Proposed Revisions
DBNGP Access Arrangement

2016 – 2020 Access Arrangement Period

Actual capital expenditure 2011-15 (Stay in business)

Supporting Submission: 8 (Part 1)

PUBLIC

Date Submitted: 31/12/2014

CONFIDENTIALITY

1.1 This submission is provided to the ERA to assist it in its assessment of the proposed revisions to the DBNGP Access Arrangement.

1.2 Some information contained in the submission is confidential and commercially sensitive. The reasons for DBP's claim of confidentiality are outlined in Appendix A: to this submission.

1.1 A public version of this submission will be provided separately.

1.3 Accordingly, this version of the submission is provided to the ERA on the following conditions:

(a) it is to be used by the ERA solely for the purposes of assessing the proposed revisions to the DBNGP Access Arrangement;

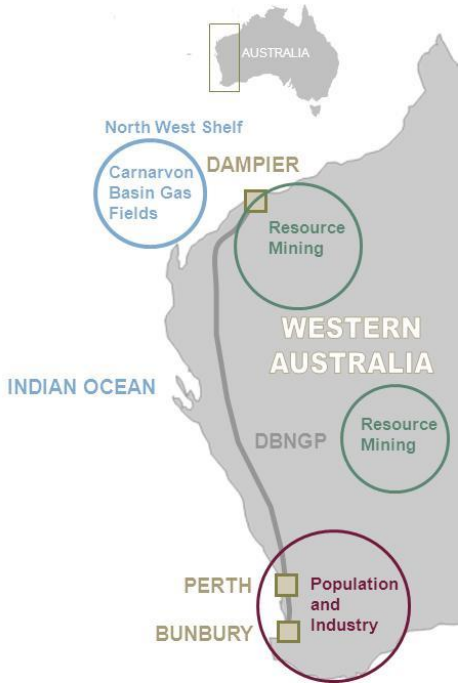
(b) it is not to be disclosed to any person other than the following without DBP's prior written approval:

(i) those staff of the ERA who are involved in assisting the ERA in its assessment process; and

(ii) those of the ERA's consultants who are involved in assisting the ERA in its assessment process and who have appropriate confidentiality undertakings in place.

DBP Transmission (DBP) is the owner and operator of the Dampier to Bunbury Natural Gas Pipeline (DBNGP), Western Australia's most important piece of energy infrastructure.

The DBNGP is WA's key gas transmission pipeline stretching almost 1600 kilometres and linking the gas fields located in the Carnarvon Basin off the Pilbara coast with population centres and industry in the south-west of the State



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1. INTRODUCTION

1.1 On 31 December 2014, DBNGP (WA) Transmission Pty Ltd (DBP) filed the following documents with the Economic Regulation Authority (ERA):

(a) proposed revised Access Arrangement (**Proposed Revised AA**); and

(b) proposed revised Access Arrangement Information (**Proposed Revised AAI**).

1.2 These documents are proposed to cover the access arrangement period commencing on 1 January 2016 and ending on 31 December 2020 (**AA Period**)

1.3 These documents contain the information that the National Gas Access (WA) Act 2009 (NGA) (which includes the Western Australian National Gas Access Law text (NGL) and the National Gas Rules (NGR)) requires to be included in order to enable them to be approved by the ERA.

1.4 In addition to the Proposed Revised AA and Proposed Revised AAI, a number of additional supporting submissions were filed to assist the ERA in assessing the Proposed Revised AA. These included the following:

(a) Submission 1: Proposal

(b) Submission 2: Cost Controls and Governance

(c) Submission 3: Proposed Reference Service

(d) Submission 4: Terms and Conditions

(e) Submission 5: Non-tariff related issues

(f) Submission 6: Cost Verification and Allocation

(g) Submission 7: Actual Capital Expenditure (Expansion)

(h) Submission 8 Actual Capital Expenditure (Stay-in-Business) (Part 1 & 2)

(i) Submission 9: Forecast Capital Expenditure

(j) Submission 10:Forecast Operating Expenditure

(k) Submission 11: Capacity and throughput forecast

(l) Submission 12: Rate of Return

(m) Submission 13: Total Revenue

(n) Submission 14: Tariff model and tariff calculation

1.5 This submission details DBP's actual capital expenditure incurred for stay in business capital projects for the 2011 to 2015 period and how expenditure is justified against NGR 79 criteria.

1.6 DBP submits that the amounts of capital expenditure outlined in Table 1 meet the NGR criteria and should be treated as conforming capital expenditure for the purposes of determining the opening capital base for the commencement of the AA Period.

1.7 Submission 8 has two parts:

(a) Part 1 which includes projects that related to actual expenditure for 2011 through to the end of 2013; and

(b) Part 2 is inclusive of actual expenditure or DBP's estimated of expenditure forecast to be incurred in the remained of 2014 and 2015.

2. CONFORMING CAPITAL EXPENDITURE

2.1 As outlined in Section 6 of the Access Arrangement Information, the conforming capital expenditure made or to be made by DBP during the 2011 to 2015 access arrangement period has been categorised into one of the following categories:

(a) Stay in business capital expenditure – capital expenditure made to ensure DBP is able to continue operating the pipeline to meet its statutory and contractual obligations.

(b) Expansion capital expenditure – capital expenditure made for the purposes of expanding the capacity of the pipeline.

2.2 The following table provides DBP's stay in business (SIB) conforming capital expenditure made, or to be made, during the 2011 to 2015 regulatory period, allocated into the classes of assets used in the depreciation schedule by regulatory asset category. DBP has also provided submission 7 providing justification for expansion capital expenditure.

Table 1: Actual SIB capital expenditure proposed as conforming capital expenditure (Real $m as at 31 December 2015)

	2011	2012	2013	2014*	2015*
Pipeline	13.97	4.83	4.88	0.61	4.30
Compression	5.59	5.13	5.78	3.11	10.44
Metering	0.38	1.98	0.99	1.63	2.77
Other	37.39	10.08	12.27	9.87	2.79
Non-depreciating	-0.02	-0.04	0.20	0.00	0.00
TOTAL	**57.30**	**21.98**	**24.13**	**15.21**	**20.30**

2.3 (*) The following should be noted with respect to the amounts of conforming capital expenditure in the above table for calendar years 2014 and 2015:

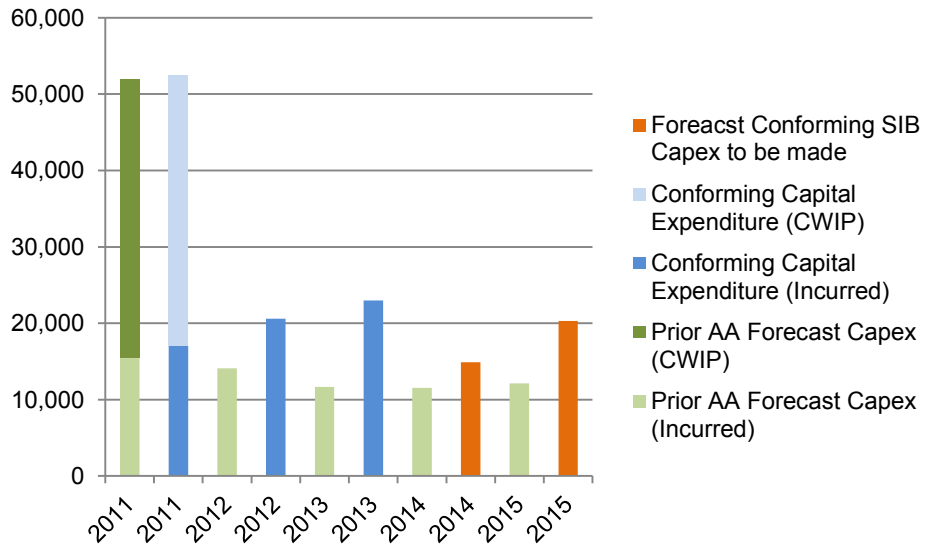
(a) For calendar year 2014 – the amounts are made up of actual capital expenditure made until the end of September 2014 and 3 months of forecast conforming capital expenditure to be made from October to December 2014. DBP will be in a position to provide actual capital expenditure made during October 2014 to December 2014 after the ERA's draft decision in 2015.

(b) For calendar year 2015 – the amounts are DBP's forecast of conforming capital expenditure

Comparison of actual SIB capital expenditure with forecast conforming capital expenditure

2.4 Figure 1 compares the conforming capital expenditure made, or to be made, by DBP during the 2011 to 2015 regulatory period (Prior Access Arrangement Period) with the forecast conforming capital expenditure approved by the ERA in the Prior Access Arrangement Period (Prior AA Forecast Capex).

Figure 1: Comparison of Current AA Forecast SIB Capex with SIB conforming capital expenditure made or to be made in the Current Access Arrangement Period (nominal $,000)



2.5 The reason for the marked difference between the level of conforming capital expenditure made in 2011 and the level of expenditure made in later years is due to the change in accounting treatment of capital expenditure from 2011 to subsequent years. In 2012, DBP moved from a capitalised basis of accounting to an incurred basis for regulatory purposes. DBP's actuals during 2005 to 2010 were reported to the ERA on an 'as capitalised' basis which required capital that was Capital Works in Progress (CWIP) (i.e. not capitalised to DBP's corporate asset register) as at 31 December 2010 to be treated as forecast conforming capital expenditure in 2011. Therefore the CWIP balance and capital incurred is reported in the first year of the Current AA Period. In the remaining years the capital expenditure is provided on an incurred accounting basis only.

2.6 For further background DBP refers the reader to paragraph 331 to 337 of the ERA's Final Decision[1].

2.7 SIB projects and estimated expenditure in years 2014 and 2015 are set out with corresponding justification in Part 2 of this submission provided as a separate document.

[1] *ERA Final Decision 31 October 2011 as amended on 22 December 2011.*

3. CAPITAL EXPENDITURE CRITERIA

3.1 Under the NGR 77(2)(b), capital expenditure can be rolled into the opening capital base if it is conforming capital expenditure.

3.2 Rule 79 of the NGR provides that conforming capital expenditure is capital expenditure that conforms with the following criteria:

(a) the capital expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services;

(b) the capital expenditure must be justifiable on a ground stated in subrule (2).

3.3 The grounds outlined in Rule 79(2) of the NGR are:

(a) the overall economic value of the expenditure is positive. It is noted that, in addition to the considerations outlined in Rule 79(3) of the NGR to be taken into account to determine whether the overall economic value of expenditure is positive, Schedule 1, clause 7(2) of the NGR provides that the ERA must consider material economic value that is likely to accrue directly to electricity market participants and end users of electricity from additional gas fired generation capacity; or

(b) the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; or

(c) the capital expenditure is necessary:

(i) to maintain and improve the safety of services; or

(ii) to maintain the integrity of services; or

(iii) to comply with a regulatory obligation or requirement; or

(iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity); or

(d) if the capital expenditure is an aggregate amount divisible into 2 parts, one referable to incremental services and the other referable to a purpose referred to in paragraph (c), and the former is justifiable under paragraph (b) and the latter under paragraph (c).

3.4 The remaining paragraphs in this section of the submission outline DBP's interpretation of key terms used in Rule 79 of the NGR.

Regulator's discretion

3.5 Before analysing each of the criteria, it is important to note that in assessing whether the capital expenditure is conforming capital expenditure the ERA has a limited discretion.[2]

3.6 As provided for in NGR 40(2), this means that the ERA may not withhold its approval to capital expenditure as conforming capital expenditure if the ERA is satisfied that it complies with the applicable requirements of the NGL and is consistent with applicable criteria (if any) prescribed by the NGR.

3.7 The effect of this is that the ERA can only withhold its approval if the element is outside the range of acceptable alternatives that comply with the requirements relevant to this element. If the ERA considers that a change to the relevant element might be desirable to achieve more complete conformity between the element and the principles and objectives of the NGL, it is not allowed to reject the service provider's proposal to give effect to that view in the decision making process.

[2] *NGR Rule 79(6)*

3.8 Under NGR79(1)(a), the capital expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services.

Prudency

3.9 In deciding whether a service provider is prudent, case law and regulatory precedent indicates that the regulator must ask what would a reasonable board of directors and company management have decided given what they knew or reasonably should have known to be true at the time they made a decision. In making decisions, a utility must take into account the best interests of its customers, whilst still being entitled to a fair return.

3.10 This was the test was applied by the Washington Utilities and Transportation Commission hearing in relation to Puget Sound Power & Light Company in the Fourth Supplemental Order made in cause U-83-54 in September 1984 at pp 32, 33, where the Commission said:

> *"The test this Commission applies to measure prudence is what would a reasonable board of directors and company management have decided given what they knew or reasonably should have known to be true at the time they made a decision. This test applies both to the question of need and the appropriateness of expenditures."*

3.11 In Canada, the issue was considered at length in a decision of the Alberta Court of Appeal, Atco Gas & Pipeline Ltd v Alberta (Energy & Utilities Board) [2005] AJ 495, 2005 ABCA 122.

3.12 In its decision, the Board applied the following test of prudence:

(a) the utility would be found prudent if it exercises good judgment and makes decisions which are reasonable at the time they are made, based on information that the owner of the utility knew or ought to have known at the time the decision was made;

(b) in making a decision, a utility must take into account the best interest of its customers while still being entitled to a fair return.

3.13 It is noted that Webster's New 20th Century Dictionary of the English language definition of prudent, provides as follows:

(a) capable of exercising sound judgment in practical matters; cautious or discreet in conduct; circumspect; sensible; not rash; characterised, dictated, or directed by prudence; as, prudent measures,

(b) synonyms include, circumspect, discreet, cautious, judicious, careful, considerate, sagacious, thoughtful, provident, frugal and economical.

3.14 The concept of prudence is therefore used to determine whether, at a particular time in question, an arrangement is or was appropriate and reasonable given the circumstances known or which ought to have been known.

3.15 The case law has also made it clear that an assessment of whether expenditure is prudence ought not to be based on hindsight. Webster's Dictionary defines hindsight as "perception of nature and demands of an event after it has happened". Applying this definition to the current context, the regulator must not impute knowledge to the service provider that the service provider could not reasonably have known at the time the utility made the decision being reviewed.

3.16 In deciding whether this test is met to be able to conclude whether a service provider is prudent, case law indicates that there is a presumption that expenditure by a service provider is prudent and that the regulator has the burden of proof to demonstrate that expenditure is imprudent. Every investment may be assumed to have been made in the exercise of reasonable judgment, unless the contrary is shown. There should not be excluded from the finding of prudency, investments which, under ordinary circumstances, would be deemed reasonable. Unless the Regulator can find expenditure which is dishonest or obviously wasteful or imprudent expenditure, it will be assumed to be prudent.

3.17 It is submitted that the if the following practical steps can be shown, then prudence and reasonableness in relation to expenditure will be proven:

(a) *Planning* - the ability to demonstrate that the service provider has considered an appropriate range of project contractual options given the legal and regulatory requirements and environment. Show that it has evaluated how this project differs from previous projects and that it has organised resources and developed policies and procedures to define clearly responsibilities and accountability.

(b) *Prioritise* - demonstrate that risk exposure areas have been identified, contingency plans developed for problems and flexibility maintained to adapt to changing project conditions.

(c) *Management* - demonstrate that a framework has been developed for the effective management of the project using resources, tools and reporting requirements, including timely corrective action when required.

(d) *Collaboration* - demonstrate that key stakeholders have been involved early in the process. Demonstrate the need for the project and that mechanisms are in place to monitor project conditions and take corrective action as they arise.

(e) *Documentation* - recognise the need to document all decisions and supporting rationales for actions throughout the planning and project process. This demonstrates that the utility has acted reasonably in preparing for and executing a major project.

3.18 Examples of evidence of imprudence include:

(a) poorly structured contracts not matched to project needs and the resource capabilities of the utility or the contractor;

(b) failure of effectively organised owner supervision;

(c) over-reliance on contracts and litigation to remedy problems after the fact, rather than through proper contract administration;

(d) inadequate financial planning and financial resources to match project needs;

(e) lack of information to make informed decisions, including inadequate cost, schedule, quality or regulatory compliance information;

(f) poor and slow resolution of engineering problems; and

(g) inability to bring the project to a conclusion and for the owner to accept operational responsibility.

3.19 In this regard, reference is made to the governance and cost control arrangements outlined in Submission 2 filed on or about the date of this submission. DBP submits that the ERA should at least infer compliance with the prudency requirements of the criteria in NGR 79 for the following reasons:

(a) *Planning* - DBP has considered an appropriate range of project contractual options given the legal and regulatory requirements and environment. Furthermore it has evaluated how a project differs from previous projects and that it has organised resources and developed policies and procedures to define clearly responsibilities and accountability.

(b) *Prioritise* - through the stay in business planning process, DBP has demonstrated that risk exposure areas have been identified, contingency plans developed for problems and flexibility maintained to adapt to changing project conditions.

(c) *Management* - the governance arrangements outlined in submission 2 demonstrate that a framework is in place for the effective management of the project using resources, tools and reporting requirements, including timely corrective action when required.

(d) *Collaboration* - key stakeholders have been involved early in the process. DBP has also demonstrated the need for the project and that mechanisms are in place to monitor project conditions and take corrective action as they arise.

(e) *Documentation* - DBP has demonstrated that it documents all decisions and supporting rationales for actions throughout the planning and project process.

4. PRUDENCY & EFFICIENCY OF CAPITAL EXPENDITURE

4.1 NGR 79(1)(a) requires that conforming capital expenditure must be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing service (**Prudency & Efficiency Criterion**).

4.2 DBP submits that the Prudency & Efficiency Criterion is met for each of the projects that make up the actual capital expenditure in the Proposed Revised AAI (as summarised in Table 1). This is so for a number of reasons.

4.3 Firstly, as outlined in Submission 2, DBP has developed a project management methodology that is to apply to every phase of the life of every capital project within the business, including the proposal, initiate, planning, delivering and finalisation phases. This common methodology:

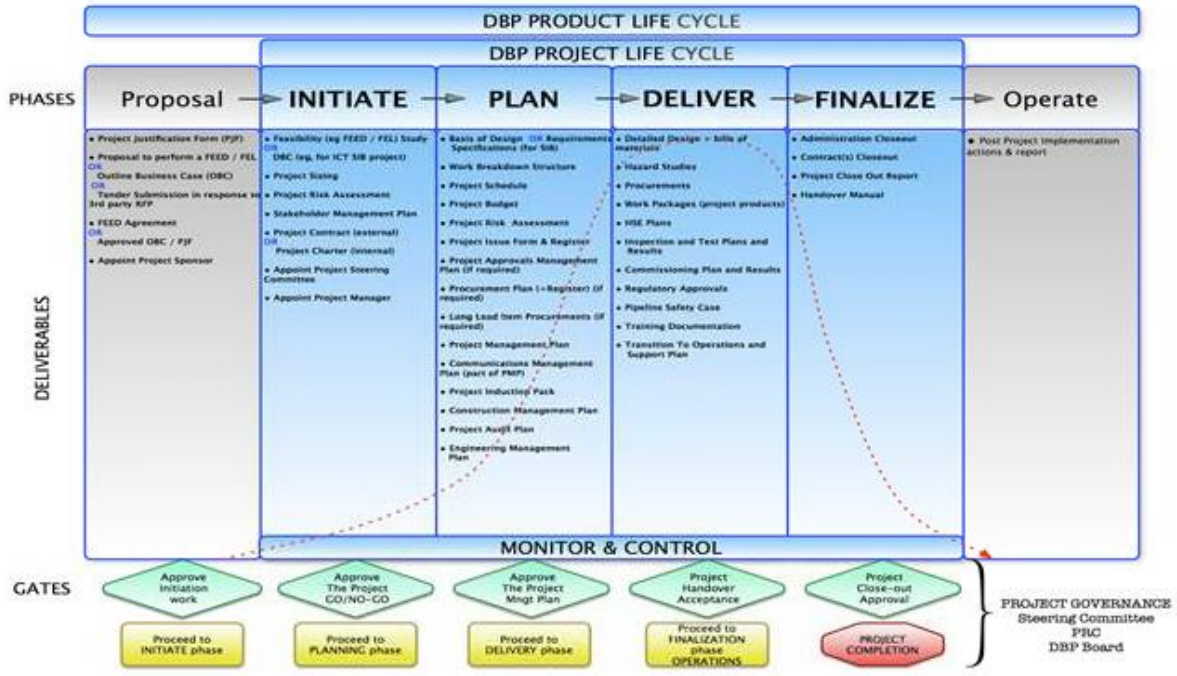
(a) establishes consistency which in turn creates higher project productivity and reduces re-work and mistakes;

(b) provides a foundation and base-lines for continuous improvement;

(c) creates opportunities for greater visibility of project performance by senior management, and stronger integration of project activities and outcomes across all divisions that are required to provide support to a project (eg, the maintenance and operations division, the corporate services, finance and commercial divisions.

4.4 The project management methodology stipulates certain deliverables for each phase of a project and the governance arrangements in place. It has been pictorially summarised in Figure 2 below.

Figure 2: Overview of DBP's Project Management Methodology



4.5 A series of procedures, templates, and supporting information and tools have been developed to ensure that the deliverables outlined above for each phase of a project can be achieved. Figure 3 lists the relevant procedures that are to apply to each phase of the project's life.

Figure 3: Project Management Procedures

Proposal	Initiation	Planning	Delivery	Finalization	Operation
Terminology Guide PMM Overview Project Sizing	Terminology Guide PMM Overview Project Sizing Project Scope Definition Project Reporting Project Risk Management	Terminology Guide PMM Overview Project Change Management Project Management Plan Project Scope Definition Project Schedule Development and Control Project Cost Management Project Auditing Project Reporting Project Risk Management	Terminology Guide PMM Overview Project Change Management Project Scope Definition Project Schedule Development and Control Project Cost Management Project Auditing Project Reporting Project Risk Management	Terminology Guide PMM Overview Project Change Management Project Closure Project Auditing Project Reporting Project Risk Management	Terminology Guide Project Closure

4.6 A copy of the Project Management Methodology Overview Procedure is attached as Appendix B: Importantly, the procedure provides that the Project Management Methodology is designed to provide:

(a) project managers and other project participants with a process to ensure that projects are executed consistently in a manner that represents industry best practice;

(b) direction and assistance on the key areas of project management that need to be applied consistently to project initiation, planning, delivery and finalisation phases.

(c) the project team with a program of persistent, consistent, accurate and timely information and processes.

4.7 The procedure also outlines the following key factors in achieving consistent levels of project quality and DBP's requirements for each of the factors:

(a) Integration Management - this covers:

(i) integration of the various elements of project controls (estimating, progress, cost, schedule, resources, materials, document management, change controls, risk and issues management and project management information);

(ii) accurate and timely cost and progress measurement and forecasting to facilitate prudent management decisions;

(iii) controlled and visible management of change;

(iv) a seamless transition across Project phases; and

(v) use of proven systems that are sufficiently flexible to accommodate project needs.

(b) Scope Management - this covers:

(i) clear and complete definition of scope, costs and responsibilities using a comprehensive cost breakdown structures. The scope of work needs to be clearly defined in sufficient detail such that the technical and financial aims of the project are fully understood and accepted by the project team.

(c) Time Management - this covers clear resourcing allocations to the project schedule, and clear relationships between the schedule and the cost breakdown structure.

(d) Cost Management - this covers clear, transparent and accurate planning, estimating, budgeting, and controlling of project cost so that the project can be completed within the approved budget, and the position at any time is known and can be substantiated.

(e) Quality Management - this covers adherence to processes that ensure the result of a project meets the needs for which the project was executed. Processes such as quality planning, assurance, and control are included in this area.

(f) Communications Management - this covers the establishment of standards for cost and schedule reporting, monitoring and forecasting based on the cost breakdown structures which ensure uniform, meaningful and consistent reporting.

(g) Risk Management - this covers controlled visible management of risks and issues.

(h) Procurement Management - this covers clear, accurate and visible management of project materials and ensures well formed, unambiguous and consistent procurements.

(i) HSE and Regulatory Management - this covers well defined project interfaces to HSE and Regulatory processes and organisations.

4.8 In terms of the governance arrangements, ultimate responsibility and accountability for any project must be clearly defined and accepted at an appropriate level of authority within DBP. The management structure for a project must be established that identifies the specific stakeholders, their responsibilities, accountabilities and the interaction between them throughout the project.

4.9 Accordingly, a governance management structure has been developed which is pictorially summarised in Figure 4 below. The key stakeholders in that structure, and the role they play, are summarised below:

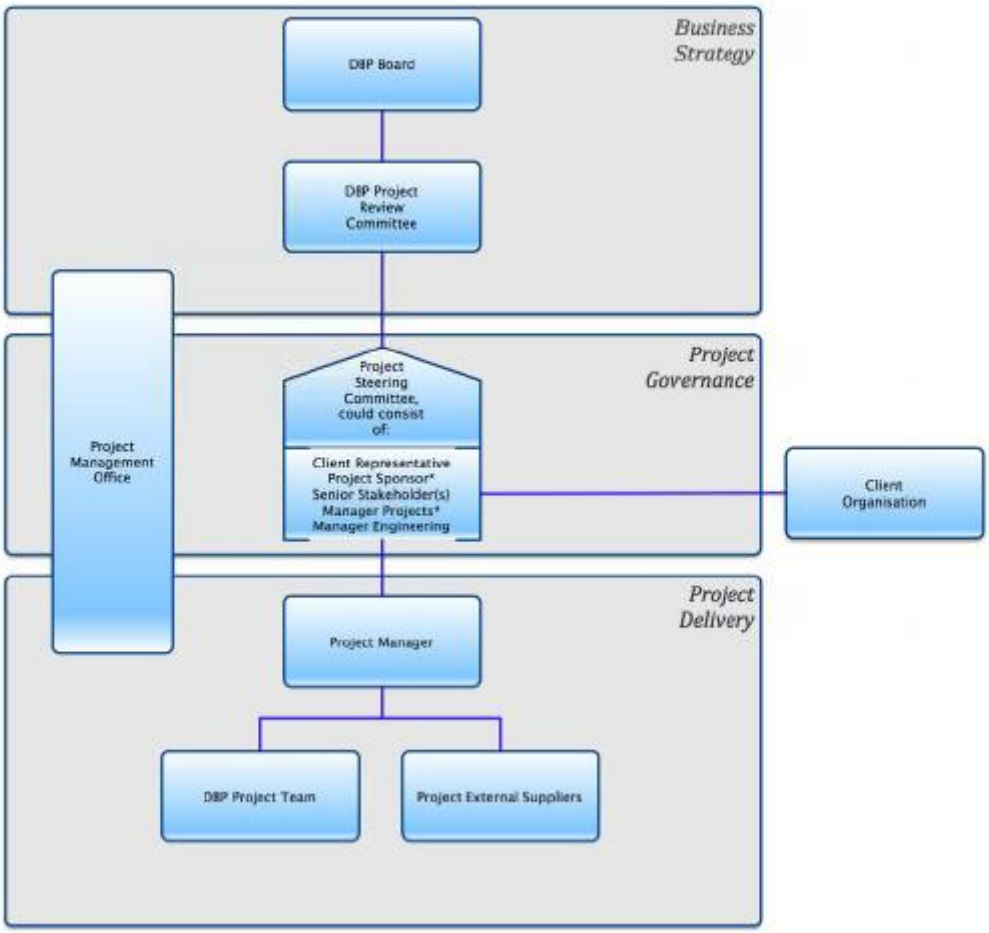
(a) The Project Review Committee (PRC) - the PRC is comprised of the senior executive team which determines the priority of DBP's portfolio of projects in the context of the DBP business plan and budget. The PRC operates according to a charter and provides authority to a project steering committee for the delivery of a project.

(b) Project Steering Committee - all projects are required to have a Project Steering Committee which is to have final responsibility for project delivery. The composition of the Steering Committee can and will vary from project to project. It should always include the Project Sponsor, and a suitable authorised person to approve project governance decisions. For most projects, this will be the Manager, Projects. For Construction projects, the Steering Committee may also include the Manager Engineering.

(c) DBP's customers may choose to implement a project Steering Committee as a part of their project execution function and if this is the case, the chair of the DBP Project Steering Committee will be part of, and report to, the customer's steering committee for the project.

(d) Depending upon the requirements of the project, project governance structures may vary depending upon the needs of the project. A project sizing procedure has been developed which provides the appropriate guidance for the structure required depending upon a project's size. Importantly, the number and nature of roles involved in project governance and for the project delivery team for a particular project will be agreed and documented at the project kickoff meeting and sanctioned by project governance at the Gate Meeting which occurs at the end of Initiation and beginning of Planning.

Figure 4: DBP Project Governance Structure



4.10 In addition DBP requires the use of an RASCI (Responsible, Accountable, Support, Consulted and Informed) Matrix to define the participation by various roles in the completion of tasks or deliverables for a project. RASCI is an abbreviation for:

(a) Responsible – those who do the work to achieve the task

(b) Accountable – those who are ultimately accountable for the correct and thorough completion of the deliverable or task, and the one to whom Responsible is accountable.

(c) Support – these are resources allocated to Responsible. Support will assist in completing the task.

(d) To be Consulted – those whose inputs are sought, and with whom there is two-way communications

(e) To be Informed – those who are kept up-to-date on progress, often only on completion of the task or deliverable.

4.11 In constructing the RASCI matrix for a project, the following principles are applied:

(a) Aim to place Accountability (A) and Responsibility I at levels that are closest to the project work or knowledge

(b) Only one (1) Accountability per task or deliverable

(c) Authority must accompany accountability

4.12 The standard RASCI matrix for DBP Project Governance is shown in Figure 5 below.

Figure 5: RASCI matrix

Key Activity / Milestone	Client	Project Review Committee	Project Steering Committee	Project Manager	Project Team
Feasibility Agreement	A	C	R	I	—
Project Business Case (FEED or DBC) – project scope & approach	C	C	A	R	S
Endorsement of the Project Business Case (FEED or DBC)	A	C	R	I	I
Project Management Plan	C	C	A	R	S
Project Quality Plan	C	A	R	R	R
Project Schedule	I	—	A	R	S
Project Budget	I	I	A	R	S
Detailed Design	I	—	A	R	S
Change Requests	I	I	A	R	S
Change Approvals	A	C	R	I	I
Project Baselines	I	—	A	R	S
Project Status Reports	I	I	A	R	S
Project Issue and Risk Escalations (corrective action recommendations, preventative action recommendations)	C	C	A	R	S
Project Milestone Review (PMM milestones) – as per GATES in section Figure 1 - DBP Project Lifecycle	I	I	A	R	S
Project Closeout Report	—	I	A	R	S
Project Handover Acceptance	A	I	R	S	S
Post Implementation Review	I	A	R	—	—
Financial approval	A	C	R	S	I
Regulatory Interface	A	I	R	S	S

4.13 In addition to the management governance structure outlined above, DBP has also implemented a "Gate Station" structure which outlines what must be completed by each phase of a project. The Gate Stations are:

(a) Gate 1 – Commence Definition. At this stage, the project is authorised by the PRC to complete the Initiation Phase within the approved initiation phase funds. This could include approval to purchase long lead items.

(b) Gate 2 – Business Case. At this phase, the project is authorised by the PRC to complete the Planning Phase within approved planning phase funds and with a formed Project Steering Committee.

(c) Gate 3 – Project Management Plan. At this stage, a project management plan is approved by the Project Steering Committee (PSC) which contains the authority to complete the delivery phase within approved delivery phase funds according to the approved plan.

(d) Gate 4 – Acceptance. At this stage acceptance of the project deliverables occurs. The project is authorised by the PSC to complete the finalisation phase with approved finalisation phase funds.

(e) Gate 5 – Closeout. Acceptance of the closeout of the Project occurs at this phase.

4.14 From a reporting perspective, the following reports are required to be provided in relation to each project:

(a) Daily Construction Report

(b) Weekly / Monthly - Status, Construction Reports

(c) Change Request, Technical Query, Variation Request

(d) Consolidated Projects Status Report

(e) Gate Certificates for each Gate Station referred to above

(f) Hand-over Certificate

(g) Closeout Report

4.15 There are also other reasons that DBP submits why all capital expenditure made or to be made during the current Access Arrangement Period (and as summarised in Table 1) meets the Prudency & Efficiency Criterion in NGR 79(1)(a) for the following additional reasons:

(a) For the reasons outlined in paragraph 3.19 of this submission;

(b) DBP has a SIB planning process that includes project identification informed by DBP's business processes and Asset management strategy framework, detailed risk assessment and ranking process (see Section 4 of Submission 2);

(c) The SIB planning process has adequate governance oversight from the Project Review Committee to the DBP Board and unitholders (See Section 3 of Submission 2);

(d) DBP uses front end engineering design (FEED) studies which involve a needs assessment for proposed works, identification and investigation of options available to meet the functional;

(e) As outlined in Section 6 of Submission 2, the terms of the gas transportation contract with Alcoa, which has a commercially negotiated tariff, provide a commercial incentive for DBP to be more than prudent and efficient in its capital planning and expenditure; and

(f) The terms and conditions in the Standard Shipper Contract (SSC) that have a commercially negotiated tariff, also provide a commercial incentive for DBP to be prudent and efficient in its capital planning and expenditure. Previously the ERA has noted that these incentives may be stronger than those under the regulatory framework[3]. In the 2016-20 Access Arrangement Period, approximately 85% of DBP's revenue will be contracted with a negotiated tariff. The prevailing tariff is fixed with the exceptions of:

(i) Escalation for inflation;

(ii) Changes in taxation;

[3] *ERA Draft Decision (May 2010) paragraph 194-197.*

(iii) Election to provide system use gas; and

(iv) Adjustments in respect of certain amounts of expansion capital expenditure.

(g) In regards to amount of expenditure classified as CWIP for the year 2011, the ERA has already concluded that this portion of SIB capital expenditure is likely to be justified under NGR 79 (at paragraph 337 of the Final Decision):

> *"Given that the value of capital works in progress relates to capital expenditures in 2010 or earlier years, the Authority is of the view that, with one exception, this amount of forecast capital expenditure in 2011 is likely to be justified under rule 79 of the NGR for the reasons set out earlier in this final decision in respect of the conforming capital expenditure for the 2005 to 2010 period."*[4]

(h) DBP notes that the one exception referred to above in relation to the CWIP amount is the value to be attributed to the BEP Lease. DBP has dealt with the difference in valuations in supporting Submission 6.

[4] *ERA Final Decision 31 October 2011 as amended on 22 December 2011*

5. SIB PROJECTS & EXPENDITURE INCURRED 2011

5.1 Table 2 lists all stay in business (SIB) projects that were undertaken by DBP during 2011 and the conforming capital expenditure made for each such project during that year.

5.2 As was outlined in paragraph 2.5, for the year 2011, DBP has also claimed, as conforming capital expenditure, the amount of expenditure reported in DBP's special purpose financial reports for the half year ended 31 December 2010 as "capital works in progress" (**CWIP**).

5.3 It should be noted that for these projects, DBP provided detailed submissions for these project as part of the 2011-2015 Access Arrangement approvals process. The relevant text from these submissions for these project is contained in Appendix C:

5.4 Expenditure listed in the table below may not be the total extent of expenditure for a project where the duration of the project spanned more than one year. Accordingly, if a project has spanned more than one year, it will be repeated in the tables for subsequent years.

5.5 Where incurred expenditure has exceeded $250k DBP has included a pie chart indicating a further breakdown of costs into internal labour, external contractors/consultants, material and services and travel, accommodation and other expenses. DBP has not produced charts for vehicle replacement projects as all costs are related to materials with very small associated amounts of internal labour.

5.6 Negative balances attributed to projects are explained in paragraph 6.2.

Table 2: SIB projects incurred expenditure - CY2011 ($ Nominal)

Table	Project Description	TOTAL incurred 2011	TOTAL 2010 CWIP & 2011 incurred
Table 3	Stage 3A filters (CS2, 4,7)	[redacted]	
Table 4	Upgrade Maximo maintenance system		
Table 5	Management of change control FY2008		
Table 6	Southern communication		
Table 7	Coating and earthing replacement at CS1,3,5 & 8		
Table 8	CCVT replacement program		
Table 9	Management of change control FY2009		
6.3	CRS upgrade		
Table 10	SCADA Upgrade		
Table 11	Detailed FEED - Replacement of meter stations flow computers/RTUs		
Table 12	Detailed FEED - SW comm's upgrade (for South of R43)		
Table 13	Microwave O&M set up costs		
Table 14	Site radiation folders to be developed for new microwave system		
Table 15	Replacement of air conditioning at compressor stations		
Table 16	Replacement of air compressors		
Table 17	Replacement of fleet vehicles		
Table 18	Citrix - BAU		
Table 19	SOE - BAU (Business as usual)		
Table 20	Cura - BAU		
Table 21	TX1		
Table 22	SAP - TX2		
Table 23	User Migration - TX2		
Table 24	Network separation - TX2		
Table 25	Data classification - TX2		

Table	Project Description	TOTAL incurred 2011	TOTAL 2010 CWIP & 2011 incurred
Table 26	TX2 Office fit out		
Table 27	Replacement of station PLC 5 at ACS sites and CS10		
Table 28	Replacement of compressor control at CS2,4,7 (Allen Bradley, Solar turbine control system, PLC 5/80 E)		
Table 29	Replacement of compressor control at CS10 (Allen Bradley, Solar turbine control system, PLC 5/25)		
Table 30	CRS - invoicing for commodity charges		
Table 31	Management of change control		
Table 32	Project management capabilities implementation		
Table 33	Tools for SDO & maintenance divisions		
6.3	Upgrade of communication system North of Karratha		
Table 34	Refurbishment of compressor station pipework		
Table 35	Replacement of DBNGP vehicles		
Table 36	Development of design basis for air compressors (CS2, 4 and 7)		
Table 37	Replacement of PVC piping at waste oil recoveries at compressor stations		
Table 38	Electronic noticeboard		
Table 39	Pinjar PS air conditioner replacement		
Table 40	DBP SAP cash flow reporting		
Table 41	Gym equipment for the compressor sites		
Table 42	CRS - General enhancements		
Table 43	CRS - Website for shippers		
Table 44	CRS - Technical upgrade + DR		
Table 45	ProMaster Express automated purchase card system		
Table 46	Annual true up MS EA licences		
Table 47	Increase Maximo users licences		
Table 48	FEED Fire & gas philosophy for DBNGP		
6.3	General office requirements		
Table 49	CS 2/2, 4/2 & 7/2 replacement of turbine air inlet filters		
6.3	FEED Repeaters 10, 11 & 21 - Towers structural upgrades		
Table 50	FEED Analysis of integrity of microwave towers		
Table 51	FEED Communications and power upgrade at spur sites 1-6		
Table 52	FEED Replacement of solar panels		
Table 53	FEED CS Replacement of Deutz TEM panels		
Table 54	FEED Review of AC power generation of MLV sites		
Table 55	FEED Replacement of earthing grid at CS's		
Table 56	FEED Replacement CS vent attenuators and station vents CS5, CS8		
Table 57	Wellesley Facilities, MLV154/155, actuation of WLV11A		
Table 58	Silencer for 10" and 8" MLV vent risers		
Table 59	Upgrade and repair aftercooler drawers		
Table 60	CS2 & 4, Replacement of GEA fire and gas system		
Table 61	Replacement of station control system at CS10		
Table 62	Refurbishment of underground pipework		
Table 63	FEED Review of odorant systems		
Table 64	Intelligent pigging		
Table 65	Supply of hydraulic lifting frames for aftercooler and oil cooler motors		
Table 66	Locking devices for permit to work isolation		
Table 67	Separation of control system network & IP network		

Table	Project Description	TOTAL incurred 2011	TOTAL 2010 CWIP & 2011 incurred
Table 68	CS mechanical isolations of LM500 & centaur units		
Table 69	Replacement of signage and directional markers		
Table 70	Management of change		
Table 71	Dampier Facilities - Communications Upgrade		
Table 72	Standardisation of PLC and HMI logic		
Table 73	Tools and equipment for SDO and Maintenance		
Table 74	Implementation of transportable online condition monitoring unit		
Table 75	MLV117 to Clifton Rd Meter Station: Communications network upgrade		
Table 76	Additional vehicles		
Table 77	VSSMS		
Table 78	FEED System review project		
Table 79	Replacement of existing vehicles		
Table 80	Subsequent costs		
Table 81	Tyre pressure monitor		
Table 82	Intelligent pigging- mainline, laterals & unpigged		
Table 83	Refurbishment of underground pipework		
Table 84	MLV117 to Clifton Road meter station		
Table 85	Management of change		
Table 86	Tools and equipment for Maintenance		
Table 87	Replace turbine air inlet CS2/4/7		
Table 88	Replace PLC station control CS1,3,5,8		
Table 89	Replace CS Vent attenuators & vents at CS2,4,7		
Table 90	Upgrade solar panels spur Sites 1-6		
Table 91	Replace DEUTZ TEM panels		
Table 92	Upgrade of flow computers		
Table 93	Fire & gas at CS2, 4, 5, 6, 7, 8, 10		
Table 94	FEED Power gen control system enhancement		
Table 95	FEED GEA control, monitor & load sharing		
Table 96	Mothball CS10 1&2 Solar Centaur		
Table 97	FEED RCD protection at CSs		
Table 98	Conitel RTU replace Clifton Rd, Harrow S		
Table 99	Replace and upgrade TSCC tel system		
Table 100	FEED : Retrofit of unpig laterals for pigging		
Table 101	Implement Visual Risk Treasury software system		
Table 102	Replacement of existing vehicles FY11/12		
Table 103	CiM Visual Planner suite		
Table 104	Installation of a Navman MY60T GPS		
Table 105	Add storage for dangerous goods at CSs		
Table 106	DBNGP CS diesel tank remote monitoring		
Table 107	Refurbish accommodation at CS4 & 5 FY11/12		
Table 108	Replace RO units at CSs		
Table 109	FEED: Mothball MS's RR, W, E, M, OR		
Table 110	Meter station site painting FY11/12		
Table 111	Replace water bores at CS1, 4 & FEED CS5		
Table 112	Pallet racking at CS5		
Table 113	SDO Tools FY11/12		
Table 114	Subsequent costs FY2012		

Table	Project Description	TOTAL incurred 2011	TOTAL 2010 CWIP & 2011 incurred
Table 115	Document management system review	[redacted]	
Table 116	PC replacement plan		
Table 117	Additional PC & equipment purchases		
Table 118	ICS-ICT working group (FEED)		
Table 119	Disaster recovery document and process		
Table 120	CRS - Functional upgrade		
Table 121	MS true-up licence		
Table 122	PC Replacement Program		
Table 123	Additional PC & software		
Table 124	PC replacement due to destruction		
Table 125	CRS enhancement program		
Table 126	SAP licensing, AET&D		
Table 127	Microwave		
Table 128	Microwave digitalisation		
	Total	**17,036,856**	**52,432,475**

5.7 It should be noted that the total of the 2011 SIB actual expenditure in Table 2 being $52.4m (Nominal) matches that arrived at in verification of actual capital expenditure found in Tables 3 and 4 in section 2 of Submission 6.

5.8 The remainder of this section details the why the expenditure summarised in Table 2 is justifiable under the NGR 79(2) Criterion.

Stage 3A filters (CS2, 4 & 7)

Table 3: Stage 3A filters (CS2, 4, & 7)

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Removal of the existing Stage 3A turbine inlet filter housings, and installation of the 3 turbine air inlets at compressor station No.2 unit 2, compressor station No.4 unit 2 and compressor station No.7 unit 2 This is a multi-year project with the capital spend in question being for the design and procurement of materials required for the 3 air filter units.
Business need	The existing Stage 3A turbine air inlet filters housings were corroding and deteriorating and required replacement in order to reduce the risk of turbine axial compressor damage and possible catastrophic failure. Expected benefits of the project were a significant reduction in risk of failure from ingestion of corrosion and collapsed filter material. Full details of this project were provided to the ERA as part of the 2011-2015 Access Arrangement approvals process and are provided in Appendix C:
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Upgrade Maximo maintenance system

Table 4: Upgrade Maximo maintenance system

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Upgrade of the maintenance management system Maximo from obsolete version 4.03 (released in 1999) to version 6.2. The project was delivered in 2 phases: 1. Data re-engineering including: • Data structure definition: data conversion strategy definition, detailed planning, data hierarchy design, template documentation and team training. • Data mapping: data extract from Maximo 4.03 and mapping to the new hierarchy • Data collection: drawing inspections and technical information gathering any missing pieces of information with the scope of work • Data structure refinement: hierarchy assessment by business user and on-site assessment requests for data deemed to be problematic. • Data validation: trial conversion waves in Maximo 6.2 through data loader to validate data quality and integrity. 2. Maximo implementation including: • Business blueprint • Realisation • final preparation • go-live, training, and support
Business need	DBP's DBNGP Asset Management Review project identified a number of deficiencies in the process of managing maintenance operations. Maximo also forms a central part of DBP's Safety Case with respect to which, DBP must comply as part of its obligations under the Pipeline Licences issued for the DBNGP. The original version of Maximo was identified to be obsolete and one of the most critical items affecting the efficient operation and maintenance of the DBNGP. It was imperative that the obsolete version 4.03 no longer supported by IBM was replaced with version 6.2. Full details of this project were provided to the ERA as part of the 2011-2015 Access Arrangement approvals process and are provided in Appendix C:
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Management of change control FY 2008

Table 5: Management of change control FY2008

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Management of change is an allocation for minor projects affecting the operation and maintenance of the DBNGP that occur throughout the year. These projects are minor in nature each with expenditure in the range of $1000 to $50,000. The largest of these projects includes: • CCVT camera, intercom and monitor replacement • GGPI grove valve change out • GPR electrical & corrosion protection replacement • Jandakot provision of services • Pipeline risk assessments • Ad hoc system improvements and change
Business need	During the normal operation of the DBNGP, various design changes are required to: • Sustain business; • Alleviate unsafe condition; • Increase reliability; • Make equipment more reliable; • Increase efficiency; and/or • Reduce costs.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Southern Communications

Table 6: Southern Communications

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	• Upgrade and replace DBNGP Southern Communications Network from MLV117 - MLV157 due to existing communications equipment systems reaching end of life. • Upgrade and replace the DC power systems at MLV 117 – MLV157 due to existing power systems reaching end of life. • Upgrade communications in the Kwinana industrial area to facilitate the exit from the Western Power pilot cable network. • Upgrade of communications at Compressor Station 10 to eliminate reliance on Telstra/ATCO services and also to increase functionality.
Business need	• Southern communications equipment was at end of life • DC power systems were at end of life • Radio licences needed to operate the networks which would have been revoked by the ACMA during 2011. Existing communications equipment could be modified to function under new licensing conditions. • Requirement to exit from the Western Power owned and operated pilot cable network Failure to undertake this project would have resulted in the loss of remote visibility and control of the DBNGP from MLV117 Della Road – MLV157 Clifton Road.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Coating and Earthing Replacement at CS1, 3, 5 & 8

Table 7: Coating and earthing replacement at CS1, 3, 5 & 8

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	This project was for the coating repair and replacement of the earthing grid for the below ground pipework at compressor stations 1, 3, 5 and 8.
Business need	Due to ageing and continuous operation of the compressor station 1, 3, 5, and 8 from 1991 coating of the below ground pipework had deteriorated and was in need of repair. Also, original copper earthing grid at compressor stations were failing and required replacement with zinc diamond line. The new earthing grid also has improved compatibility with existing DBNGP Cathodic Protection system. Full details of this project were provided to the ERA as part of the 2011-2015 Access Arrangement approvals process and are provided in Appendix C:
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

CCVT replacement programme

Table 8: CCVT replacement programme

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Replacement of the existing Closed Circuit Vapour Turbines (CCVT) at Main Line Valve (MLV) sites. The project included the purchase of units, installation and commissioning for the following sites: • MLV10 • MLV20 • MLV32 • MLV44 • MLV58 • MLV56 • MLV68 • MLV70
Business need	Existing CCVTs were obsolete and had no vendor support for maintenance purposes. CCVTs are essential for the reliable power supply at remote MLV sites enabling: • the operation and control of MLV • SCADA visibility of the site • Power the communications network along the pipeline
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Management of change control FY 2009

Table 9: Management of change control FY 2009

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Management of change is an allocation for minor projects affecting the operation and maintenance of the DBNGP that occur throughout the year. These projects are minor in nature with expenditure in the range of $1000 to $50,000. Major works include: • Replacement of 19 Clipsal Timer 56 Series • Pipe Stress Analysis Study - Della Road • Risk assessment for Mundijong road extension work • Replacement of 20 Heinelec 16 Amp circuit breaker • Replacement of 20 pressure transmitter gauges • Replacement of 7 temperature transmitters • Groundbed replacement at compressor stations • Repair erosion at Yuna KP/ Nabawa Rd • 2201 Backplane upgrade kit, • LF5-10 CV B H/D air compressor replacement • Replacement of 2 Phoenix multiplus C24/1600/40-16 sinewave inverter

	Project details
	• GGPI Grove Valve changeout • CS1-CS10 Unit valve eng work • Implementation of new temperature (T1) compensation at compressor station • Refurbishment of CS4 compressor & motor • Replacement telecommunications cabling CS2,3,4 &7 • Install new Contrologix workstation • A470001-EN AMS machinery manager
Business need	During the normal operation of the DBNGP, various design changes are required to: • Sustain business; • Alleviate unsafe condition; • Increase reliability; • Make equipment more reliable; • Increase efficiency; and/or • Reduce costs.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

SCADA upgrade

Table 10: SCADA upgrade

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	The scope of work for this project included: • Upgrading Hardware and software from existing system to new platform • Upgrading corporate historian system • Automating KPI reporting through a corporate portal/dashboard • Upgrading reporting tool for SCADA and field data • Improving data and systems security • Improving billing and reporting
Business need	The existing SCADA system was obsolete and not supported by the vendor and had the following limitations: • No hardware or software vendor support • Unavailability of spares • Level of security not up to date • Insufficient data retention period • Incompatible with current Windows environment • Poor connectivity with communications systems The upgrade project will rectified the above limitations delivering for improved operations, billing, reporting and monitoring of the DBNGP. Full details of this project were provided to the ERA as part of the 2011-2015 Access Arrangement approvals process and are provided in Appendix C:
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Detailed FEED - replacement of meter station flow computers

Table 11: Detailed FEED - replacement of meter station flow computers

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Front end engineering and design study considering the replacement of Leeds and Northrop conitel RTU at Clifton Road and Harrow Street.
Business need	The existing Leeds and Northrop Conitel RTU were obsolete and not supported by the vendor. Units needed to be replaced with modern flow computers to ensure metering accuracy and security to meet requirements of transportation contracts.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Detailed FEED - SW Comms upgrade

Table 12: Detailed FEED - SW Comms upgrade

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	The scope of this project is to prepare a front end engineering design in relation to the following aspects of the microwave communications system: • Upgrade and replacement of the DBNGP Southern Communications Network from MLV117 - MLV157 due to existing communications equipment systems reaching end of life. • Upgrade and replace the DC power systems at MLV 117 – MLV157 due to existing power systems reaching end of life. • Upgrade communications in the Kwinana industrial area to eliminate reliance on the Western Power pilot cable network. • Upgrade communication at Compressor Station 10 to eliminate reliance on Telstra/ATCO services and also increase functionality.
Business need	• Southern Communications equipment was at end of life • DC power systems were at end of life • Radio licences needed to operate the networks would have been revoked by the ACMA during 2011. Existing communications equipment couldn't be modified to function under new licensing conditions. • Required exit from the Western Power owned and operated pilot cable network Failure to undertake this project would have resulted in the loss of remote visibility and control of the DBNGP from MLV117 Della Road – MLV157 Clifton Road.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Microwave O&M set-up costs

Table 13: Microwave O&M set-up costs

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Implementation of training programme for upgraded communications systems plus acquisition of related safety and diagnostic equipment. This training programme was attended by DBP's operation and maintenance staff.
Business need	Along with the digitisation works carried out to the microwave system DBP identified a number of staff to be trained in the various systems which make up the DBNGP communication network. Diagnostic and safety equipment including GPS units and vehicle radio allowed for the efficient and safe operation and maintenance of the DBNGP communications network.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Site radiation folders to be developed for new microwave system

Table 14: Site radiation folder to be developed for new microwave system

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	The scope of work for this project includes: • Prepare FEED scope of work • Develop DBNGP Communications Network Radiation Register • Develop site specific documentation • Install site specific signage
Business need	DBP operates and maintains a standalone communications network that requires: • Every communications site requires a site specific radiation register and signage • Ensuring that employees and contractors working on the communications site are protected from excessive exposure to radio frequency radiation.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Replacement of air conditioning at compressor stations

Table 15: Replacement of air conditioning at compressor stations

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	This project is the annual replacement of air conditioner units (for equipment rooms and accommodation units), targeting units that are faulty and have reached the end of useful life.
Business need	Air conditioning units are essential in allowing equipment to operate within the manufacturer's specified temperature range. Operating continuously at high temperatures can lead to premature failure or intermittent trips of critical infrastructure on the DBNGP. Some equipment rooms have heat detectors that will shut GEAs down on high enclosure temperature. In addition, air conditioners at accommodation buildings are required to maintain suitable living conditions.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replacement of air compressors

Table 16: Replacement of air compressors

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Replace all air compressors on ACS sites at CS1, CS3 and CS8.
Business need	The reliability of air compressor units is imperative to the operation of the DBNGP. Units provide buffer air when boost compressors are not running and pressurised. Units were +20 years old and obsolete with repair cost more than the cost of a new unit.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replacement of fleet vehicles

Table 17: Replacement of fleet vehicles

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	New vehicles acquired and fitted out for field operations on the DBNGP to enable maintenance to be undertaken as a result of the additional equipment constructed as a result of Stage 5B expansion. Expenditure was for the following vehicles and equipment: • Toyota Hilux SR5 Dual Cab (PL) • Toyota Hilux SR5 Extra Cab (CS) • Big Al BA3 (Roscos) • Toyota Hilux SR5 Extra Cab (CS) • DA Bull DB5 (Roscos) • Tooling • Electrical and Solar Fitout • Toyota Hilux SR5 Dual Cab (MS) • Custom TG1 (Roscos) • Tooling / Spring Upgrade • Mercedes Sprinter 4WD LWB (MS) • Toyota Prado GLX Auto (E&TS) • Toyota Prado GXL Auto (FTSO) 1DHW 985 • Communication equipment • Engel • Recovery kits
Business need	Vehicles purchased replaced existing vehicles identified for replacement. Replacement of vehicles is assessed based on excessive mileage and age. One additional vehicle was purchased for engineering and technical services.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Citrix - BAU

Table 18: Citrix - BAU

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Upgrade of the DBP Citrix environment.
Business need	Out-dated Citrix software was assessed to pose a number of risks due to the following factors: • lack of vendor support for software considered to be end of life. • Lack of redundancy • Inoperability issues with corporate IT service provider. • Citrix is critical business software allowing workers in remote area access to corporate IT systems as well as the GIS platform and Maximo.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

SOE - BAU

Table 19: SOE - BAU

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Implementation of new Standard Operating Environment for corporate IT/IS as part of transition from ATCO to DBP
Business need	Required as part of the ICT separation and transition from ATCO to DBP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

CURA - BAU

Table 20: CURA - BAU

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	DBP's purchase of CURA software. CURA is used to capture DBP's contractual and regulatory obligations.
Business need	It is critical that DBP is able to manage and track its licences conditions, contractual, and regulatory obligations.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

TX1

Table 21: TX1

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	TX1 and TX2 refers to phases of the transition process from a predominantly outsourced business model to having the majority DBP's resources in-house. The key outcomes of the transition agreement with WestNet were: • The transfer of approximately 170 positions to DBP in total; • Responsibility for existing non-DBNGP operations and maintenance services contracts currently performed by WNE for other gas pipelines to be transferred to DBP; • Work group re-arrangement within Allendale II to accommodate DBP staff in spaces separate from WNG/WNE staff but in areas to be determined based on the space currently occupied on levels 6 and 7; and • A simplified IT transition with the objective of transferring all DBNGP and relevant third party asset data to DBP, with data retained by WNE being limited to that required to fulfill its remaining obligations under the OSA.
Business need	DBP has thus internalised all critical functions connected with the operation of the DBNGP in order to: • Ensure asset management functions were aligned with the strategic direction of the overall business; • Have more direct control over operating costs; • Simplify arrangements to enable it to meet its confidentiality and non-discrimination obligations to shippers under the SSC; and • Provide greater ability to retain, allocate, motivate and manage employees.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

SAP - TX2

Table 22: SAP - TX2

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Implementation of SAP environment as part of transition from WestNet Energy to DBP. See Table 21 for further background.
Business need	DBP required a SAP environment for the management of financial business system independent from ATCO. Under the operating services agreement, DBP could rely on use of SAP under the same licence as WestNet because of the common shareholding between the two businesses. However, because DBP and WestNet no longer had a shareholding relationship and the SAP licence requirements do not allow a holder of a SAP licence to provide the SAP service to unrelated entities, DBP is required to obtain its own SAP licence. Without a financial reporting system, DBP would not be able to prepare reports required under the Corporations Act. Full details of this project were provided to the ERA as part of the 2011-2015 Access Arrangement approvals process and are provided in Appendix C:
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

User migration - TX2

Table 23: User migration - TX2

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Migration of ICT users from Westnet Energy to a DBP specific Standard Operating Environment as part of the TX2 transition process. See Table 21 for further background.
Business need	It was necessary to migrate to the DBP users to a specific ICT Standard Operating Environment. Full details of this project were provided to the ERA as part of the 2011-2015 Access Arrangement approvals process and are provided in Appendix C:
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Network separation - TX2

Table 24: Network separation - TX2

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Upgrade of the Control System Network (CSN) from a combined network environment shared with the IP telephony network, to a standalone network as part of the transition. The CSN is an ethernet network extending across the DBNGP used in monitoring, maintenance and configuration of field devices.
Business need	It was assessed that separation of the networks would allow for simplification and streamlining of both networks, reducing administrative overheads. Separation of the CSN improved network security by removing unauthorised third party access to the IP telephony network Full details of this project were provided to the ERA as part of the 2011-2015 Access Arrangement approvals process and are provided in Appendix C:
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Data classification - TX2

Table 25: Data classification - TX2

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Conduct data classification in preparation for TX2 transition.
Business need	This was critical preparatory work for the data transition process from Westnet Energy to DBP. Full details of this project were provided to the ERA as part of the 2011-2015 Access Arrangement approvals process and are provided in Appendix C:
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

TX2 office fit out

Table 26: TX2 office fit out

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Establishment of sub leased office / accommodation for DBP as part of the TX2 transition. The project included: • the establishment of 28 permanent work stations; • minor increase in floor space; • modification of partitioning, ceiling panels; • power and communication cabling; and • new furniture.
Business need	Required to establish office space for DBP to function as a standalone entity after separation from Westnet Energy. This was required as prior office space and facilities could not cater for additional employees transitioned from WestNet Energy to DBP. Full details of this project were provided to the ERA as part of the 2011-2015 Access Arrangement approvals process and are provided in Appendix C:
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replacement of station PLC 5 at ACS sites and CS10

Table 27: Replacement of station PLC 5 at ACS sites and CS10

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study assessing the scope of work for replacement of obsolete Allen Bradley Compressor station Programmable Logic Control (PLC5) control system at ACS sites (CS1,3,5, and 8) and compressor station 10 with the latest system. Note that FEED study for CS10 has been carried out as a separate project (See Table 29).
Business need	PLC is one of the most critical items on a compressed pipeline enabling compressors to operate safely and efficiently. The PLC installed at these sites were original equipment and had reached design life and were no longer supported by Solar turbines.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replacement of compressor control at CS2, 4, 7

Table 28: Replacement of compressor control at CS2, 4, & 7

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study assessing the scope of work for replacement of obsolete Allen Bradley Compressor station Programmable Logic Control (PLC5) control system for unit 2 at compressor station 2, 4, and 7 with the latest system.
Business need	The PLC is one of the most critical items on a compressed pipeline enabling compressors to operate safely and efficiently. The PLC installed at these sites were original equipment and had reached their design life no longer being supported by Solar turbines.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replacement of compressor control at CS10

Table 29: Replacement of compressor control at CS10

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study for the replacement of Allen Bradley PLC 5 based control system to latest PLC based control system for CS#10 including software configuration to achieve existing station control functionality through the new system.
Business need	Relevant PLC were assessed to be obsolete due to the equipment not being supported by Solar turbines.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

CRS - invoicing for commodity charge

Table 30: CRS - invoicing for commodity charge

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Project implemented reconfiguration of CRS to include template for invoicing commodity charges.
Business need	Work ensured continual billing compliance and improvement to CRS billing system for the management of the shipper contracts.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Management of change control

Table 31: Management of change control

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Management of change is an allocation for minor projects affecting the operation and maintenance of the DBNGP that occur throughout the year. These projects are minor in nature with expenditure in the range of $1000 to $50,000. Major work includes: • 4098-9640EA (T614D) detectors • Pipe welding - Exhaust stack at CS6 • G250 Rolled plate • Hire of 60FT EWP with harnesses CS6 • CCVT motive fluid • Single-phase voltage monitoring relay K8 *20 • CS6 coating renovation • Dampier control system • Solar system TRU in Carnarvon CLV2 • Pneutorque remote PT72-500 S/N 2009/45791 • Pneutorque remote PT72-500 2009/45882 • Scimitar series inverter S/N PSW1000412002439 • PLC modification for CS10 unit 2 • FasTracker VSSMS vehicle tracking unit • CCVT Canister Unit at Jandakot Depot • Relocate Southern Comms Mux MoC Titan • Starpoint for SharePoint PoC • GEA Reliability
Business need	During the normal operation of the DBNGP, various design changes are required to: • Sustain business; • Alleviate unsafe condition; • Increase reliability; • Make equipment more reliable; • Increase efficiency; and/or • Reduce costs.

	Project details
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Project management capability implementation

Table 32: Project management capability implementation

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	This project was to develop and implement project management capability to effectively and efficiently manage minor project work including; • Define project management methodology • Develop processes from concept to handover • Configure SAP to support the methodology
Business need	DBP requires project management capability to manage its minor project work with the following benefits: • Integrated project management system • Captures the fundamental elements of a project management system • Simple generation of reports including fundamental health check reports • Reporting suite that covers the full spectrum from work packages to enterprise wide summaries.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Tools for SDO & maintenance divisions

Table 33: Tools for SDO & maintenance divisions

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Annual tool budget allocated to both SDO and maintenance to acquire new tools and equipment required to perform day-to-day operations.
Business need	Required to allow staff to access appropriate equipment required to perform normal maintenance duties on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Refurbishment of compressor station pipework

Table 34: Refurbishment of compressor station pipework

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	A dig up programme of underground pipework to verify the condition of coating systems. This expenditure was incurred for refurbishing 256 meters of pipe at CS8 and general excavation.
Business need	The condition of the main pipeline on the DBNGP is monitored via the cathodic protection (CP) surveys and direct current voltage gradient (DCVG) surveys. However, the condition of the underground pipework in compressor stations cannot be determined in the same manner due to the vast number of other underground systems in the vicinity. Also in many instances, shielding occurs which blocks CP from certain parts of the pipeline resulting in corrosion. The project was required to maintain an acceptable level of protection of underground pipework.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replacement of DBNGP vehicles

Table 35: Replacement of DBNGP vehicles

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Replacement of DBNGP vehicles. This expenditure was for the following vehicles and equipment: • Toyota Hilux SR5 Dual Cab (PL) (1DHR 151) • Toyota Workmate Cab Chassis 79 (PL) • Big Al BA3 (1DLT 970) • Toyota Workmate Cab Chassis 79 (CS) • Big Al BA3* (1DKD 176) • Solar Fit-out • Toyota Workmate Cab Chassis 79 (CS) • Big Al BA3 (1DKD 175) • Toyota Workmate Cab Chassis 79 (CS) • Da Bull (1DKV 395) • Communications equipment • Toyota Hilux SR5 Extra Cab (MS) (1DID 392) • Refurbished Tool Box • Toyota Hilux SR5 Extra Cab (MS) (1DJL 673) • Tooling • Toyota Prado GXL Auto (PL) (1DLZ 615) • Communications (VSSMS)
Business need	DBP replaces vehicles that have excessive mileage and at excessive age. Both age and high mileage result in increased maintenance costs. Reliable vehicles are essential to ensure the safety of personnel and their ability to perform required duties effectively and efficiently.

	Project details
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Development of design basis for air compressors (CS2, 4 & 7)

Table 36: Development of design basis for air compressors (CS2, 4 & 7)

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study assessing for the replacement of existing air compressors at CS2, 4, and 7.
Business need	Excess downtime was observed for the Stage 3 air compressors at CS2, 4, and 7 due to failure and maintenance requirements. Air compressors were out date, unreliable and had failed repeatedly.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replacement of PVC piping at waste oil recoveries

Table 37: Replacement of PVC piping at waste oil recoveries

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Develop a scope of work, cost estimate and approximate project schedule in order to replace existing PVC pipe of the waste wash down system with stainless steel pipe work.
Business need	Sun damage had occurred to waste oil recovery system PVC pipework, risking potential environmental and or safety incident.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Electronic noticeboard

Table 38: Electronic noticeboard

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Electronic notice boards (ENB) facilitate the dissemination of safety alerts, bulletin, KPIs and general safety information in a timely and effective manner.
Business need	Benefits realised by installing the ENB are: • effective distribution of safety information assisting DBP to meet Safety Case requirement which require effective communication of important information to staff. • an additional communication medium for other information including, outage planning, weather warnings, road closures and travel register status. • ENB can also be used to introduce video conferencing to compressor stations reducing travel requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Pinjar PS air conditioner replacement

Table 39: Pinjar PS air conditioner replacement

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Project to replace both air conditioner units at control huts at the meter station at Pinjar Power Station.
Business need	Air conditioning units are essential for equipment to operate within the manufacturer's specified temperature range. Operating continuously at high temperatures can lead to premature failure or intermittent trips of critical infrastructure on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

DAP SAP cash flow reporting

Table 40: DAP SAP cash flow reporting

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Implementation of SAP enhancement for cash flow reporting
Business need	Currently, the DBP cash flow reporting was prepared using multiple downloads and excessive manipulation of the data in excel spread sheets. Enhancements allowed for a more simplified reporting process as well as reducing the risk of human error.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Gym equipment for compressor sites

Table 41: Gym equipment for compressor sites

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Installation of gym equipment at CS2, CS3, CS4, CS6 CS7 and CS9
Business need	Equipment required allowing employees rostered to remote compressor stations maintain work life balance and healthy life style.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

CRS - General enhancements

Table 42: CRS - General enhancements

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Customer reporting system (CRS) enhancements including: • Update date choosers function (not consistent across application). • Implement P&L and S&D services billing style into CRS • Functional Update - CRS to re-issue revised allocation reports. • Functional Update - DQ and CQ reports to be modified to highlight changed billing data. • Functional Update - DQR and CQR to be combined into 1 report
Business need	Enhancements ensure that shipper billing is accurate and reliable.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services

CRS - website for shippers

Table 43: CRS - website for shippers

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Establish customer reporting service (CRS) website portal
Business need	Allow shippers better access to information, and pipeline services. Benefits included: • reducing reliance on personnel • automate billing functions • improved reporting capability • improved change control and auditing capability
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

CRS - Technical upgrade and DR

Table 44: CRS - Technical upgrade and DR

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Upgrade of CRS system including implementation of Disaster Recovery system.
Business need	It is critical to maintain security and safety of data and continuous operation of the CRS system in the event of emergency.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

ProMaster express automated purchase card system

Table 45: ProMaster express automated purchase card system

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Project delivered an online system for the recording, coding and approval of DBP corporate card purchases and expense claim reimbursements.
Business need	Prior to the implementation of Promaster, DBP's system was a manual process that required cardholders to populate all corporate card expenditures on an excel sheet which was later manually entered in SAP. Implementation of Promaster Express by Inlogik introduced an automated expense management system for DBP purchase cards, expense reimbursement claims and kilometre travel reimbursement.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services

Annual true up of MS EA licences

Table 46: Annual true of MS EA licences

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	DBP has a licensing agreement with Microsoft covering standard desktop software and server operating system software requiring the payment of an annual true-up charge.
Business need	Desktop computers, laptops, service and software are essential tools in the provision and maintenance of the IT/IS service delivery on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Increase Maximo user licences

Table 47: Increase Maximo user licences

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Additional Maximo user licences for staff access increasing number of users by 10%.
Business need	Further software licences were required to allow additional staff to access Maximo.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

FEED fire & gas philosophy for DBNGP

Table 48: FEED fire & gas philosophy for DBNGP

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	FEED study to define fire and gas monitoring and suppression philosophy for various DBNGP facilities.
Business need	Ensure that the fire and gas safety requirements are met on the DBNGP facilities.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Replacement of turbine air inlet filters

Table 49: Replacement of turbine air inlet filters

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Removal of the existing Stage 3A turbine inlet filter housings, and Installation of the 3 turbine air inlets at compressor station No.2 unit 2, Compressor Station No.4 unit 2 and Compressor Station No.7 Unit 2 This is a multi-year project. Capital spend was for the design and procurement of the materials for the 3 air filter units. This expenditure is for the detail design prior to the installation in later years.
Business need	The existing Stage 3A turbine air inlet filters housings were corroding and deteriorating and required replacement in order to reduce the risk of turbine axial compressor damage and possible catastrophic failure. Expected benefits of this project were a significant reduction in the risk of failure from ingestion of corrosion and collapsed filter material.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

FEED analysis of integrity of microwave towers

Table 50: FEED analysis of integrity of microwave towers

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study to determine the structural integrity of the microwave towers at repeaters 3, 4, 7 and 9. The outcome to determine an appropriate way to rectify and fix to current Australian Standards.
Business need	Tower structures were assessed to be reaching their end of life design.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

FEED comms and power upgrade at spur sites

Table 51: FEED comms and power upgrade at spur sites

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED Study assessed the scope of work required to upgrade the communications and power at spur sites on the DBNGP.
Business need	The communications and power systems at spur sites required upgrade or replacement due to age or equipment obsolescence.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

FEED replacement of solar panels

Table 52: FEED replacement of solar panels

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study to determine scope of work for replacement of solar panels at spur sites 3-6. This FEED study was incorporated into another related FEED study and therefore not progressed as per plan.
Business need	Due to ageing and failure of existing solar panels, site had become more prone to power outages and therefore lack of remote visibility. To control this site effectively it is necessary to upgrade the solar power and batteries at these sites to maintain effective control.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

FEED CS replacement of DEUTZ TEM panels

Table 53: FEED CS replacement of DEUTZ TEM panels

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	FEED study to obtain a scope of work for the replacement of TEM panels on all DEUTZ GEAs at compressor stations CS02, CS04, CS06 and CS09.
Business need	This system was no longer supported and spare parts were unavailable for the existing operating systems.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

FEED review of AC power generation of MLV sites

Table 54: FEED review of AC power generation of MLV sites

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	FEED study assessing the scope of work required for the rationalisation and standardisation of GEA control systems at MLV sites on the DBNGP
Business need	Rationalisation and standardisation of GEA control systems are required to ensure the functionality of GEAs are maintained.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

FEED replacement of earthing grid at CS

Table 55: FEED replacement of earthing grid at CS

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study assessing the scope of work required replace the earthing grid at all compressor stations. This FEED study was incorporated into other related and therefore did not progress as per plan.
Business need	Earthing grids at compressor stations are important to the safety and integrity of the facilities for the protection of equipment and personnel. With continuous operation of the DBNGP since commissioning, it was necessary for the earthing grid to be replaced as required.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

FEED replacement CS vent attenuators and station vents

Table 56: FEED replacement CS vent attenuators and station vents

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study to assess requirements for the repair of compressor station vent attenuators at compressor stations 2, 4 and 7.
Business need	The existing vent attenuators at CS 2, 4 & 7 were fitted during the Stage 3 Expansion and had deteriorated to the stage that they posed a risk to personnel by projection materials during venting.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Wellesley facilities MLV154/155 actuation of WLV11A

Table 57: Wellesley facilities MLV 154/155 actuation of WLV11A

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	• Installation of actuator on WLV11A; • Installation of actuator instrumentation in MLV154 compound; • Installation of local valve controls on MLV154 RTU panel; and • Configuration of SCADA and RTU to enable remote actuation.
Business need	This work was required to install remote operability to WLV11A as part of enhanced system safety so that the Worsley Lateral and the Southern Loop could be remotely isolated in an emergency.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure was necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Silencer for 10" and 8" MLV vent risers

Table 58: Silencer for 10" and 8" MLV vent risers

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	This project ensured safe venting procedure by introducing vent silencers on the DBNGP. In populated/metro areas a vent silencer are used with valve actuators in remote locations. Scope of work included: • Procurement of noise silencer and adaptor brackets • Technical support for implementation • Technical training and operating procedure • Introduce the device to maintenance and to emergency response personnel
Business need	Noise levels from mainline venting are so high that there is a risk of hearing damage to personnel involved in this operation. Risk also extends beyond the workforce and applies to any person of the public in the vicinity of the valve during venting.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Upgrade and repair aftercooler drawers

Table 59: Upgrade and repair aftercooler drawers

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	This project involved the refurbishment /modification of all 50 aftercooler fan drawers (currently direct online type) at all 10 compressor stations. Project is to be delivered over two years.
Business need	Allows soft start capable drawers for lower inrush current aftercooler fan starts.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

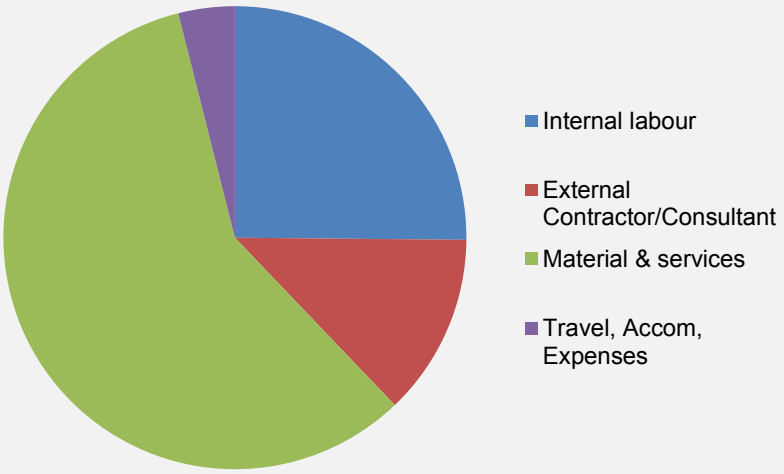
Replacement of GEA fire and gas system (CS2 & 4)

Table 60: Replacement of GEA fire and gas system (CS 2 & 4)

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Old fire and gas controllers at CS2 and 4 were replaced with the new Sieger 57 type controllers as per previous CS06 and CS09 retrofit carried out during GEA reliability project in 2009/10 financial year. The aim was to minimise changes and re-use existing GEA F&G sensors and also use the existing EGA Programmable Logic Control (PLC) code for coding annunciator display and SCADA.
Business need	The existing fire & gas controllers at CS2 and 4 are obsolete and not supported by the vendor. It was critical to replace to maintain the safe and reliable operation of the fire and gas system.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Replacement of station control system at CS10

Table 61: Replacement of station control system at CS10

	Project details
Incurred 2011	[redacted] The following figure provides a breakdown of incurred expenditure: 
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Replacement of Allen Bradley programmable logic control (PLC) 5 based control system to new latest PLC based control system for CS10. Plus software configuration to achieve existing station control functionality.
Business need	Relevant PLC were assessed to be obsolete due to the equipment not being supported by Solar turbines.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Refurbishment of underground pipework

Table 62: Refurbishment of underground pipework

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	A dig up programme of underground pipework to verify the condition of coating systems. This expenditure was incurred refurbishing 256 meters of pipe at CS8 and required excavation works.
Business need	The condition of underground pipe on the DBNGP is monitored via the cathodic protection (CP) surveys and direct current voltage gradient (DCVG) surveys. However, the condition of the underground pipework in compressor stations cannot be determined in the same manner due to the vast number of other underground systems in the vicinity. Also in many instances, shielding occurs which in a way blocks CP from certain parts of the pipeline which results in corrosion. The project was required to maintain an acceptable level of inspection of underground pipework.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

FEED review of odorant systems

Table 63: FEED review of odorant systems

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study for the review of odorant systems design across the DBNGP.
Business need	FEED study required to ensure that current equipment remains compliant with current Australian standards.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Intelligent pigging

Table 64: Intelligent pigging

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Intelligent pigging of the DBNGP and associated laterals including Dampier facilities to Wagerup West, Wagerup West to Worsley, Southern Loop, Russell Road lateral and Rockingham laterals. Scope includes the preparation of the pipeline and alignment of all MLVs and testing of launchers and receivers, pig signals and confirmation of all off takes, LOR plugs and EOL status with the loop tie ins. The project included the calling of tender for an Inline Inspection (ILI) contractor complete with cleaning scope. The expenditure also included cost of detailed modelling work to determine the most optimum time for pigging and pre-planning with the selected contractor.
Business need	DBP is required to perform pipeline pigging under its pipeline licence and Safety Case.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Supply of hydraulic lifting frames for coolers

Table 65: Supply of hydraulic lifting frames for coolers

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Obtain hydraulic lifting frames for the removal of aftercooler and oil cooler motors.
Business need	There was no equipment suitable to remove after/oil-cooler motors from elevated work areas. Project allowed for the procurement of equipment that reduced risks to staff associated with a routine task.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Locking devices for permit to work isolation

Table 66: Locking devices for permit to work isolation

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	DBP's permit to work system requires isolation and tagging be carried out on equipment prior to maintenance tasks being undertaken. This expenditure allowed for the procurement of lockboxes, padlocks and hasps required when installing isolations.
Business need	Changes to DBP's permit to work system introduced a new isolation and tagging procedure which ensures that equipment is locked out of service when maintenance personnel are performing activities on the equipment itself or related facilities.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Separation of control system network & IP network

Table 67: Separation of control system network and IP network

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	This project included the upgrade the control system network, from a combined network environment which is shared with the IP telephony network, to a standalone network. This involved: • the separation of the networks on the digital microwave backbone and the installation of new Patton Ethernet extenders at each compressor station to facilitate the delivery of the control system network to the compressor stations. • A new network switch installed at each of the compressor stations to facilitate connection to the control systems devices to the separate network and two new routers installed at both Allendale and Karratha.
Business need	Separation of the two networks allowed for the simplification of both networks, reducing administrative overheads. Separation of the control system network also improved network security as it removed unauthorised third party access to the IP telephony Network.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Mechanical isolation of LM500

Table 68: Mechanical isolation of LM500

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	This project isolated the LM500 turbines from process gas by means of positive isolation. This required rated blind flanges be installed to isolate the station pipework from the LM500 header pipework inside the building. The work enabled the pipework to be purged and nitrogen gas introduced for long term isolation. Note that this work was limited to LM500 units with the remaining Centaur units to be completed in a separate project.
Business need	The purpose of this project was to positively and safely isolate this turbine unit so it can be preserved.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replacement of signage and directional markers

Table 69: Replacement of signage and directional markers

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	This project involved the replacement of aerial directional markers and KP marker signage along the DBNGP. The old signage was faded and not considered serviceable. The project allowed the procurement of signage, plus labour and associated requirements to install the replacement signage.
Business need	Required to comply with Australian Standard 2885 and safety case
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

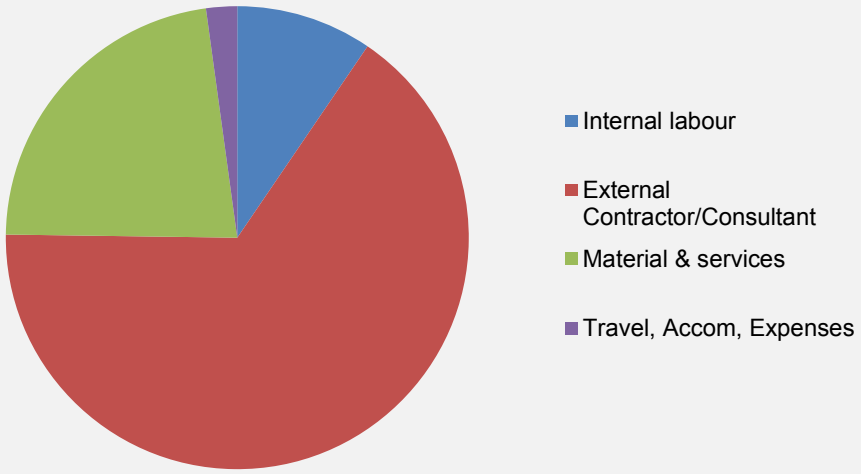
Management of change

Table 70: Management of change

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Management of change projects are minor in nature with expenditure in the range of $1000 to $50,000. Major work includes: • Replace fibre connection East Perth • SCADA Serial cards into SAGEM • Install air-conditioner at Repeater 1 • PMS SAP Monthly budget reporting • Repair odorant valves • Kemerton PS - Pump upgrade • Kemerton PS - Fuel gas meter upgrade • UPS replacements - Battery pack for 9355 Series, 15kVA UPS • Remote access to flow computers • Hardware for vortex cooler • Shelving for equipment room - Level 7 Esplanade • CS1 & CS8 Fuel Gas Temp Transmitter
Business need	During the normal operation of the DBNGP, various design changes are required to: • Sustain business; • Alleviate unsafe condition; • Increase reliability; • Make equipment more reliable; • Increase efficiency; and/or • Reduce costs.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

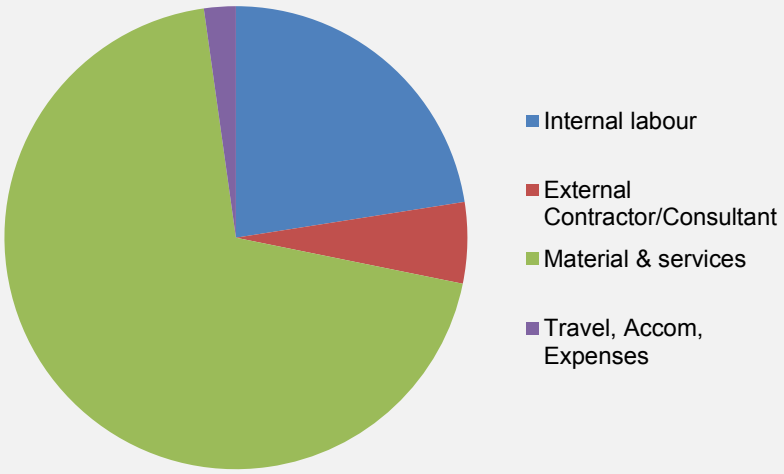
Dampier facilities - communications upgrade

Table 71: Dampier facilities - communications upgrade

	Project details
Incurred 2011	[redacted] The following figure provides a breakdown of incurred expenditure: 
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Installation of new communications infrastructure at Dampier facilities to service MLV1 - 5. Project included replacement of DC power supply as well as flooded wet cell batteries and upgrade of communications server.
Business need	This is the second part of a two part project to provide communications to Dampier facilities. This site had no corporate or control systems access as well as no real remote visibility. On completion DBP was able to operate separately from the Horizon power network with the inherent risk of being connected to an old and sparsely supported network removed. The power system at this site was originally installed 27 years ago and had a number of flood damaged cells. Upgrade to software was also required so that it remained compatible with other communication severs on the DBNGP. A complete server upgrade was required including onsite factory acceptance before integration into the DBNGP network.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Standardisation of PLC and HMI logic

Table 72: Standardisation of PLC and HMI logic

	Project details
Incurred 2011	[redacted] The following figure provides a breakdown of incurred expenditure: 
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Standardisation of Programmable Logic Control (PLC) and Human Machine Interface (HMI) logic at the following compressor stations: • CS1 (U1 & U2) • CS2 (U3) • CS3 (U1 & U3) • CS4 (U3) • CS5 (U1 & U2) • CS6 (U1 & U2) • CS7 (U3) • CS8 (U1 & U2) • CS9 (U2)
Business need	Variation in control set points and alarm and trip setting have been found between various control systems across the DBNGP. The following benefits were achieved: • Standardisation of control philosophy • Ease of maintenance due to standard philosophy • Rationalisation of critical process control loops and displays for the Solar fleet. • Remote controls and station critical shutdown functions checked and standardised. • Standardisation of set-points, shutdowns and alarms on all critical unit and station functions.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Tools and equipment for SDO and Maintenance

Table 73: Tools and equipment for SDO and maintenance

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Annual tool budget allocated to both SDO and maintenance to acquire new tools and equipment required to perform day-to-day operations. The majority of the cost are for Personal Gas Detectors plus the following major items: • Gas detector solaris 4 gas • Toolbox gas software • Toolbox gas software • TMS set • Yokogawa process calibrator • Fluke 789 • Personal gas detector for rotating Equipment • TSI VelociCalc ventilation meter • Clamp milliamp meter • Handheld GPS • Gas detector calibration station • ART Configurator 475 • Modelling Software - EFFECTS • Yew decade boxes - Type 2793 • Hart modem • Batteries for GP320 Handheld • Crystal DP gauge • Purchase of cameras for northern zone • Replacement DC/AC Microprobe • 2793 decade resistance boxes • Drill/pap set P/N 694-009 • Supply - Clamp meter - model 336 • Supply - Sidchrome 205 PCE metric/AF tool • Ralston Nitropak fine adjust piston • Leda P/N Tpak fluke meter hanging kit • Leda P/N TL75 fluke test leads • Swagelok 1/2" tube benders part no MS-HT • Swagelok 3/8" benders part no MS-HTB-6T • Swagelok pipe cutters MS-TC-308 • Crystal Eng. nVision 30 psi pressure mod • Earth ground resistance tester - Fluke 1 • P/N TECINC18PD-32C milwake 18V battery • Ultrasonic thickness gauge 38DL • Protocol analyser • nVision 10,000 kpa pressure module • nVision RTD100 temperature module • Heart 375 communicator Batteries • GEZ2ATM 19 pce spanner set
Business need	Required to allow staff to access appropriate equipment required to perform normal maintenance duties on the DBNGP. Rollout of mandatory Personal Gas Detectors as part of the DBP Zero Harm policy.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

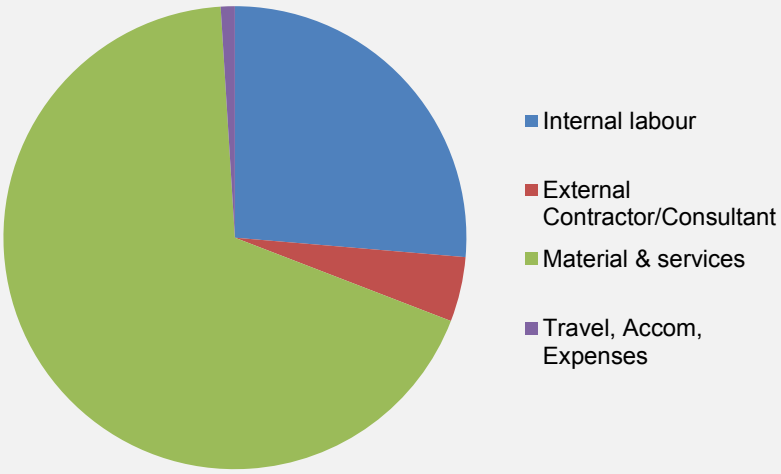
Transportable online condition monitoring unit

Table 74: Transportable online condition monitoring

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Purchase of two transportable online vibration condition monitoring and diagnostic systems that can be used on any of the compressor units and pipe on the DBNGP.
Business need	The project was aimed at maintaining the integrity and continuity of compressor stations on the DBNGP. As the compressor station operating regime changes through each expansion, the DBNGP experiences higher variability in its transient conditions, which has the potential to cause increased vibration damage. The previous method of performing this type of data collection and analysis involved engaging a specialist vibration consultant, which resulted in unreliable data and in some instances an inability to find faults at very high per day rates. In DBP's view notification and recording potential faults as they occur is essential to early detection.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

MLV117 to Clifton Rd: Comms network

Table 75: MLV117 to Clifton Rd: Comms network

	Project details
Incurred 2011	[redacted] The following figure provides a breakdown of incurred expenditure: 
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	The scope of the project included: • upgrade and replacement of the DBNGP southern communications network from MLV117-MLV157 due to existing communications equipment systems reaching the end of life; • Upgrade and replacement of DC power systems at MLV117-MLV157 due to existing power systems reaching end of life; • Upgrading communications in the Kwinana industrial area to facilitate the exit from the Western Power pilot cable network; and • Upgrade of communications to compressor station 10 to eliminate reliance on Telstra/ATCOATCO services and also to increase functionality.
Business need	Justification for the project was: • Southern communications equipment was at end of life • DC power systems were at end of life • Radio licences needed to operate the networks would have been revoked by the ACMA during 2011. The existing communications equipment could not be modified to function under new licensing conditions. • Requirement to exit for the western power owned and operated pilot cable network. Failure to undertake this project would have resulted in the loss of visibility ad control of the DBNGP from MLV117 Della Road to MLV157 Clifton Road.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Additional vehicles

Table 76: Additional vehicles

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Replacement of DBNGP vehicles. Driving is DBP's most significant risk to personnel safety. Accordingly, DBP's standards for its motor vehicles are designed to maintain the risks of death or injury to workers from driving vehicles to a level that achieves ALARP in accordance with the safety regulatory framework under the Petroleum Pipelines Act. DBP's motor vehicle replacement policy has been developed with that in mind and therefore has resulted in: • motor vehicles used in remote areas being replaced approximately every 200,000km; • the need for vehicles to meet certain standards. DBP has formed the view that, where vehicles are used in remote areas (generally this is in areas other than downstream of CS9), Landcruisers are more reliable and efficient (once taking into account initial capital and operations and maintenance costs) than some of DBP's previous inventory of vehicles (which include Hilux's). However, in areas downstream of CS9, DBP accepts a wider range of vehicle makes and models; • the need for vehicles to be fitted with a number of other materials and equipment to meet DBP's safety standards (such as toolboxes, communication equipment, electrical fitout and vehicle monitoring systems). While generally, materials and equipment from retiring vehicles can be retrofitted to new like for like vehicles, because DBP has decided to generally use Landcruisers for remote driving, the retrofitting cannot occur if the Landcruisers are replacing other models and makes of vehicles (eg Hilux). This item of expenditure therefore resulted in the acquisition of the following items: • Toyota Hilux SR5 Extra Cab (MS) 1DRM 415 • Tool Box (Tuff Engineering) • Electrical Fitout (Nashtec) • Communication equipment • VSSMS inc.alarm (Ashleys) • Toyota Workmate Cab Chassis 79 (MS) 1DSQ 994 • Tool Box, Kevrek Crane (Tuff Engineering) • Electrical Fitout (Nashtec) • Communications (VSSMS)
Business need	Additional vehicles for new maintenance staff working on remote sites.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Vehicle speed and safety monitoring system (VSSMS)

Table 77: VSSMS

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Implementation of a Vehicle Speed and Safety Monitoring System for vehicles travelling to remote sites.
Business need	As part of DBP's Zero Harm policy and the DBNGP Safety Case requiring the monitoring of safe driving practices by each staff as well as contractors working on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

FEED CRS system review project

Table 78: FEED CRS system review project

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study for the review of IT architectural design and functionality of Customer Reporting Systems (CRS)
Business need	This review is needed to identify the solution to the existing technical issues in CRS due to the incremental software update and customisation over the years. This work was critical in maintaining the integrity and operability of the CRS system.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replacement of existing vehicles

Table 79: Replacement of existing vehicles

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Replacement of DBNGP vehicles. Driving is DBP's most significant risk to personnel safety. Accordingly, DBP's standards for its motor vehicles are designed to maintain the risks of death or injury to workers from driving vehicles to a level that achieves ALARP in accordance with the safety regulatory framework under the Petroleum Pipelines Act. DBP's motor vehicle replacement policy has been developed with that in mind and therefore has resulted in: • motor vehicles used in remote areas being replaced approximately every 200,000km; • the need for vehicles to meet certain standards. DBP has formed the view that Landcruisers are more reliable and efficient (once taking into account initial capital and operations and maintenance costs) than some of DBP's previous inventory of vehicles (which include Hilux's); • the need for vehicles to be fitted with a number of other materials and equipment to meet DBP's safety standards. While generally, materials and equipment from retiring vehicles can be retrofitted to new like for like vehicles, because DBP has decided to generally use Landcruisers for remote driving, the retrofitting cannot occur if the Landcruisers are replacing other models and makes of vehicles (eg Hilux) The expenditure is for the following vehicles and equipment: • Toyota Workmate Cab Chassis 79 (PL) 1DRG 219 • Tool Box (Tuff Engineering) • Electrics (Nashtec) • Comms equipment (Octocom) • Toyota Workmate Cab Chassis 79 (PL) 1DSQ 961 • Tool Box, Kevrek Crane (Tuff Engineering) • VSSMS Optalert (Ashleys) • Isuzu FSS 550 4x4 Cab Chassis (CS) 1DVO 634 • Body Work • Hiab • Toyota Prado GXL (FTSO) 1DRG 411 • Fit-out (Ultimate 4WD) • Electrics (Nashtec)
Business need	DBP replaces vehicles that have excessive mileage and excessive age. Both age and high mileage result in increased maintenance costs. Reliable vehicles are essential to ensure the safety of personnel and their ability to perform required duties effectively and efficiently.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Subsequent costs

Table 80: Subsequent costs

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	The Subsequent cost category, consistent with the requirements of AASB116 Property Plant and Equipment (PP&E), captures expenditure incurred as a condition of continuing to operate an item of PP&E. Regular day-to-day servicing expenditure is recognised through profit and loss (operating expenditure) as consumed and generally described as repairs and maintenance. However, major overhauls that effectively extend the life of an asset are classified as a subsequent cost of the assets continued use the costs of which are recognised as part the asset value. For this period the following subsequent costs were carried out: Replace and upgrade microwave equipment Development of CAD work Enhancement of GIS database Establish document search facility FEED for BT phone system in control room MLV Hazardous area inspection work Update as-built design document OPTALERT safety glasses Hazardous areas rectification Alcoa Pinjarra run 3 turbine meter Alcoa Wagerup run 1 control valve Clifton Rd MS 6" turbine meter CS1 Unit 1 turbine intake filters CS1 Unit 1 turbine replacements CS10 Station recycle valve overhaul CS 2 Unit 2 suction valve CS3 Station recycle valve overhaul CS3 Unit 1 turbine PECC valve CS3/3 Stage 4 Solar Mars turbine removal CS4 Unit 2 AC pump CS4/3 Compressor bundle overhaul CS5 GEA2 alternator CS5 Station recycle valve overhaul CS6 Unit 3 Compressor bundle overhaul CS6 Unit 3 Recycle valve overhaul CS7 Unit 2 actuator CS7 Unit 3 recycle valve overhaul CS8 Unit 1 recycle valve overhaul CS8 Unit 1 turbine replacement CS8 Unit 2 recycle valve overhaul 2311 CS8 Unit 2 recycle valve overhaul 2351 CS8 Unit 2 vent valve CS9 station recycle valve overhaul CS9 Unit 2 air inlet filter [redacted]
Business need	The ongoing subsequent costs provide for essential work carried out under the approved Asset Management Plan during normal operation and maintenance that can be capitalised under the Australian Financial Accounting processes.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

	Project details
	• to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Tyre pressure monitor

Table 81: Tyre pressure monitor

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Purchase wireless in cabin tyre pressure monitors for DBNGP remote service vehicles.
Business need	New equipment identified by maintenance safety committee assessed to reduce the risk of fleet accidents due to low tyre pressure. Maintaining appropriate tyre pressure also reduces the frequency/cost of tyre replacements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

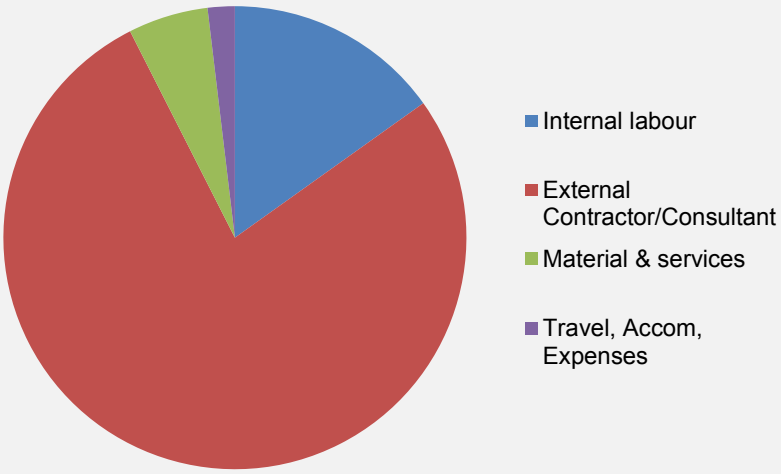
Intelligent pigging

Table 82: Intelligent pigging

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Intelligent pigging of the DBNGP and associated laterals including Dampier facilities to Wagerup West, Wagerup West to Worsley, Southern Loop, Russell Road lateral and Rockingham laterals. Scope includes the preparation of the pipeline and alignment of all MLVs and testing of launchers and receivers, pig signals and confirmation of all off-take, LOR plugs and EOL status with the loop tie ins. The project included the calling of tender for an ILI contractor complete with cleaning scope. It is envisaged that there will be detailed modelling work to determine the most optimum time for pigging and pre-planning with the selected contractor. The scope of work for this part of the project is limited to the initial FEED study and the tendering process for ILI contractor.
Business need	DBP is required to perform pipeline pigging under its pipeline licences and Safety Case.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Refurbishment of underground pipework

Table 83: Refurbishment of underground pipework

	Project details
Incurred 2011	[redacted] The following figure provides a breakdown of incurred expenditure: 
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	A dig up programme of underground pipework to verify the condition of coating systems: • Civil works; excavation, reinstatement • Coating application by external contractor • Retractable galvanised steel support manufacture • HAZID by external consultants • Ground Radar Penetration as required • NDT, SCC assessment and inspection This expenditure was for the refurbishment of 420 meters of pipe in CS3 including general excavations. This expenditure is part of the project listed in Table 34.
Business need	The condition of underground pipeline on the DBNGP is monitored via the cathodic protection (CP) surveys and direct current voltage gradient (DCVG) surveys. However, the condition of the underground pipework in compressor stations cannot be determined in the same manner due to the vast number of other underground systems in the vicinity. Also in many instances, shielding occurs which in a way blocks CP from certain parts of the pipeline which results in corrosion. The project was required to maintain an acceptable level of inspection of underground pipework.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

MLV117 to Clifton Rd meter station

Table 84: MLV117 to Clifton Rd meter station

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	The scope of the project included: • upgrade and replacement of the DBNGP southern communications network from MLV117-MLV157 due to existing communications equipment systems reaching end of life; • Upgrade and replacement of DC power systems at MLV117-MLV157 due to existing power systems reaching end of life; • Upgrading communications in the Kwinana industrial area to facilitate the exit from the Western Power pilot cable network; and • Upgrade of communications to compressor station 10 to eliminate reliance on Telstra/ATCO services and also to increase functionality. This is part of the MLV117 to Clifton road Communications upgrade project (Table 75)
Business need	Justification for the project was: • Southern communications equipment was at end of life • DC power systems were at end of life • Radio licenses needed to operate the networks would have been revoked by the ACMA during 2011. The existing communications equipment could not be modified to function under new licensing conditions. • Requirement to exit for the western power owned and operated pilot cable network. • Failure to undertake this project would have resulted in the loss of remote visibility and control of the DBNGP from MLV117 Della Road to MLV157 Clifton Road.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Management of change

Table 85: Management of change

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Management of change projects are minor in nature with expenditure in the range of $1000 to $50,000. Major work includes: • GEA electric starters to A & B MLV sites • MLV119 emergency spool design • Rockingham odorant injection valve replacement • Pressure safety valve register review at CSs
Business need	During the normal operation of the DBNGP, various design changes are required to: • Sustain business; • Alleviate unsafe condition; • Increase reliability; • Make equipment more reliable; • Increase efficiency; and/or • Reduce costs.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Tools and equipment for maintenance

Table 86: Tools and equipment for maintenance

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Purchase tooling to ensure maintenance activities can be completed efficiently and effectively. The majority of the cost are for the following major items: • 3/4 drive ratchet, Sid15950 • GEZ2ATM 19 pce spanner set, • 3/4 drive breaker, Sid15954 3\4 see long • Rawlston Instruments Kit - QTHA - Kit 4. • Crystal calibrator, model is33 • Battery testers. product BT002 • Atago hand refractometer master • Switching power supply 6.3VDC, 20 • Testo 340 flue gas analyser • CO (H2 comp) Measuring cell • Transport case P/No 0516 3400 • Gas sampling hose with condensate • PC Software testo 335 easyEmision
Business need	Required to allow staff to access appropriate equipment required to perform normal maintenance duties on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replace turbine air inlet CS2/4/7

Table 87: Replace turbine air inlet CS2/4/7

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Removal of the existing Stage 3A turbine inlet filter housings, and installation of the 3 turbine air inlets at compressor station No.2 unit 2, compressor station No.4 unit 2 and compressor station No.7 unit 2 This is a multi-year project. Capital spend was for the design and procurement of the materials for the 3 air filter units. This expenditure is for the detail design prior to the installation in later years.
Business need	The existing Stage 3A turbine air inlet filters housings were corroding and deteriorating and required replacement in order to reduce the risk of turbine axial compressor damage and possible catastrophic failure. Expected benefits of this project were a significant reduction in risk of failure from ingestion of corrosion and collapsed filter material.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replace PLC station control CS1, 3, 5, 8

Table 88: Replace PLC station control CS1, 3, 5, 8

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study assessed the replacement of the obsolete Allen Bradley Compressor station Programmable Logic Control (PLC5) control system at ACS sites (CS1, 3, 5, and 8) with the latest system. Related expenditure also referred to in Table 27.
Business need	The Programmable Logic Control (PLC) are one of the most critical items to enable the compressor to operate safely and efficiently. The PLC installed at these sites were the original equipment that reached design life and were no longer supported by Solar turbines.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replace CS vent attenuators and vents

Table 89: Replace CS vent attenuators and vents

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Replacement of vent attenuators at CS 2, 4 & 7. Project included the inspection, clean-up and repair to eliminate the risk of release of foreign material during venting. Related expenditure also referred to in Table 56.
Business need	The existing vent attenuators at CS 2, 4 & 7 were fitted during the Stage 3 Expansion and had deteriorated to the stage that they may have posed a risk to personnel by projection of materials during venting.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Upgrade solar panels spur sites 1-6

Table 90: Upgrade solar panels spur sites 1-6

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Replacement of existing solar panels at spur sites 1-6. This project has been incorporated into another related project so this has not been progressed as per plan.
Business need	Due to ageing and repeated failure in existing solar panels, sites had become prone to power outages impacting remote visibility of sites. To control this site effectively remotely it was necessary to perform the upgrade.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replace DEUTZ TEM panels

Table 91: Replace DUETS TEM panels

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Replacement of TEM panels on all DEUTZ GEA's at compressor stations CS02, CS04, CS06 and CS09.
Business need	This system was no longer supported and spare parts were unavailable.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Upgrade flow computers

Table 92: Upgrade flow computers

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Upgrade flow computers, RTU's, associated equipment cabinets, DC circuit wiring and associated drawings and I.S. barriers at 40 DBNGP metering sites.
Business need	The project justification was as follows: • 40 flow computers identified to be at end of operational life. Replacement spares no longer available. Failure to implement this project would have resulted in loss of billing data, site visibility and several safety concerns over inadequate 240VAC wiring. • Existing electrical wiring drawings at most sites were inadequate to perform troubleshooting and engineering without site visit. • Hazardous area barriers had to be upgraded as this level of change required reconfiguration to be consistent with Hazardous Area Requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Fire and gas

Table 93: fire and gas

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study assessing replacement of fire and gas systems at CS 2, 4, 5, 6, 7, 8, and 10.
Business need	All compressor stations are equipped with suitable fire & gas monitoring system to handle the risk to plant and personnel. There are CO_2 based Fire suppression system for compressor unit buildings installed during the ACS expansion project. There is also water mist based fire suppression system for compressor enclosures installed during the Stage 4 expansion project. To handle fire and gas release, various types of sensor are used at compressor stations. All sensors are connected to PLC through interfacing system. The PLC carry out voting and generate confirm fire or confirm gas detect signals to initiate further protective action. Micro-1000 and Sieger-5701 system were declared obsolete and were no longer supported by the vendor. The project addresses the problem of obsolescence.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

FEED power gen control system enhance

Table 94: FEED power gen control system enhance

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Front End Engineering Design (FEED) study of the Compressor Station Power Systems, reviewing the controllability / operability and the stability of the DBNGP Compressor Station Power Generation Systems (GEA and DEA).
Business need	• Pre-Stage 5 Power Generation control systems had reached the limit of their useable life. • Older control system hardware had become obsolete and therefore in need of migration to current / future generation control system equipment. • Legacy GEA control system architecture severely restricted effective integration into the compressor station control system, leading to loss of event history. • Of particular importance, was the identification of redundant and obsolete legacy code, associated panel wiring, and control devices that should be replaced or removed during the standardisation process.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

FEED GEA control monitoring & load sharing

Table 95: FEED GEA control monitoring & load sharing

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study reviewing GEA controls for pre-stage 5A units to examine the case for standardisation of controls across the DBNGP.
Business need	Some control boards had been in service for over 30 years along with associated meters and relays.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Mothball CS10 1&2 Solar Centaur units

Table 96: Mothball CS10 1&2 Solar Centaur units

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Project isolated the centaur turbines from the process gas by means of positive isolation. These required rated blind flanges to be installed to isolate the station pipework from the header pipework inside the building. The work enabled the centaur pipework to be purged and nitrogen gas introduced for long term isolation before future removal from site. This expenditure is the initial set up cost, for the mothballing of CS10 unit 1 and 2.
Business need	It is industry best practice and safe procedure to isolate inactive equipment that is no longer operated and obsolete.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

FEED RCD protection at CS

Table 97: FEED RCD protection at CS

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study to determine the need to retrofit RCDs at compressor stations.
Business need	While DBP is not obliged to correct the installations retrospectively, compliance with the Australian Wiring Rules is in mandatory in Western Australia. In addition, compliance with the Australian Wiring Rules is a condition of DBP's pipeline licence and requirement of the Safety Case.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Conitel RTU replacement Clifton Rd, Harrow St

Table 98: Conitel RTU replacement Clifton Rd, Harrow St

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Replacement of Conitel RTU at Clifton Road and Harrow Street This expenditure relates to project set up costs.
Business need	Meter run valves were remotely operated by an output from a Leeds and Northrop conitel RTU at Clifton Road and Harrow Street. These RTUs were 20+ years old.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replace and upgrade TSCC telephone system

Table 99: Replace and upgrade TSCC telephone system

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	To upgrade/replace the telephony at the Jandakot maintenance depot as well as the compressor stations (CS1-9) This expenditure is project set up costs.
Business need	The telephone system was determined to be at end of life and had no capacity for expansion.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services

FEED retrofit of unpiggable laterals for pigging

Table 100: FEED retrofit of unpiggable laterals for pigging

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	FEED study assessed the feasibility of converting the pipework of the unpiggable laterals to enable intelligent pigging. This work was deferred until the completion of the main pigging project. Expenditure is for project set up costs.
Business need	DBP is required to perform pipeline pigging under its pipeline licences and Safety Case.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Implement Visual Risk treasury software

Table 101: Implement Visual Risk treasury software

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Upgrade of treasury management system (TMS) from Acorn to Visual Risk. DBP's TMS is carried out in accordance with AASB 139 Financial Instruments: Recognition and Measurement.
Business need	Prior to the upgrade, in order to comply with AASB 139, DBP engaged external consultants to perform hedge effectiveness testing at a cost of around $40k p.a. Implementation of Visual Risk enabled DBP to perform hedge effectiveness testing in-house utilising existing treasury resources and has also provided cash flow forecasting functionality that was also not available with the Acorn product.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to comply with a regulatory obligation or requirement

Replacement of existing vehicles FY11/12

Table 102: Replacement of existing vehicles FY11/12

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Additional cost for accessories as part of the DBP replacement vehicle programme.
Business need	DBP replaces vehicles that have excessive mileage and at excessive age. Both age and high mileage result in increased maintenance costs. Reliable vehicles are essential to ensure the safety of personnel and their ability to perform required duties effectively and efficiently.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

CiM Visual Planner Suite

Table 103: CiM Visual Planner Suite

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Implementation of CiM Visual Planner Suite into Maximo 6
Business need	The Visual Planning/Scheduling tool provides calendar based, graphical view/control functions that allows visualisation in a calendar format which can zoom from hours to days, weeks, months or years. It also creates a Work Load Graph that allows for the determination of labour requirement for any given time period.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Installation of Navman MY60T GPS

Table 104: Installation of Navman MY60T GPS

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Installation of Navman MY60T GPS to all field service vehicles as part of the DBNGP Zero Harm policy and for journey management
Business need	DBP operate a medium size fleet of 4wd vehicles that travel long distances in remote and harsh terrains. Excessive speed is a cause of vehicle crash and a speed alert device is a proactive device to provide the driver with an audible over speed alarm. The additional benefits included the mapping and waypoints of the DNBGP, phone address book and the ability to view AVI work instructions.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Add storage for dangerous goods at CS

Table 105: Add storage for dangerous goods at CS

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Minor expenditure for provision of dangerous goods storage at Compressor Stations. This expenditure is project set up costs.
Business need	To comply with Dangerous Goods Safety Act 2004
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

DBNGP CS diesel tank remote monitoring

Table 106: DBNGP CS diesel tank remote monitoring

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Implementation of remote monitoring system for diesel tank levels at compressor stations.
Business need	It is essential that the diesel tank levels can be monitored for refuelling purposes to ensure availability of diesel fuel at remote sites.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Refurbish accommodation at CS4 & 5 FY11/12

Table 107: Refurbish accommodation at CS4 & 5 FY11/12

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Replacement and refurbishment of accommodation facilities located at CS4 and CS5 needed to maintain standard. Expenditure relates to initial setup of project.
Business need	Due to ageing and continued operation of the accommodation facilities over a number of years, it is necessary to replace and refurbish worn out accommodation units at these compressor stations. This is to ensure the facilities meet the building code and are a suitable environment for employees to live in.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Replace RO units at CS

Table 108: Replace RO units at CS

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Project includes the overhaul of the existing reverse osmosis (RO) unit at CS1 and the installation of a new unit at CS2. Expenditure relates to initial setup of project.
Business need	Reverse osmosis units provide the site for water to the DBP personnel. Existing units are 20 years old and obsolete with repair costs rising. New units included InteliSys control which allowed for remote monitoring via SCADA systems. Additionally, the water table had changed requiring modification to the bore to ensure clean water is available.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

FEED mothball meter station RR, W, E, M, OR

Table 109: FEED mothball meter station RR, W, E, M, OR

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	The FEED study assessment for mothballing of the following meter stations: • Rocky Ridge • Westlime • Eneabba • Mount Adam • Oakley Road Expenditure for initial setup of project.
Business need	As per the DBNGP pipeline licence conditions and Australian Standards. DBP is obliged to ensure that the non-functioning meter stations are preserved.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Meter station site painting

Table 110: Meter station site painting

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Painting of three meter station sites addressing issues raised in corrosion assessment, including recoating at: • Forrestdale MS • MLV122, • Alcoa Pinjarra • Worsley MS.
Business need	• Barter road meter Station - Over 25 years of atmospheric conditions had caused a considerable coating and corrosion damage. • Worsley meter Station Runs 1 & 2 - Over 25 years of atmospheric conditions often in a cold damp caustic tainted air while running at near dew point had caused considerable coating and corrosion damage. • Nangetty road meter station, MLV93 and Mungarra power station off-take - Nangetty exhibited extremely poor coating and in places 1mm pitting. The Mungarra off-take had been reduced to bare metal in places or to undercoat. The Nangetty road skid had a coating that was reduced to a powder.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replace water bores at CS1, 4 & FEED CS5

Table 111: Replace water bores at CS1, 4 & FEED CS5

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Redrill of CS1 & CS 4 water bores and FEED study for CS5 water bore. Expenditure relates to initial set up of the project
Business need	The water bores at CS1 and CS4 had been in service since 1984 and 1991 respectively and have now failed through the collapsing of the vertical bore casing. CS1 redrill was planned for the same location, and CS4 was planned for a different location as the quality of water had deteriorated. CS5 bore was drawing muddy water indicating a need relocate or drill deeper at that site.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Pallet racking at CS5

Table 112: Pallet racking at CS5

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Pallet racking facilities at CS5 to ensure safe material handling. Expenditure relates to initial set up of the project
Business need	As part of DBP's Zero Harm policy, DBP is obliged to provide safe working environment for handling material for its employees.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

SDO tools FY11/12

Table 113: SDO tools FY11/12

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Purchase tooling to ensure maintenance activities can be completed efficiently and effectively. The majority of the cost are for the following major items • Repair and service MS Nitropak Sn.1001-5 • LA-861304ABUW defibrillator pack • Licencee's representative signs • Mathey Dearman chain clamp • Voip monitor
Business need	Required to allow staff to access appropriate equipment required to perform normal maintenance duties on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Subsequent costs FY2012

Table 114: Subsequent costs FY2012

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	The Subsequent cost category, consistent with the requirements of AASB116 Property Plant and Equipment (PP&E), captures expenditure incurred as a condition of continuing to operate an item of PP&E. Regular day-to-day servicing expenditure is recognised through profit and loss (operating expenditure) as consumed and generally described as repairs and maintenance. However, major overhauls that effectively extend the life of an asset are classified as a subsequent cost of the assets continued use the costs of which are recognised as part the asset value. For this period the following subsequent costs were carried out: DCVG surveys Hazardous area inspection - Compressor stations Hazardous areas rectification work Create Maximo PM's for Comm's incl. BOM's UGL reactive microwave maintenance Vibration & high flow works DBP internal labour CS7 Unit 3 bundle overhaul [redacted] The expenditure for replacing the CS7 Unit 3 bundle was due to an unexpected material failure of the compressor impeller that required urgent replacement from the bundle E1D2 to E1D4.
Business need	The ongoing subsequent costs provide for essential work carried out under the approved Asset Management Plan during normal operation and maintenance that can be capitalised under the Australian Financial Accounting processes.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Document management system review

Table 115: Implementation of document management system review

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	As a result of DBP's annual corporate risk assessment process, it was recognised that a document management system should be implemented to manage a number of key risks in the business. Accordingly, a Document and Records Management (DRM) Review was initiated which comprised of three stages: • Project Planning – agreeing project logistics and data gathering activities • Data Gathering – analysing document and records management practices and requirements based on the outputs from stakeholder workshops and documentation reviews • Recommendations – assessing gaps between current DRM capability and requirements, identifying DRM options and recommendations.
Business need	An internal audit highlighted the need of a centralised system for managing documents and records exposing the organisation to increased risk in terms of statutory and regulatory compliance.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement

PC replacement plan

Table 116: PC replacement plan

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Implementation of 1/3 PC replacement programme.
Business need	DBP's PC and laptop replacement policy is that equipment is replaced every 3 years to ensure equipment is reliable and fit for purpose.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services

Additional PC& equipment purchases

Table 117: Additional PC & equipment purchases

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Purchase of additional PC's and software.
Business need	Replace damaged or misplaced equipment or service additional requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services

ICS-ICT working group (FEED)

Table 118: ICS-ICT working group (FEED)

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	FEED study to develop recommendations for Industrial Control Systems (ICS) and ICT management structures covering: • industrial control systems; • SCADA; • Communications; and • Corporate information and technology
Business need	DBP identified a need to review its ICS and ICT management structures including: • Governance • Physical location of assets • Asset management strategies • Skills management strategies
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Disaster recovery document and process

Table 119: Disaster recovery document and process

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Develop and documentation of an IT disaster recovery plan.
Business need	Developing and documenting an IT disaster recovery plan that supported the IT business continuity plan was identified as a requirement for the business in an internal IT disaster recovery readiness audit conducted in 2008.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

CRS - functional upgrade

Table 120: CRS - functional upgrade

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	Functional upgrade to DBP's customer reporting system (CRS)
Business need	Upgrade and maintenance of DBP's CRS providing a number of benefits, including: • reducing human error in billing and pipeline information provision • reducing reliance on personnel • automation of billing functions • improved reporting capability • improved change control and auditing capability • allow DBP to fulfill a number of regulatory reporting obligations.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement

MS true up licence

Table 121: MS true up licence

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	[redacted]
Description	DBP has a licensing agreement with Microsoft covering standard desktop software and server operating system software requiring the payment of an annual true-up charge.
Business need	Desktop computers, laptops, service and software are essential tools in the provision and maintenance of the IT/IS service delivery on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

PC replacement plan

Table 122: PC replacement plan

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Implementation of 1/3 PC replacement programme.
Business need	DBP's PC and laptop replacement policy is that equipment is replaced every 3 years to ensure equipment is reliable and fit for purpose.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services

Additional PC & software for new recruits

Table 123: Additional PC & software for new recruits

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Purchase of additional PC's and software for new employees
Business need	Replace damaged or misplaced equipment or service additional requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services

PC replacement due to destruction

Table 124: PC replacement due to destruction

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Purchase of additional PC's and software due to loss or damage. This is for setting up project code to capture the cost incurred
Business need	Replace damaged or misplaced equipment or service additional requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services

CRS enhancement programme

Table 125: CRS enhancement programme

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	Upgrade of DBP's customer reporting system
Business need	Upgrade required responding to a number of system enhancements identified by internal and external users.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services

SAP licensing AET&D

Table 126: SAP licensing AET&D

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	DBP's payment for licensing costs for SAP financial management environment.
Business need	DBP was required to pay additional licensing costs for the SAP environment due to Brookfield Asset Management's sale of AET&D assets and subsequent departure of Brookfield from DBP's corporate structure. DBP's original licence costs had been based on sharing costs between related service providers.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Microwave

Table 127: Microwave

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	See Table 128
Business need	See Table 128
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Microwave digitalisation

Table 128: Microwave digitisation

	Project details
Incurred 2011	[redacted]
TOTAL 2011 (CWIP plus incurred expenditure)	
Description	It is noted Replace and upgrade microwave system. During the first quarter of 2006, Gibson Quai – AAS Pty Ltd was commissioned to carry out a study on the options for replacement of the existing microwave radio system and prepared a report with a number of recommendations on the way forward. The replacement of the old analogue microwave system with a new digital microwave system was identified as the lowest cost and easiest to implement solution. Tenders were called in December 2006 for the design, supply, installation and commissioning of a replacement Microwave Communications System inclusive of a VHF Radio System on a lump sum basis.. Full details of this project were provided to the ERA as part of the 2011-2015 Access Arrangement approvals process and are provided in Appendix C:
Business need	The telecommunications network for the DBNGP was an analogue microwave radio system. The microwave network was aging and subject to faults and failures. The telecommunication network carries all the SCADA information relating to compression controls and status, valve controls and status and monitoring of the gas flows throughout the pipeline as well as telephony (voice) traffic, data and mobile radio traffic for the pipeline system. Western Power had also indicated that they intended to cease providing maintenance services on the old microwave radio system at the end of December 2007.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

6. SIB PROJECTS & EXPENDITURE INCURRED 2012

6.1 The following table lists all stay in business (SIB) projects that were underway during 2012 and associated expenditure during the period. It should be noted that expenditure may not be the total extent of expenditure required for or incurred under projects that span more than one year.

6.2 Negative balances attributed to projects are explained in 6.3.

Table 129: SIB Projects Expenditure Incurred CY2012 ($ Nominal)

Paragraph or table	Project Description	Total additions 2012
6.3	Stage 3A filters (CS2, 4,7)	[redacted]
6.3	PP Southern Communication	
Table 130	CCVT replacement Program	
Table 131	SCADA Upgrade	
6.3	Detailed FEED - Replacement of meter stations flow computers/RTUs	
6.3	Detailed FEED - SW Comms Upgrade (for South of R43)	
6.3	Development of Design Basis for Air Compressors (CS2, 4 and 7)	
6.3	Replacement of PVC Piping at Waste Oil Recoveries	
Table 132	Electronic Noticeboard	
6.3	FEED Fire & Gas philosophy for DBNGP	
6.3	CS 2/2, 4/2 & 7/2 Replacement of Turbine Air Inlet Filters	
6.3	FEED Communications and Power upgrade at Spur sites 1-6	
6.3	FEED Replacement of Solar panels	
6.3	FEED CS Replacement of Deutz TEM Panels	
6.3	FEED Review of AC Power Generation of MLV sites	
6.3	FEED Replacement of Earthing Grid at CS's	
6.3	FEED Replacement CS vent Attenuators and Station Vents CS5, CS8	
Table 133	Wellesley Facilities, MLV154/155, Actuation of WLV11A	
Table 134	Silencer for 10" and 8" MLV Vent Risers	
Table 135	Upgrade and Repair Aftercooler Drawers	
Table 136	CS2 & 4, Replacement of GEA Fire and Gas System	
Table 137	Replacement of Station Control system at CS10	
6.3	FEED Review of Odorant Systems	
6.3	Intelligent Pigging	
6.3	Standardisation of PLC and HMI logic	
6.3	MLV117 to Clifton Rd Meter Station: Communications Network Upgrade	
6.3	VSSMS	
Table 138	FEED System Review Project	
Table 139	Replacement of existing vehicles	
Table 140	Intelligent Pigging- mainline, lats & unp	
Table 141	Refurbishment of Underground Pipework	
Table 142	Pipeline: MLV117 to Clifton Road Met	

Paragraph or table	Project Description	Total additions 2012
Table 143	Management of Change	[redacted]
Table 144	Tools and equipment for Maintenance	
Table 145	Replace turbine air inlet CS2/4/7	
Table 146	Replace PLC Station Control CS1,3,5,8	
Table 147	Replace CS Vent Atten & vents at CS2,4,7	
Table 148	Upgrade Solar Panels Spur Sites 1-6	
Table 149	Replace DEUTZ TEM Panels	
Table 150	Upgrade of Flow Computers	
Table 151	F & G at CS2, 4, 5, 6, 7, 8, 10	
Table 152	FEED Power Gen Control system Enhance	
Table 153	FEED GEA Control, monitor & load sharing	
Table 154	Mothball CS10 1&2 Solar Centaur	
Table 155	FEED RCD protection at CS's	
Table 156	Conitel RTU replace Clifton Rd, Harrow S	
Table 157	Replace and upgrade TSCC tel sys	
Table 158	5 Yearly Formal SAR	
Table 159	FEED: Retrofit of unpig lats for pigging	
Table 160	Implement Visual Risk Treasury s/w sys	
Table 161	Level 6 reconfiguration	
Table 162	Replacement of Existing Vehicles FY11/12	
Table 163	CiM Visual Planner Suite	
6.3	Add Storage for Dangerous Goods @ CS's	
Table 164	CS Diesel Tank remote monitoring	
Table 165	Refurbish accommodation at CS4 & 5 FY11/12	
Table 166	Replace RO Units at CS's	
Table 167	FEED: Mothball MS's RR, W, E, M, OR	
Table 167	Meter Station Site Painting FY11/12	
Table 168	Replace Water Bores at CS1, 4 & FEED CS5	
6.3	Pallet Racking at CS5	
Table 169	SDO Tools FY11/12	
Table 170	Subsequent Costs FY2012	
Table 171	Office Modification of Level 7	
Table 172	Implement Working at Height Standards CS	
Table 173	Mitigate noise at accommodation facilities	
Table 174	Upgrade GEA F&G system at CS9	
Table 175	Inspect Hazardous area Equip on the DBNGP	
Table 176	Replace Earth Grid at Meter Stations	
Table 177	Excavate & Inspect DGNGP as per CP dig-up	
Table 178	Rectify Hazardous Area Equip at MLV sites	
Table 179	Replace Odorant Transport Tank	
Table 180	Upgrade Odorant Injection Facilities	

Paragraph or table	Project Description	Total additions 2012
Table 181	Replace Ground Cover at Alcoa Pinjarra MS	[redacted]
Table 182	Management of Change - FY12/13	
Table 183	Replace Batteries & Battery Chargers CS6&9	
Table 184	Replacement of Coriolis Meters	
Table 185	Pigging of Loop 0 & Loop 2 (re-run)	
Table 186	Upgrade F&G Sys at Mainline & Mtr Stns	
Table 187	Replacement Vehicles for Existing Fleet	
Table 188	New Vehicles for Maint Metering Team	
Table 189	New Fire Suppression Sys- Jandakot servr room	
Table 190	Subsequent Costs FY12/13	
Table 191	Tools & Equip for Maintenance FY12/13	
Table 192	Tools for SDO FY12/13	
Table 193	Tools & Equip for Field Tech Svc FY12/13	
Table 194	Jandakot Outdoor Shelter	
6.3	Additional PC & Equipment purchases	
6.3	ICS-ICT Working Group	
Table 195	Desktop Migration to MsOffice 2010	
Table 196	PC Replacement Program	
Table 197	Additional PC & Software	
6.3	PC Replacement Due to Destruction (2	
Table 198	CRS Enhancement Program	
Table 199	Upgrade servers	
Table 200	Upgrade CRS with New Modules	
Table 201	Upgrade Jasper with new HSE reporting	
Table 202	Replacement of PC & Printers	
Table 203	New Windows 7 Computerised Maintenance tools	
Table 204	Mobile Device Management (MDM) System	
Table 205	New PC & Office Equipment	
Table 206	In house training & devt establishment	
	Total	**20,584,510**

6.3 Figures in the project summary and expenditure tables that are negative relate to:

(a) Accounting reversals that were made when total project expenditure came in under what was budgeted and accrued for during the period;

(b) A project code was setup for a FEED study then those initial costs were reversed and rolled into a new project code when the implementation stage of the project commenced;

(c) Changes in project codes that were a consequence of enhancements made to the Enterprise Resource Planning (ERP) software. When DBP made changes to DBP's ERP new projects codes where created for projects already commenced and costs were transferred to the new codes which required a number of accounting reversals.

An example of this can be seen in the project costs for Stage 3A filters (CS2, 4, & 7) (2011) in the first row of Table 2 and costs are later reversed in 2012. These costs then reappear in a new

project 'Replace turbine air inlet CS2/4/7 of Table 145 (2012). The effect of that reversal in a practical sense is that 2.02m was incurred in 2011 and the net value of the reversal and transfer of costs during 2012 was $329,674.

6.4 It should be noted that the total of the 2012 SIB incurred expenditure in being $20.58m matches that arrived at in verification of actual capital expenditure found in Section 2 of Submission 2.

6.5 The remainder of this section details the why the expenditure summarised in the table above is justifiable under subrule NGR 79(2) as conforming capital expenditure.

CCVT replacement programme

Table 130: CCVT replacement programme

	Project details
Incurred expenditure	[redacted]
Description	The Stage 5B expansion saw the replacement of Closed Circuit Vapour Turbines (CCVT) at associated main line valves (MLV). This project saw the completion of remaining sites not included in the expansion project. The project included the purchase of the unit, installation and commissioning. The project included the purchase of the units, installation and commissioning for the following sites: • MLV10 • MLV20 • MLV32 • MLV44 • MLV58 • MLV56 • MLV68 • MLV70 This cost is an accounting adjustment on the project carried out in Table 8
Business need	Existing CCVTs were obsolete and had no vendor support for maintenance purposes. CCVTs are essential for the reliable power supply at remote MLV sites enabling: • the operation and control of MLV • SCADA visibility of the site • Power the communications network along the pipeline
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

SCADA upgrade

Table 131: SCADA upgrade

	Project details
Incurred expenditure	[redacted]
Description	The scope of work for this project included: • Upgrading Hardware and software from existing system to new platform • Implement upgraded SCADA system • Replacement of SCADA master station • Upgrading corporate historian system • Automating KPI reporting through a corporate portal/dashboard • Upgrading reporting tool for SCADA and field data • Improving data and systems security • Improving billing and reporting This is continued expenditure from the project carried out in Table 10
Business need	The existing SCADA system was obsolete and not supported by the vendor and had the following limitations: • No hardware or software vendor support • Unavailability of spares • Level of security not sufficient • Insufficient data retention period • Incompatible with current Windows environment • Poor connectivity with communication The upgrade project rectified identified limitations with improved operations, billing, reporting, and monitoring of the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Electronic noticeboard

Table 132: Electronic noticeboard

	Project details
Incurred expenditure	[redacted]
Description	Electronic notice boards (ENB) facilitate the dissemination of safety alerts, bulletin, KPIs and general safety information in a timely and effective manner. This is continued expenditure as part of the project in Table 38
Business need	Benefits realised by installing the ENB are: • effective distribution of safety information assisting DBP to meet Safety Case requirement which require effective communication of important information to staff. • an additional communication medium for other information including, outage planning, weather warnings, read closures and travel register status. • ENB can also be used to introduce video conferencing to compressor stations reducing travel requirements
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Wellesley facilities MLV154/155 actuation of WLV11A

Table 133: Wellesley facilities MLV154/155 actuation of WLV11A

	Project details
Incurred expenditure	[redacted]
Description	The project included the following deliverables: • installation of actuator on WLV11A • Installation of actuator instrumentation in MLV154 compound • Installation of local valve controls on MLV154 RTU panel • Configuration of SCADA and RTU to enable remote actuation. This is continued expenditure as part of the project in Table 57
Business need	Required for the installation of remote operability to WLV11A as part of enhanced system safety so that the Worsley Lateral and the Southern Loop could be remotely isolated in an emergency.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Silencer for 10" and 8" MLV vent risers

Table 134: Silencer for 10" and 8" MLV vent risers

	Project details
Incurred expenditure	[redacted]
Description	This project ensured safe venting procedure by introducing vent silencers on the DBNGP. In populated/metro areas vent silencers are used with valve actuators used in remote locations. Scope of work included: • Procurement of noise silencer and adaptor brackets • Technical support for implementation • Technical training and operating procedure • Introduce the device to maintenance and to emergency response personnel This expenditure is continued as part of the project in Table 58
Business need	Noise levels from mainline venting are so high that there is a risk of hearing damage to personnel involved in this operation. This risk extends beyond the workforce and applies to any person in the vicinity of the valve during venting.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Upgrade and repair aftercooler drawers

Table 135: Upgrade and repair aftercooler drawers

	Project details
Incurred expenditure	[redacted]
Description	Refurbishment /modification of all 50 aftercooler fan drawers (currently direct online type) at all 10 compressor stations. Project was delivered over two years. This expenditure is continued as part of the project in Table 59
Business need	Allows soft start capable drawers for lower inrush current aftercooler fan starts.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

CS2&4 replacement of GEA fire and gas system

Table 136: CS2 & 4 replacement of GEA fire and gas system

	Project details
Incurred expenditure	[redacted]
Description	Old fire and gas controllers at CS2 and 4 were replaced with the new Sieger 57 type controllers as per previous CS06 and CS09 retrofit carried out during GEA reliability in 2009/10 financial year. The aim was to minimise changes and re-use existing GEA F&G sensors and also use the existing EGA Programmable Logic Control (PLC) code for coding annunciator display and SCADA. This expenditure is continued as part of the project in Table 60
Business need	The existing fire & gas controllers at CS2 and 4 are obsolete and not supported by the vendor. It was critical to replace with the latest system to maintain safe and reliable operation of the fire and gas system.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Replacement of station control system at CS10

Table 137: Replacement of station control at CS10

	Project details
Incurred expenditure	[redacted]
Description	Replacement of Allen Bradley PLC 5 based control system to new PLC based control system for CS#10. Plus software configuration to achieve existing station control functionality through the new system. This expenditure is an accounting adjustment to the project carried out in Table 61
Business need	Relevant PLC were assessed to be obsolete due to the equipment not being supported by Solar turbines.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

CRS system review project

Table 138: CRS system review project

	Project details
Incurred expenditure	[redacted]
Description	IT architectural design review of CRS implementation and functionality.
Business need	Numerous incremental software updates to DBP's heavily customised Customer Reporting System (CRS) had introduced a number of issues in to the system.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

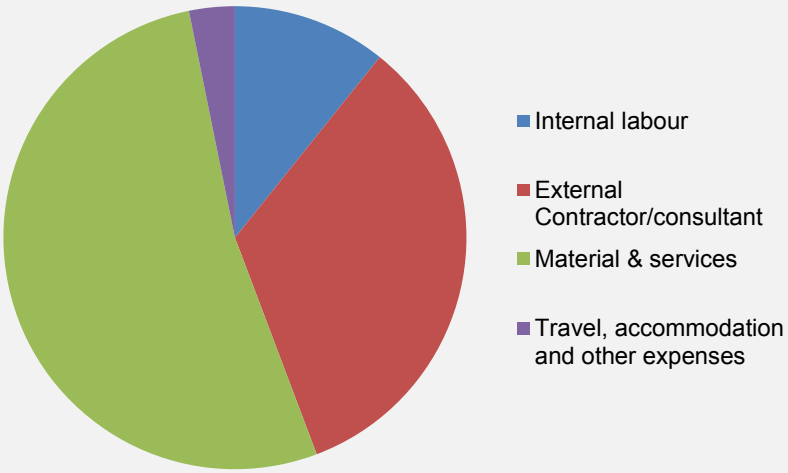
Replacement of existing vehicles

Table 139: Replacement of existing vehicles

	Project details
Incurred expenditure	[redacted]
Description	Replacement of DBNGP vehicles. This expenditure is for replacing accessories as part of the DBNGP vehicle replacement programme
Business need	DBP's replaces vehicles that have excessive mileage and at excessive age. Both age and high mileage result in increased maintenance costs. Reliable vehicles are essential to ensure the safety of personnel and their ability to perform required duties effectively and efficiently.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

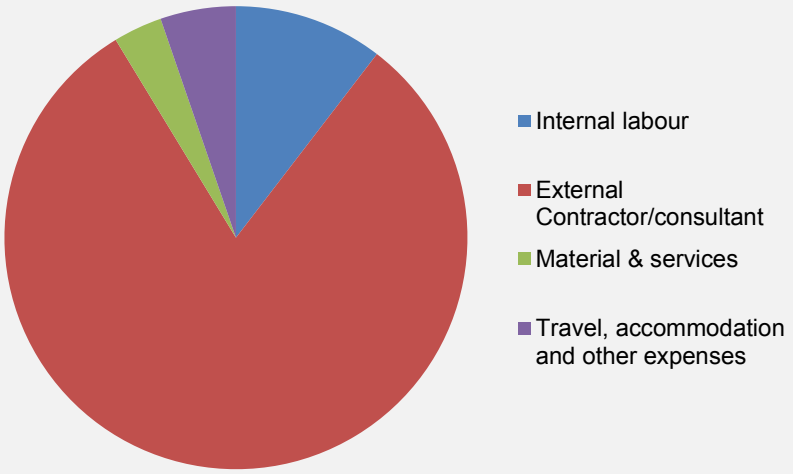
Intelligent pigging - mainline, laterals and un-pig

Table 140: Intelligent pigging - mainline, laterals and un-pig

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Intelligent pigging of the DBNGP and associated laterals including Dampier facilities to Wagerup West, Wagerup West to Worsley, Southern Loop, Russell Road lateral and Rockingham laterals. Scope includes the preparation of the pipeline and alignment of all MLVs and testing of launchers and receivers, pig signals and confirmation of all off takes, LOR plugs and EOL status with the loop tie ins. The project included the calling of tender for an Inline Inspection (ILI) contractor complete with cleaning scope. It is envisaged that there will be detailed modelling work to determine the most optimum time for pigging and pre-planning with the selected contractor.
Business need	DBP is required to perform pipeline pigging under its pipeline licences and Safety Case.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

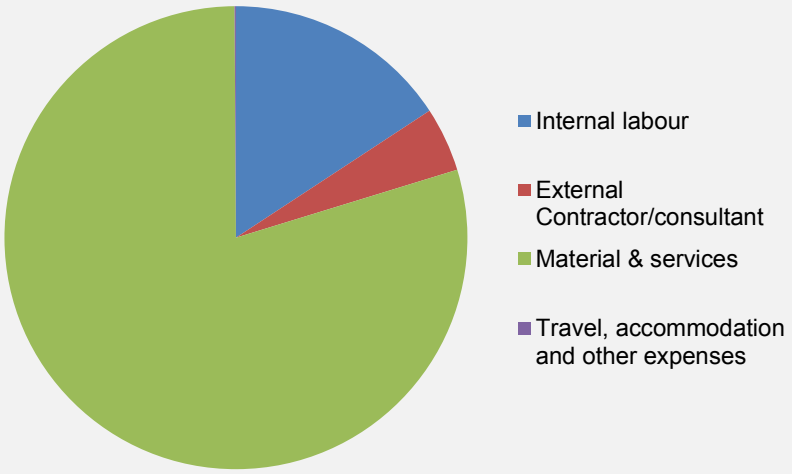
Refurbishment of underground pipework

Table 141: Refurbishment of underground pipework

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Excavate, inspect and assess pipe defects and recoat the station pipework at Compressor Stations 5, 8, 1, 2, 4, 6, 7 and 9. The scope of work involves the historical assessment of coating performances at these sites and includes the following: 1. Planning, costing and resourcing 2. Selection of contractors and training 3. HAZID and job specification 4. Work Flow and processes 5. Mobilisation and site preparation 6. Excavation 7. Coating Evaluation 8. Recoating 9. Backfilling and project complete 10. Project Close Out This expenditure was for the refurbishment of 156 meters of pipe in CS5 and general excavations.
Business need	The station pipework had a coating with a design life of no more than 10 years. Station pipework is not piggable due to the proximity to other structures and earthing practices reduces the effectiveness of cathodic protection. The DBNGP Integrity Guidelines therefore recommend in service inspection and recoating of underground station pipework. The ultra-high built epoxy system applied in during the ACS Expansion Projects back in 1991 at CS1, 3, 5 and 8 had shown during preliminary inspection at CS3 and 5 that this type of coating was failing caused by shielding of CP currents within the station. The shielding has created the onset of significant corrosion pitting and metal loss in general areas without impacting on integrity of the pipeline.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

MLV117 to Clifton Road meter station (pipeline)

Table 142: MLV117 to Clifton Road meter station (pipeline)

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	The scope of this project is as follows: • Upgrade and replacement of the DBNGP Southern Communications Network from MLV117. • Upgrade and replace the DC power systems at MLV 117. • Upgrading of the communications in the Kwinana industrial area to facilitate the exit from the Western Power pilot cable network. • Upgrade of the communications to Compressor Station 10 to facilitate the existing from the reliance on Telstra/ATCO services and also to increase capacity to this site. • Upgrade communications at Pinjar power station and exit use of Western Power communications infrastructure • Upgrade communications at Mungarra power station and exit use of Western Power communications infrastructure • Consolidate backup communications paths between Perth and Karratha (SCADA, 2way,Telephone, Comms, Corporate) This expenditure is continued part of the same project in Table 75
Business need	Justification for the project as follows: • Southern Communications equipment was at end of life; • DC power systems at end of life; • Required to exit from the Western Power owned and operated pilot cable network; • Cost savings by consolidating 3rd party provided backup communications circuits; and • Failure to undertake this project would have resulted is the loss of remote visibility and control of the DBNGP from MLV117 Della Road – MLV157 Clifton Road.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Management of change

Table 143: Management of change

	Project details
Incurred expenditure	[redacted]
Description	Management of change projects are minor in nature with expenditure in the range of $1000 to $50,000. Major work includes: • GEA Point monitoring at CSs • Kemerton pump upgrade • Pressure safety valve register review at meter station • Maximo disaster recover reinstatement
Business need	During the normal operation of the DBNGP, various design changes are required to: • Sustain business; • Alleviate unsafe condition; • Increase reliability; • Make equipment more reliable; • Increase efficiency; and/or • Reduce costs.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

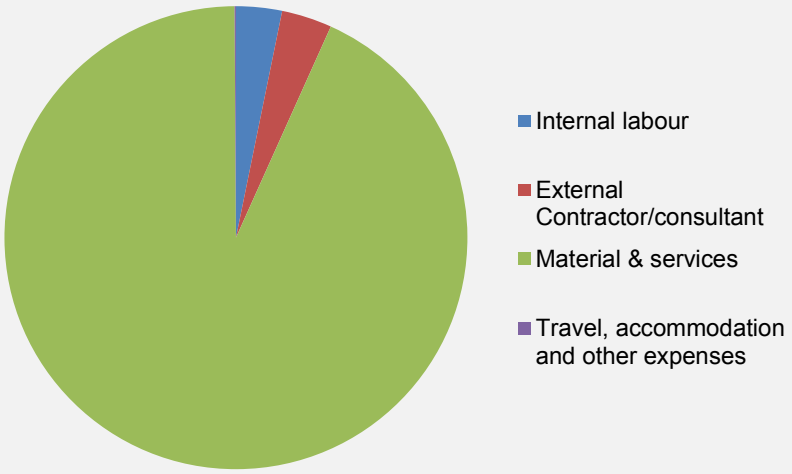
Tools and equipment for maintenance

Table 144: Tools and equipment for maintenance

	Project details
Incurred expenditure	[redacted]
Description	Purchase tooling to ensure maintenance activities can be completed efficiently and effectively. The majority of the cost are for the following major items • RTD100 • 475HP1EKLUGMTS field communicator as per • Replacement tools for new MS E.I FMO • NPAC-2FBA-2M-1M • Fluke 87VEx • Crystal NV-4AA • Crystal 100BAR • Hart communicators • Fluke - multimeter 707Ex • Fluke - multimeter 725Ex • Crystal calibrator • Wallace & Tiernan: test pressure gauge • Ralston - Hose quick test 1 meter • Ralston - Hose quick test 50 foot • Ralston - Hose reel • Ralston - Quick test tee • Comet - regulator - air • Cotek - Inverter 12VDC to 240VAC • Hitachi - Battery drill 18volt cordless • Ridgid - Tube benders 1/2" • Ridgid - Tube benders 1/4" • Ridgid - Tube benders 3/8" • Sidchrome - Spanner 1 5/8" • Sutton - drill bit set (1mm-13mm) • Utilux - crimp kit • MSA766348-BU cal stn • Fluke 9102s thermal block calibrator • Fluke 365 200A AC/DC clamp ammeter • Fluke TL81A deluxe electronic test lead • Fluke TPAK Meter Hanging kit • Motorola GP339 (FM Approved) Programmed • Crystal N Vision • 240 Volt AC Charger to suit GP339 2 - Wa • 43 APG FOXBORO F0101AF TOOL KIT • 43 APG Tool Kit P/N F0101AF FOXBORO • Model 10BAR Crystal Eng. nVision 10 bar • Model RTD100 Crystal Eng. nVision RTD100 • Model NV-4AA Crystal Eng. nVision Base U • Model 100BAR Crystal Eng. nVision 100 ba
Business need	Required to allow staff to access appropriate equipment required to perform normal maintenance duties on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

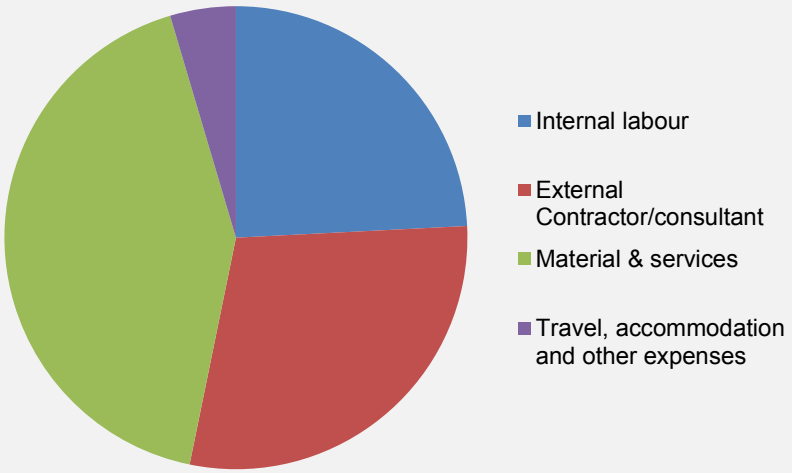
Replace turbine air inlet CS2, 4 & 7

Table 145: Replace turbine air inlet CS2, 4 & 7

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Removal of the existing Stage 3A turbine inlet filter housings, and installation of the 3 turbine air inlets at compressor station No.2 unit 2, compressor station No.4 unit 2 and compressor station No. unit 2 The total expenditure for this project is actually a reversal of prior years' expenditures for the same project (for design, and procurement but not installation). This has now been rolled into a new project code in anticipation of imminent installation of the filter.
Business need	The existing Stage 3A Turbine air inlet filters housings were corroding and deteriorating and required replacement in order to reduce the risk of turbine axial compressor damage and possible catastrophic failure. Expected benefits of this project are a significantly reduced risk of failure from ingestion of corrosion and collapsed filter material.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replace PLC station control CS1, 3, 5 & 8

Table 146: Replace PLC station control CS1, 3, 5, & 8

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	This project is for the replacement of the obsolete Allen Bradley Compressor station Programmable Logic Control (PLC5) control system at ACS sites (CS1, 3, 5, and 8) with the latest system. This expenditure is for design and implementation carried out over multiple years, following the FEED study in Table 27
Business need	The Programmable Logic Control (PLC) are one of the most critical items to enable the compressor to operate safely and efficiently. The PLC installed at these sites were original equipment that had reached design life and were no longer supported by Solar turbines.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replace CS vent attenuators and vents at CS2, 4 & 7

Table 147: Replace CS vent attenuators and vents at CS2, 4 & 7

	Project details
Incurred expenditure	[redacted]
Description	The existing vent attenuators at CS 2, 4 & 7 required inspection, clean-up and repair to eliminate risk of release of foreign material during venting. This expenditure is for implementation work following the FEED study in Table 56
Business need	Vent attenuators at CS 2, 4 & 7 fitted during the Stage 3 expansion had deteriorate to the stage that they posed a risk to personnel by projection of materials during venting.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

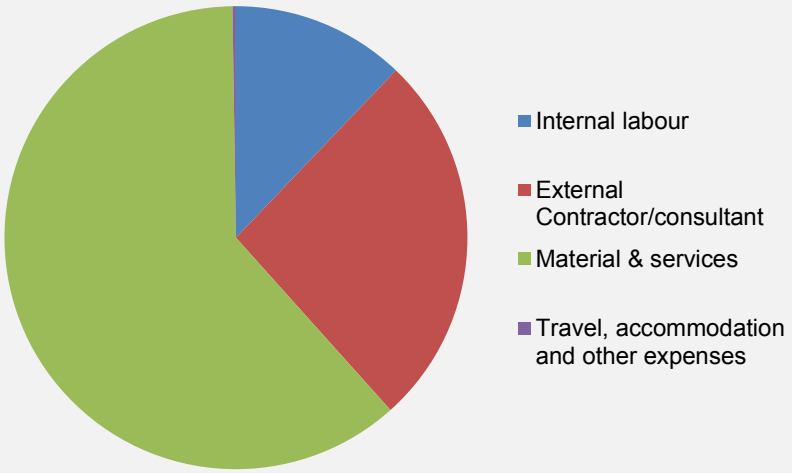
Upgrade solar panels at spur sites 1-6

Table 148: Upgrade solar panels at spur sites 1-6

	Project details
Incurred expenditure	[redacted]
Description	Upgrade of solar panels at spur sites 1-6
Business need	Due to ageing and failure of existing solar panels, the site had become prone to power outages and therefore was problematic in terms of remote visibility via control systems. To control this site effectively it was necessary to upgrade the solar power at this site to maintain effective control.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

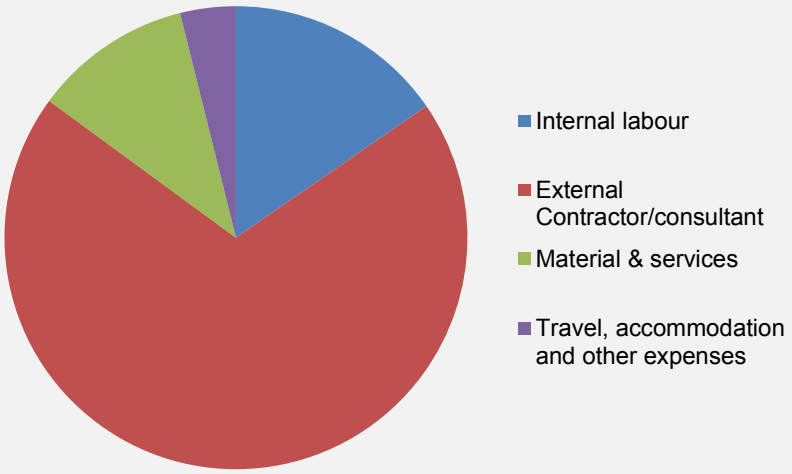
Replace DUETZ TEM Panels

Table 149: Replace DUETZ TEM Panels

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Replacement of TEM systems at CS02, CS04, CS06 & CS09 with an InteliVision / GE GEA PLC solution. This expenditure is for the implementation work as part of a multiple year project, following the FEED study in Table 53
Business need	TEM systems at CS02, CS04, CS06 & CS09 were obsolete and no longer repairable due to unavailability of components.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

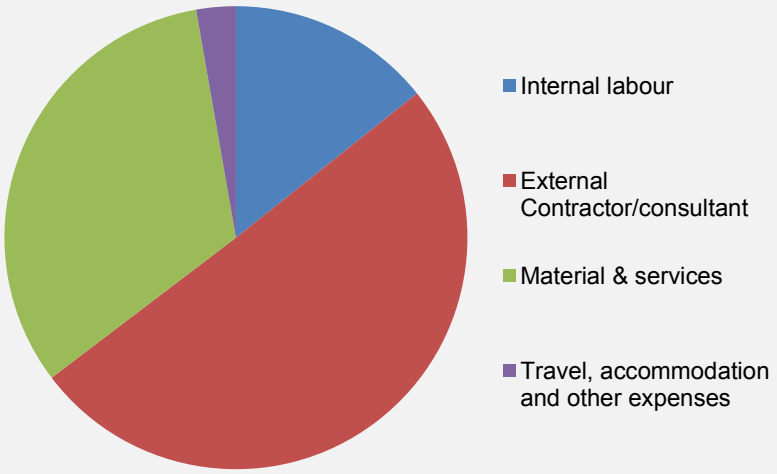
Upgrade flow computers

Table 150: Upgrade flow computers

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Upgrade flow computers, RTU's, associated equipment cabinets, DC circuit wiring and associated drawings and I.S. barriers at 40 metering sites. This expenditure is for the implementation work as part of a multiple year project (continued from Table 92).
Business need	• 40 flow computers were at end of their operational life. Replacement spares are no longer available. Failure to implement this project would have resulted in loss of billing data, site visibility and several safety concerns over inadequate 240VAC wiring. • Existing electrical wiring drawings at most sites were inadequate to perform troubleshooting and engineering without site visit. • Hazardous area barriers required upgrade to be configured as per current Hazardous Area Requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Fire and gas at CS2, 4, 5, 6, 7, 8, & 10

Table 151: Fire and gas at CS2, 4, 5, 6, 7, 8, & 10

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Replace fire and gas systems at CS 2, 4, 5, 6, 7, 8, and 10 including Station Emergency Shutdown (SESD) & Mainline Emergency Shutdown (MLESD). This project excludes the replacement of fire & gas systems of GEAs (To be replaced under different project) and fire & gas replacement system of Stage 4 units and stage 5B units (installed after 2006 and are not considered to be obsolete. This was expenditure related to the implementation of work initiated in Table 93
Business need	All compressor stations are equipped with suitable fire & gas monitoring system to handle the risk to plant and personnel. There are CO_2 based fire suppression systems for compressor unit buildings installed during the ACS expansion project. There are also water mist based fire suppression systems for compressor enclosures installed during the Stage 4 expansion project. To handle fire and gas release, various types of sensors are used at compressor stations. All sensors are connected to PLC through interfacing system. The PLC carry out voting and generate confirm fire or confirm gas detect signals to initiate further protective action. Micro-1000 and Sieger-5701 system were declared obsolete and no longer supported by vendors. The project addresses the problem of obsolescence.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

FEED Power gen control system enhance

Table 152: FEED Power gen control system enhance

	Project details
Incurred expenditure	[redacted]
Description	This project is for the Front End Engineering Design (FEED) study of the Compressor Station Power Systems, and enhancement of the controllability / operability and stability of the DBNGP Compressor Station Power Generation Systems (GEA and DEA).
Business need	The project was based on the following justification: • Pre-Stage 5 Power Generation control systems had reached the limit of their useable life. • Older control system hardware had become obsolete and therefore needed migration to current / future generation control system equipment. • Legacy GEA control system architecture severely restricted effective integration into the compressor station control system, leading to loss of event history. • Of particular importance, was the identification of redundant and obsolete legacy code, associated panel wiring, and control devices that should be replaced or removed during the standardisation process.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

FEED GEA control, monitoring and load sharing

Table 153: FEED GEA control, monitoring and load sharing

	Project details
Incurred expenditure	[redacted]
Description	Front End Engineering Design (FEED) study of the Compressor Station Power Systems and enhancement of the controllability / operability and stability of the DBNGP Compressor Station Power Generation Systems (GEA and DEA). This project is expanded from previous project in Table 152 to include monitoring and load sharing.
Business need	The project is based on the following justification: • Pre-Stage 5 Power Generation control systems had reached the limit of their useable life. • Older control system hardware had become obsolete and therefore needed migration to current / future generation control system equipment. • Legacy GEA control system architecture severely restricted effective integration into the compressor station control system, leading to loss of event history. • Of particular importance, was the identification of redundant and obsolete legacy code, associated panel wiring, and control devices that should be replaced or removed during the standardisation process.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Mothball CS10 1&2 Solar Centaur units

Table 154: Mothball CS1&2 solar Centaur units

	Project details
Incurred expenditure	[redacted]
Description	This project isolated the Centaur turbines from the process gas by means of positive isolation. These required rated blind flanges to be installed isolating the station pipework from the header pipework inside the building. The work enabled the Centaur pipework to be purged and nitrogen gas introduced for long term isolation before future removal from site. Expenditure related to implementation works at CS10.
Business need	It is industry best practice and safe procedure to isolate inactive equipment that is no longer in use.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

FEED RCD protection at CS

Table 155: FEED RCD protection at CS

	Project details
Incurred expenditure	[redacted]
Description	The purpose of this project was to review the need for the retrofit of Residual Circuit Breakers (RCD) for all compressor stations.
Business need	While DBP is not obliged to correct installations retrospectively, this issue was raised by DBP's maintenance safety committee as a concern, which initiated a FEED study. RCDs for an new electrical installation is required to comply with the Australian Wiring Rules is defined in the Electricity (Licensing) Regulations 1991 (WA) which in turn is referenced in the Electricity Act 1945 (WA). Therefore, compliance with the Australian Wiring Rules is mandatory in Western Australia. In addition, compliance with the Australian Wiring Rules is a condition of DBP's pipeline licences and the Safety Case.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

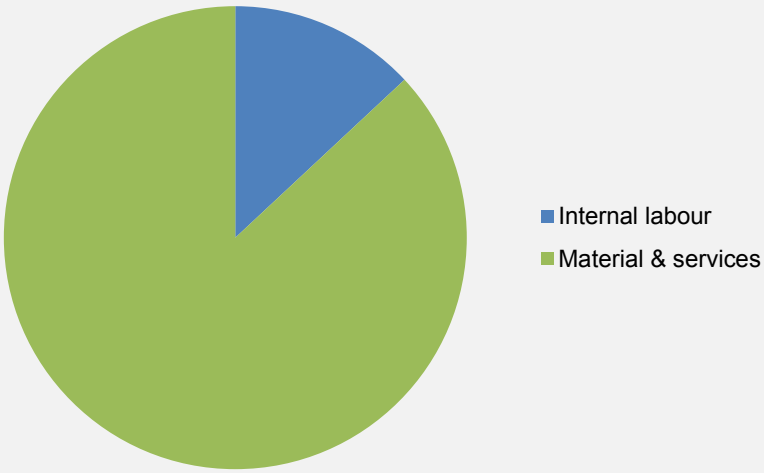
Replace Conitel RTU Clifton Road and Harrow Street

Table 156: Replace Conitel RTU at Clifton Road and Harrow Street

	Project details
Incurred expenditure	[redacted]
Description	Replacement of Conitel RTU units at Clifton road and Harrow Street. This is implementation work following the FEED study in Table 11.
Business need	Meter run valves are remotely operated by an output from a Leeds and Northrop Conitel RTU at Clifton Road and Harrow Street. RTUs were 20+ years old, should units fail they would have not been repairable.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replace and upgrade TSCC telephone system

Table 157: Replace and upgrade TSCC telephone system

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Upgrade/replacement of telephony at the Jandakot maintenance depot as well as the compressor stations (CS1-9).
Business need	The telephone system was determined to be at end of life and had no capacity for expansion.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

5 yearly formal SAR

Table 158: 5 yearly formal Safety assessment review (SAR)

	Project details
Incurred expenditure	[redacted]
Description	Formal Safety Assessments Review (SAR) for the DBNGP were conducted in 2003-4, including extensive AS2885 Safety Management Study of the pipeline and HAZOPs (internal risk assessment workshops) for aboveground facilities. In accordance with the provisions of the DBNGP Safety Case and AS2885, SARs are required to be conducted on a 5 yearly basis to ensure currency and to incorporate any additional hazards based on operational experience. The scope of the SARs include: • All mainline sections, including Stage 4, Stage 5A and Stage 5B loops • All DBNGP laterals • All Compressor Stations • All MLVs • All DBNGP Meter Stations The review assessed the impact from hazards and threats to personnel, environment, equipment, production & reputation
Business need	Review to comply with DBNGP Safety Case and AS2885.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

FEED retrofit for unpiggable laterals for pigging

Table 159: FEED retrofit for unpiggable laterals for pigging

	Project details
Incurred expenditure	[redacted]
Description	The FEED assessed the feasibility of converting the pipework of the unpiggable laterals to enable intelligent pigging of the laterals.
Business need	DBP is required to perform pipeline pigging under its pipeline licences and Safety Case.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Implement Visual Risk treasury software system

Table 160: Implement Visual Risk treasury software system

	Project details
Incurred expenditure	[redacted]
Description	Upgrade of treasury management system (TMS) from Acorn to Visual Risk. DBP's TMS is carried out in accordance with AASB 139 Financial Instruments: Recognition and Measurement.
Business need	Prior to the upgrade, in order to comply with AASB 139 DBP engaged external consultants to perform hedge effectiveness testing at a cost of around $40k p.a. Implementation of Visual Risk enabled DBP to perform hedge effectiveness testing in-house utilising existing treasury resources and has also provided cash flow forecasting functionality that was also not available with the Acorn product.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to comply with a regulatory obligation or requirement

Level 6 reconfiguration

Table 161: Level 6 reconfiguration

	Project details
Incurred expenditure	[redacted]
Description	This project made required changes to the office layout in level 6 of the Esplanade tenancy to maximize use of space.
Business need	Required to provide adequate an adequate work environment for staff.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replacement of existing vehicles FY11/12

Table 162: Replacement of existing vehicles FY11/12

	Project details
Incurred expenditure	[redacted]
Description	Replacement of DBNGP vehicles. This expenditure is for the following vehicles and related equipment: • Toyota GXL Cab Chassis 79 • Tool Box (Bosston Canopies) • Comms (Octocom) • VSSMS (Ashleys) • Toyota GXL Cab Chassis 79 • Tool Box (Bosston Canopies) • Toyota GXL Cab Chassis 79 • Toyota GXL Cab Chassis 79 • Toyota GXL Cab Chassis 79 • Toyota GXL Cab Chassis 79 • Toyota Prado GXL • Toyota Prado GXL • Toyota Prado GXL Manual
Business need	DBP replaces vehicles that have excessive mileage and at excessive age. Both age and high mileage result in increased maintenance costs. Reliable vehicles are essential to ensure the safety of personnel and their ability to perform required duties effectively and efficiently.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

CiM Visual Planner suite

Table 163: CiM Visual Planner suite

	Project details
Incurred expenditure	[redacted]
Description	Implementation of CiM Visual Planner Suite into Maximo 6 This expenditure is continued from the project in Table 103
Business need	The Visual Planning/Scheduling tool provides calendar based, graphical view/control functions that allows visualisation in a calendar format which can zoom from hours to days, weeks, months or years. It also creates a Work Load Graph that allows for the determination of labour requirement for any given time period.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

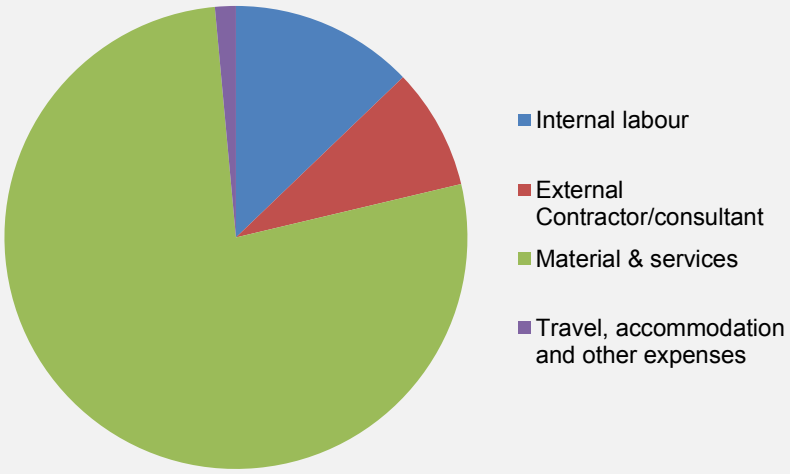
CS diesel tank remote monitoring

Table 164: CS diesel tank remote monitoring

	Project details
Incurred expenditure	[redacted]
Description	Implementation of remote monitoring system for diesel tank levels at compressor stations. This expenditure is continued from Table 106
Business need	It is essential that the diesel tank levels can be monitored for refuelling purposes to ensure availability of diesel fuel at remote sites.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Refurbish accommodation at CS4 & 5 FY11/12

Table 165: Refurbish accommodation at CS4 & 5 FY 11/12

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	This project was for the replacement and refurbishment of accommodation facilities located at CS4 and CS5 needed to maintain the standard of facilities.
Business need	Due to ageing and continued operation of the accommodation facilities over a number of years, it is necessary to replace and refurbish worn out accommodation units at compressor stations. This is to ensure the facilities meet the building code and are a suitable environment for employees to live in.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

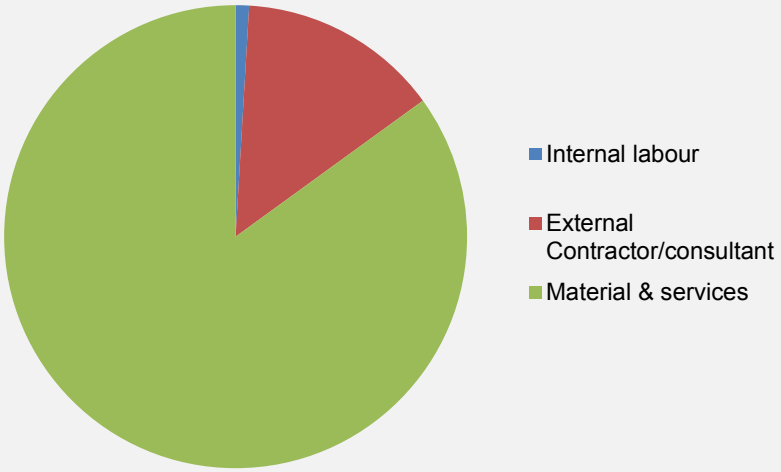
Replace RO units at CS

Table 166: Replace RO units at CS

	Project details
Incurred expenditure	[redacted]
Description	This project is to replace Reverse Osmosis (RO) units installed at all compressor stations over the course of this programme.
Business need	The reliability of these Reverse Osmosis units provide each site with water. The water is used for drinking and all potable requirements. The main drivers for an upgrade programme at this time are: • Reverse Osmosis units were around 20 years with many obsolete, with rising maintenance requirements. • The new units provided InteliSys control, allowing remote access by Maintenance and SDO teams through the SCADA system reducing costs. • Changes in the water table have changed the quality of the ground water effecting the production of adequately refined water for the sites. • Implement waste management of the RO units by improving current design and installing evaporation ponds in order to comply with industry best practice
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Meter station site painting FY11/12

Table 167: Meter station site painting FY11/12

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Painting of 3 to 4 sites per annum based on corrosion assessment. • Forrestdale MS • MLV122, • Alcoa Pinjarra • Worsley MS
Business need	A site coating assessment was carried out in 2010 which found that there are a number of sites that are over 20 years old and were showing considerable coating and corrosions damage due to constant icing (pre-heater) and generally atmospheric exposure.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Replace water bores at CS1, 4 & FEED 5

Table 168: Replace water bores at CS1, 4 & FEED 5

	Project details
Incurred expenditure	[redacted]
Description	Redrill of CS1 & CS 4 water bores and FEED study for CS5 water bore.
Business need	The water bores at CS1 and CS4 had been in service since 1984 and 1991 respectively and have now failed through the collapsing of the vertical bore casing. CS1 redrill was planned for the same location, and CS4 was planned for a different location as the quality of water had deteriorated. CS5 bore was drawing muddy water indicating a need relocate or drill deeper at that site. However it could be rectified if more rainfall occurred in the area and the water table rises.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

SDO tools FY11/12

Table 169: SDO tools FY11/12

	Project details
Incurred expenditure	[redacted]
Description	Purchase tooling to ensure maintenance activities can be completed efficiently and effectively. The majority of the cost are for the following major items • Fluke 754 • test probe adapter kit TP920 • Supply pipeline equipment as quoted as p • Technical toolboxes 2012 subscription • Mini hook test lead test TL940 • Mini pincer test lead set TL950 • C452 compressor end play tool FT44703 • 2250 hand-held analyser SLM, 1/3rd OBA, • Cable 10-ways multi, LEMO-1B 10-pin (M) • Outdoor microphone kit • Supply one Honda EU30iu HANDY generator • Simulator, infrared flame, Triple IR Lig • Engel for comms car • WR359 Supply 2 x VFLs • Comms toolkit
Business need	Required to allow staff to access appropriate equipment required to perform normal maintenance duties on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Subsequent costs FY12

Table 170: Subsequent costs FY12

	Project details
Incurred expenditure	[redacted]
Description	The Subsequent cost category, consistent with the requirements of AASB116 Property Plant and Equipment (PP&E), captures expenditure incurred as a condition of continuing to operate an item of PP&E. Regular day-to-day servicing expenditure is recognised through profit and loss (operating expenditure) as consumed and generally described as repairs and maintenance. However, major overhauls that effectively extend the life of an asset are classified as a subsequent cost of the assets continued use the costs of which are recognised as part the asset value. For this period the following subsequent costs were carried out: DCVG surveys Hazardous areas Inspection compressor stations Hazardous area rectification work Create Maximo PM's for Comm's incl BOM's UGL reactive microwave maintenance Vibration & high flow works DBP Internal Labour (Reversal of previous cost) CS10-4 Gas turbine air Inlet collector replace Solar PLC & HMI reactive CP visibility punch list Inverter for CS1, CS3 & CS5 CS9 Reliability Loadbank DBNGP facilities drawings update CS7 Unit 3 Bundle overhaul (Reversal of previous cost) CS9/1 Compressor dry gas seal replacement CCVT replacements CS9 PSV Inspection CS4 Unit 3 overhaul CS9/1 suction valve CS8/1 PECC Valve CS9 Replace onskid TT4000 screen CS1 Unit 2 Recycle valve CS1 Unit 1 Recycle valve CS8 U1 removal / CS9 U2 installation Eneabba IJ and heater replacement Pinjar RTU replacement Recycle valve Replacement of air conditioners Thomas road pigging CS2/3 Bundle insptn & dry gas seal replace CS1/1 Dry gas seal replacement CS2/2 Dry gas seal replacement CS2/2 Dry gas seal punch list [redacted]
Business need	The ongoing subsequent costs provide for essential work carried out under the approved Asset Management Plan during normal operation and maintenance that can be capitalised under the Australian Financial Accounting processes.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Office modification level 7

Table 171: Office modification level 7

	Project details
Incurred expenditure	[redacted]
Description	This project made required changes to the office layout in level 7 of the Esplanade tenancy to maximize use of space.
Business need	Required to provide adequate an adequate work environment for staff.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Implement working at heights policy at CS

Table 172: Implement working at heights at CS

	Project details
Incurred expenditure	[redacted]
Description	The working at heights project delivers compliance with all relevant occupational health and safety legislation, and Australian Standards. This is an ongoing project that selects a scope each year on a basis of priority. For example, the practice of working on after coolers has been ranked highly due to the combination of significant height with confined space, and involves execution of a rescue plan from height. New platforms have been designed for DAVIT rescue equipment and these will be fabricated and installed at CS09, CS06, Dampier facilities. In addition, prefabrication of platform railing extensions and access improvements to suit WLPG and CS09 Odorant storage facilities including installation will been included.
Business need	The key benefit resulting from this project is to ensure access and egress of above ground facility on the DBNGP is compliant with OHS regulations and Australian Standards. Working at Heights safe practice is also a key focus of DBP's Zero Harm Principles.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Mitigate noise at accommodation facilities

Table 173: Mitigate noise at accommodation facilitates

	Project details
Incurred expenditure	[redacted]
Description	Continuation of installation and testing of noise rectification works to reduce tonal noise levels in the sleeping accommodation buildings at compressor stations. The overall project includes: Provide acoustic attenuation of the air inlet ducting of the following stage 4 solar turbine packages: • CS02 Unit #3 • CS03 Unit #3 • CS04 Unit #3 Provide acoustic attenuation of the new air inlet ducting of the following stage 3 solar turbine packages: • CS02 Unit #2 • CS04 Unit #2 Replace the exhaust mufflers on the following GEA packages: • CS02 GEA #3 • CS04 GEA #3
Business need	Tonal characteristics of noise can pose a safety hazard to the public and those working on the DBNGP. Most immediately they have an impact on comfort levels within accommodation facilities and can affect the quality of sleep effecting fatigue levels of staff work at site for extended periods of time. High noise levels have been measured at two sources: • Air inlet ducting on stage 4 solar turbine packages, and • Exhaust mufflers on stage 5A GEA packages Further, the new air inlets being installed on the stage 3A solar turbine packages are of the same design as those currently in use on the stage 4 packages and are therefore expected to also produce problematic tonal noise.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Upgrade GEA fire and gas system at CS9

Table 174: Upgrade GEA fire and gas system at CS9

	Project details
Incurred expenditure	[redacted]
Description	Old fire and gas controllers at CS2 and 4 were replaced with the new Sieger 57 type controllers as per previous CS06 and CS09 retrofit carried out during GEA reliability in 2009/10 financial year. The aim was to minimise changes and re-use existing GEA F&G sensors and also use the existing EGA Programmable Logic Control (PLC) code for coding annunciator display and SCADA. This expenditure is continued as part of the project in Table 60
Business need	The existing fire & gas controllers at CS2 and 4 are obsolete and not supported by the vendor. It is critical to replace the system to maintain the safe and reliable operation of the fire and gas system.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Inspect hazardous area equipment

Table 175: Inspect hazardous area equipment

	Project details
Incurred expenditure	[redacted]
Description	As a part of obligation under AS 2381 and AS 60079, DBP is required to conduct visual inspection of all equipment installed in the hazardous area every 4 years. The inspection is carried out by third party contractor. The contractor prepares a report of any non-conformity found on the equipment. Under the scope of this project, all the non-conformity will be rectified to meet the requirement of hazardous area installation standards. The scope covers rectification of hazardous area equipment installed at compressor stations CS03, CS04, CS07, CS08 and CS10.
Business need	Required under AS 2381 and AS 60079.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Replace earth grid at meter stations

Table 176: Replace earth grid at meter stations

	Project details
Incurred expenditure	[redacted]
Description	Replace earth grids at meter stations. This expenditure is for the work carried out at MLV18 site.
Business need	Original earthing systems in compressor stations, metering stations and valve sites have shown extensive corrosion. The mode of corrosion is not uniform which makes it impossible to judge condition by way of a grid or bell hole excavation. Rather special resistance measuring tools are needed to assist in the measurement of remote earth resistance of the grid. An effective grid system is essential to deal with step and touch earth raised potentials as well as safe operation of control instruments in a compressor station, metering station or a valve sites.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Excavate & inspect as per CP dig-up

Table 177: Excavate and inspect as per CP dip-up

	Project details
Incurred expenditure	[redacted]
Description	Cathodic protection dig up programme to excavate and inspect the DBNGP for coating and pipe damage and for signs of Stress Corrosion Cracking This expenditure is for the refurbishment of 156 meters of pipe in CS5 and required excavation.
Business need	Dig-ups are required in order to determine the condition of the pipeline and coating by direct inspection as per AS 2885. Monitoring for stress-corrosion cracking cannot be achieved in any other way except by exposing the pipe.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Rectify hazardous area equipment at MLV sites

Table 178: Rectify hazardous area equipment at MLV sites

	Project details
Incurred expenditure	[redacted]
Description	As a part of obligation under AS 2381 and AS 60079, DBP is required to conduct visual inspection of all equipment installed in the hazardous areas every 4 years. The inspection is carried out by third party contractor. The contractor prepares a report of any non-conformity found on the equipment. Under the scope of this project, all the non-conformity will be rectified to meet the requirement of hazardous area installation standards. The scope covers rectification of hazardous area equipment installed at compressor stations CS03, CS04, CS07, CS08 and CS10.
Business need	Required under AS 2381 and AS 60079.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Replace odorant transport tank

Table 179: Replace odorant transport tank

	Project details
Incurred expenditure	[redacted]
Description	Replace odorant transport equipment and engineer a certified vessel utilising approved and appropriate transfer equipment designed in such a fashion that minimised working at height issues and manual handling risks. All safety systems utilised had backup and interlocks to ensure operator error would result in odour release. Safety and spill equipment also installed in transport.
Business need	Odorant is transferred from bulk storage facilities at CS9 and WLPG to the onsite injection facilities along the DBNGP. The equipment used required a full engineering review, redesign and modifications/replacement. This was to ensure that equipment was fit for purpose reducing identified risks associated with personal injury, and environmental impact.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Upgrade odorant injection facilities

Table 180: Upgrade odorant injection facilities

	Project details
Incurred expenditure	[redacted]
Description	Pressure safety equipment on odorant pressure equipment had reached end of life and required replacement as per Australian Standards. This expenditure is for design development.
Business need	Replacing this equipment was required to remain compliant with Australian Standards. The new design determined by a HAZOP (DBP's internal risk assessment process) also incorporated additional valving arrangements to ensure exposure to odorant, a dangerous substance at concentration, was minimised.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Replace ground cover at Alcoa Pinjarra meter station

Table 181: Replace ground cover at Alcoa Pinjarra meter station

	Project details
Incurred expenditure	[redacted]
Description	Removal of existing ground cover and disposal of material was completed by a contractor. The reapplication of the 100 Blue metal surface to restore step touch safeguards and reduce weed infestation. All works required a permit to work (PTW) officer in attendance. Expenditure was for the initial project set up costs.
Business need	The ground surface holds water during rain periods. This adds to hazards with water ingress into foot wear, slip potential, trip hazards provided by some variety of weeds and cover for fauna such as snakes and insects. To some extent, the site also becomes a fire risk the drier seasons. This combined with the HV switchyard located next to the facility and the potential for an earth fault.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

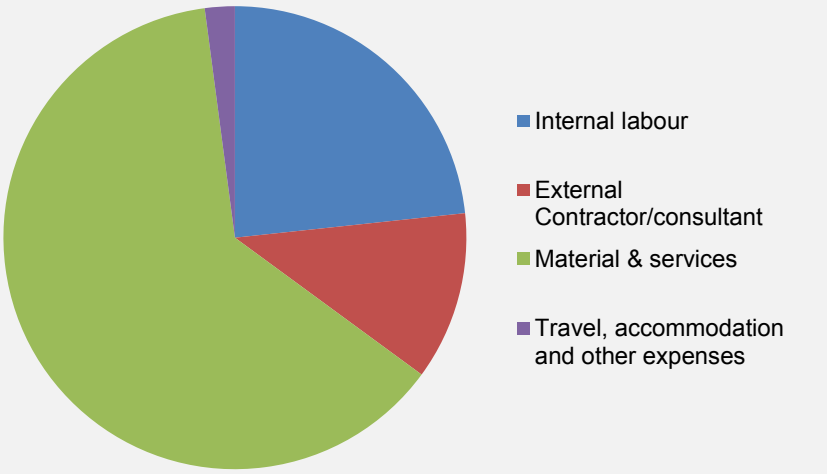
Management of change FY12/13

Table 182: Management of change FY12/13

	Project details
Incurred expenditure	[redacted]
Description	Management of change projects are minor in nature with expenditure in the range of $1000 to $50,000. Major work included: • CS7 Pipes UV Protection • As-built drawings • Audit Emergency Container Tools
Business need	During the normal operation of the DBNGP, various design changes are required to: • Sustain business; • Alleviate unsafe condition; • Increase reliability; • Make equipment more reliable; • Increase efficiency; and/or • Reduce costs.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replace batteries and battery chargers CS 6 & 9

Table 183: Replace batteries and battery chargers CS6 & 9

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	The purpose of this project was to replace the 110VDC battery chargers and battery banks at all compressor stations. 110VDC Battery Chargers Sets Requirements: • Each Battery Charger sets consist of 1x 110VDC charger cabinets, 1x battery maintenance point (BMP) panels. • Total required battery chargers = 14x sets • 110VDC battery banks sets requirements: • Each Battery bank sets consist of 54x Gel type batteries (340Ah Capacity). • Total required Battery Banks = 14x sets Scope of Work • Engineering consultants to provide support for design • Vendors to supply 110VDC battery changers and battery banks sets for cs#1, 2, 3, 4, 5, 7 and 8 • Electrical contractors to install 110vdc battery changers and battery banks • Consultants and electrical contractors to test and commissioning installation • As build drawings
Business need	Justification: • Obsolete equipment with no support • Spare parts were no longer available • Faults on these systems were increasing • Two battery chargers already isolated due to failure
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

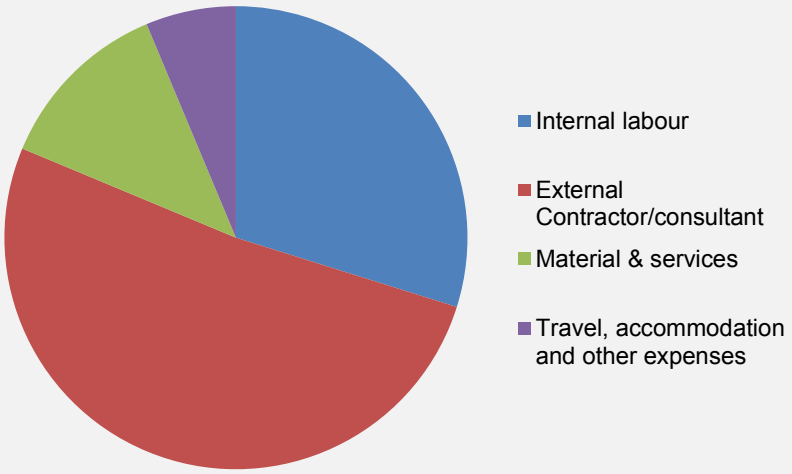
Replacement of coriolis meters

Table 184: Replacement of coriolis meters

	Project details
Incurred expenditure	[redacted]
Description	Replacement of sixteen coriolis meters that have transmitters that were at end of life and were no longer supported.
Business need	This project was required for the following reasons: • Existing flow transmitters were failing • Spares were unavailable • The flow elements were superseded 5 prior • Project schedule as part of the long term equipment replacement strategy This solution was chosen for the following reasons: • The upgrade was a stop gap measure that only upgrades the electronics and core processor. The flow element is >12 years old • The price difference between only other coriolis option E&H was minimal. The proposed meters were already proven on the DBGNP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Pigging of loop 0 & loop 2 (re-run)

Table 185: Pigging of loop 0 & loop 2 (re-run)

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Re-run the pigging due to failure to obtain sufficient data in the original run. The cause of these failed runs is due to high level of electromagnetic static causing the loss of data.
Business need	Pigging is required under the DBNGP pipeline licence and safety case. These runs for the loopline are critical as they are a baseline for future integrity management of the loopline (eg. 5 yearly intelligent pigging results can be compared with this baseline results).
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Upgrade fire and gas at mainline and meter stations

Table 186: Upgrade fire and gas at mainline and meter stations

	Project details
Incurred expenditure	[redacted]
Description	Old fire and gas controllers were replaced with new Sieger 57 type controllers as per previous CS06 and CS09 retrofit carried out during GEA reliability in 2009/10 financial year. The aim was to minimise changes and re-use existing GEA F&G sensors and also use the existing EGA Programmable Logic Control (PLC) code for coding annunciator display and SCADA. This work is continued fire and gas work extending from the compressor station to the mainline and meter stations.
Business need	Required to meet prescribed safety requirements. This project can be justified on the following grounds: • Replacement of ageing and obsolete equipment that are no longer supported by the vendor • Review and implement latest revised safety standard • Compliance to Asset Management Plan and Safety Case
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Replacement vehicles for existing fleet

Table 187: Replacement vehicles for existing fleet

	Project details
Incurred expenditure	[redacted]
Description	Replacement of DBNGP vehicles as per DBP vehicle replacement policy. This expenditure is for the following vehicles and equipment: • Toyota Prado GXL 1ECL441 • Fitout (Coastal) • Comms (Octocom) • VSSMS (Ashleys) • Toyota Landcruiser 200 GX 1EBZ022
Business need	DBP replaces vehicles that have excessive mileage and at excessive age. Both age and high mileage result in increased maintenance costs. Reliable vehicles are essential to ensure the safety of personnel and their ability to perform required duties effectively and efficiently.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services.

New vehicles for maintenance metering team

Table 188: New vehicle for maintenance metering team

	Project details
Incurred expenditure	[redacted]
Description	New vehicles for maintenance metering team. This minor expenditure is to set up the project.
Business need	Reliable vehicles are essential to ensure the safety of personnel and their ability to perform required duties effectively and efficiently.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

New fire suppression system - Jandakot server room

Table 189: New fire and suppression system - Jandakot sever room

	Project details
Incurred expenditure	[redacted]
Description	This project is for the initial assessment and FEED study for installation of a fire suppression system into the Jandakot Server room.
Business need	Due to the critical function of the IT assets in the Jandakot server room it was necessary to protect the equipment from a fire before it threatens surrounding equipment.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Subsequent costs FY12/13

Table 190: Subsequent costs FY12/13

	Project details
Incurred expenditure	[redacted]
Description	The Subsequent cost category, consistent with the requirements of AASB116 Property Plant and Equipment (PP&E), captures expenditure incurred as a condition of continuing to operate an item of PP&E. Regular day-to-day servicing expenditure is recognised through profit and loss (operating expenditure) as consumed and generally described as repairs and maintenance. However, major overhauls that effectively extend the life of an asset are classified as a subsequent cost of the assets continued use the costs of which are recognised as part the asset value. For this period the following subsequent costs were carried out: Telecommunications CP pipeline integrity Recycle valve White goods Reactive - replacement valves Road repair to CS5 Erection of sheds & installation-CS2 & 4 CS1/2 dry gas seal replace & int inspect Water treatment at CS2, CS3 and CS4 Meter recertification Valve overhaul Replace 240VAC incomer panel-Pye Road MS CCVT faults GEA overhaul Sewer reticulation extension at Jandakot [redacted]
Business need	The ongoing subsequent costs provide for essential work carried out under the approved Asset Management Plan during normal operation and maintenance that can be capitalised under the Australian Financial Accounting processes.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Tools and equipment for maintenance FY12/13

Table 191: Tools and equipment for maintenance FY12/13

	Project details
Incurred expenditure	[redacted]
Description	Purchase selected tooling to ensure maintenance activities are carried out efficiently and safely. The majority of the cost are for the following major items • Part No. 31632 - cutter tube ridgid 151 • Part No. 25210 - wrench adj black 375mm • Part No. 31105 - wrench pipe straight 24 • Part No. 31000 - wrench pipe straight 6" • N-Vision meter NV-4AA • 87V Ex Meter • Hart communicator, 475HP1EKL9GMT • 1651B multifunction tester • 725EX process meter • Fluke 773 clamp meters • 23635T Dry block • Pneumatic Calibrator 65-120 60 • US500/301tw1n utepak 2x hose reel ar30-5 • 23635T Dry block • Ralston 1/4" NPT male adaptor. QTHA-2MB0 • Ralston 1/4" tube fitting. QTHA-2TB0 • Pelicon case cat No 1550 in Yellow. • Swagelock
Business need	Tools are integral part of the expected duties of the engineers and specialists.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Tools for SDO FY12/13

Table 192: Tools for SDO FY12/13

	Project details
Incurred expenditure	[redacted]
Description	Procure tools for SDO staff to perform required duties. The majority of the cost are for the following major items • Manufacture of 10 inch air mover adaptor • Bently Nevada 1701/22-01 field monitor • WR370 supply 2.4Ghz antenna • Comms tools • Trimble pathfinder office software
Business need	Tools are integral part of the expected duties of the engineers and specialists.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Tools and equipment for field tech services FY12/13

Table 193: Tools and equipment for field tech services FY12/13

	Project details
Incurred expenditure	[redacted]
Description	The purchase of specialist tools for Rotating Plant Mechanical, Gas Measurement, and Rotating Plant Control Systems teams within the Maintenance division. The majority of the cost are for the following major items • Igs-log dongle-usb hardware key for igs • Fluke-125/007s industrial scopemeter, 40 • Fluke-376 fluke 376 1000 amp trms ac/dc • Fluke-1735 3 phase power logger c/w 4 fl • Is33-36/3000psi crystal eng. i.s. dual r • Fluke-ti25 fluke ti25 thermal imager wit • Eyebolt bss drop forged blk unc 5/8" # 1 • Pliers lock wire twisting 229mm # 70213 • Wrench adjustable 375mm # 25115 • Socket set met/ af 1/4" dr 43 piece sidc • Crimper # 464-482 • Screwdriver set mech. (14pc) t186 # 65.7 • Gear wrench combination 13 piece af set # • Spanner comb ring/oe af 1 1/8" Sidchrome • Allen key set metric 9pc 1.5-10mm # 1219 • Socket set met / af 1/2" dr 51 piece sid • Handle offset adj 1/2" dr 450mm Sidchrome • Spanner set af ring/oe 13 piece Sidchrom • Hammer compo-cast sledge 4.76kg/10.5lb # • Spanner comb ring/oe af 1 1/16" Sidchrome • Socket set af 3/4" sq dr 19 piece Sidchrome • Spanner comb ring/oe af 1 1/2" sidchrome • Eyebolt bss drop forged blk unc 1/2" # 1 • Shackle bow gr s screw pin 10mm 1t wll # • Crate blue polypropylene 52 ltr # 0789 6 • Block lever vital nr 500kg x 1.5m # 0098 • Bar pinch 450 x 16mm # 5pb45016 • Bar pinch 1800 x 30mm 6' x 1 3/16" # 5pb • Bar pinch 750 x 25mm 2 1/2' x 1" # 5pb75 • Wrench adjustable 600mm # 25157 • Allen key set imperial 13pc 0.050" - 3/8 • Mirror inspection 60mm led 940mm # 70188 • Ullman magnetic pick up tool ht-2 (black • Hook & pick extra long ullman 4 pc set # • 1/2" unc omnidirectional lifting lug 1t • 10mm clevis-clevis grade p turnbuckle #t • Plier set 3 pce knipex 002011s • Hammer, club 4lb • M10 omnidirectional lifting lug 0.63t wl • Micrometer digimatic 0-1" 0-25mm mit 293 • Trolley high density phoenix hdt7208 # h • 300mm mitutoyo digital vernier # 764-10 • Files needle (set 12) 160mm 2 cut # 0753 • Bootlace kit # 228-0321 • Crimp kit # 441-5535 • Ratchet 1/2" drive bigfella 17" sidchrom • Wrench adjustable 250mm # 25113 • 5/8" unc omnidirectional lifting lug 1.5 • Eyebolt bss drop forged blk unc 3/8" # 1 • Ullman magnetic pick up tool ht-2 (black • Ullman magnetic pick up tool ht-2 (black

	Project details
	• 12" mitutoyo digital depth vernier imper • 24" mitutoyo digital depth vernier imper • Part no. 70543 - twisting pliers
Business need	Procurement of specialised equipment and tooling to facilitate the Field Technical Services Group's function to support and investigate various tasks that involve diagnostics and project work directly related to DBNGP asset and personnel.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

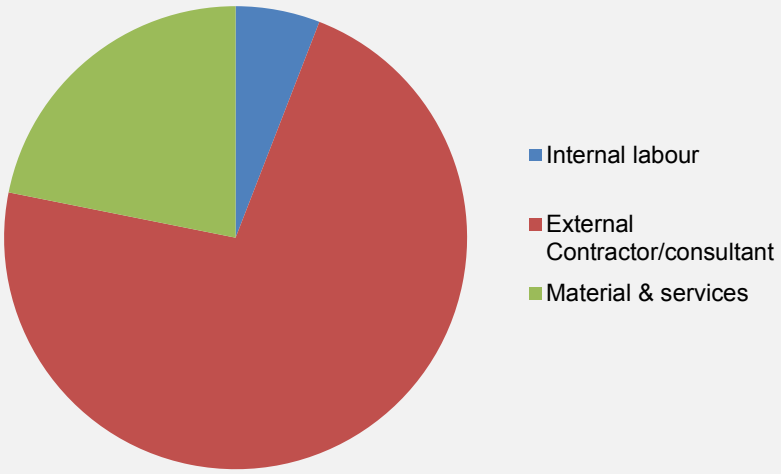
Jandakot outdoor shelter

Table 194: Jandakot outdoor shelter

	Project details
Incurred expenditure	[redacted]
Description	Installation of a fit for purpose outdoor shelter at Jandakot depot to protect heavy equipment and spares from exposure to the weather.
Business need	DBP stores heavy equipment and operational spares at Jandakot depot for both emergency and maintenance needs. This shelter is essential in protecting parts and equipment from damage due to exposure to weather.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Desktop migration to MSOffice 2010

Table 195: Desktop migration to MSOffice 2010

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Desktop software upgrade from Microsoft office 2003 to 2010.
Business need	MSO2003 no longer supported and Windows XP support was scheduled to cease
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

PC replacement programme

Table 196: PC replacement programme

	Project details
Incurred expenditure	[redacted]
Description	Scope of work as follows: • Continue 1/3 PC replacement programme to ensure all PCs are fit for purpose and under warranty; • Printer replacement; and. • DBP software licensing agreement costs.
Business need	The project is based on the following justification: • ensure all PCs are fit for purpose and under warranty • Printers >5yo are considered end of economic life. Replace monochrome laser printers more than five years old. • DBP has signed a licensing agreement covering standard desktop software and Server Operating System SW. There is a contractual obligation to pay the true-up charge. Items 2 and 3 following are not applicable as the SW is already deployed within DBP
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Additional PC & software

Table 197: Additional PC & software

	Project details
Incurred expenditure	[redacted]
Description	Purchase of additional PC's and software.
Business need	Replace damaged or misplaced equipment or service additional requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

CRS enhancement programme

Table 198: CRS enhancement programme

	Project details
Incurred expenditure	[redacted]
Description	CRS enhancements including: • Update date choosers function • Implement P&L and S&D services billing style into CRS • Implement certain shipper charges and invoicing into CRS • Functional update - CRS to re-issue revised allocation reports. • Functional update - Delivered quantity reports (DQR) and combined quantity reports (CQR) modification highlighting changed billing data. • Functional Update - DQR and CQR to be combined into 1 report
Business need	Required to respond to shipper needs and required levels of service provision.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Upgrade of servers

Table 199: Upgrade of servers

	Project details
Incurred expenditure	[redacted]
Description	Set up cost for the project to upgrade the servers
Business need	Server needed upgrade due to obsolescence and the requirement to operate the latest IT infrastructure.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Upgrade CRS with new modules

Table 200: Upgrade CRS with new modules

	Project details
Incurred expenditure	[redacted]
Description	Upgrade to DBP's customer reporting system (CRS)
Business need	Upgrade and maintenance of DBP's CRS provide a number of benefits, including: • reducing human error in billing and pipeline information provision • reducing reliance on personnel • automation of billing functions • improved reporting capability • improved change control and auditing capability • allow DBP to fulfill a number of regulatory reporting obligations.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Upgrade Jasper with new HSE reporting

Table 201: Upgrade Jasper with new HSE reporting

	Project details
Incurred expenditure	[redacted]
Description	This project: • Created a separate instance of the Cintellate Program (JASPER) accessible only to DBP users. • Disallowed WNE and WNGG to view DBP data and vice versa. • Converted JASPER data from WNG into DBP SQL environment. • Configured a new instance to match existing configuration for DBP. • Copied all Stage 5B data into DBP SQL environment. • Built server to house DBP's instance of JASPER.
Business need	The Jasper system was used for recording and reporting incidents and events that occur on the DBNGP and jointly by Westnet. As the two businesses separated it was important that DBP had its own HSE incident reporting tool.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Replacement of PC & printers

Table 202: Replacement of PC and printers

	Project details
Incurred expenditure	[redacted]
Description	Scope of work as follows: • Continue 1/3 PC replacement programme to ensure all PCs are fit for purpose and under warranty; • Printer replacement; and. • DBP software licensing agreement costs.
Business need	• ensure all PCs are fit for purpose and under warranty • Printers >5yo are considered end of economic life. Replace monochrome laser printers more than five years old. • DBP has signed a licensing agreement covering standard desktop software and Server Operating System SW. There is a contractual obligation to pay the true-up charge. Items 2 and 3 following are not applicable as the SW is already deployed within DBP
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

New Windows 7 computerised maintenance tools

Table 203: New Windows 7 computerised maintenance tools

	Project details
Incurred expenditure	[redacted]
Description	This project involved replacing obsolete field maintenance tools (FMTs), computerised interface tools used by maintenance staff to interface to the DBNGP field based equipment (PLCs, flow computers, valve controllers, battery chargers, fire & gas systems etc…) for routine maintenance and fault diagnostics
Business need	Existing hardware and operating systems were no longer supported by the vendor.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Mobile device management system

Table 204: Mobile device management system

	Project details
Incurred expenditure	[redacted]
Description	This project was a pilot for mobile device management software to enforce the use of PIN to unlock screen and ability to remotely wipe DBP issued mobile devices.
Business need	Address the IT security risk associated email and documents being retained on smart phone devices.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services

New PC & office equipment

Table 205: New PC & office equipment

	Project details
Incurred expenditure	[redacted]
Description	Purchase of additional PC's and software.
Business need	Replace damaged or misplaced equipment or service additional requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

In house training and development establishment

Table 206: In house training and development establishment

	Project details
Incurred expenditure	[redacted]
Description	As part of the transfer of approximately 160 employees from WestNet to DBP in 2008, DBP inherited an outsourced training framework. Since then DBP has been progressively establishing internal systems and procedures required to manage training requirements for around 200 staff.
Business need	In 2012 DBP moved its training function in-house in order to improve the effectiveness and quality of training and development focussing on meeting the following requirements: • DBP's Safety Case • Mandatory training requirements • Allow web based training in remote locations. • Increase customisation of DBP training programs allow input from senior management team and subject matter experts. • Integration with Human Resources to ensure training and development is aligned with position descriptions and other HR requirements. • Training designed to align with DBP business requirements, key performance indicators and annual objectives. • Ensuring all employees receive an individual training plan. • Focus on career development and succession planning as opposed to just providing technical and mandatory training.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

7. SIB PROJECTS & EXPENDITURE INCURRED 2013

7.1 The following table lists all stay in business (SIB) projects that were underway during 2013 and associated expenditure during the period. It should be noted that expenditure may not be the total extent of expenditure required for or incurred under projects that span more than one year.

7.2 Negative balances attributed to projects are explained in 6.3.

Table 207: SIB projects Expenditure Incurred CY2013 ($ Nominal)

Table	Project Description	TOTAL additions for 2013
Table 208	FEED System Review Project	[redacted]
Table 209	Intelligent pigging mainline laterals & unpigged	
Table 210	Refurbishment of underground pipework	
Table 211	MLV117 to Clifton Road meter station	
Table 212	Replace turbine air inlet CS2/4/7	
Table 213	Replace CS vent attenuators & vents at CS2,4,7	
Table 214	Upgrade solar panels spur sites 1-6	
Table 215	Replace DEUTZ TEM Panels	
Table 216	Upgrade of flow computers	
Table 217	Fire & gas at CS2, 4, 5, 6, 7, 8, 10	
Table 218	FEED Power gen control system enhancements	
Table 219	FEED GEA control, monitor & load sharing	
Table 220	FEED RCD protection at CSs	
Table 221	FEED : Retrofit of unpigged laterals for pigging	
Table 222	Refurbish accommodation at CS4 & 5 FY11/12	
6.3	Subsequent Costs FY2012	
Table 223	Implement working at height standards CS	
Table 224	Mitigate noise at accommodation facilities	
Table 225	Upgrade GEA F&G system at CS9	
Table 226	Inspect hazardous area equipment on the DBNGP	
Table 227	Replace earth grid at meter stations	
Table 228	Excavate & inspect DGNGP as per CP dig up	
Table 229	Rectify hazardous area equip at MLV sites	
Table 230	Replace odorant transport tank	
Table 231	Upgrade odorant injection facilities	
Table 232	Replace ground cover at Alcoa Pinjarra meter station	
Table 233	Management of Change - FY12/13	
Table 234	Replace batteries & battery chargers CS6&9	
Table 235	Replacement of coriolis meters	
6.3	Pigging of Loop 0 & Loop 2 (re-run)	
Table 236	Upgrade F&G system at mainline & meter stations	
Table 237	Replacement vehicles for existing fleet	

6.3	New vehicles for Maintenance metering team		[redacted]
Table 238	New fire suppressions system - Jandakot server room		
Table 239	Subsequent Costs FY12/13		
Table 240	Tools & equipment for Maintenance FY12/13		
6.3	Tools for SDO FY12/13		
Table 241	Tools & equipment for field tech Services FY12/13		
Table 242	Jandakot outdoor shelter		
Table 243	Furniture for Geraldton rental		
Table 244	ISN subscription set up		
Table 245	Jandakot administration building paving		
Table 246	Thomson Reuters Power Tax software		
Table 247	Repair corroded horizontal IG joints		
Table 248	Safety critical site drawings		
Table 249	Upgrade GEA F&G system at CS6		
Table 250	Purchase of additional vehicles		
Table 251	Replacement vehicles		
Table 252	SDO Tools FY13/14		
Table 253	Field technical services tooling		
Table 254	Maintenance tools FY13/14		
Table 255	Purchase forklift for Jandakot warehouse		
Table 256	Lean-to for Jandakot repairs facility		
Table 257	Jandakot workshop tools		
Table 258	Provision for health & safety projects		
Table 259	Maximo upgrade		
Table 260	Replace reverse osmosis at CSs		
Table 261	GEA & DEA battery relocation		
Table 262	Excavate & inspect DGNGP as per CP Dig up		
Table 263	Refurbish CS below & above ground pipework		
Table 264	FEED: Decommissioning thermal dispersion meters		
Table 265	Replace air compressor at CS1,CS3 & CS8		
Table 266	Installation of harmonics filters at CS6		
Table 267	Management of change		
Table 268	Replace wall/roof sheets- Comms / GEA hut		
Table 269	Replace D2 with D4 wheels at CS3/3		
Table 270	10KW GEA Intelisys control system upgrade		
Table 271	Install PCD air for boost compressor		
Table 272	GE Bently Nevada Data collectors purchase		
Table 273	Replace labyrinth seals-NP units CS6&9		
Table 274	Install Solar dynamic vibration data visibility		
Table 275	Additional hardware/software licence FTS equipment		
Table 276	Replace air conditioning at CS2, CS3 CS4		
Table 277	Painting of meter stations		
Table 278	Replace engineering document control system		
Table 279	Combined service drawings-CS2 to CS10		

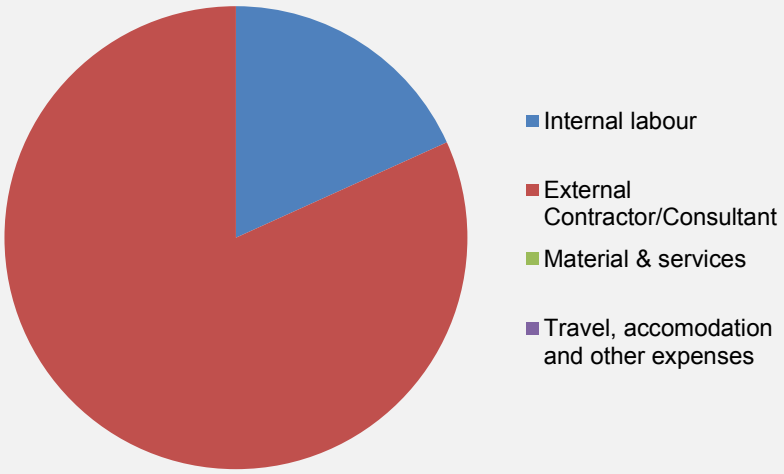
Table 280	Jandakot fire system upgrade	[redacted]
Table 281	Replace ref electrodes- mainline MLV comp	
Table 282	Fuel gas pressure control system upgrade	
Table 283	Install pressure monitoring devices-2 Meter stations	
Table 284	Install AC AUX lube oil pumps-CS6 & CS9	
Table 285	Replace sacrificial anode bed- Worsley lateral	
Table 286	Subsequent costs FY13/14	
Table 287	Hazardous area equip rectification-CS's	
Table 288	Inspection of hazardous areas	
Table 289	Refurbish accommodation facilities-CS's FY13/14	
Table 290	Gas chromatograph upgrade	
Table 291	Annual provision for IT items- PC, printers etc…	
Table 292	Video conferencing upgrade expand LYNC	
Table 293	Provision of video conferencing- CS2, 4, 6, 7 & 8	
6.3	Desktop migration to MsOffice 2010	
Table 294	Upgrade of DBP servers	
Table 295	Upgrade CRS with new modules	
Table 296	Upgrade Jasper with new DBP HSE reporting	
Table 297	Replacement of PC & printers	
6.3	New Windows 7 Computerised maintenance tools	
Table 298	Mobile device management (MDM) system	
Table 299	New PC & office equipment	
Table 300	In-house training & development establishment	
	Total	**$22,985,867**

7.3 It should be noted that the total of the 2011 SIB actual expenditure in the table above being $22.98m matches that arrived at in verification of actual capital expenditure found in Section 2 of Submission 2.

7.4 The remainder of this section details the why the expenditure summarised above is justifiable under subrule NGR 79(2).

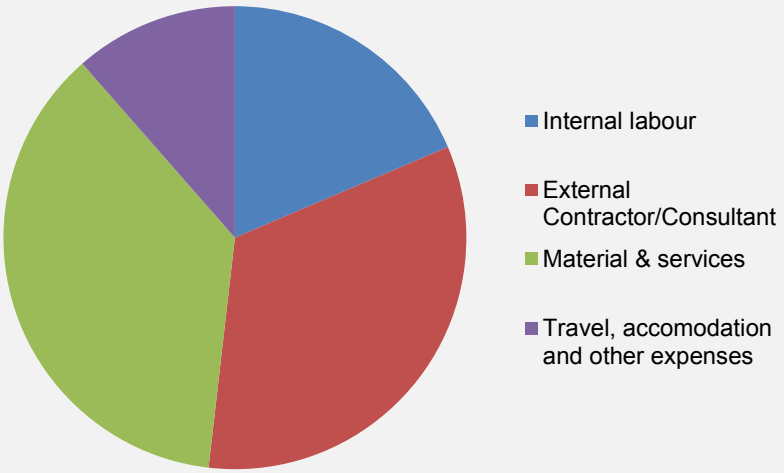
CRS system review project

Table 208: CRS system review project

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	IT architectural design review of CRS implementation and functionality. This expenditure is continued from previous year.
Business need	Numerous incremental software updates to DBP's heavily customised Customer Reporting System (CRS) had caused a number of issues.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

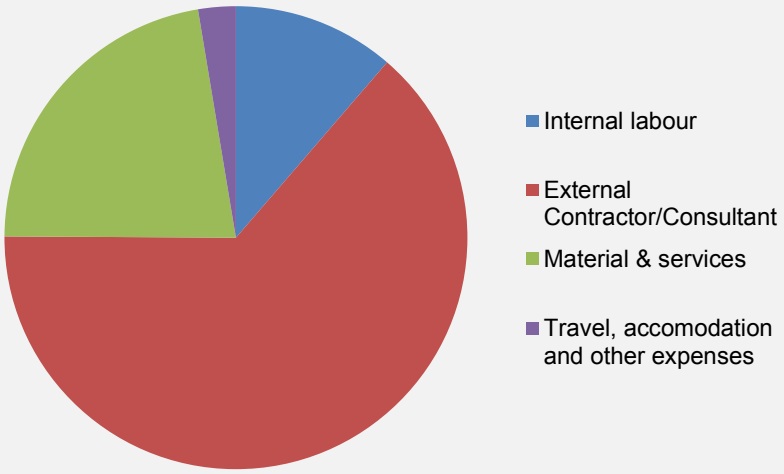
Intelligent pigging - mainline, laterals and un-pig

Table 209: Intelligent pigging - mainline, laterals and un-pig

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Intelligent pigging of the DBNGP and associated laterals including Dampier facilities to Wagerup West, Wagerup West to Worsley, Southern Loop, Russell Road lateral and Rockingham laterals. Scope included the preparation of the pipeline and alignment of all MLVs and testing of launchers and receivers, pig signals and confirmation of all off takes, LOR plugs and EOL status with the loop tie ins. The project included the calling of tender for an Inline Inspection (ILI) contractor complete with cleaning scope. It is envisaged that there will be detailed modelling work to determine the most optimum time for pigging and pre-planning with the selected contractor.
Business need	DBP is required to perform pipeline pigging under its pipeline licences and Safety Case.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

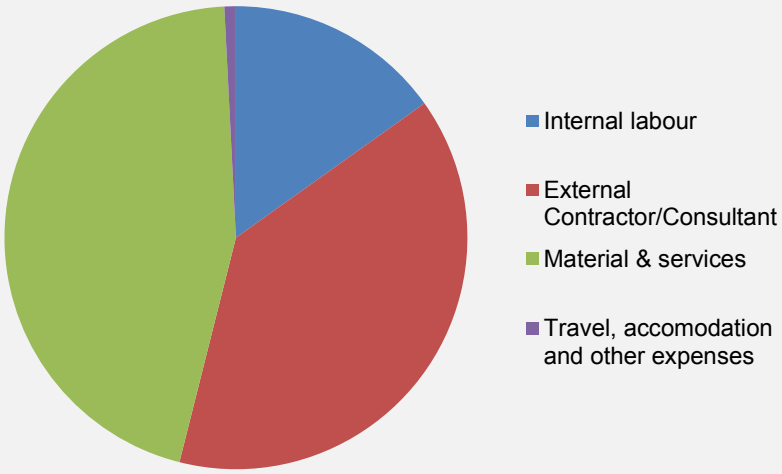
Refurbishment of underground pipework

Table 210: Refurbishment of underground pipework

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	To excavate, inspect and assess pipe defects and recoat the station pipework at Compressor Stations 5, 8, 1, 2, 4, 6, 7 and 9. The scope of work involves the historical assessment of coating performances at these sites and includes the following: • Planning, costing and resourcing • Selection of contractors and training • HAZID and job specification • Work Flow and processes • Mobilisation and site preparation • Excavation • Coating Evaluation • Recoating • Backfilling and project complete • Project Close Out This expenditure is for the refurbishment of 150 meters of pipe in Kwinana Junction and general excavations.
Business need	The station pipework coating had a design life of no more than 10 years based on experience with similar coating used. Station pipework was not piggable as it is connected to other structures and assessed to be high risk for corrosion as earthing operation made cathodic protection ineffective therefore inspection and recoating of underground station pipework was required. The ultra-high built epoxy system applied during the ACS Expansion Projects in 1991 at CS1, 3, 5 and 8 indicated that this type of coating was failing due to the shielding of CP currents within the station. Shielding created the onset of significant corrosion pittings and metal loss in general areas.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

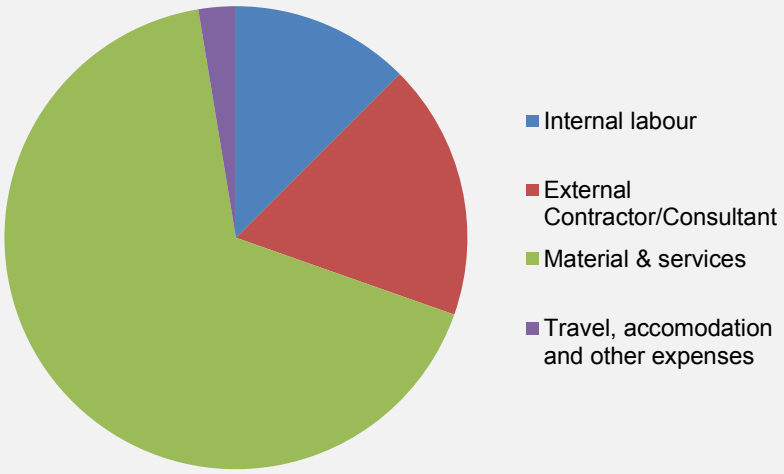
MLV117 to Clifton Road meter station (pipeline)

Table 211: MLV117 to Clifton Road meter station (pipeline)

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Upgrade and replacement of the DBNGP Southern Communications Network from MLV117. • Upgrade and replace the DC power systems at MLV 117. • Upgrading of the communications in the Kwinana industrial area to facilitate the exit from the Western Power pilot cable network. • Upgrade of the communications to Compressor Station 10 to eliminate reliance on Telstra/ATCO services and also to increase functionality. • Upgrade communications at Pinjar power station and exit use of Western Power communications infrastructure • Upgrade communications at Mungarra power station and exit use of Western Power communications infrastructure • Consolidate backup communications paths between Perth and Karratha (SCADA, 2way,Telephone, Comms, Corporate) See also Table 142
Business need	• Southern Communications equipment was at end of life; • DC power systems were at end of life; • Requirement to exit from the Western Power owned and operated pilot cable network; • Cost savings by consolidating 3rd party provided backup communications circuits; and • Failure to undertake this project will result is the loss of visibility and control of the DBNGP from MLV117 Della Road – MLV157 Clifton Road.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

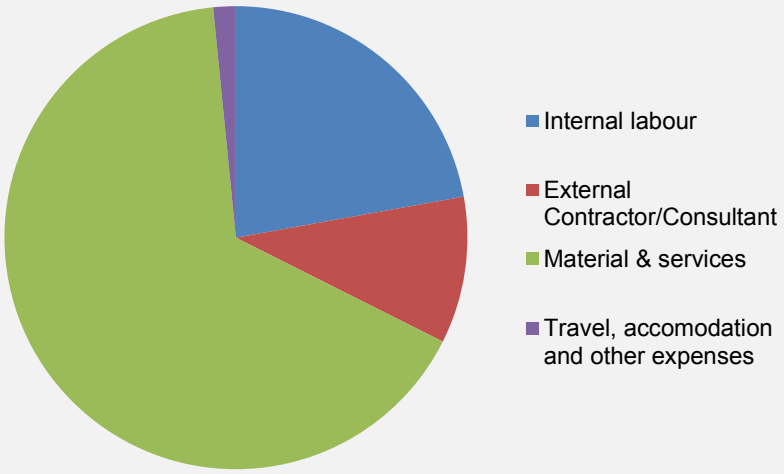
Replace turbine air inlet CS2, 4 & 7

Table 212: Replace turbine air inlet CS2, 4 & 7

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Removal of Stage 3A turbine inlet filter housings, and installation of the 3 turbine air inlets at compressor station No.2 unit 2, compressor station No.4 unit 2 and compressor station No.7 unit 2 Expenditure is for the installation of 2 out of 3 units. Remaining unit for CS7 unit 2 to be installed later.
Business need	Existing Stage 3A Turbine air inlet filters housings were corroding and deteriorating and required replacement in order to reduce the risk of turbine axial compressor damage and possible catastrophic failure. Expected benefits of this project were significant reduction in the risk of failure from ingestion of corrosion and collapsed filter material.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

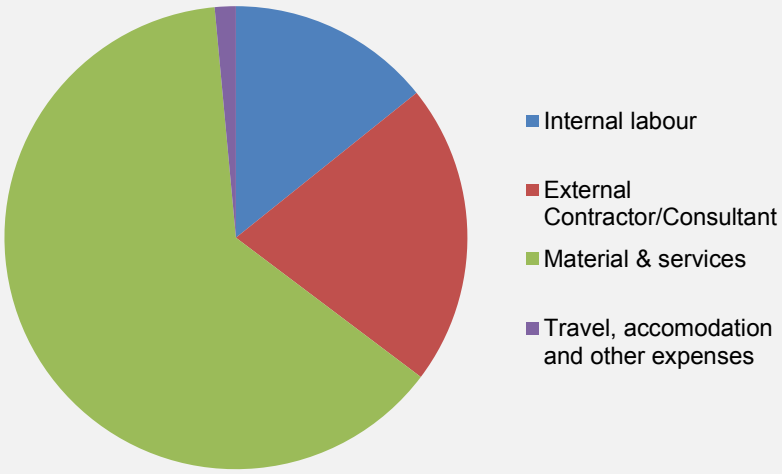
Replace CS vent attenuators and vents at CS2, 4 & 7

Table 213: Replace CS vent attenuators and vents at CS2, 4 & 7

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	The existing vent attenuators at CS 2, 4 & 7 required inspection, clean-up and repair to eliminate risk of release of foreign material during venting. Expenditure is continued from previous project in Table 147
Business need	Vent attenuators at CS 2, 4 & 7 fitted during the Stage 3 expansion had deteriorated to the stage that they posed a risk to personnel by projection of materials during venting.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

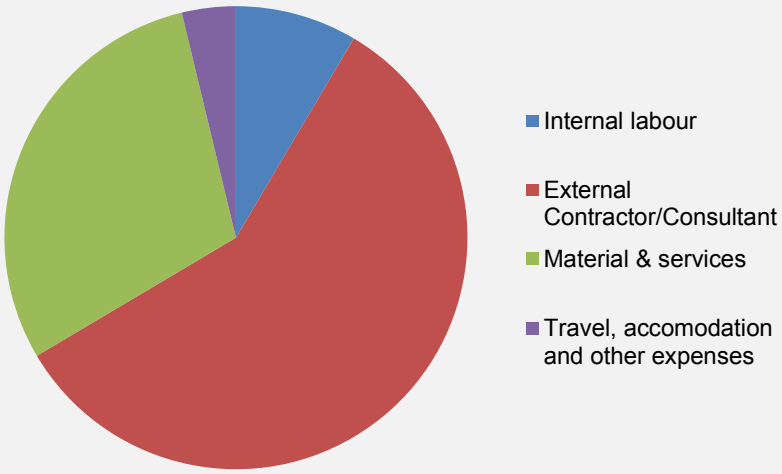
Upgrade solar panels at spur sites 1-6

Table 214: Upgrade solar panels at spur sites 1-6

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Upgrade of solar panels at spur sites 1-6
Business need	Due to ageing and failure of existing solar panels, sites had become prone to power outages effecting remote visibility via control systems. To control this site effectively it was necessary to upgrade the solar power to maintain effective control. Expenditure is continued from previous project in Table 148
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

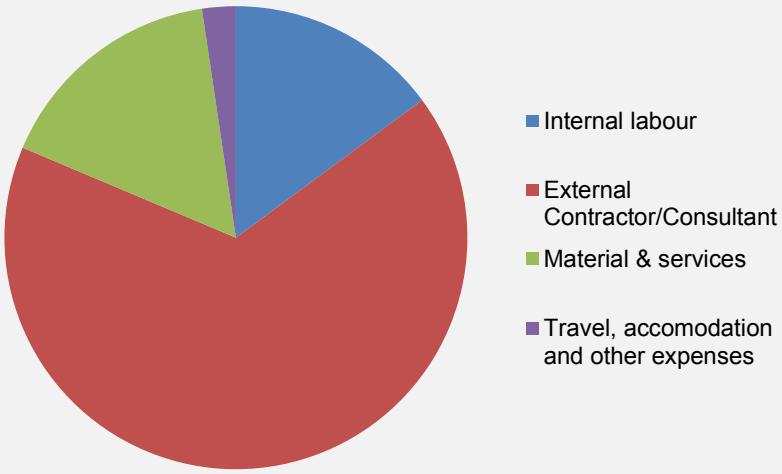
Replace DUETZ TEM Panels

Table 215: Replace DUETS TEM Panels

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Replacement of TEM systems at CS02, CS04, CS06 & CS09 with an InteliVision / GE GEA PLC solution. Expenditure is for the implementation work as part of a multiple year project, following the FEED study in Table 53
Business need	TEM systems at CS02, CS04, CS06 & CS09 were obsolete and no longer repairable due to unavailability of components.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

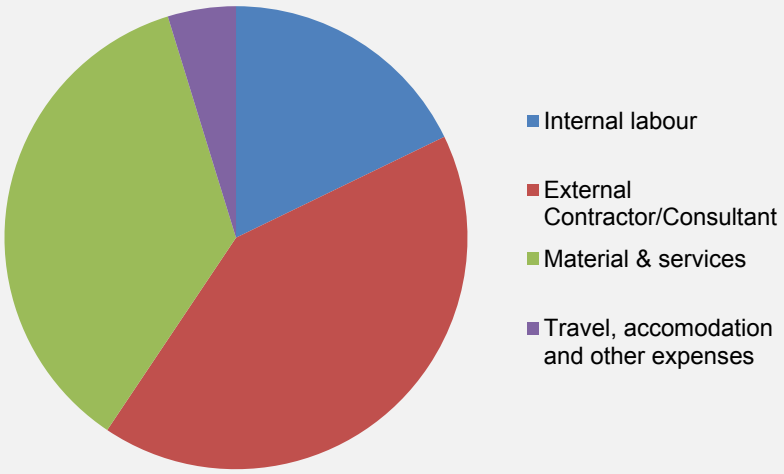
Upgrade flow computers

Table 216: Upgrade flow computers

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Upgrade flow computers, RTUs, associated equipment cabinets, DC circuit wiring and associated drawings and I.S. barriers at 40 metering sites. Expenditure is for the implementation work as part of a multiple year project and continued from Table 150
Business need	• 40 flow computers were at end of life. Replacement spares were no longer available. Failure to implement this project would have resulted in loss of billing data, remote site visibility and several safety concerns over inadequate 240VAC wiring. • Existing electrical wiring drawings at most sites were inadequate to perform troubleshooting and engineering without site visit. • Hazardous area barriers required upgrade to meet current Hazardous Area Requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Fire and gas at CS2, 4, 5, 6, 7, 8 & 10

Table 217: Fire and gas at CS2, 4, 5, 6, 7, 8 & 10

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Replace fire and gas systems at CS 2, 4, 5, 6, 7, 8, and 10 including Station Emergency Shutdown (SESD) & Mainline Emergency Shutdown (MLESD). This project excluded the replacement of fire & gas systems of GEAs (To be replaced under different project) and fire & gas replacement system of Stage 4 units and stage 5B units (installed after 2006 and were not considered to be obsolete). This is a multi-year project. See Table 93
Business need	All compressor stations are equipped with suitable fire & gas monitoring system to handle the risk to plant and personnel. There are CO_2 based fire suppression system for compressor unit buildings installed during the ACS expansion project. There is also water mist based fire suppression system for compressor enclosures installed during the Stage 4 expansion project. To handle fire and gas release, various types of sensor are used at compressor stations. All sensors are connected to Programmable Logic Control (PLC) through interfacing system. The PLC carry out voting and generate confirm fire or confirm gas detect signals to initiate further protective action. Micro-1000 and Sieger-5701 system were declared obsolete and were no longer supported by vendors. The project addresses the problem of obsolescence.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

FEED power gen control system enhance

Table 218: FEED power gen control system enhance

	Project details
Incurred expenditure	[redacted]
Description	Front End Engineering Design (FEED) study of the Compressor Station Power Systems, to enhance the controllability / operability and stability of the DBNGP Compressor Station Power Generation Systems (GEA and DEA). This expenditure is continued from previous year FEED Study in Table 152.
Business need	• Pre-Stage 5 Power Generation control systems had reached the limit of their useable life. • Older control system hardware had become obsolete and therefore is in need of migration to current / future generation control system equipment. • Legacy GEA control system architecture severely restricted effective integration into the compressor station control system, leading to loss of event history. • Of particular importance, was the identification of redundant and obsolete legacy code, associated panel wiring, and control devices that required replaced or removed during the standardisation process.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

FEED GEA control, monitoring and load sharing

Table 219: FEED GEA control, monitoring and load sharing

	Project details
Incurred expenditure	[redacted]
Description	Front End Engineering Design (FEED) study of the Compressor Station Power Systems, and enhanced the controllability / operability and stability of the DBNGP Compressor Station Power Generation Systems (GEA and DEA). This project was expanded from previous project in Table 218 included monitoring and load sharing, implementation and site work.
Business need	• Pre-Stage 5 Power Generation control systems had reached the limit of their useable life. • Older control system hardware had become obsolete and needed migration to current / future generation control system equipment. • Legacy GEA control system architecture severely restricted effective integration into the compressor station control system, leading to loss of event history. Of particular importance, was the identification of redundant and obsolete legacy code, associated panel wiring, and control devices that required removal during the standardisation process.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

FEED RCD protection at CS

Table 220: FEED RCD protection at CS

	Project details
Incurred expenditure	[redacted]
Description	The purpose of this project was to review the need for the retrofit of Residual Circuit Breakers (RCD) for all compressor stations.
Business need	While DBP is not obliged to correct installations retrospectively. This issue was raised by DBP's maintenance safety committee as a concern, which initiated a FEED study. RCDs for an new electrical installation is required to comply with the Australian Wiring Rules is defined in the Electricity (Licensing) Regulations 1991 (WA) which in turn is referenced in the Electricity Act 1945 (WA). Therefore, compliance with the Australian Wiring Rules is mandatory in Western Australia. In addition, compliance with the Australian Wiring Rules is a condition of DBP's pipeline licences and the Safety Case.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

FEED retrofit of unpig laterals for pigging

Table 221: FEED retrofit of unpig laterals for pigging

	Project details
Incurred expenditure	[redacted]
Description	FEED study assessing the feasibility of converting the pipework of the unpiggable laterals to enable intelligent pigging of the laterals. Expenditure was continued from the FEED study in Table 159.
Business need	DBP was required to perform pipeline pigging under its pipeline licences and Safety Case.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

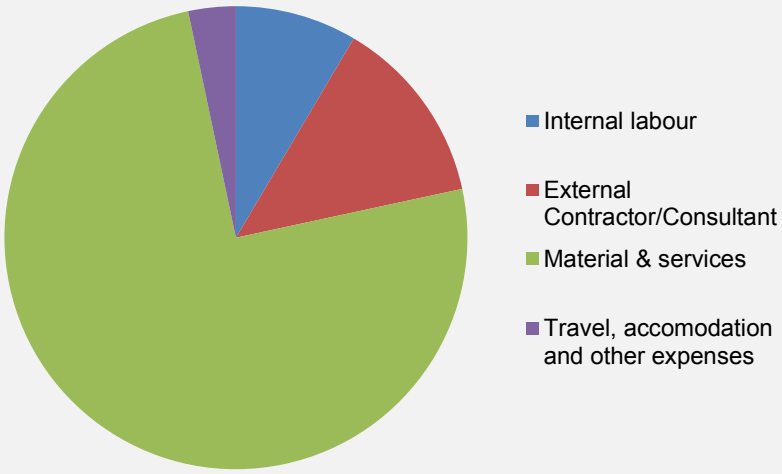
Refurbish accommodation at CS4 & 5 FY11/12

Table 222: Refurbish accommodation at CS4 & 5 FY 11/12

	Project details
Incurred expenditure	[redacted]
Description	Replacement and refurbishment of accommodation facilities located at CS4 and CS5 needed to maintain standard. Expenditure is continued from the project in Table 165
Business need	Due to ageing and continued operation of the accommodation facilities over a number of years, it was necessary to replace and refurbish worn out accommodation units at some compressor stations. This is to ensure the facilities meet the building code and are a suitable environment for employees to live in.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

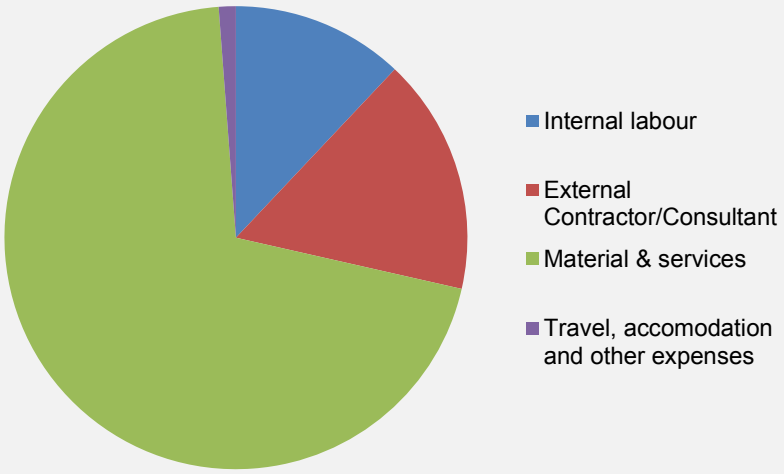
Implement working at heights policy at CS

Table 223: Implement working at heights at CS

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	The working at heights project delivers compliance with all relevant occupational health and safety legislation, and Australian Standards. This is an ongoing project that selects a scope each year on a basis of priority. For example, the practice of working on after coolers has been ranked highly due to the combination of significant height with confined space, and involves execution of a rescue plan from height. New platforms have been designed for DAVIT rescue equipment and these will be fabricated and installed at CS09, CS06, Dampier facilities. In addition, prefabrication of platform railing extensions and access improvements to suit WLPG and CS09 odorant storage facilities including installation will been included.
Business need	The key benefit resulting from this project was to ensure access and egress of above ground facility on the DBNGP is compliant with OHS regulations and Australian Standards. Working at Heights safe practice is also a key focus of DBP's Zero Harm Principles.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Mitigate noise at accommodation facilities

Table 224: Mitigate noise at accommodation facilitates

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Continuation of installation and testing of noise rectification works to reduce tonal noise levels in the sleeping accommodation buildings at compressor stations. The overall project included: Acoustic attenuation of the air inlet ducting of the following stage 4 solar turbine packages: • CS02 Unit #3 • CS03 Unit #3 • CS04 Unit #3 Acoustic attenuation of the new air inlet ducting of the following stage 3 solar turbine packages: • CS02 Unit #2 • CS04 Unit #2 Replace the exhaust mufflers on the following GEA packages: • CS02 GEA #3 • CS04 GEA #3 This project is part of a multi-year project started in 2011
Business need	Tonal characteristics of noise can pose a safety hazard to the public and those working on the DBNGP. Most immediately they have an impact on comfort levels within accommodation facilities and can affect the quality of sleep effecting fatigue levels of staff work at site for extended periods of time. High noise levels have been measured at two sources: • Air inlet ducting on stage 4 solar turbine packages, and • Exhaust mufflers on stage 5A GEA packages Further, the new air inlets being installed on the stage 3A solar turbine packages are of the same design as those currently in use on the stage 4 packages and are therefore expected to also produce problematic tonal noise.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Upgrade GEA fire and gas system at CS9

Table 225: Upgrade GEA fire and gas system at CS9

	Project details
Incurred expenditure	[redacted]
Description	• Install & commission new F&G monitoring system for GEAs at CS09: • Remove existing F&G monitoring system. • Install new F&G system monitoring • Connect existing sensors to new system. • Functional checking • As build drawings
Business need	• Very limited support from the manufacturer due to obsolescence. • Reliable F&G monitoring ensures integrity of assets. • No fire and gas detection was present potential for asset damage.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Inspect hazardous area equipment

Table 226: Inspect hazardous area equipment

	Project details
Incurred expenditure	[redacted]
Description	As a part of obligation under AS 2381 and AS 60079 DBP is required to conduct visual inspection of all equipment installed in hazardous areas every 4 years. The inspection is carried out by third party contractor. The contractor prepares a report of any non-conformity found on the equipment. Under the scope of this project, all the non-conformity is also rectified to meet the requirement of hazardous area installation standards. The scope covers rectification of hazardous area equipment installed at compressor stations CS03, CS04, CS07, CS08 and CS10.
Business need	Required under AS 2381 and AS 60079.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replace earth grid at meter stations

Table 227: Replace earth grid at meter stations

	Project details
Incurred expenditure	[redacted]
Description	Replace earth grids at meter stations. Expenditure was for the work carried out at MLV18 site.
Business need	Original earthing systems in compressor stations, metering stations and valve sites have shown extensive corrosion. The mode of corrosion is not uniform which makes it impossible to judge condition by way of a grid or bell hole excavation rather special resistance measuring tools were needed to assist in the measurement of remote earth resistance of the grid. An effective grid system is essential to deal with step and touch earth raised potentials as well as safe operation of control instruments in a compressor station, metering station or a valve sites.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Excavate & inspect as per CP dig-up

Table 228: Excavate and inspect as per CP dip-up

	Project details
Incurred expenditure	[redacted]
Description	Cathodic Protection dig up programme to excavate and inspect the DBNGP for coating and pipe damage and for signs of stress corrosion cracking. This expenditure is mainly for dig-up work conducted near CS10
Business need	Dig-ups were required in order to determine the condition of the pipeline and coating by direct inspection as per AS 2885. Monitoring for stress-corrosion cracking cannot be achieved in any other way except by exposing the pipe.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

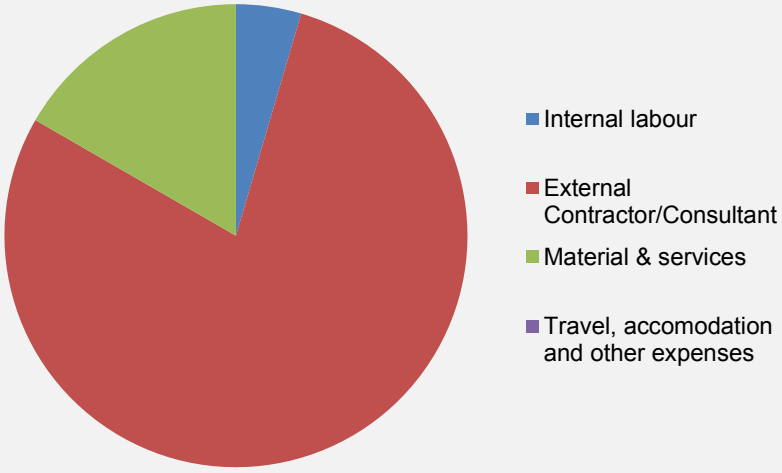
Rectify hazardous area equipment at MLV sites

Table 229: Rectify hazardous area equipment at MLV sites

	Project details
Incurred expenditure	[redacted]
Description	As a part of obligation under AS 2381 and AS 60079 DBP is required to conduct visual inspection of all equipment installed in the hazardous areas every 4 years. The inspection is carried out by third party contractor. The contractor prepares a report of any non-conformity found on the equipment. Under the scope of this project all the non-conformity is also rectified to meet the requirement of hazardous area installation standards. The scope covers rectification of hazardous area equipment installed at compressor stations CS03, CS04, CS07, CS08 and CS10.
Business need	Required under AS 2381 and AS 60079.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

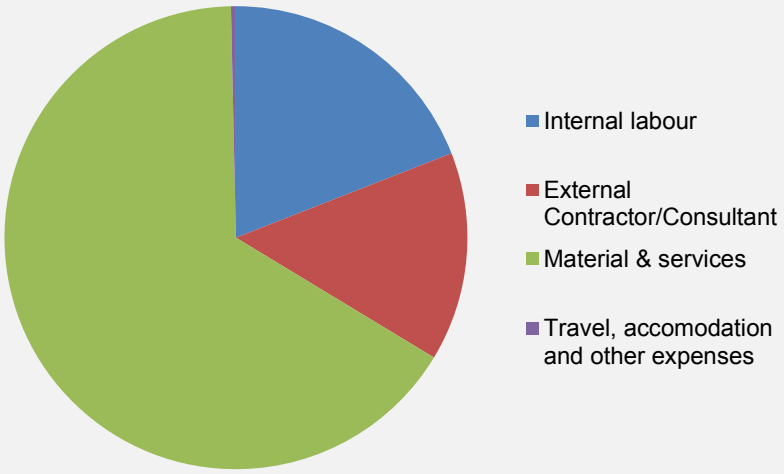
Replace odorant transport tank

Table 230: Replace odorant transport tank

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Replace odorant transport equipment and engineer a certified vessel utilising approved and appropriate transfer equipment designed in such a fashion that it minimised working at height issues and manual handling risks. All safety systems utilised were designed to have backup and interlocks to ensure operator error would not result in odour release. Safety and spill equipment also installed in transport.
Business need	Odorant is transferred from bulk storage facilities at CS9 and WLPG to the onsite injection facilities along the DBNGP. The equipment used required a full engineering review, redesign and modifications/replacement. This was to ensure that equipment was fit for purpose reducing identified risks associated with personal injury, and environmental impact.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Upgrade odorant injection facilities

Table 231: Upgrade odorant injection facilities

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	This project saw the upgrade to existing odorant injection facilities. Expenditure is for detailed design, and procurement of major items including prefabrication and function testing. A temporary transportable odorising facility was also developed to allow for implementation.
Business need	Replacing this equipment was required to remain compliant with Australian Standards. The new design determined by a HAZOP (DBP's internal risk assessment process) also incorporated additional valving arrangements to ensure exposure to odorant, a dangerous substance at concentration, is minimised.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Replace ground cover at Alcoa Pinjarra meter station

Table 232: Replace ground cover at Alcoa Pinjarra meter station

	Project details
Incurred expenditure	[redacted]
Description	Removal of existing ground cover and disposal of the material carried out by a contractor. The reapplication of the 100 Blue metal surface to restore Step touch safeguards and reduce weed infestation. All works required a permit to work (PTW) officer in attendance.
Business need	The ground surface held water during rain periods. Identified hazards included water ingress into foot wear, slip potential, trip hazards provided by some variety of weeds and cover for fauna such as snakes and insects. To some extent, the site also becomes a fire risk the drier seasons. The HV switchyard located next to the facility also increases the potential for an earth fault.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

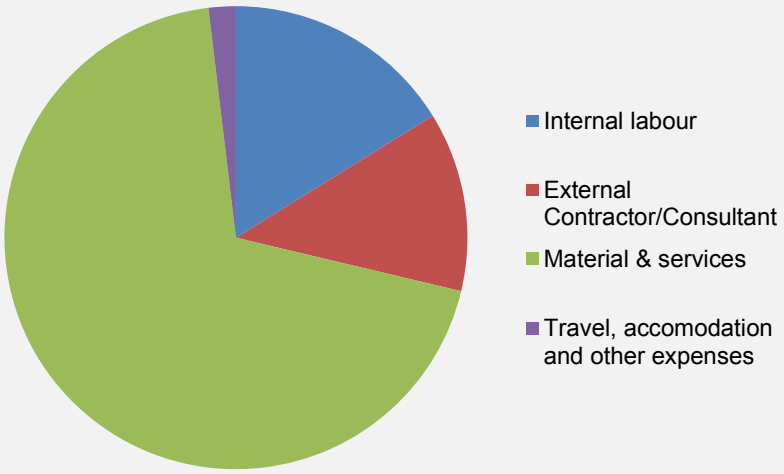
Management of change FY12/13

Table 233: Management of change FY12/13

	Project details
Incurred expenditure	[redacted]
Description	Management of change projects are minor in nature with expenditure in the range of $1000 to $50,000. Major work Includes: • KNR meter station flow meter purchase and install • 2x Mobile load bank tester
Business need	During the normal operation of the DBNGP, various design changes are required to: • Sustain business, • Alleviate unsafe condition; • Increase reliability; • Make equipment more reliable; • Increase efficiency; and/or • Reduce costs.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

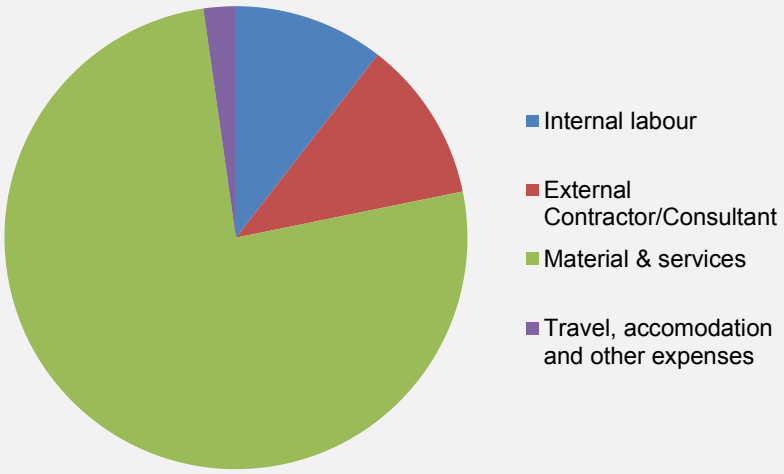
Replace batteries and battery chargers CS 6 & 9

Table 234: Replace batteries and battery chargers CS6 & 9

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Replace the 110VDC Battery Chargers and Battery Banks for all compressor stations. 110VDC Battery Chargers Sets Requirements: • Each Battery Charger sets consist of 1x 110VDC Charger Cabinets, 1x Battery Maintenance Point (BMP) Panels. • Total required Battery Chargers = 14x sets • 110VDC Battery Banks Sets Requirements: • Each Battery bank sets consist of 54x Gel type batteries (340Ah Capacity). • Total required Battery Banks = 14x sets Scope of Work • Engineering consultants to provide support for design • Vendors to supply 110VDC Battery Changers and Battery Banks sets for CS#1, 2, 3, 4, 5, 7 and 8 • Electrical Contractors to install 110VDC Battery Changers and Battery Banks • Consultants and Electrical Contractors to test and commissioning installation • As build drawings
Business need	• Obsolete equipment with no support • Spare parts were no longer available • Faults on these systems were increasing • Two battery chargers already isolated due to failure
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replacement of coriolis meters

Table 235: Replacement of coriolis meters

	Project details
Incurred expenditure	[redacted] The following figure provides a breakdown of incurred expenditure: 
Description	Replacement of sixteen coriolis meters that had transmitters that were at end of life and are no longer supported by vendor.
Business need	This project was required for the following reasons: • Existing flow transmitters were failing • Spares were unavailable • The flow elements were superseded 5 prior • This project was scheduled as part of the long term equipment replacement strategy This solution was chosen for the following reasons: • The upgrade is a stop gap measure that only upgrades the electronics and core processor. The flow element is still >12 years old and will fail at some time • The price difference between only other coriolis option E&H is minimal. The proposed meters are already proven on the DBGNP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Upgrade fire and gas at mainline and meter stations

Table 236: Upgrade fire and gas at mainline and meter stations

	Project details
Incurred expenditure	[redacted]
Description	Old fire and gas controllers were replaced with new Sieger 57 type controllers as per previous CS06 and CS09 retrofit carried out during GEA reliability in 2009/10 financial year. The aim was to minimise changes and re-use existing GEA F&G sensors and also use the existing EGA Programmable Logic Control (PLC) code for coding annunciator display and SCADA. This work is continued fire and gas work extending from the compressor station to the mainline and meter stations.
Business need	Required to meet prescribed safety requirements. This project was justified on the following grounds: • Replacement of ageing and obsolete equipment that are no longer supported by the vendor • Review and implement latest revised safety standard • Compliance to Asset Management Plan and Safety Case
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Replacement vehicles for existing fleet

Table 237: Replacement vehicles for existing fleet

	Project details
Incurred expenditure	[redacted]
Description	Replacement of DBNGP vehicles. This expenditure is for the following vehicles and equipment: • Toyota Prado GXL 1ECL442 • Fitout (Coastal) • Comms (Octocom) • VSSMS (Ashleys) • Toyota Prado GXL 1ECU864 • Deutz Tractor 1EDI017 • Licensing costs • Toyota Prado GXL 1ECV197 • Toyota Landcruiser 200 GX 1EDS790 • Toyota Landcruiser 200 GX 1EBZ021 • Toyota Prado GXL 1ECU874
Business need	DBP replaces vehicles that have excessive mileage and at excessive age. Both age and high mileage result in increased maintenance costs. Reliable vehicles are essential to ensure the safety of personnel and their ability to perform required duties effectively and efficiently.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

New fire suppression system - Jandakot server room

Table 238: New fire and suppression system - Jandakot sever room

	Project details
Incurred expenditure	[redacted]
Description	Install a fire suppression system into the Jandakot Server room.
Business need	Due to the critical function of the IT assets in the Jandakot server room it was necessary to protect the equipment from a fire.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Subsequent costs FY12/13

Table 239: Subsequent costs FY12/13

	Project details
Incurred expenditure	[redacted]
Description	The Subsequent cost category, consistent with the requirements of AASB116 Property Plant and Equipment (PP&E), captures expenditure incurred as a condition of continuing to operate an item of PP&E. Regular day-to-day servicing expenditure is recognised through profit and loss (operating expenditure) as consumed and generally described as repairs and maintenance. However, major overhauls that effectively extend the life of an asset are classified as a subsequent cost of the assets continued use the costs of which are recognised as part the asset value. For this period the following subsequent costs were carried out: Telecommunications CP pipeline integrity Recycle valve Pressure vessel inspection White goods Reactive - Replacement valves CS1/2 Dry gas seal replace & int inspect Water treatment at CS2, CS3 and CS4 Load bank tester CS6 Unit 2 dry gas seal replacement CS6 Cable relocation & UPS installation GEA power generation at CS6 and CS7 CS6 Unit 2 actuator Conitel RTU replacement at CS9 CS9/2 turbine repair Turbine swap from C8/1 to CS9/2 Aftercooler drawers Load bank installation at CS9 CS5 Unit 2 PECC valve CS4 Unit 3 air inlet fan Meter recertification Valve overhaul Replace 240VAC incomer panel-Pye Road MS Nangetty MS heater regulators installation CCVT faults GEA overhaul Hot tap fittings 14x26 inch #600 Install actuator at WLV-11A [redacted] CS9/2 Turbine repair in the above list was due to the unexpected and premature failure of the turbine unit 2 at CS9.
Business need	The ongoing subsequent costs provide for essential work carried out under the approved Asset Management Plan during normal operation and maintenance that can be capitalised under the Australian Financial Accounting processes.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Tools and equipment for maintenance FY12/13

Table 240: Tools and equipment for maintenance FY12/13

	Project details
Incurred expenditure	[redacted]
Description	Purchase selected tooling to ensure maintenance activities are carried out efficiently and safely. Cost are for the following items • tube deburring tool, 3/16 in. to 1 1/2 i • tube cutter for stainless steel, soft co • hand tube bender, 1/4 in. tube od, 3/4 i • sidchrome adjustable wrench 450mm • drill set (metric 1mm to 13mm) • sidchrome toolbox & toolkit • regulator nitro 20000kpa type51 • speedy seals puncture repair kit • vernier caliper 200mm digital • 5pc file set 8" w/ zippered storage case • kit insulated crimp terminal hella • rule steel toledo 300mm • tool kit - controller • abw inspection mirror 57mm #70188 • pelican storm case, black with padded di • rola-case 20 compartment plastic case 37 • 1000v insulated 7 pce screwdriver set • weller iron soldering kit portasol #p-1k • proto pry bar aligning 405 x 13mm #j2116 • shackle bow gr s screw pin 13mm 2t wll • wedges fox 75mm x 38mm x 13mm • wedges fox 4" x 1" 100 x 25 x 8 x 0.8mm • deluxe electronic test lead set with cas • file thread restoring metric int/ext • round sling yellow wll 3t 2m • detector gas altair 5x lel,o2,co,h2s,ch4 • station calibration for a5 pump • cylinder gas calibration 50% vol methane • regulator demand flow regulator • galaxy cylinder holder • pneumatic calibrator 65-120 60 • spectrum monitor with spectrogram record • mts4000 platform quad (27/25/37/35db) ot • handheld spectrum analyser, 100 khz to 7 • omk-36p smart pocket pm/ls kit 850/1300/ • general dynamics dsr8vswr antenna bridge • tracking generator, 5 mhz to 7.0 ghz • cable and antenna test, 7 ghz; requires • portable wan protocol analyser/ber teste • bmp71 stocking pack with labelmark softw • channel scanner • ecom inst. intrinsically safe trms indus • fibre cable preparation tool kit • precision mechanical calibrator, 3-in-1 • site master, 2 mhz to 4 ghz cable & ante • crystal eng. nvision 10 bar pressure mod • s101/x101 extension tube 1.13m fibreglas • cordless heat tester • base smoke detector test kit • general dynamics r8000b communications s • general dynamics r2190a 3ghz premiere pa

	Project details
	• general dynamics r2188a r8-3y - 3-year s • wrench prohold 9pc met set (1.5-10mm) • wallt box service, re-zero. • wrench prohold 13pc imp set (0.5-3/8)
Business need	Tools are integral part of the expected duties of the engineers and specialists.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Tools and equipment for field tech services FY12/13

Table 241: Tools and equipment for field tech services FY12/13

	Project details
Incurred expenditure	[redacted]
Description	The purchase of specialist tools for Rotating Plant Mechanical, Gas Measurement, and Rotating Plant Control Systems teams within the Maintenance division. Cost was for the following tools: • files needle (set 12) 160mm 2 cut # 0753 • bootlace kit # 228-0321 • crimp kit # 441-5535
Business need	Procurement of specialised equipment and tooling to facilitate the Field Technical Services Group's function to support and investigate various tasks that involve diagnostics and project work directly related to DBNGP asset and personnel.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Jandakot outdoor shelter

Table 242: Jandakot outdoor shelter

	Project details
Incurred expenditure	[redacted]
Description	Install a fit for purpose outdoor shelter at Jandakot depot to protect the heavy equipment and spares from exposure to the weather.
Business need	DBP stores heavy equipment and operational spares at Jandakot depot for both emergency and maintenance needs. This shelter is essential in protecting these parts and equipment from damage due to exposure to weather.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Furniture for Geraldton rental

Table 243: Furniture for Geraldton rental

	Project details
Incurred expenditure	[redacted]
Description	Acquire furniture for Geraldton rental accommodation
Business need	Required to provide suitable living quarters for field service workers traveling and working on the mid-west section of the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

ISN Subscription setup

Table 244: ISN Subscription setup

	Project details
Incurred expenditure	[redacted]
Description	ISNetworld (ISN) subscription service provides contractor & supplier information management, connecting corporations in capital-intensive industries with safe, reliable, contractors and suppliers. Contractor information and performance data is gathered through a Management Systems Questionnaire, ISN collects and verifies the following: • Written Health, Safety, Quality and Sustainability Programs • Insurance / Workers Compensation Documentation • Prosecution Records • Individual Level Training Records Based on this data, a customised scoring criteria is set to engage the safest, most qualified contractors & suppliers.
Business need	The key benefits from DBP subscribing to the ISNetworld platform is as follows: • ISN verify key pieces of information for informed decisions and risk mitigation. • A configurable scorecard assists in identifying contractors that best fit DBP's needs. Scorecards can have been aligned with business unit/site requirements (i.e. Safety Case Requirements, Zero Harm Principles) • It allows DBP to monitor contractors and receive alerts when there is a lapse in compliance. • Benchmarking and trending reports assist DBP with decision making. • Allow access to global database of 42,000+ pre-qualified contractors by geography and service. • 22% of DBP's already contractors / suppliers subscribe to ISN • All DBP contractors aligned with ISN have been issued photographic identification cards which link to a searchable database containing the contractor's contact details, qualifications, licences and DBNGP HSE & Site Induction details. • Contractor data can be interfaced between ISN and DBP's Training Management System.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

Jandakot administration building paving

Table 245: Jandakot administration building paving

	Project details
Incurred expenditure	[redacted]
Description	Paving completed formed a subcomponent of an overall project that was initiated to upgrade the safety and amenity of the Jandakot depot facility. The overall scope of work included: • Fire system rectification works • Window Solar Tinting • Landscaping • Paving The actual expenditure only related to the paving subcomponent of the overall scope of works.
Business need	Maintain the safety and amenity of the Jandakot depot facility.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Thomsons Reuters tax software

Table 246: Thomsons Reuters tax software

	Project details
Incurred expenditure	[redacted]
Description	Implementation costs for Thomson Reuters 'PowerTax' corporate tax. Annual software licence fees are separately provided for within the ICT Opex budget.
Business need	Historically, tax return work papers have been completed in excel and the forms handwritten, with hard copy files provided to advisors for review. This process was time consuming internally and for advisors, resulted in the duplication of tax calculations already done as part of year-end financial reporting and increased the risk of unnecessary transposition errors. Dynamic, web based solutions are available that both corporates and advisors use to roll year-end tax provision work papers into the tax return preparation process, reducing preparation and review time.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Repair corroded horizontal IG joints

Table 247: Proposal for repair of corroded horizontal IG joints

Incurred expenditure	[redacted]
Description	Due to excessive corrosion on the meter station inlets insulation flanges at Pinjarra & Wagerup there was a need to repair flanges to improve their integrity. On the most recent inspection by DBP's corrosion engineer both sites indicated significant corrosion in the horizontal insulation gaskets (IG) joints at both delivery lines. The flange gap was full of corrosion product and detached paint flakes. DBP assessed the safest solution was to renovate corroded joints and maintain IG in the line, hot tap and bypass for uninterrupted gas supply to both delivery lines. The project included detailed FEED study to design a system of filtration downstream of hot tap to eliminate swarf entering shipper installations.
Business need	Renovation of the flange joints was the only solution that maintained the integrity of the delivery point and prevented future gas leak. There was no practical solution to seal the flange joint externally using mechanical clamp without compromising the CP system. No action may have resulted in an unplanned shutdown and unavailability of supply.
NGR 79(2) ground	In accordance with NGR 79 (2)(c) the capital expenditure is necessary: • to maintain and improve the safety of services. • to maintain the integrity of services.

Safety critical site drawings

Table 248: Safety critical site drawings

	Project details
Incurred expenditure	[redacted]
Description	Improvement to the following safety critical DBNGP key site drawings • Piping layout • Piping and instrument diagram • Electrical schematics for power distribution, emergency shutdown, gas service valve control and equipment located in Hazardous Areas • Hazardous Area layout Expenditure is for initial project set up and preliminary review.
Business need	Most safety and operational critical drawings: • These drawings are key drawings upon which work planning, safe working isolations and corrective action works are based. If the drawings are not clear or are misleading, this can contribute to error and delay. For example, a piping layout drawing requiring referral to a separate drawing showing a fragment modified by a project could lead to inadvertent overlooking of the project modification or a point of isolation. There are numerous known problems effecting these drawings: • Project modifications being shown on separate drawings showing only a fragment has been a widely used technique to save drafting costs dating back to the mid-1980's. As-built drawings from projects and management of change modifications are sometimes still on backlog to be updated. Search meta data is not available for many of these drawings so the drawings are difficult to find in Intranet searches, particularly if the drawings span multiple numbering systems.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement.

Upgrade GEA F&G system at CS6

Table 249: Upgrade GEA F&G system at CS6

	Project details
Incurred expenditure	[redacted]
Description	The existing F&G monitoring system at CS6 will be replaced with the current system from the same manufacturer.
Business need	• Very limited spare support from the manufacturer due to obsolescence. • Reliable F&G monitoring there by ensure the integrity of the assets. • Only installation and commissioning work was pending
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Purchase of additional vehicles

Table 250: Purchase of additional vehicles

	Project details
Incurred expenditure	[redacted]
Description	Acquisition of vehicles including fit out according to DBP policy. This is a small expenditure for accessories as part of the purchase of additional vehicles.
Business need	Allow staff to attend remote sites along the DBNGP as required.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Replacement vehicles

Table 251: Replacement vehicles

	Project details
Incurred expenditure	[redacted]
Description	Replacement of DBNGP vehicles. This expenditure is for the following vehicles and equipment: • Toyota Hilux SR5 Ext Cab • Canopy (Bosston) • GVM Upgrade • Fitout (Coastal) • Toyota Landcruiser 76 GXL Wagon • Toyota Landcruiser 79 GXL Cab Chassis • Toyota Landcruiser 79 GXL Cab Chassis • Toyota Landcruiser 79 GXL Cab Chassis • Toyota Landcruiser 79 GXL Cab Chassis • Toyota Landcruiser 79 GXL Cab Chassis • Toyota Landcruiser 79 GXL Cab Chassis • Toyota Landcruiser 79 GXL Cab Chassis
Business need	DBP's replaces vehicles that have excessive mileage and at excessive age. Both age and high mileage result in increased maintenance costs. Reliable vehicles are essential to ensure the safety of personnel and their ability to perform required duties effectively and efficiently.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

SDO tools FY13/14

Table 252: SDO tools FY13/14

	Project details
Incurred expenditure	[redacted]
Description	Purchase tooling to ensure maintenance activities can be completed efficiently and effectively. The majority of the cost are for the following: • UE systems model up9000 atex • Supply 1 off Monarch Palm Strobe Deluxe • Supply 1 off Monarch Pocket Laser Tach 2 • Supply 1 off ME'Scope VT620 Software & L • 3D Toolbox Complete Product/Case
Business need	Required to allow staff to access appropriate equipment required to perform normal maintenance duties on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Field technical services tooling

Table 253: Tools and equipment for field tech services FY12/13

	Project details
Incurred expenditure	[redacted]
Description	The purchase of specialist tools for Rotating Plant Mechanical, Gas Measurement, and Rotating Plant Control Systems teams within the Maintenance division. The majority of the cost are for the following: • Crystal Eng. RTD Temperature Probe; Pt10 • Crystal Eng. nVision RTD100 Temperature • Ralston Zip-Up Nylon Kit Bag • Crystal Eng. nVision Current and Voltage • nVision 30 Bar module Part No 30BAR • Ralston High Pressure Calibration Hose; • Ralston Fitting Adapter; 1/2 Inch Tube • 475HP1EKLUGMTS Field Communicator • Crystal nVision base unit Part No NV-4AA • Ralston Fitting Adapter; 3/8 Inch Tube • nVision 100 Bar Module Part No 100BAR • Ralston Fitting Adapter; 1/4 Inch Male H • Ralston Fitting Adapter; 1/4 Inch Tube • TwistGuard Test Leads (Fluke Manufacturing)
Business need	Procurement of specialised equipment and tooling to facilitate the Field Technical Services Group's function to support and investigate various tasks that involve diagnostics and project work directly related to DBNGP asset and personnel.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Maintenance tools FY13/14

Table 254: Tools and equipment for maintenance

	Project details
Incurred expenditure	[redacted]
Description	Purchase tooling to ensure maintenance activities can be completed efficiently and effectively. The majority of the costs are for the following: • PV211 Pump Kit • Crystal N Vision PT 100 Probes • Crystal N Vision 10 bar pressure module • Crystal N Vision PT 100 Modules • BOSCH cordless hammer drill gsb18ve-2li • DC Clamp Ammeter 1000 Amp Rating • Cable tie tensioner stainless steel auto • # Brady label printer BMP71 kit • Durasleeve Wire Marking Inserts, Box of • Tube Deburring Tool, 3/16 in. to 1 1/2 i • Tube Cutter for Stainless Steel, Soft Co • Hand Tube Bender, 3/8 in. Tube OD, 15/16 • Hand Tube Bender, 1/4 in. Tube OD, 9/16 • Hand Tube Bender, 1/2 in. Tube OD, 1 1/2 • Complete TCT hole saw bit 22mm blade w/ • Crystal Eng. nVision RTD100 Temperature • Ralston Banch Tee; Male QT x Male QT x M • Crystal Eng. Basic RTD Probe; Pt100/385, • Crystal Eng. nVision 100 bar Pressure Mo • Ralston Transtek High Pressure Hose and • Crystal Eng. nVision Base Unit (Accepts • Fluke 1652C Mulifunction Tester (Fluke M • Ralston DP Transmitter QT Adapter; 5/16- • Fluke 725Ex I.S. Multifunction Process C • Ralston Fitting Adapter; 1/4 Inch Female • Ralston Nitropak Calibration Pressure So • Tool Kit Controller
Business need	Required to allow staff to access appropriate equipment required to perform normal maintenance duties on the DBNGP.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Purchase forklift for Jandakot warehouse

Table 255: Purchase forklift for Jandakot warehouse

	Project details
Incurred expenditure	[redacted]
Description	The scope of this project is for the purchase of 2 forklifts. • Replace old 3.2t forklift with a new 7.0t forklift. • Replace 2.5t hire forklift with new 2.5t forklift.
Business need	Forklifts were 19 year old machine and no longer fit for purpose for use.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Lean-to for Jandakot repairs facility

Table 256: Lean-to for Jandakot repairs facility

	Project details
Incurred expenditure	[redacted]
Description	This project is for the construction of 7mtr X 6mtr lean-to (shelter / roof) adjacent to repairs workshop.
Business need	This work provided a safe working environment allowing activities that create fumes, dust, sparks or flashes to be undertaken in the lean-to outside the workshop and a less confined space. This reduced a number of HSE issues within the workshop providing protection from the elements during hot or inclement weather events.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Jandakot workshop tools

Table 257: Jandakot workshop tools

	Project details
Incurred expenditure	[redacted]
Description	This project included purchasing tools and equipment for the set-up of an overhaul/repairs workshop at the Jandakot facility.
Business need	Project enabled DBP to set up a workshop for performing in house repairs and overhaul work; • By having reticulated shop air allowing maintenance staff to perform strip down work rather than sending parts out externally reducing costs. • Painting facilities also allow for repaired equipment to be coated as per the DBP paint spec in-house rather than externally. • Allowed for the testing of overhauled equipment after repair to ensure that it is fit for field operation.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Provision for health & safety projects

Table 258: Provision for health and safety projects

	Project details
Incurred expenditure	[redacted]
Description	This project provided capital funding for improvement projects that were developed by the HSE representatives across DBP's business to manage actions arising out of DBP's annual Safety Survey.
Business need	The improvement programs are categorised under: Response to Safety, Continuous Improvement, Safety Leadership, Psychological Safety and Engagement
NGR 79(2) ground	In accordance with NGR 79 (2)(c) the capital expenditure is necessary: • to maintain and improve the safety of services. • to maintain the integrity of services. • to comply with a regulatory obligation or requirement.

Maximo upgrade

Table 259: Maximo upgrade

	Project details
Incurred expenditure	[redacted]
Description	The project scope is to provide a technical upgrade to Maximo including the software and hardware. This project also provided additional functionality after the upgrade.
Business need	This Maximo upgrade was required as: • Disaster Recovery (DR) exercises had proven a number of issues needed to be addressed within Maximo. • the Maximo Servers installed were at end of life at 5 years. • The Maximo Version 6.2.3 was no longer supported by IBM. • The current operating system was Windows 2003 and required upgrade to Windows 2012
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replace RO units at CS

Table 260: Replace RO units at CS

	Project details
Incurred expenditure	[redacted]
Description	Overhaul of the existing reverse osmosis (RO) unit at CS1 and installation of a new unit at CS2.
Business need	RO units provide potable water for DBP personnel at site. Existing units are 20 years old and obsolete with repair costs rising. New units include InteliSys control which allows for remote monitoring via SCADA systems. Additionally, the water table has changed requiring modification to some bores.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement

GEA & DEA battery relocation

Table 261: GEA & DEA battery relocation

	Project details
Incurred expenditure	[redacted]
Description	The following scope of works is for 1x GEA. Each site has 2-3 GEA and 1 DEA. There is a total for 23x GEAs and DEA that required the batteries to be relocated. • Supply 2x Batteries per GEA / DEA • Supply 1x Carbon Fibre box • Supply 1x Heavy Duty Aluminium stand for battery box • Supply all cables and material to complete works • Remove the old batteries and/or box from the engine room • Install new battery stand external and adjacent to the GEA/DEA enclosure • Fit and Install batteries to battery box on to the stand • Install and terminate engine and changing cables to the batteries • Where required install cable trays and conduits to secure new cables
Business need	The investigation of an incident involving exploding batteries at GEA installations resulted in the need to install additional physical barrier to reduce the risk of battery explosions and fire.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services

Excavate & inspect DBNGP as per CP dig up

Table 262: Excavate and inspect DBNGP as per CP dip up

	Project details
Incurred expenditure	[redacted]
Description	Cathodic protection dig up programme to excavate and inspect the DBNGP for coating and pipe damage and for signs of Stress Corrosion Cracking This expenditure is for dig-up work conducted near CS10
Business need	Dig-ups are required in order to determine the condition of the pipeline and coating by direct inspection as per AS 2885. Monitoring for stress-corrosion cracking cannot be achieved in any other way except by exposing the pipe.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Refurbishment CS below & above ground pipework

Table 263: Refurbishment of underground pipework

	Project details
Incurred expenditure	[redacted]
Description	A dig up programme of underground pipework to verify the condition of coating systems. This minor expenditure is for the initial project set up costs and project meetings.
Business need	The condition of the main pipeline on the DBNGP is monitored via the cathodic protection (CP) surveys and direct current voltage gradient (DCVG) surveys. However, the condition of the underground pipework in compressor stations cannot be determined in the same manner due to the vast number of other underground systems in the vicinity. Also in many instances, shielding occurs which in a way blocks CP from certain parts of the pipeline which results in corrosion. The project was required to maintain an acceptable level of continued protection of underground pipework.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

FEED decommissioning thermal dispersion meters

Table 264: FEED decommissioning thermal dispersion meters

	Project details
Incurred expenditure	[redacted]
Description	FEED study reviewing thermal dispersion meters.
Business need	Study not completed due to reprioritisation.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Replacement of air compressors at CS1, CS3 & CS8

Table 265: Replacement of air compressors at CS1, CS3 & CS8

	Project details
Incurred expenditure	[redacted]
Description	Replace all air compressor on ACS sites at CS1, CS3 and CS8.
Business need	The reliability of air compressor units are imperative to the operation of the DBNGP. Units provide buffer air when boost compressors are not running and pressurised. Existing units were +20 years old and were obsolete with repair cost more than the cost of a new unit. This expenditure is continued expenditure as part of a multi-year project in Table 16
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Installation of harmonics filters at CS6

Table 266: Installation of harmonics filters at CS6

	Project details
Incurred expenditure	[redacted]
Description	Installation of active power quality filter which rectified 3rd order harmonic issues on the power system at CS06
Business need	The harmonics issues caused spurious tripping of the MDB-SS feeder which at the time supplied the auxiliary power for all 3 GEAs onsite causing the station to go black. Harmonics also caused the situation where the site power generation requirements were increased resulting in extra fuel gas being consumed.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Management of change

Table 267: Management of change

	Project details
Incurred expenditure	[redacted]
Description	Management of change projects are minor in nature with expenditure in the range of $1000 to $50,000. Major work includes: • CS6 Exhaust Stack 2001813 • Cybertec Telstra Modem - Devil Creek • CS10 1 Exhaust Stack Rain Cover • CS10 2 Exhaust Stack Rain Cover
Business need	During the normal operation of the DBNGP, various design changes are required to: • Sustain business; • Alleviate unsafe condition; • Increase reliability; • Make equipment more reliable; • Increase efficiency; and/or • Reduce costs.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replace wall/roof sheets- comms / GEA hut

Table 268: Replace wall/roof sheets- comms / GEA hut

	Project details
Incurred expenditure	[redacted]
Description	Replacement of wall and roof sheeting by building contractor for repeater huts at R42 due to corrosion of original sheets. Plus the installation of a ladder safety attachment point to GEA hut roof for maintenance on solar panels, exhaust outlets, vents and fan cowlings.
Business need	Due to ageing and continued operation, the roof and wall sheets of the hut at repeater sites had severe corrosion that needed to be replaced to protect equipment from water egress into the hut and damaging GEA alternators.
NGR 79(2) ground	In accordance with NGR 79 (2)(c) the capital expenditure is necessary: • to maintain and improve the safety of services. • to maintain the integrity of services.

Replace D2 with D4 wheels at CS3/3

Table 269: Replace D2 with D4 wheels at CS3/3

	Project details
Incurred expenditure	[redacted]
Description	Compressor wheel replacement at CS2/3 and 6/3. This cost was for holding the risk assessment workshop.
Business need	During bundle inspection in November 2010 to investigate rubbing of the compressor rotor cracks were identified in D2 impellers. Solar's initial advice was that impellor cracks were a known problem and were non-destructive i.e. the damage limits itself to the impeller vane leading edges and would not impact operation and often goes undetected until overhaul. However, the failure of a D2 wheel in a domestic US installation saw Solar structurally redesign and replace the D2 with a "D4" wheel to completely eliminate the risk of cracks or loss of material. Solar has agreed to provide three additional D4 wheels (free of cost) that would cover any eventualities as future inspections are conducted.
NGR 79(2) ground	In accordance with NGR 79 (2)(c) the capital expenditure is necessary: • to maintain and improve the safety of services. • to maintain the integrity of services. • to maintain DBP's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred.

10Kw GEA Intellisys control system upgrade

Table 270: 10Kw GEA Intellisys control system upgrade

	Project details
Incurred expenditure	[redacted]
Description	This project replaced obsolete relay based control board and auxiliary equipment on the 10kW GEA with the latest Intellisys controller type AMF25. This project also delivered standardization of GEA controllers to all DBP installations including compressor stations. Expenditure is for the detailed design, procurement, fabrication and testing. Items will be installed in later years.
Business need	• The existing relay based control boards are obsolete and no longer supported by the vendor. • The failure rate for the existing controllers was excessive. For instance, there were 30 priority 3 and 2 incidents during 2012 relating to GEA's at MLV sites that required unplanned attendance from pipeline field staff. • Implementation will delivered standardisation to DBP GEA controls systems.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Install PCD air for boost compressor

Table 271: Install PCD air for boost compressor

	Project details
Incurred expenditure	[redacted]
Description	This project was to modify the air delivery system of the compressor unit in order to utilise PCD air for boost compressor buffer air and seal air during engine operation.
Business need	• Utilisation of PCD air during engine operation reducing operational costs for site air compressors • The use of cleaner PCD air reduced the risk of carry over oil and liquid contamination from air compressors and provided improved dry gas seal life.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

GE Bently Nevada Data collectors purchase

Table 272: GE Bently Nevada Data collectors purchase

	Project details
Incurred expenditure	[redacted]
Description	Installation of GE Bently Nevada Scout 100 & 140 data collectors to replace current data collectors in service.
Business need	The Bently Nevada data collectors enabled condition monitoring of critical compression data using the same platform as the onsite system. Benefits included simplified and customised reporting, integration with Maximo for maintenance workflow, process data able to be captured at a high scan rate and correlated with periodic data. This system also allowed for simple integration with DBP's multiple condition monitoring and inspection systems including IR thermography, oil sample monitoring and NDT.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replace labyrinth seals - NP units CS6&9

Table 273: Replace labyrinth seals - NP unit CS6&9

	Project details
Incurred expenditure	[redacted]
Description	Installation of Coba Seals to replace labyrinth seals on Nuovo Pignone PCL603 centrifugal compressor at CS6 and CS9. Expenditure for the design review and assessment.
Business need	Coba Seals were procured in FY 2013/ 14 to replace labyrinth type separation seals on Nuovo Pignone PCL 603 compressor. Seals were not installed due to reprioritisation or the project and deferred.
NGR 79(2) ground	In accordance with NGR 79 (2)(c) the capital expenditure is necessary: • to maintain and improve the safety of services. • to maintain the integrity of services.

Install Solar dynamic vibration data visibility

Table 274: Install Solar dynamic vibration data visibility

	Project details
Incurred expenditure	[redacted]
Description	Purchase and installation of Bently Nevada FMIM's (Field Management Interface Module) to enable the collection and analysis of dynamic data from the existing machine protection racks on all Stage 4 Solar packages, upgraded ACS Solar packages and Stage 3A packages after control systems upgrade.
Business need	The project allowed for the permanent installation of the Bently Nevada FMIM cards into the onsite control and monitoring panel eliminating the risk of damage plugging and removing portable controller cards. The benefits included the improvement to online data collection and analysis as well as reducing the repair cost to the damaged card slots through frequent insertions and removals.
NGR 79(2) ground	In accordance with NGR 79 (2)(c) the capital expenditure is necessary: • to maintain and improve the safety of services. • to maintain the integrity of services.

Additional hardware/software licence FTS equipment

Table 275: Additional hardware/software licence FTS equipment

	Project details
Incurred expenditure	[redacted]
Description	Purchase of vendor software required and install on Tier 3 Field Maintenance Tools as developed by the Field Technical Services team.
Business need	The purchase of additional hardware and software licences required for field technical services staff and maintenance staff.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replace air conditioning at CS2, CS3, CS4

Table 276: Replace air conditioning at CS2, CS3, CS4

	Project details
Incurred expenditure	[redacted]
Description	Annual replacement of air conditioner units, targeting units that are faulty and have reached end of useful life. Air conditioners are critical equipment for controlling room temperatures for the following reasons: • At temperature certain equipment become less reliable • Management of fatigue for the DBP personnel
Business need	Air conditioning units are essential to allow equipment to operate within the manufacturer's specified temperature range. Operating continuously at high temperatures can lead to premature failure or intermittent trips of critical infrastructure on the DBNGP. For instance, some equipment rooms have heat detectors that will shut GEA's down on high enclosure temperature. In addition, air conditioners at accommodation buildings maintain suitable living conditions.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Painting of meter stations

Table 277: Painting of meter stations

	Project details
Incurred expenditure	[redacted]
Description	Painting of 3 to 4 sites per annum based on corrosion assessment. • Barter road meter station • Worsley meter Station runs 1 & 2 • Nangetty road meter Station, MLV93 and Mungarra power station off take. This is part of the continued project outlined in Table 110
Business need	A site coating assessment was carried out in 2010 which found that there were a number of sites that are over 20 years old and are showing considerable coating and corrosions damage due to constant icing (pre-heater) and generally atmospheric exposure.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Replace engineering document control

Table 278: Replace engineering document control

	Project details
Incurred expenditure	[redacted]
Description	FEED study into requirements for storage and retrieval of engineering documentation. This expenditure is for initial project set up costs.
Business need	There was an identified need to review the existing document control system to ensure that up to date document and information are available for engineering and operational staff.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Combined service drawings - CS2 to CS10

Table 279: Combined service drawings - CS2 to CS10

	Project details
Incurred expenditure	[redacted]
Description	Produce and issue current combined services drawings for compressor stations CS2, 4, 6, 7, 8, 9 &10. The combined services drawings show all recorded site services (power, communications, control, piping, earthing, etc) on the one drawing with a particular emphasis on underground services. This expenditure is for initial project set up costs.
Business need	A safety focused initiative to ensure that: • All underground services drawings are up to date. • All underground services are properly and correctly identified and located. • All underground services are recorded on a single combined drawing to eliminate incidents during excavation work. • Proper and up to date drawings will enable the Permit to Work holder to carry out the work safely.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Jandakot fire system upgrade

Table 280: Jandakot fire system upgrade

	Project details
Incurred expenditure	[redacted]
Description	This project involves the fire system rectification works to bring Jandakot Facility compliant to the current standards: • Connection of the warehouse to the existing Fire Indicator Panel (FIP) located at the front of the administration building • Connection of the training room to the existing FIP at the administration building • Replace the existing fire alarm bells distributed around site with code compliant Audible Warning Alarms. • Replace the existing thermal detectors on site for Photo Optical Detectors • Provide tactical fire plan.
Business need	• Current fire alarms could not be heard in other buildings within the Jandakot facility. • To bring the fire system to current building code and standards
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Replace ref electrodes - mainline MLV compound

Table 281: Replace ref electrodes - mainline MLV compound

	Project details
Incurred expenditure	[redacted]
Description	This project saw the replacement of steel rod reference electrodes at MLV compound F-boxes with copper-copper sulphate reference electrodes, to improve the visibility of the CP system.
Business need	Steel rod references were not precise and only indicted abrupt potential changes without giving an absolute potential measurement. It was not possible to have a SCADA alarm indicating when a section of the DBNGP was outside of the Cathodic Protection criterion. This prevented prompt detection and rectification of Cathodic Protection dropouts and compromised safety and AS 2885 obligations.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

Fuel gas pressure control system upgrade

Table 282: Fuel gas pressure control system upgrade

	Project details
Incurred expenditure	[redacted]
Description	This project replaced the pneumatic controllers on fuel gas skids with electronic transmitters and the pneumatic positioners of the control valves replaced with digital positioners. The affected sites include CS1 Unit 1, CS3 Unit 1, CS5 Unit 1 & 2, and CS8 Unit 1 & 2.
Business need	• Existing pneumatic controllers were difficult to maintain due cost and unavailability of technicians with the ability to perform maintenance. • Not possible to control fuel pressure within the desired band of 200 KPA. As a result, there had been occasional trips of the units due to high T5 temperature. • The conversion provides tighter control on valve and improved diagnostic / condition monitoring. • The use of digital controllers are in line with current industry practice.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Install pressure monitoring devices - 2 meter stations

Table 283: Install pressure monitoring devices - 2 meter stations

	Project details
Incurred expenditure	[redacted]
Description	This project saw the installation of a new pressure transmitter and associated cabling at outlet of Harvey Meter Station and outlet of Pinjarra Town meter station
Business need	Existing configuration did not provide a true pressure reading due to the DP across the odorant injection system.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Install AC AUX lube oil pumps - CS6 & CS9

Table 284: Install AC AUX lube oil pumps - CS6 & CS9

	Project details
Incurred expenditure	[redacted]
Description	This project converted the existing CS6 Unit 2 and CS9 Unit 1 AC auxiliary lube oil Pump Direct On Line (DOL) 30 kW motor drive to soft start motor drive. The conversion replaced the existing thermal overload protection device with the soft start integral overload function Expenditure is for the initial project set up costs.
Business need	The intent of this project was to improve site AC power reliability at CS6 and CS9 by reducing the starting current when the AC auxiliary pump is started. Optimisation of site power reliability was critical in ensuring compressor units availability and reliability
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replace sacrificial anode bed - Worsley lateral

Table 285: Replace sacrificial anode bed - Worsley lateral

	Project details
Incurred expenditure	[redacted]
Description	This project saw the replacement of two sets of magnesium sacrificial anode beds on the SW Cogen Lateral with new anodes.
Business need	The SW Cogen lateral has two sets of ten buried magnesium anodes that reinforce the cathodic protection at a watercourse and a lake, sites WX34.004 and WX53.755. The much lower soil resistivity in these areas can prevent the impressed current cathodic protection from achieving protection potential on its own in these areas. The 2012 Annual Survey reported six of the ten anodes at WX34.004 had failed and the remaining four likely to fail in the immediate term.
NGR 79(2) ground	In accordance with NGR 79 (2)(c) the capital expenditure is necessary: • to maintain and improve the safety of services. • to maintain the integrity of services.

Subsequent costs FY13/14

Table 286: Subsequent costs FY13/14

	Project details
Incurred expenditure	[redacted]
Description	The Subsequent cost category, consistent with the requirements of AASB116 Property Plant and Equipment (PP&E), captures expenditure incurred as a condition of continuing to operate an item of PP&E. Regular day-to-day servicing expenditure is recognised through profit and loss (operating expenditure) as consumed and generally described as repairs and maintenance. However, major overhauls that effectively extend the life of an asset are classified as a subsequent cost of the assets continued use the costs of which are recognised as part the asset value. For this period the following subsequent costs were carried out: Review critical spares holding for turbines Solar control software update-Solar FSR As building of facilities drawings Near maps licence Alternative Accom. arrangements at CS's GIS enhancements Overhaul emergency fittings at Jandakot Overhaul 1200 D tapping machine at Jandakot CS2 Unit 2 engine exchange CS8 Unit 2 engine exchange CS3 Unit 1 suction & discharge valves Replacement of actuators Replace CS10 3&4 fuel gas coriolis meters [redacted] The capital expenditure for CS2 Unit 2 Engine exchange was due to premature failure.
Business need	The ongoing subsequent costs provide for essential work carried out under the approved Asset Management Plan during normal operation and maintenance that can be capitalised under the Australian Financial Accounting processes.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Hazardous area equip rectification - CS

Table 287: Hazardous area equip rectification - CS

	Project details
Incurred expenditure	[redacted]
Description	As a part of obligation under AS 2381 and AS 60079, DBP is required to conduct visual inspection of all equipment installed in the hazardous areas every 4 years. The inspection is carried out by third party contractor. The contractor prepares a report of any non-conformity found on the equipment. Under the scope of this project, all the non-conformity is rectified to meet the requirement of hazardous area installation standards. The scope covers rectification of hazardous area equipment installed at compressor stations CS03, CS04, CS07, CS08 and CS10.
Business need	Required under AS 2381 and AS 60079 and the DBP Asset Management Plan
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement.

Inspection of hazardous areas

Table 288: Inspection of hazardous areas

	Project details
Incurred expenditure	[redacted]
Description	As a part of obligation under AS 2381 and AS 60079 DBP conducts visual inspection of all equipment installed in the hazardous areas every 4 years. The inspection is carried out by third party contractor. The contractor prepares a report of any non-conformity found on the equipment. Under the scope of this project, all the non-conformity is rectified to meet the requirement of hazardous area installation standards under a separate project. The scope of the project includes inspections at meter stations north of CS10 and MLV sites.
Business need	Required under AS 2381 and AS 60079 and the DBP Asset Management Plan
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to comply with a regulatory obligation or requirement.

Refurbish accommodation facilities - CS FY13/14

Table 289: Refurbish accommodation facilities - CS FY 13/14

	Project details
Incurred expenditure	[redacted]
Description	Accommodation buildings painted internally and externally and new carpets installed. Curtains and other furnishings within the buildings also replaced.
Business need	Accommodation facilities have not been significantly refitted since original construction. These facilities are used by staff that are required to man compressor stations and are located at these stations for periods of up to 11 days at a time.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Gas chromatograph upgrade

Table 290: Gas chromatograph upgrade

	Project details
Incurred expenditure	[redacted]
Description	Seven ABB C6+ BTU8100 gas chromatographs had reached end of life. Each ABB C6+ BTU8000 was replaced with current technology ABB C6+ NGC8206 gas chromatograph. This project will be completed over a 3 year period
Business need	• Spare parts for currently installed equipment were unavailable for purchase. • Gas quality measurement is critical in ensuring accurate gas metering and billing as per transportation contracts.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Annual provision for IT items

Table 291: Annual provision for IT items

	Project details
Incurred expenditure	[redacted]
Description	Scope of work as follows: • Continue 1/3 PC replacement programme to ensure all PCs are fit for purpose and under warranty; • Printer replacement; and. • DBP software licensing agreement costs
Business need	The project is based on the following justification: • ensure all PCs are fit for purpose and under warranty • Printers >5yo are considered end of economic life. Replace monochrome laser printers more than five years old. DBP has signed a licensing agreement covering standard desktop software and Server Operating System SW. There is a contractual obligation to pay the true-up charge. Items 2 and 3 following are not applicable as the SW is already deployed within DBP
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Video conferencing upgrade expand LYNC

Table 292: Video conferencing upgrade expand LYNC

	Project details
Incurred expenditure	[redacted]
Description	Implement point to point video and desktop with external parties and enable the same facilities on DBP smart phones Pilot LYNC programme to be expanded to all users within DBP. Pilot users have strongly advocated that being able to share desktop and video conference with parties external to DBP.
Business need	Improve and simplify communication with vendors and suppliers especially with respect to technical matters. Video conferencing is also considered to be a cost savings initiative.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Provision of video conferencing CS2, 4, 6, 7, & 8

Table 293: Provision of video conferencing CS2, 4, 6, 7, & 8

	Project details
Incurred expenditure	[redacted]
Description	Currently there is video conferencing (VC) facilities at CS1, CS3, CS5, CS9, Esplanade (x2) and Jandakot. This project will deliver video conferencing to the additional remote sites that do not have VC installed (CS2, CS4, CS6, CS7 and CS8). The VC equipment will connect to exiting electronic notice board screens at each of the sites.
Business need	The existing VC equipment was installed in 2011/12 and has reduced travel requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services

Upgrade of DBP servers

Table 294: Upgrade of DBP servers

	Project details
Incurred expenditure	[redacted]
Description	Part project to upgrade the DBP servers
Business need	Servers needed to be upgraded due to obsolescence and the requirement to operate the latest IT infrastructure.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Upgrade CRS with new modules

Table 295: Upgrade CRS with new modules

	Project details
Incurred expenditure	[redacted]
Description	Upgrade to DBP's customer reporting system (CRS)
Business need	Upgrade and maintenance of DBP's CRS provide a number of benefits, including: • reducing human error in billing and pipeline information provision • reducing reliance on personnel • automation of billing functions • improved reporting capability • improved change control and auditing capability • allow DBP to fulfill a number of regulatory reporting obligations.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to comply with a regulatory obligation or requirement • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Upgrade Jasper with new HSE reporting

Table 296: Upgrade Jasper with new HSE reporting

	Project details
Incurred expenditure	[redacted]
Description	This project was scoped to: • Create a separate instance of the Cintellate Program (JASPER) accessible only to DBP users. • Disallow WNE and WNGG to view DBP data and vice versa. • Convert Jasper data from WNG into DBP SQL environment. • Configure new instance to match existing configuration for DBP. • Copy all Stage 5B data into DBP SQL environment. • Build server to house DBP Jasper. This expenditure is continued from previous project in Table 201
Business need	The Jasper system was used for recording and reporting incidents and events that occur on the DBNGP and was jointly used with ATCO. As the two businesses separated it was important that DBP had its own HSE incident reporting tool.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Replacement of PC & printers

Table 297: Replacement of PC and printers

	Project details
Incurred expenditure	[redacted]
Description	Scope of work as follows: • Continue 1/3 PC replacement programme to ensure all PCs are fit for purpose and under warranty; • Printer replacement; and. • DBP software licensing agreement costs.
Business need	The project is based on the following justification: • ensure all PCs are fit for purpose and under warranty • Printers >5yo are considered end of economic life. Replace monochrome laser printers more than five years old. • DBP has signed a licensing agreement covering standard desktop software and Server Operating System SW. There is a contractual obligation to pay the true-up charge. Items 2 and 3 following are not applicable as the SW is already deployed within DBP
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

Mobile device management system

Table 298: Mobile device management system

	Project details
Incurred expenditure	[redacted]
Description	Current pilot of mobile device management to enforce use of PIN to unlock screen and ability to remotely wipe device. This project is the expansion to the pilot programme intended to ensure that only approved devices (BYOD or DBP Smart phones and Tablets) are able to remotely access email systems.
Business need	Address the IT security risk associated email and documents being retained on smart phone devices.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain the integrity of services • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

New PC & office equipment

Table 299: New PC & office equipment

	Project details
Incurred expenditure	[redacted]
Description	Purchase of additional PCs and software.
Business need	Replace damaged or misplaced equipment or service additional requirements.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain DBP's capacity to meet levels of demand for services at the time the capital expenditure was incurred.

In house training and development establishment

Table 300: In house training and development establishment

	Project details
Incurred expenditure	[redacted]
Description	As part of the transfer of approximately 160 employees from WestNet to DBP in 2008, DBP inherited an outsourced training framework. Since then DBP has progressively established its own internal systems and procedures required to manage training requirements for around 200 staff.
Business need	In 2012 DBP moved its training function in-house in order to improve the effectiveness and quality of training and development focussing on meeting the following requirements: • DBP's Safety Case • Mandatory training requirements • Allow web based training in remote locations. • Increase customisation of DBP training programmes allow input from senior management team and subject matter experts. • Integration with Human Resources to ensure training and development is aligned with position descriptions and other HR requirements. • Training designed to align with DBP business requirements, key performance indicators and annual objectives. • Ensuring all employees receive an individual training plan. • Focus on career development and succession planning as opposed to just providing technical and mandatory training.
NGR 79(2) ground	In accordance with NGR 79(2)(c) capital expenditure is necessary: • to maintain and improve the safety of services • to maintain the integrity of services • to comply with a regulatory obligation or requirement

APPENDIX A: CONFIDENTIALITY TABLE

APPENDIX B: PROJECT MANAGEMENT METHODOLOGY OVERVIEW PROCEDURE

APPENDIX C: SUBMISSIONS ON CWIP PROJECTS PROVIDED IN 2011-2015 ACCESS ARRANGEMENT PROCESS

References to tables below are to the tables in this submission. The information that follows each Table reference is the information that was provided to the ERA in relation to the project as part of the 2011-15 Access Arrangement Approvals process.

Relevant Table: Table 128: Microwave digitisation

1.1. DBP provided the following project justification in Submission 17 made 25 June 2010.

(a) The telecommunications network for the Dampier to Bunbury Natural Gas Pipeline (DBNGP) was an analogue microwave radio system. The microwave network was aging and subject to faults and failures. The telecommunication network carries all the SCADA information relating to compression controls and status, valve controls and status and monitoring of the gas flows throughout the pipeline as well as telephony (voice) traffic, data and mobile radio traffic for the pipeline system.

(b) Western Power had indicated that they intend to cease providing maintenance services on the old microwave radio system at the end of December 2007.

(c) During the first quarter of 2006, Gibson Quai – AAS Pty Ltd was commissioned to carry out a study on the options for replacement of the existing microwave radio system and prepared a report with a number of recommendations on the way forward. The replacement of the old analogue microwave system with a new digital microwave system was identified as the lowest cost and possibly easiest to implement solution.

(d) Tenders were called in December 2006 for the design, supply, installation and commissioning of a replacement Microwave Communications System inclusive of a VHF Radio System on a Lump Sum basis.

(e) The tendering process together with the Monte Carlo Cost Risk Analysis process allowed the total project budget to be established.

(f) The project was executed and coordinated in line with the Stage 5A project schedule.

1.2. Eight bids were received in response to Invitation to Bid for replacement of the Karratha to Perth microwave radio system.

1.3. Three organisations offered an Optic Fibre solution with the remainder offering a microwave radio solution.

1.4. All optical fibre solutions proposed by bidders were rejected because;

(a) they are dependent on State Government approvals

(b) the solution could not be delivered in the required timeframe

(c) the offer was subject to capital contributions from Government and/or potential anchor tenants.

1.5. DBP provide the system upgrade design documentation including scope of work (Attachment 3.12 of submission 17 AlintaDBNGP_MWDesign22112006_C)

1.6. DBP provides the following planned budget information:

[redacted]

Relevant Table: Table 10: SCADA upgrade

1.7. DBP provided the following project justification in Submission 17 made to the ERA at 25 June 2010.

1.8. The DBNGP was supervised by a Telvent OASyS 5.2.2UX SCADA system. This system was commissioned in 1999, with the application remaining largely unchanged since that time. A Telvent historian was being used for data archiving however the capacity of that historian was limited.

1.9. The Telvent platform at the time was supported by TUSC, however the hardware platform was deemed to be at the end of life and support dependent on arrangements with a third party supplier.

1.10. It was for these reasons the system was replaced by a new OASyS DNA 7.5 system.

1.11. DBP provides the following attachments which further describe the SCADA project;

(a) 3.4 a SCADA Functional Design Spec V0.3.pdf

(b) 3.4 b Gas Suite Functional Design Spec V0.1.pdf

1.12. DBP provides the following Monte Carlo cost analysis demonstrating expected costs:

SCADA UPGRADE							

[redacted]

Relevant Table: Table 3: Stage 3A filters (CS2, 4, & 7)

1.13. DBP provided the following project justification in Submission 18 made to the ERA at 18 July 2010.

1.14. This project involves the replacement of the Stage 3A Turbine Air Inlet Filter Housing at Compressor Stations 2 unit 2, 4 (unit 2) & 7 (unit 2).

1.15. The existing turbine air inlet filter housings are corroding and the existing static filters are susceptible to overloading and have ruptured several times.

1.16. It is considered more efficient to purchase a new Turbine air inlet filter assembly including ducting in stainless steel as the new unit is a replication of the stage 4 turbine air inlet filters and as such offer standardisation across DBP's fleet of Solar Mars 100 gas turbine. It also ensures efficiencies in terms of commonality of spare parts and maintenance.

1.17. DBP provides the relevant FEED study as attachment (Stage 3A Filters FEED study report).

1.18. DBP provides the following results from Monte Carlo cost analysis:

Stage 3A Filters

[redacted]

Relevant Table: Table 7: Coating and earthing replacement at CS1, 3, 5 & 8

1.19. DBP provided the following project justification in Submission 18 made to the ERA at 18 July 2010.

1.20. This project required the excavation, inspection and assessment of pipe defects; the recoating of the pipes with a non-shielding epoxy based coating system, and the reinstatement of the excavated areas.

1.21. The scope of work involves the engagement of contractors on a schedule of rates basis including plant and equipment from a Civil Contracting organisation that has been accredited to work on the DBNGP. The contractors together with DBP staff provide the key resources for the:

(a) Locating of all services before commencement of works

(b) Positive identification of all buried structures

(c) Hand excavation until the pipeline is located

(d) Machine excavation until the pipeline is fully exposed all around

(e) The coating evaluation and assessment of the pipeline

(f) The surface preparation and recoating

(g) The curing of coating and backfilling and reinstatement

1.22. The ultra-high Built epoxy system applied in Expansion Projects back in 1991 in CS1, 3,5 and 8 have shown in preliminary inspection and audit programs to be shielding the CP currents within the station. The shielding has created onset of corrosion pitting and metal loss. So far the following stations have been inspected and the coating system has been renovated: C3 both hot and cold sections, CS5 and CS8 the hot section. The Project is aimed to continue to complete CS5 and CS8 cold sections then proceeding to CS1, 2, 4, 6, 7 and 9 progressively until all below ground pipework are completed.

1.23. A provision $1.5M per compressor station and an allowance of work at 1.5 compressor stations per year has been assumed in developing the cost estimate, although the actual costs will be dependent on the outcome of inspections.

Relevant Table: Table 4: Upgrade Maximo maintenance system

1.24. DBP provided the following project justification in Submission 18 made to the ERA at 18 July 2010.

1.25. DBP provides the Maximo business case in attachment (CMMS Upgrade Business Case accepted final rev 4.doc).

1.26. The CMMS software is the core IT system utilised for DBNGP Asset Management. It is the inventory management system for the pipeline.

1.27. Until the project was undertaken, Maximo Version 4.3 was being used. This version was released in 1999. However, this version was no longer supported by the vendor, IBM. Accordingly, it needed to be upgraded, or else, DBP would have been faced with a redundant inventory management system.

1.28. The overall project was divided into two sub-projects. Whilst these are clearly separate parts of the overall project, they are dependent on each other, and one cannot be implemented without the other.

1.29. Project 1 covered all tasks related to data gathering and mapping, and Project 2 contained all tasks relevant to the implementation, including solution design and testing, software, hardware, training and technical development.

Project 1: Data re-engineering includes:

1.30. Data structure definition: data conversion strategy definition and detailed planning, data hierarchies design and template documentation, team training

1.31. Data mapping: data extract from Maximo 4.03 and mapping to the new hierarchies

1.32. Data collection: drawing inspections and technical information gathering for all missing pieces of information within the scope of the work outlined in the study.

1.33. Data structure refinement: hierarchy assessment by business users and on-site assessment requests for data deemed problematic

1.34. Data validation: mock conversion waves in Maximo 6.2 through data loader to validate data quality and integrity

Project 2: Maximo Implementation
(commencing once the functional team has completed Project 1) included:

1.35. Four phases - business blueprint, realization, final preparation, go-live and support (see below diagram).

1.36. Two rounds of mock conversion (mock 1 and 2) were to place. This used intermediate data supplied by Project 1, as scheduled below.

1.37. One additional round of mock conversion (mock 3) took place during Project 2. This round used final static and the latest dynamic data snapshot as scheduled below.

1.38. The Monte Carlo cost analysis was undertaken to establish the following budget for the project:

Cost Items	Baseline	P50	P85
[redacted]			
[redacted]			
IT Cost			
[redacted]			
[redacted]			
Provisional Cost			
[redacted]			
[redacted]			
[redacted]			

1.39. DBP has advised (in submission 10 made 1 April 2010) that the actual expense of the project in 2010 was $6,165,560. The amount referred to in table 4 related to the amount of CWIP as at 31 December 2010.

1.40. **Relevant tables:**

(a) Table 22: SAP - TX2

(b) Table 23: User migration - TX2

(c) Table 24: Network separation - TX2

(d) Table 25: Data classification - TX2

(e) Table 26: TX2 office fit out

1.41. DBP provided the following project justification in Submission 17 made to the ERA at 25 June 2010.

1.42. This project involves transition of certain DBNGP services from Alinta Asset Management (AAM)/WestNet Infrastructure Group (WNG)/WestNet Energy (WNE) to DBP requiring amendments to the OSA and the novation by AAM of its rights under the OSA to BBI.

1.43. The principles guiding the transition were as follows:

(a) DBP to assume full responsibility for all DBNGP functions with the exception of expansion related project management services and IT/IS services;

(b) WNG, either directly or through WNE will provide project management services for all expansion related capital works, with DBP having responsibility for managing SIB and minor capital works; and

(c) WNG to continue to provide IT/IS services under services standards to be set out in the amended and restated OSA, with a view to reaching agreement on a stand-alone service arrangement outside the OSA and with a nominal 5 year term.

1.44. The key outcomes of the transition agreement were:

(a) The transfer of approximately 170 positions to DBP in total;

(b) Responsibility for existing non-DBNGP operations and maintenance services contracts currently performed by WNE for other gas pipelines to be transferred to DBP;

(c) Work group rearrangement within Allendale II to accommodate DBP staff in spaces separate from WNG/WNE staff but in areas to be determined based on the space currently occupied on levels 6 and 7; and

(d) A simplified IT transition with the objective of transferring all DBNGP and relevant third party asset data to DBP, with data retained by WNE being limited to that required to fulfil its remaining obligations under the OSA.

1.45. DBP provided the following project justification in Submission 18 made to the ERA at 18 July 2010.

1.46. In addition to the scope, DBP provides the project justification form outlining the TX2 office fit out component of the project (attachment 3.15 PJF TX2 Office Fit Out). In addition, the total project consists of a number of additional components including, SAP costs, user migration costs, network separation costs and data clarification during the changes.

1.47. DBP provides the breakdown of expenditure incurred for the project in the following table:

TX2 Office Fit Out	[redacted]
SAP - TX2	
User Migration - TX2	
Network Separation - TX2	
Data Classification - TX2	
Total	

1.48. The SAP component related to the TX2 project was required to complete migration of the gas transmission and pipeline maintenance functions plus corporate functions of finance and Human Resources of the asset manager to DBP. As a result of these changes there was a requirement to create a new SAP environment for DBP to enable day to day business functions.

1.49. The User Migration work allowed for the management of the DBP IT environment transitioning it to a separate entity while providing sufficient separation for compliance purposes. This incorporates the configuration of perimeter network services such as Internet services, SMTP Email routing, Backups, Antivirus, Antispam and Monitoring services to service the new DBP IT Infrastructure. In summary, this component of the overall project included:

(a) Separation of the DBP network, users and resources from all other business entities in the form of routers/firewalls at all points of connection between the WNG and DBP network.

(b) Capacity for DBP to obtain access to Internet services (web, email etc) via WNG's internet connection(s).

(c) Capacity for DBP users to have access to DBNGP domain applications as required.

(d) IT support services for the DBP domain and associated infrastructure and staff

1.50. Network separation component included:

(a) Electronically identifying current workstation list for users (based on the in-scope personnel list)

(b) Validation the workstation list with users and manager

(c) Determination of applications requirements for users and workstations, including Blackberry and remote access, on a like-for-like basis

(d) Determination of the data and hardware implications for the workstation migration

(e) Development of a user migration strategy based on the already identified tools and processes, defined user list, and application requirements

(f) Pre-stage user accounts in the DBP domain (based on the in-scope personnel list)

(g) Pre-stage mailboxes and mail data to the DBP exchange server (based on the in-scope personnel list) (has data separation implications)

(h) User Acceptance Testing (UAT) for the identified application list with the new workstation SOE at The Esplanade and Jandakot Gate 2

(i) Pilot migrations at The Esplanade and Jandakot Gate 2

(j) Refinement of User Migration strategy based on UAT and Pilot stages

(k) User Migrations on Level 7 The Esplanade

(l) User Migrations at Jandakot Gate 2

(m) User Migrations at GHD House (Control Room DR site)

1.51. The final data clarification component of the overall project included:

(a) Development of data governance and management principles including a data classification scheme that classifies data belonging to DBP.

(b) Accommodate and controlling access to data accessible by both DBP and WNG (shared data). Develop associated documentation as required.

(c) Define a new directory structure for the new DBP ICT environments' shared data servers. This directory structure shall was based on DBP's organisational structure and provided the functionality for DBP's implementation of Microsoft's Distributed File System (DFS). Implementation of a Role Based Access Control (RBAC) model that enabled RBAC for DBP's DFS.

(d) Identification of electronic and hard copy data to be migrated to DBP and associated metadata, including location, owner, users; volume, security requirements, processing systems and storage systems.

(e) Classification of each migrant's personal business data items (e.g. business emails in personal and shared email mailboxes and business data resident in migrants Home Drives) as belonging to DBP. Move each migrant's personal business data items to an appropriate DBP location.

(f) Alignment of the structure of shared data (e.g. shared files residing on data servers) with DBP's new DFS directory structure. Move shared data items to an appropriate DBP location.

(g) Identification and classification of all hard copy data items (e.g. printed reports, paper files and records) as belonging to DBP. Move hard copy data items to an appropriate DBP location.

APPENDIX D: ATTACHMENTS RELEVANT TO APPENDIX C

Attachment #	Relevant Attachment	Relevant SIB Project
1.	Microwave System Design Document - AlintaDBNGP_MWDesign22112006_C	Microwave Digitisation
2.	SCADA Functional Design Spec V0.3.pdf	SCADA Upgrade
3.	Gas Suite Functional Design Spec V0.1.pdf	SCADA Upgrade
4.	Stage 3A Filters FEED study report	Stage 3A Filters
5.	CMMS Upgrade Business Case accepted final rev 4.doc	Upgrade Maximo maintenance system
6.	PJF TX2 Office Fit Out	TX2 Office fit-out