SUBMISSION 10: Actual Stay-in-Business Capital Expenditure (2005 to 2010) Justification and Forecast Stay in Business Capital Expenditure (2011 to 2015)

Public Version

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1. INTRODUCTION

1.1. On 1 April 2010, 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 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.

1.3. The ERA also issued a Regulatory Information Notice on 2 March 2010 (**RIN**). This submission is aimed at supplementing the information in the Proposed Revised AA and Proposed Revised AAI in order to address the information requested by the ERA in the RIN.

1.4. In addition to the Revised AA and Proposed Revised AAI, a number of additional submissions on key issues will be or are to be filed to assist the Regulator to assess the Proposed Revised AA and to address the categories of information requested in the RIN. These included the following:

1. Background Information (being this submission)
2. AA & AAI Compliance Checklist
3. Pipeline Services
4. Basis for Total Revenue
5. Terms and Conditions Justification
6. Explanation of Queuing Requirements
7. Capacity and Throughput Forecast
8. Rate of Return
9. Justification of Actual expansion Capital Expenditure (2005 – 2010)
10. Actual Stay-in-Business Capital Expenditure (2005 – 2010) (being this submission)
11. Forecast Capital Expenditure (2005 – 2010)
12. Operational Expenditure

1.5. This submission provides the justification for the stay-in-business capital expenditure which Operator has taken into account for the purpose of determining the reference tariff of the Proposed Revised Access Arrangement.

1.6. Operator submits that all of the SIB CAPEX incurred in 2005-2010 falls within the scope of Rule 79 of the NGR. Conforming stay-in-business capital expenditure will be substantiated in the following sections of this submission.

1.7. Before providing a justification for the conforming capital expenditure against Rule 79 of the NGR a number of preliminary issues must be addressed. These include:

(a) The owners' strategic approach to undertaking DBNGP capital projects during the proposed Access Arrangement Period;

(b) The role of the Safety Case in capital expenditure planning for the DBNGP; and

(c) Relevant findings of the Full court of the Supreme Court of Western Australia in Re: Dr Kin Michael AM; ex parte Operator (WA) Nominees Pty Ltd & Anor [2002] WASCA 231.

(d) A comparison of planned and actual capital expenditure over the prior access arrangement period and reasons for difference

2. NEW CAPITAL EXPENDITURE CRITERIA

2.1. Operator submits that all of the SIB CAPEX incurred in 2005-2010 falls within the scope of Rule 79 of the NGR. Conforming stay-in-business capital expenditure will be substantiated in the following sections of this submission.

2.2. In accordance to Rule 79 of the NGR 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).

(c) Sub Rule (2) states capital expenditure is justifiable if:

(d) the overall economic value of the expenditure is positive; or

(e) 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

(f) 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 meets levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependant on an expansion of pipeline capacity); or

(v) the capacity 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 (d) and the latter under paragraph (c).

2.3. in deciding whether the overall economic value of capital expenditure is positive, consideration is to be given only to economic value directly accruing to the service provider, gas producers, users and end users.

2.4. In determining the present value of expected incremental revenue

(a) A tariff will be assumed for incremental services based in (or extrapolated from) prevailing reference tariffs or an estimate of the reference tariffs that would have been set for comparable services if those services had been reference services; and

(b) Incremental revenue will be taken to be the gross revenue to be derived from the incremental services less incremental operating expenditure for the incremental services; and

(c) A discount rate is to be used equal to the rate of return implicit in the reference tariff.

2.5. If capital expenditure made during an access arrangement period conforms, in part, with the criteria laid down in this rule (Rule 79 f the NGR), the capital expenditure is, to that extent, to be regarded as conforming capital expenditure.

2.6. The ERA's discretion under rule 79 is limited.

3. OPERATORS APPROACH TO APPROVING CAPITAL PROJECTS AND CAPITAL EXPENDITURES

3.1. Operator has implemented formal policies and procedures for the approval of capital projects, for the procurement of materials and services requires to create new capital projects, and for the monitoring of project implementation.

3.2. All capital projects, whether new or continuing, for the next five years, were to be reviewed as an integral part of a formal annual business planning process.

3.3. Planned expenditure on new projects that were likely to proceed because the added value to business, were required for safety reasons, or met a specific statutory or contractual obligation, were included in rolling five year forecasts and where appropriate in the Annual Budget. Inclusion of a project in the current forecast, or in the Annual Budget, did not, however, mean that approval had been given for the project to proceed.

3.4. Before a project expected to require expenditure in excess of $300,000 could proceed, that project had to be approved by the (executive management) Capital Review Board, and then by the Board's Finance Committee and the full Board of Directors. Documents required for Capital Review Board approval include:

(a) A description of the project and of the key stakeholders (shippers, suppliers and others);

(b) Information on the shippers' business, in the case where the projects was required provide service to a specific shipper.

(c) Details of the new capital project to be constructed, the component expenditure estimates, project timing, and logistics issues;

(d) A comprehensive financial analysis including net present value and internal rate of return estimates, sensitivity studies, assessments of cash flow impact, and assessment of "profit and loss" impact';

(e) A discussion of commercial issues including likely contract terms and conditions, funding arrangements and, where appropriate, any specific regulatory issues; and

(f) An assessment of the strategic benefits (or disbenefits) of proceeding or not proceeding.

3.5. Before a project expected to require expenditure less than $300,000 could proceed, that project had to be approved by the relevant divisional General Manager, the Chief Financial Officer, and the Chief Executive Officer.

3.6. Once a project was approved, it could proceed, and expenditure could be incurred. However, specific items of expenditure were subject to further approvals in accordance with documented internal procurement procedures. Those internal procurement procedures include procedures for tendering for the supply of materials and services, and procedures for tendering for the supply of materials and services, and procedures for acquiring materials and services through the use of purchase orders.

3.7. where materials or service were to be acquired under contract:

(a) to ensure competitive pricing, all items with an estimated value exceeding $50,000 were to be obtained via a formal tendering process whenever alternative sources of supply existed;

(b) to ensure competitive pricing, for items with an estimated total value less than or equal to $50,000 at least three written quotations were to be obtained whenever alternative sources of supply existed;

(c) sole source negotiation of a contract was permitted whenever materials or services were available from only one supplier.

3.8. where materials and services were to be acquired via a purchase order:

(a) to ensure competitive pricing, three written quotes were to be obtained for any items with an estimated total value exceeding $10,000;

(b) to ensure competitive pricing, two written quotes were to be obtained for any items with an estimated value exceeding $2,000 but less than $10,000; and

(c) items with an estimates total value less than $2,000 could be obtained on the basis of only one written quote

3.9. Capital project implementation was monitored via monthly Capital Project Meetings. Those meetings enforced accountability through a requirement that project managers report to, and answered questions from, the executive management group on project progress, performance against approved budgets, and expected outcomes (including delays, and possible budget overruns).

3.10. A capital project was completed once the project manager advised that the physical work had been completed, and approved the transfer of project costs from a work in progress ledger into the asset register. After completion, larger projects were, at the discretion of the Capital Review Board, subject to a post-completion review. These reviews sought to understand and draw lessons from both projects that were delivered on time and on budget, and projects that were not realised as planned.

Alliance Contracting

3.11. As a prudent service provider, acting efficiently, Operator does not maintain its own cadre of engineering and technical staff capable of undertaking all of the design, development, acquisition and construction of facilities required to expand the capacity of the DBNGP. For the technical services required for pipeline expansion, Operator draws on the technical expertise of ANS, via the Operating Services Agreement and on its alliances with other suppliers of equipment and engineering services. This is standard industry practice within the pipeline industry.

3.12. There are a range of methods are available for securing the services of suppliers of equipment, and of engineering and technical services. At one end of the spectrum, that equipment or those services may be secured through fixed price contracts with suppliers. Somewhere along this spectrum is the method of engaging a supplier under a schedule of rates contract so that the contractor is better able to exclude contingencies from its pricing. At the other end of the spectrum, equipment, or engineering and technical services, may be secured through an alliance contract.

3.13. In alliance contracting, the party requiring equipment, or engineering and technical services, forms an alliance with the contractor, enabling both parties to work co-operatively to deliver required facilities of the desired quality at the best possible price. Alliance contracting delivers these outcomes through its facilitation of knowledge flow between the parties, and the provision of incentives for the sharing of knowledge.

3.14. The fundamental principles behind the alliance contract method include the following:

(a) The incorporation of a philosophy of “no disputes” and “no blame” so that when issues do arise, the parties are encouraged to work together to determine the best result for the project.

(b) A primary emphasis on business outcomes for all the parties.

(c) Clear understanding of individual and collective responsibilities.

(d) An equitable balance of risk and reward for all parties.

(e) Encouragement of openness and cooperation between the parties. This open book approach is important in setting the target price for an alliance contract.

(f) Encouragement to develop and apply innovative approaches and achieve continuous improvement.

(g) Access to and contribution of the expertise and skills of all parties.

(h) A commercial basis which offers the opportunity to achieve rewards commensurate with exceptional overall performance.

3.15. Under the alliance contract method, little or no risk is separately allocated to particular participants in an alliance. Instead, parties jointly accept the project risks up to a point, and work together to achieve the best outcome for a project. However, suppliers under alliance contracts are generally entitled to full recovery of the costs incurred during the alliance. Therefore their risk is effectively capped at their profit and overheads recoverable by them under the alliance.

3.16. There is no rigid contractual structure for an alliance project. The actual structure adopted will be influenced by the nature of the project, and the culture, corporate objectives and drivers of each of the alliance participants.

3.17. Some argue that the non-allocation of risk in an alliance contract favours the supplier, as they are the party who would usually bear the majority of risks under conventional forms of contracts, such as latent conditions, completion and defects. However, this position ignores the fact that risks usually borne solely by an owner under conventional forms of contracts are also shared between the participants under an alliance contract, such as legislative risk, cultural heritage and environmental risks.

3.18. Where these risks are encountered under a lump sum contract, they would usually result in a variation being directed by the owner, and the supplier being entitled to an adjustment of the lump sum price and time for completion.

3.19. In contrast, alliance contracts are more flexible. Where such issues are encountered under an alliance contract, the parties work together to overcome them.

3.20. Commercial arrangements under alliance contracts are often structured so that they require minimal adjustment during the course of the works. The risk/reward regime will usually only be altered in very limited situations. Similarly, there will usually be only limited grounds on which participants will be entitled to extensions of time or increased costs.

3.21. The issue of whether the contract price is too high or too low, always an issue with lump sum contracts (price is inevitably less than actual cost), remains an issue with alliance contracts. However, if an alliance contract has some form of target cost incentive, experience suggests that the ultimate price for the delivery of the service will be less than the co-operative estimate of that price (typically greater than actual cost), or the estimate of price arrived at by the buyer or the service supplier.

3.22. Alliance contracts provide beneficial cost and service related outcomes relative to lump sum contracts (even when those contracts are the results of tender process) for the following reasons:

(a) the supplier is able to mobilise quickly;

(b) the buyer of services (ie Operator) can exert a high level of control over any contract work carried out by the supplier (i.e. the alliance partner);

(c) the buyer can more readily change the delivery approach to accommodate project changes;

(d) alliance partners usually have a good understanding of projects and risks;

(e) there is the greatest likelihood of meeting tight deadlines;

(f) under lump sum or schedule of rates agreements, there is a steep learning curve for the supplier which will be factored into the pricing, resulting in an increased price for service provision;

(g) lump sum and schedule of rates agreements take time to formalise, and this may not be appropriate in circumstances where a new facility must be designed, and constructed or acquired, in a short period; and

(h) specification of the full scope of work for inclusion in a lump sum or schedule of rates contract takes time, and the buyer of the services bears the risk of later scope change.

3.23. Operator secured engineering and technical services through alliance contracts. Alliance contracts were entered in to with:

(a) Worley, for engineering, procurement and construction management (EPCM) related services;

(b) Solar Turbines, for compressor-related services; and

(c) HPS/KT for construction services.

3.24. The alliance arrangements still required a significant part of the cost items to be the subject of a tender process. Operator envisaged most of the total cost of the project related to projects that had been the subject of competitive tender. This is consistent with the requirement of the Operating Service Agreement between the Operator and its prime service provider WestNet, which requires contracts to be the subject of a competitive tender process.

The Safety Case in Capital Expenditure Planning

3.25. Many of the capital expenditure projects, developed of acquired during the prior access arrangement period were required for the safe and reliable operation of the DBNGP. They were identified pursuant to a Safety Case prepared by the previous owners, in June 1999, in accordance with the conditions of the pipeline licences covering the DBNGP.

3.26. One of the purposes of a Safety Case is to demonstrate that a pipeline licensee has the management system needed to systematically and continually identify and assess hazards so as to eliminate or minimize, as far as is reasonably practicable, the risks to employees working on the DBNGP facilities over the life of those facilities.

3.27. A Safety Case must be approved by the State safety and technical regulator. Once it is approved, the Safety Case becomes the set of recognized legal requirements with which the pipeline licensee must comply in relation to the operation of the pipeline.

3.28. A Safety Case comprises three elements: the facility description, the safety management system, and the formal safety assessment. The safety management system addresses all aspects of administering and managing safety on the pipeline. The formal safety assessment is represented by a risk assessment undertaken on the pipeline pursuant to Australian Standard 2885 ("Standard")

3.29. According to the Standard, pipeline loss of integrity (i.e. gas release) and interruption to supply risks are to be assessed. The risk assessment therefore includes the pipeline and main line valve (MLV) sites. It does not include compressor stations and metering. However, as part of its own internal standards, Operator has applied the same approach to its compressor stations and metering facilities.

3.30. The assessment identified a number of hazardous events (i.e. events resulting in a loss of pipeline integrity or interruption to continuity of supply). The risk of these events occurring was assessed by pipeline location class (i.e. R1, R2 and T1) and for Sensitive/Highly Populated areas. The Operator's personnel through the implementation of further controls and on-going monitoring/management of these risks.

3.31. The safety related capital costs were therefore incurred as a direct result of the Safety Case, which, as mentioned above, was approved by the technical and safety regulator in 2001 (and which is currently undergoing a review process with the regulator). Given this, they should be accepted by the Regulator without question.

3.32. This submission indentifies the new conforming capital expenditure incurred as a direct result of the Safety Case.

3.33. Relevant findings of the Full Court of the Supreme Court of Western Australia

3.34. Operator notes that the Full Court of the Supreme Court of Western Australia, in *Re: Dr Ken Michael AM; ex parte Epic Energy (WA) Nominees Pty Ltd & Anor* [2002] WASCA 231, found as follows in relation to costs required for the safe and reliable operation of the pipeline:

3.35. "It is clear from s2.24(c) that the ongoing safe and reliable operation of the pipeline must be taken into account. Expenditure necessary for this purpose must be taken into account **whether or not** that would occur in a competitive market or according to theories of economic efficiency." (emphasis added)

4. COMPARISON OF ACTUAL AND FORECAST CAPITAL EXPENDITURE 2005 – 2010

4.1. In the Total revenue calculation for the access arrangement period of the previous access arrangement, the Regulator included amounts for what was then referred to as New Facilities Investment that was forecast to occur during that period.

Table 1: Comparison of actual and forecast Conforming Capital Expenditure from 2005 to 2010 ($m Nominal)

	2005	2006	2007	2008	2009	2010	Total
Actual SIB Capital Expenditure (Nominal $'000,000)	0.69	4.07	3.79	5.80	12.78	51.76	**78.89**
Forecast New Facilities Investment ($million nominal)	13.17	14.00	7.33	9.05	10.13	9.37	**63.05**
Difference	**12.48**	**9.93**	**3.54**	**3.25**	**(2.65)**	**(42.39)**	**(15.84)**

4.2. SIB Capex forecast to occur during the previous period (2005 forecast) comprised projects requiring expenditure of $63.06 million (nominal).

4.3. DELETED

4.4. An amount of $78.89 million was actually spent on projects required during 2005 to 2010.

4.5. This represents actual expenditure $15.84 million in excess of the 2005 forecast.

4.6. The excess expenditure can be explained by the circumstances acquisition process and the ability to provide an accurate forecast at the time and the major expansions that have occurred over the period which have contributed the need for further expenditure.

4.7. DELETED

5. DELETED

6. DELETED

7. JUSTIFICATION OF ACTUAL SIB CAPEX

7.1. This section of the submission provides justification of projects that were included in forecast and projected in the Access Arrangement information document of 15 December 2005.

Project Name	Description	Justification
Compressor Stations		
CS6 & CS9 Nuova Pignone D20 RTU Interface	**Project Description:** Relocating the D20 RTU interface along with the TSCC from GHD House to The Esplanade enabled the Disaster Recovery System at Jandakot to communicate with CS6 and CS9 sites **Business Imperative:** The D20 interface was a temporary measure put in place to enable communication with CS6 and CS9 pending the upgrade of SCADA. The temporary measure had to be updated **Project Deliverables:** Improved interface with remote equipment	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
CS6 & CS9 Nuova Pignone Demister Replacement	**Project Description:** Demister upgrade enabled return lube oil tank pressures to run at design values. **Business Imperative:** The project reduced likelihood of shutdowns at both CS9 units and reduced venting of lube oil mist in the compressor enclosure which had significant health and safety impacts. **Project Deliverables:** Reliable operation of the NP machines	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and

Project Name	Description	Justification
		(2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
CS1, CS3, CS5, CS8 Solar Turbine Lube Oil System Pipework	**Project Description:** A bulletin was issued to Solar Service to inform of an inherent design problem on existing packages. It was observed that in most cases, effected packages experienced high lube oil pump pulsations. Under certain conditions, these pulsations may excite and fatigue bolts which position the flapper arrangement inside the check valves. **Business Imperative:** Compliance with the Solar Service bulletin is important to maintain equipment warranty and safety performance **Project Deliverables:** Safe and reliable performance of the Solar Turbine lube oil system and reduce impact on shut downs due to balance of plant equipment non performance	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and required to maintain Operator's obligation to meet contracted capacity.
CS6/2 Nuova Pignone Dry Gas Seals Replacement	**Project Description:** The dry seals of the NP gas compressor had reached its design life and showed deterioration in performance. Seals were refurbished for reuse. **Business Imperative:** Reliable operation of the dry seals of the compressors is critical to the reliable operation of the machines	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and

Project Name	Description	Justification
	Project Deliverables: Compressor reliable operation and reduction in trips due to leaking gas seals	improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
CS6/2 Nuova Pignone Major Overhaul	**Project Description:** The machine had reached its maximum run hours and safe operation. It had to be overhauled **Business Imperative**: Gas Turbines are required by design to be overhauled when operating run hours have reached a predetermined time particularly for hot sections. Overhaul is critical to ensure reliable and safe operation **Project Deliverables:** Completion of the works within time schedule to avoid curtailment of supply. Commissioned new unit to meet energy performance criteria and be reliable	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
CS5/2 Solar Mars 100 Replacement	**Project Description:** The machine had reached its maximum run hours and safe operation. It had to be overhauled	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest

Project Name	Description	Justification
CS9 Turbine Exhaust Stack Major Overhaul	**Business Imperative**: Gas Turbines are required by design to be overhauled when operating run hours have reached a predetermined time particularly for hot sections. Overhaul is critical to ensure reliable and safe operation **Project Deliverables:** Completion of the works within time schedule to avoid curtailment of supply. Commissioned new unit to meet energy performance criteria and be reliable **Project Description:** The gas turbine exhaust stack had shown deterioration and wear following inspection. Repairs were conducted but after further exposure to operation – further deterioration was detected and resulted in decision to replace **Business Imperative:** The stack had reached engineering design life and could no longer be repaired. Cost effective to replace **Project Deliverables:** CS9 was a critical site in terms of capacity delivery to the Shippers. Work had to be scheduled to be conducted when the new unit was commissioned and placed in service. Stack was constructed off site and installed on site new and complete to reduce downtime	sustainable costs of providing services because: (1) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to

Project Name	Description	Justification
		meet contracted capacity.
CS2/3 Solar Mars 100 Replacement	**Project Description:** The machine had reached its maximum run hours and safe operation. It had to be overhauled **Business Imperative:** Gas Turbines are required by design to be overhauled when operating run hours have reached a predetermined time particularly for hot sections. Overhaul is critical to ensure reliable and safe operation **Project Deliverables:** Completion of the works within time schedule to avoid curtailment of supply. Commissioned new unit to meet energy performance criteria and be reliable	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
CS9/2 Solar Mars 100	**Project Description:** The machine had reached its maximum run hours and safe operation. It had to be overhauled **Business Imperative:** Gas Turbines are required by design to be overhauled when operating run hours have reached a predetermined time particularly for hot sections. Overhaul is critical to ensure reliable and safe operation **Project Deliverables:** Completion of the works within time schedule to avoid curtailment of supply. Commissioned new unit to meet energy performance criteria and be reliable	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because:

Project Name	Description	Justification
		(1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
CS6/3 Solar Pressure Sensing Tube Replacement	**Project Description:** The machine had reached its maximum run hours and safe operation. It had to be overhauled **Business Imperative:** Gas Turbines are required by design to be overhauled when operating run hours have reached a predetermined time particularly for hot sections. Overhaul is critical to ensure reliable and safe operation **Project Deliverables:** Completion of the works within time schedule to avoid curtailment of supply. Commissioned new unit to meet energy performance criteria and be reliable	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
CS2/2 Solar Mars 100	**Project Description:** The machine had reached its maximum run hours and safe operation. It had to be overhauled **Business Imperative:** Gas Turbines are required by design to be overhauled when operating run hours have reached a predetermined time particularly for hot sections. Overhaul is critical to ensure reliable and safe operation **Project Deliverables:** Completion of the works within time schedule to avoid curtailment of supply. Commissioned new unit to meet energy performance criteria and be reliable	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services

Project Name	Description	Justification
CS8/2 Solar Mars 100	**Project Description:** The machine had reached its maximum run hours and safe operation. It had to be overhauled **Business Imperative:** Gas Turbines are required by design to be overhauled when operating run hours have reached a predetermined time particularly for hot sections. Overhaul is critical to ensure reliable and safe operation **Project Deliverables:** Completion of the works within time schedule to avoid curtailment of supply. Commissioned new unit to meet energy performance criteria and be reliable	existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Compressor Station Whitegoods		
Whitegoods	**Project Description:** Routine replacement of White Goods at Compressor Stations **Business Imperative:** Compressor Stations also contain facility where employees working on the pipeline are accommodated and fed with inclusion of motel style facility. These facilities form a critical part of the Asset Management Plan to ensure resources are located close to the pipeline for its servicing and reduce travel time **Project Deliverables**: White goods services	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity

Project Name	Description	Justification
	accommodation facilities and its availability assists in ensuring resources are close to service the DBNGP	of services because: (1) the project replaces an asset; and
Computer Equipment		
TSCC Hardware at Esplanade	**Project Description:** The relocation of the Control Center from GHD to the Esplanade was part of Alinta's consolidation of control room functions into a central location in Perth and the conversion of the GHD control center into a fully functional DR site for the DBNGP **Business Imperative:** Business cases developed supported the need for a back up control room and the consolidation of Control Centre at the new HO at the Esplanade **Project Deliverables:** The transition of the DBNGP controls from GHD to the Esplanade had to be seamless to ensure ongoing safe performance of the DBNGP	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) required to maintain Operator's obligation to meet contracted capacity.
Printers and Servers	Corporate system	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain integrity of services because: (1) is required to maintain Operator's obligation to meet contracted capacity.
2*RSLOGIX 5000 Pro Edition	Tool for equipment calibration and programming	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest

Project Name	Description	Justification
		sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project
	Coating evaluation	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
AP Holiday Detector High Voltage		
	Coating evaluation	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to
HP Mobile Messenger Case & Warranty *2		

Project Name	Description	Justification
		meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Olympus Camera's & Equipment *3	Coating evaluation	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Interface Cables PCMIA to CNET	Coating evaluation	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and

Project Name	Description	Justification
		improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
	Corporate system	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Fuji Xerox Photocopier serial 680072 L6 Perth		
CS2 & CS4 UPS for Programming PC	Performance measurement tool	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with

Project Name	Description	Justification
Dell Powervault NF500 NAS Storage Server	Corporate system	accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard;

Project Name	Description	Justification
		and (2) required to maintain Operator's obligation to meet contracted capacity.
	Corporate system	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and required to maintain Operator's obligation to meet contracted capacity.
Dell Poweredge R300 Server		
	Corporate system	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity.
Dell Printer 3130CN		

Project Name	Description	Justification
Network Security Upgrade	Corporate system	▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity.
CS1, CS3, Cs5 & CS8 Dell Poweredge T300 Tower Server	Corporate system	▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services.

Project Name	Description	Justification
Jandakot - Dell NAS Storage Server	Corporate system	▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Gas Engine Alternator (GEA)		
The overall GEA program justified above relates	**Project Description:** This project involves the	▪ Capital expenditure would be incurred by a prudent

Project Name	Description	Justification
to the following subprojects: 1. GEA's for CS9 2. GEA's for CS6 3. GEA's for CS2 4. CS4/1 GEA Major Overhaul 5. CS6 GEA1 & GEA 2 Deutz TBG616 V12 Major Overhaul SN9296219 6. CS8 GEA1 Waukesha L5108 Major Overhaul 7. CS9 GEA1 & GEA 2 Deutz TBG616 V12 Major Overhaul SN9296187 8. CS1 -> CS9 GEA Partial Upgrades 9. CS2 GEA1 & GEA 2 12000H Major Upgrade Service 10. CS3 GEA2 24000H Major Upgrade Service 11. CS5 GEA2 24000H Major Upgrade Service 12. CS6 GEA2 48000H Major Upgrade Service	improvements required to enhance the reliability of the GEAs and the age of some existing equipment that are required to be interfaced with new equipment following expansion **Business Imperative:** Unreliable power generation is a major contributor to forced turbine compressor unit outages causing unreliable compressor operation **Project Deliverables:** Project deliverables include: • Reliable and dependable power generation, synchronisation and load sharing system • Documentation modification to reflect As Built status of power generation. • Training of Maintenance personnel by association with upgrades/ enhancements Project success is measured by improvement in the uptime of the Gas Engine Alternators and electrical distribution system. This is achieved through, • Electrical upgrades and mechanical enhancements of most Gas Engines across all compressor stations, • Replacement of old and obsolete GEA Ancillary / Auxiliary equipment, as applicable across all compressor sites. All the above measures enhanced the synchronization and load sharing process of the Gas Engine Alternators, while minimising nuisance tripping of critical assets affecting gas compression on the DBNGP.	Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Repeater Site Electricity Meter Upgrades x49	**Project Description:** Some Repeater sites are powered by the grid where electricity measurements are taken by the user and relayed to the service provider. With modern equipment – this project enabled the upgrading of meters that can be remotely accessed for energy consumption	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and

Project Name	Description	Justification
	avoiding manual errors and reading of meters delays **Business Imperative:** Energy use and monitoring is part of DBP's carbon footprint initiative. Accurate reading as well as determination of correct charging regime is critical to the energy consumption management **Project Deliverables**: The meters are installed at grid powered sites for remote reading are operational	(2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and required to maintain Operator's obligation to meet contracted capacity.
Motor Vehicles		
Vehicles	**Project Description:** DBP operates and maintains the DBNGP using a workforce that is located at compressor stations as well as its Maintenance base at Jandakot and Head Office at the Esplanade. Vehicles are extensively used for the transport of its workforce as well as used as mobile workshops. Vehicles are replaced based on fair wear and tear and replacement policy of DBP. **Business Imperative:** The replacement program for the 49 vehicles fleet is critical to the safe transport of people to site and its use as a reliable mobile workshop for the field employees. Replacement program adopts industry best practices of Fleet Managers and experience attained after 25 years of service **Project Deliverables:** An average of up to 10 vehicles are replaced annually to maintain the level of safety and integrity in the fleet of vehicles	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to

Project Name	Description	Justification
		meet contracted capacity.
Safety Equipment		
Jandakot CS1, CS2, CS3, CS4, CS5, CS6, CS7, CS8, CS9, CS10 Laerdel HS1 Defibrillator & Oxygen Unit	**Project Description:** Defibrillation units were installed at all Compressor Stations and the Jandakot Depot to enhance emergency first aid response in the event of Cardiac Arrest. **Business Imperative:** DBP adopts Zero Harm in HSE and following recommendation by the Safety Committee as well as wider consultation in the industry, the recommendation was considered value adding to the enhancement of safety in the workplace **Project Deliverables:** The units were purchased following consultation with St John Ambulance and deployed to the approved sites. Training was included in the First Aid Training programs	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
SCADA		
SCADA Update & CP Visability	**Project Description:** In 2006 a SCADA strategy was prepared as part of the overall review of SCADA systems utilised for the operation of the DBNGP. The reasons for recommending the upgrade, included: 1. Age of systems increased the risk of asset failure 2. Limited vendor support for system increased the risk of asset failure 3. Limited ability to expand the system 4. Unable to benefit from improvements in communication technology. 5. upgrade would enable operator to meet industry security standards	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to

Project Name	Description	Justification
	6. lack of available training on the system 7. Data accessibility was limited 8. Resources to support the system not readily available 9. limited ability to consider additional applications for core functions 10. Upgrades were required for the planned growth of the DBNGP **Business Imperative:** The SCADA upgrade was due because it was no longer supported. Its replacement needs to be cognisant of: 1. Modern technology platform supported by vendors 2. Expandable system capable of supporting growth 3. Increased security levels on the system – up to international standards for SCADA 4. Provision for a full corporate historian to provide access to SCADA data for all required users. 5. Fully supported system, with training readily available to users 6. Ability to bolt-on new applications to improve operational performance ability to link in with monitoring software to improve data accuracy through SCADA o billing 7. Improved technical and auditing then applying configuration changes to the system. **Project Deliverables:** The SCADA upgrade is required to be managed to ensure the old and the new can operate side by side until such time as the old can be decommissioned once the new is commissioned and reached stable operation. The upgrade also includes the back up at the new DR site transferred from GHD to Jandakot	meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
SCADA Pack at BP Cogen	**Project Description:** The GIS was upgraded to web based system **Business Imperative:** The GIS contains all lands information and its accessibility to all users is critical	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because:

Project Name	Description	Justification
	Project Deliverables: Improved accessibility of information to field employees	(1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Software		
GIS Project	**Project Description:** The RTU/Flow Computer at this site had reached engineering design life and require replacement with the new version RTUs and Flow Computers being deployed for new installations **Business Imperative:** These are remote control and billing devices and are critical to the safe operation of the Delivery Point **Project Deliverables:** The installation of the new RTU/Flow Computer must be seamless to ensure un corrupted billing information	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and

Project Name	Description	Justification
		(2) required to maintain Operator's obligation to meet contracted capacity.
Customer Reporting System (CRS) Upgrade	**Project Description:** As per clause 15.5 of the Standard Shipper Contract, Operator is required to provide to Shipper no later than 1 hour after the end of each gas hour, the unverified portion of the delivered gas for each delivery point the Shipper had been scheduled to deliver gas to. **Business Imperative:** In order to comply with this requirement, CRS must be modified to create and generate this information to all Shippers on an hourly basis. CRS provide a number of benefits, including: 1. improving error rates 2. reducing reliance on personnel 3. automate billing functions 4. improved reporting capability 5. improved change control and auditing capability **Project Deliverables:** Improve performance of the CRS	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
SAP	Corporate System – financial	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred

Project Name	Description	Justification
Maximo	Corporate System – procurement platform	because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and ▪ required to maintain Operator's obligation to meet contracted capacity.
IT Disaster Recovery Phase 1 (Epic)	***Project Description:*** Operator identified that in the event of the loss of the server room Operator would be unable to continue safe operation of the DBNGP. Phase 1 of the disaster recovery plan was to provide transportation services with access to email, CRS and the internet. The project required three additional severs to be installed at Jandakot.	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and

Project Name	Description	Justification
OHS Management System (Epic)	This OHS management system enabled the consolidation of all OHS policies, procedures and instructions for ease of access to by all employees	(2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Technical Services Software (Epic) Windows XP (Epic) GIS Equipment (Epic) Technical Services Software (Epic)	Miscellaneous software Miscellaneous software Miscellaneous software Miscellaneous software	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project

Project Name	Description	Justification
		▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and required to maintain Operator's obligation to meet contracted capacity.
Bristol Host Data Retrieval System (Epic)	***Project Description:*** Operator required the hardware/software upgrades as part of the business continuity planning and billing function at Jandakot. Capability provides for data verification in conjunction with CRS and improves functionality and reliability of the existing system	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Condition RED PC Software (Thermonitor	This is software for use of thermography as an asset	▪ Capital expenditure would be incurred by a prudent

Project Name	Description	Justification
Reporter)	management tool	Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Oil Analysis Trending Software Program *3	Software for condition monitoring of oils used on the DBNGP	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because:

Project Name	Description	Justification
		(1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
	Corporate system	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
DBP-ALN IS Project Cost - SAP 1ERP 1B1		
	Sofware to enable the remote access of engineering performance of equipment not covered under SCADA	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to
Cimplicity x4		

Project Name	Description	Justification
		meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Low Cost IT Projects	Projects relate to IT improvements of systems and processes	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
RSLogix5000 x4 - RSLogix5 x15	Tool for equipment calibration and programming	
VersaPro upgrade to GE Proficy Professional x11 VersaPro upgrade to GE Proficy Standard x11	GE PLC interface programmer GE PLC interface programmer	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and

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		(2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
ISaGraph x11 - RealFlo x11 - Cables x11 RSLogix5000 Function Block Editor x6	Performance measurement tool Performance measurement tool	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
RSLogix5000 Function Block Editor x6		

Project Name	Description	Justification
Office Pro 2007 x12 - Office Pro Media CD x1	Corporate system	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Vista Business x30 - Vista Business Media CD x1	Corporate system	
RSLinx Classic OEM for CS servers x10	Corporate system	
Server 2008 x4 - Server 2008 CALS x70	Corporate system	
Sysmantec Endpoint x75 - CD SP2 disk x1	Corporate system	
Server 2008 x4 - Visio x3 - media CDs	Corporate system	
Norton Internet Security x20	Corporate system	
Prolink 2.5 x5 for Metering Laptop	AVT measurement tools	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred

Project Name	Description	Justification
		because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
	SCADA interface software	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
ValveLink 7.3.2 x1 - Modbus Site x1		
	Corporate system	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and
XP Media CD x1-Vista Ultimate x1-PartitionMagic x1		

Project Name	Description	Justification
		(2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
	Corporate system	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity.
Kiwi Logging Daemon		▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and ▪ required to maintain Operator's obligation to meet contracted capacity. Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project

Project Name	Description	Justification
	Corporate system	▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project
ipMonitor License with 1st year maintenance		▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
LANsurveyor License with 1st year maintenance	GIS/GPS pipe locator	▪ Capital expenditure would be incurred by a prudent

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		Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
	GIS/GPS pipe locator	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because:
LANsurveyor Responder 25-pack License		

Project Name	Description	Justification
		(1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
	Performance measurement tool	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Kiwi CatTools - Full install License		
@RISK Industrial 4.0.xSN 73456 Upgrade	Monte Carlo Cost Risk tool	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to
@RISK Industrial 4.5.xSN 1137518 Upgrade	Monte Carlo Cost Risk tool	

Project Name	Description	Justification
		meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Telephone		
3*375 Field Communicator	Field Communication Tools	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
9505A Motorola Satellite Phone & Prepaid	Field Communication Tools	
Iridium Phone 9505A & car kit	Field Communication Tools	
Iridium Satellite Phones x 2 1CSF 576	Field Communication Tools	
	Field Communication Tools	
Maintenance Team Nokia 6120C (NEXT G) mobiles x4		
Tools and Equipment		
Various tools	**Project Description:** Procurement of tools required by the Engineering Department for the ongoing support of the DBNGP. **Business Imperative**: Due to increase of staff and the installation of new generation equipment on the DBNGP,	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and

Project Name	Description	Justification
	additional tools were needed to be procured for the Engineering and HELM departments. These tools are required to perform normal duties on the DBNGP. Additionally, tools and equipment have been replaced due to normal wear and tear.	(2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.
Vibration Works		
Vibration Monitoring Equipment	**Project Description: FEED to assess viability of Vibration Monitoring Tools on critical rotating plants** **Business Imperative**: Vibration monitoring is a key proactive tool to assess performance of rotating plants. Proactive monitoring can provide lead to proactive maintenance and fault assessment of critical plant. **Project Deliverables:** Strategy to support vibration monitoring	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity.
Throttling Vibration Study	**Project Description:** Due to the increased flow rates on the DBNGP resulting from the expansion projects, the dynamic behaviour of the pipe line need to be surveys to ensure no excessive vibration / pipe dynamics are experienced. **Business Imperative:** As the flow in the DBNGP increases with demand – some components require testing to ensure high flows can be managed. **Project Deliverables:** The outcome of the project is survey and stress analysis reports, identifying any points with high vibration and quantifying the stresses at these	▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to

Project Name	Description	Justification
	points, on the DBNGP at higher flow rate conditions. The outcome of the project is increased flow rates through DBNGP with all excessive vibration points rectified to accommodate the increased forces it is subjected to.	meet contracted capacity.
CS10 Vibration Monitoring Equipment	**Project Description:** During the high flow testing of CS10 following commissioning of Stage 4 loads, several components of station piping required reinforcement to secure long term integrity of the station pipework **Business Imperative:** Station pipework is design to incorporate industry standards for mitigation against flow induced vibration. However real performance can only be tested by simulating high flow under worst conditions and it is a requirement that all stations are tested for high flow operation. **Project Deliverables:** The project required the use of specialist consultants to undertake an audit and review followed by location IDs and measurements of all key locations for vibration. Data is analysed and assessed for actions and reinforcements	
DBNGP Provide Scrubber Alarms	**Project Description:** Scrubbers are used to clean gas prior to entry of gas into the gas compressors. **Business Imperative:** Scrubber alarms are critical to the safe and reliable operation of the station and protection of the compressors **Project Deliverables:** Reliable installation and remote visibility of alarms	
25m High Pressure Hoses *3	These are replacement equipment for the safe pressurisation of equipment not fitted with pressurisation devices	
Bypass of existing Fortescue River Crossing	**Project Description:** The Fortescue River Crossing was exposed during cyclone Monty in 2004 **Business Imperative:** Repair of the crossing is critical to safe operation	

Project Name	Description	Justification
	Project Deliverables: The repairs included the isolation of the section affected and the laying of a new section of crossing and tie into the DBNGP Project justification against regulatory criteria: the capital expenditure is necessary to maintain the integrity of services	
Other		
DBNGP Signage & Badging	**Project Description:** The DBNGP had undergone many ownership changes and resultant multitudes of badging on signs associated with the asset **Business Imperative:** Clear signage and badging is important for the Safety and visibility of the DBNGP Project Deliverables: The badging project had to be scheduled to align with business changes	▪ Capital expenditure would be incurred by a prudent Service Provider acting efficiently, in accordance with accepted good industry practise to achieve the lowest sustainable costs of providing services because: (1) various design options were considered; and (2) is this the lowest cost option for the project ▪ Capital expenditure is necessary to maintain and improve the safety of services. ▪ Capital expenditure is necessary to maintain integrity of services because: (1) the project replaces an asset; and (2) is required to maintain Operator's obligation to meet contracted capacity. ▪ Capital expenditure is necessary to maintain the capacity to meet levels of demand for services existing at the time the investment is incurred because: (1) project is required to meet a reliability standard; and (2) required to maintain Operator's obligation to meet contracted capacity.