cast)	2015/16 (f/cast)
Functional Costs ($'000 real as at 30 June 2013)	714.6	878.3	1,571.7	791.0	983.7	1,003.4
% change		22.9%	79%	(50%)	24.4%	2%
Functional Costs ($'000 nominal)	685.7	852.7	1,571.7	810.8	1,033.5	1,080.5
% change		24.3%	84%	(51.6%)	27.5%	4.5%

97. Based on the information provided by System Management and the advice from GBA, the Authority considers System Management's forecast functional costs expenditure, adjusted to nominal prices, is reasonable.

Legal Costs

Table 11 System Management proposed legal costs for the third review period compared with actual costs for the second review period (nominal $'000)

Description	Second Review Period			Third Review Period		
	2010/11 (actual)	2011/12 (actual)	2012/13 (f/cast)	2013/14 (f/cast)	2014/15 (f/cast)	2015/16 (f/cast)
Legal Costs ($'000 real as at 30 June 2013)	189.7	136.7	200.0	200.0	200.0	200.0
% change		(28%)	46%	-	-	-
Legal Costs ($'000 nominal)	182.0	132.7	200.0	205.0	210.1	215.4
% change		(27.1%)	50.7%	2.5%	2.5%	2.5%

98. Based on the information provided by System Management and the advice from GBA, the Authority considers System Management's forecast legal expenditure, adjusted to nominal prices, is reasonable.

Insurance Costs

Table 12 System Management proposed insurance costs for the third review period compared with actual costs for the second review period (nominal $'000)

Description	Second Review Period			Third Review Period		
	2010/11 (actual)	2011/12 (actual)	2012/13 (f/cast)	2013/14 (f/cast)	2014/15 (f/cast)	2015/16 (f/cast)
Insurance ($'000 real as at 30 June 2013)	0.0	0.0	0.0	386.3	386.3	386.3
% change		-	-	386.3%	-	-
Insurance ($'000 nominal)	-	-	-	395.9	405.8	415.9
% change				395.9%	2.5%	2.5%

99. Insurance costs in relation to System Management (Markets) are included in Western Power's overall insurance policies. Insurance costs in relation to the

2010/11 and 2011/12 financial years were recovered via Western Power's access arrangement revenue cap.

100. From 2012/13, costs have been allocated in accordance with Western Power's CRAM and are consistent with the costs excluded from Western Power's recent access arrangement revenue cap for the period 2012/13 to 2016/17. The allocation is based on an independent assessment of the insurance costs that System Management would be likely to pay as a standalone entity. For the 2012/13 year, insurance costs have been included in business support costs as set out in paragraph 103 below.

101. The Authority is satisfied that the amounts included in System Management's costs are consistent with the values excluded from Western Power's access arrangement revenue cap and that the method of allocation is reasonable.

Business Support Costs

Table 13 System Management proposed business support costs for the third review period compared with actual costs for the second review period (nominal $'000)

Description	Second Review Period			Third Review Period		
	2010/11 (actual)	2011/12 (actual)	2012/13 (f/cast)	2013/14 (f/cast)	2014/15 (f/cast)	2015/16 (f/cast)
Business Support ($'000 real as at 30 June 2013)	0.0	0.0	915.6	560.1	581.3	619.0
% change	-	-	915.6%	(38.8%)	3.8%	6.5%
Business Support ($'000 nominal)	0.0	0.0	915.6	574.1	610.7	666.6
% change		-	915.6%	(37.3%)	6.3%	9.1%

102. Western Power provides a number of business support services (e.g. finance, regulation, IT, accommodation and human resources) that are utilised by System Management. Business support costs in relation to the 2010/11 and 2011/12 financial years were recovered via Western Power's access arrangement revenue cap.

103. From 2012/13, costs have been allocated in accordance with Western Power's CRAM and are consistent with the costs excluded from Western Power's recent access arrangement revenue cap for the period 2012/13 to 2016/17. Insurance costs have been included in the 2012/13 cost. For the following years insurance has been identified separately as set out in paragraph 100 above.

104. The Authority is satisfied that the amounts included in System Management's costs are consistent with the values excluded from Western Power's access arrangement revenue cap and that the method of allocation is reasonable.

IT Operating Costs

Table 14 System Management proposed IT operating costs for the third review period compared with actual costs for the second review period (nominal $'000)

Description	Second Review Period			Third Review Period		
	2010/11 (actual)	2011/12 (actual)	2012/13 (f/cast)	2013/14 (f/cast)	2014/15 (f/cast)	2015/16 (f/cast)
IT Operating Costs ($'000 real as at 30 June 2013)	700.9	1,673	1,470	1,092.2	1,092.2	1,092.2
% change		138%	(12.1%)	(25.7%)	-	-
IT Operating Costs ($'000 nominal)	672.5	1,702	1,470	1,120	1,148	1,177
% change		153%	(13.6%)	(23.8%)	2.5%	2.5%

105. IT support costs include costs associated with software licencing, software maintenance and other costs related to the direct provision and support of IT services that are not part of the IT capital expenditure provision.

106. Based on the information provided by System Management and the advice from GBA, the Authority considers System Management's forecast IT operating expenditure, adjusted to nominal prices, is reasonable.

Capital Costs

107. Depreciation and borrowing costs in System Management's proposed Allowable Revenue for the second review period include:

- Amounts arising from capital projects planned for the Third Review Period; and
- Amounts arising from actual and planned capital expenditures in the First and Second Review Period that are carried over into the Third Review Period according to depreciation schedules.

Capital Projects for the Third Review Period

108. The Authority has assessed System Management's proposed depreciation and borrowing costs by first considering whether the capital projects planned for the Third Review Period represent expenditures that are consistent with System Management acting efficiently, seeking to achieve the lowest practically sustainable cost of delivering services, and secondly verifying the calculation of amounts of depreciation and borrowing costs.

109. System Management's proposed capital expenditure for the Third Review Period is for IT. The forecast capital expenditure is derived by project, with each project being separately estimated and costed by System Management. A summary of the capital expenditure proposed for the third Review Period is summarised in Table 15 below.

Table 15 System Management Proposed Capital Expenditure (real $'000)[14]

Description	2013/14 (f/cast) $'000	2014/15 (f/cast) $'000	2015/16 (f/cast) $'000	Total (f/cast) $'000
Consolidating support for the MEP:	**533**	**289**	**-**	**822**
SMARTS security assessment	149	-	-	149
SMARTS test environment	216	115	-	331
IMO outbound data	168	174	-	342
Improving internal processes and systems	**1,094**	**729**	**502**	**2,325**
Lodgement and approval for commissioning	232	84	-	316
Customer portal user management phase 1	85	-	-	85
Customer portal user management phase 2	-	282	291	573
FTP replacement	251	206	50	506
Disaster recovery	376	-	-	376
Capitalised labour	151	156	161	469
Supporting market development	**800**	**752**	**572**	**2,125**
Outage management phase 1	469	274	-	743
Outage management phase 2	107	144	238	489
Improvements to balancing	46	47	-	93
30 minute gate closure	0	159	-	159
Emissions intensity index	63	-	-	63
Spinning reserve market	115	127	334	577
Total	**2,427**	**1,769**	**1,075**	**5,271**

110. In its report to the Authority, GBA notes there are no major projects incorporated in the Third Review period and the total forecast is substantially less than the actual capital expenditure of around $15 million during the Second Review period.

111. GBA notes that the projects in the "supporting market development" category are uncertain in terms of timeframe and scope as they relate to possible Market Rule changes. GBA recommends that expenditure for which the requirement and timing is uncertain should not be included in forecast capital expenditure. The Authority concurs with this view and notes that there are sufficient mechanisms available to obtain approval of such expenditure in the future if the need arises.

[14] Extracted from Table 16 of System Management's proposal. During the review minor errors were found in relation to cost escalation calculations. System Management provided revised figures which have been incorporated in the Authority's revised Forecast Capital Expenditure.

112. System Management provided additional information showing that the expenditure in relation to “Outage management phase 1” relates to a market rule change already in process. The Authority accepts it is reasonable to include this item in Forecast Capital Expenditure but has excluded the remaining items listed as supporting market development.

113. GBA considers the remaining expenditure to be reasonable and that it would be expected after a major investment such as SMARTS that some manual workarounds and inefficient system solutions would be in place that require further investment to increase compliance, reduce risk and increase efficiencies.

114. Based on the information provided by System Management and the advice of GBA the Authority’s determination of Forecast Capital Expenditure is set out in Table 16 below.

Table 16 Authority’s Determination of Forecast Capital Expenditure (nominal $’000)

Description	2013/14 (f/cast) $’000	2014/15 (f/cast) $’000	2015/16 (f/cast) $’000	Total $’000
Consolidating support for the MEP:	**543.3**	**297.3**	**-**	**840.6**
SMARTS security assessment	152.5	-		152.5
SMARTS test environment	220.3	118.3		338.6
IMO outbound data	170.5	179.0		349.5
Improving internal processes and systems	**1,117.5**	**752.5**	**526.8**	**2,396.8**
Lodgement and approval for commissioning	236.7	86.7	-	323.4
Customer portal user management phase 1	86.4	0.0	-	86.4
Customer portal user management phase 2	0.0	291.1	304.3	595.4
FTP replacement	255.9	213.3	53.8	523.0
Disaster recovery	384.7	0.0	-	384.7
Capitalised labour	153.8	161.4	168.7	483.9
Supporting market development	**478.7**	**282.9**	**-**	**761.6**
Outage management phase 1	478.7	282.9	-	761.6
Outage management phase 2	-	-	-	
Improvements to balancing	-	-	-	
30 minute gate closure	-	-	-	
Emissions intensity index	-	-	-	
Spinning reserve market	-	-	-	
Total	**2,139.5**	**1,332.7**	**526.9**	**3,999.1**

Depreciation Allowances

115. The Authority has reviewed System Management's proposed depreciation costs over the Third Review Period by:

- establishing the accounting procedures applied by System Management to different asset classes to derive depreciation allowances and considering whether these procedures accord with generally accepted accounting principles; and
- performing a check on System Management's calculation of depreciation amounts.

116. Two submissions made specific comments in relation to depreciation:

- Griffin Power has concerns regarding the relationship between the assets being depreciated and the resultant claim for depreciation, particularly the appropriateness of the depreciable assets attributable to Market Participants. Griffin Power is also concerned as to whether labour has been capitalised or not and, if so, that it has been treated properly in depreciation.
- Synergy notes that the IMO and System Management have adopted different asset lives and suggests that, given the similar nature of the assets, a common write-off period should be adopted reflecting useful asset life.

117. System Management has forecast depreciation based on asset values calculated in real dollars as at 30 June 2013. As outlined above, the Authority considers Allowable Revenue should continue to be set in nominal dollar terms. The Authority has recalculated depreciation by using the closing value of undepreciated assets from the most recent Regulatory Financial Statements (i.e. 2011/12), adding forecast capital expenditure in nominal values and calculating depreciation on a straight line basis. The revised calculation takes account of the exclusion of forecast capital expenditure in relation to supporting market development as outlined in paragraph 112 above. Western Power has provided details of forecast depreciation in relation to the closing asset balance as at 30 June 2012.

118. System Management has proposed using a four year life for SMARTS and other IT investment. GBA notes that System Management commissioned an expert report as part of its process for determining asset life which provided a recommendation of between 3 and 5 years. GBA considers 5 years would be more consistent with the likely asset economic life (particularly in the case of SMARTS) and would be consistent with the IT asset lives proposed by the IMO.

119. Based on this advice the Authority considers the asset life should be adjusted to five years and has incorporated this in its recalculation of forecast depreciation. The revised depreciation is set out in Table 17 below.

Table 17 Amended Forecast Depreciation (nominal $'000)

Description	2012/13 (forecast)	2013/14 (forecast)	2014/15 (forecast)	2015/16 (forecast)
Revised Depreciation	1,121[15]	3,270	3,403	3,669

120. Depreciation will increase significantly in 2013/14 due to capital expenditure in relation to SMARTS during 2011/12 and 2012/13 of around $15 million impacting the charge.

121. GBA reviewed the expenditure relating to SMARTS and noted:

> It is not possible for us to form a firm opinion on the information available to us as to the efficiency of the historical capex especially that associated with the SMARTS system. The project was unique and not one that can be readily benchmarked. We note that, in developing the project, System Management produced a substantive cost benefit options document that provided significant detail on options available. We recognise that there were delays in the final implementation of the balancing and LFAS markets from the timeframes originally scheduled but we also recognise that, given the described scope of the work elements required, the timeframe for implementation of the required IT systems was very optimistic. As a result there were probable inefficiencies in the overall development of the project. However, the Market Rules relevant to the operation of the new markets was not finalised until February 2012, even though the market trial was due to commence in April 2012. Any inefficiencies in project implementation were not necessarily a consequence of specific actions by System Management, but perhaps more reflective of the optimistic timeframe set down when planning the market. Consequently a more considered overall planning process incorporating realistic contingency based timeframes may have resulted in lower cost outcomes and a similar delivery timeframe of the same market systems solution.

122. For the purposes of this decision, in relation to the capital expenditure incurred prior to the Third Review Period, the Authority is required to determine forecast depreciation charges. As noted in paragraph 119, the Authority has recalculated depreciation based on a five year asset life.

123. Actual depreciation will be reported in the annual Financial Regulatory Statements. Using these audited values to calculate overs and unders for the purposes of the annual budget when determining System Management Fees, will ensure the concerns raised by Griffin Power (i.e. the appropriateness of the depreciable assets attributed to Market Participants and the treatment of capitalisation of labour) are adequately addressed.

Borrowing Costs

124. As noted above, System Management has proposed that Allowable Revenue should include a return on investment calculated by applying a real post tax WACC of 6.6 per cent to a derived capital value.

125. For the reasons outlined above, the Authority does not accept this method and has amended the forecast to reflect borrowing costs in relation to undepreciated capital expenditure. Undepreciated capital expenditure is based on the amount reported in the 2011/12 Regulatory Financial Statements with forecast capital expenditure added and forecast depreciation deducted. A cost of debt of 5.35 per cent, consistent with the value approved by the Authority for Western Power's third

[15] Based on information provided by System Management during this review.

access arrangement, has been adopted and applied to the forecast opening value of undepreciated capital expenditure for each year. System Management has provided updated information relating to forecast interest rates which is broadly in line with the rate assumed by the Authority.

Table 18 Amended Forecast Borrowing Cost (nominal $'000)

Description	2013/14 $'000	2014/15 $'000	2015/16 $'000
Revised Borrowing Cost	812	752	641
Forecast Undepreciated Capital Expenditure (opening value)	15,180	14,050	11,980

126. The actual borrowing cost for System Management (Markets) will be reported in Western Power's annual Financial Regulatory Statements. Using these audited values to calculate overs and unders when the annual budget is approved, will ensure System Management recovers its actual financing costs.

Tax Payable

127. Whilst the Authority does not accept use of a post tax WACC, it does recognise that taxation is a legitimate cost which System Management must be able to recover.

128. The Authority has recalculated tax payable after adjusting for amendments noted in relation to prior year adjustments, capital expenditure, asset lives, borrowing costs and revenue profile. After taking account of these revisions, forecast tax payable is nil.

129. The actual taxation costs for System Management (Markets) will be reported in Western Power's annual Financial Regulatory Statements. Using these audited values to calculate overs and unders when the annual budget is approved, will ensure System Management recovers any taxation costs if they arise.

Adjustments for First and Second Review Period

130. System Management has included costs of $1.1 million in its proposed Allowable Revenue which it describes as adjustment relating to the First and Second Review Period. The Authority notes that, for the purposes of this decision, it is required to make adjustments only relating to forward looking costs. Adjustments in relation to previous periods are dealt with via the annual budget unders and overs process as set out in clause 2.23.7 of the Market Rules.

Smoothing

131. System Management has proposed smoothing the profile of Allowable Revenue over the three years such that the forecast annual increase in fees is the same for all years and total revenue over the period is equivalent in net present value terms compared with the unsmoothed total Allowable Revenue. The different revenue profiles are shown in Table 19 below. As can be seen, the proposed smoothed profile results in higher revenue overall in nominal terms (although equal in net present value terms) and higher Allowable Revenue in the final year.

Table 19 System Management's proposed allowable revenue for the third review period (2013/14 to 2015/16) ($'000 real at 30 June 2013)

Description	2013/14	2014/15	2015/16	Present Value
Allowable revenue (unsmoothed)	**14,004**	**13,867**	**14,881**	**37,582**
Allowable revenue (smoothed)	**11,880**	**14,183**	**16,961**	**37,582**

132. The Authority notes that the Market Rules states that recurring expenditure requirements and payments should be recovered in the year of expenditure whereas capital expenditure should be recovered through the depreciation and amortisation of the assets acquired by the capital expenditure in a manner that is consistent with generally accepted accounting principles. System Management's proposal to smooth Allowable Revenue does not result in this requirement being met. The Authority considers the revenue profile should continue to be set on an unsmoothed basis to ensure that recurring expenditure is recovered in the year it is incurred and capital expenditure is recovered in line with depreciation charges.