

# Powerlink - 2027-32 Revenue Proposal IT and IT/OT Cyber Security Review

Australian Energy Regulator | 1 September 2026

**PUBLIC**



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## DOCUMENT INFORMATION

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# CONTENTS

|           |                                                                      |           |
|-----------|----------------------------------------------------------------------|-----------|
| <b>1.</b> | <b>Introduction .....</b>                                            | <b>1</b>  |
| 1.1.      | Purpose of this report.....                                          | 1         |
| 1.2.      | Scope of requested work .....                                        | 1         |
| 1.3.      | Our review approach .....                                            | 1         |
| 1.3.1.    | Conformance with NER requirements .....                              | 2         |
| 1.3.2.    | Technical review.....                                                | 4         |
| 1.4.      | This report .....                                                    | 5         |
| 1.4.1.    | Report structure.....                                                | 5         |
| 1.4.2.    | Information sources.....                                             | 5         |
| 1.4.3.    | Presentation of expenditure amounts .....                            | 5         |
| <b>2.</b> | <b>IT Investment Program: IT/OT Cyber Security .....</b>             | <b>6</b>  |
| 2.1.      | Background/Approach.....                                             | 6         |
| 2.1.1.    | NPV Analysis.....                                                    | 8         |
| 2.1.2.    | Key Limitations .....                                                | 9         |
| 2.2.      | Prudency-Investment Need.....                                        | 9         |
| 2.3.      | Efficiency - Cost Estimation.....                                    | 10        |
| 2.4.      | Top Down benchmarks .....                                            | 12        |
| 2.5.      | Bottom up estimate .....                                             | 13        |
| 2.5.1.    | Efficiency adjustment for rates .....                                | 13        |
| 2.5.2.    | Efficiency adjustment for planned headcount and duration .....       | 16        |
| 2.6.      | Key Findings .....                                                   | 17        |
| <b>3.</b> | <b>IT Investment Program: Enterprise Asset Management (EAM).....</b> | <b>19</b> |
| 3.1.      | Background/Approach.....                                             | 19        |
| 3.2.      | Evidence Provided and Basis for Preferring Option 1.....             | 22        |
| 3.2.1.    | NPV Analysis.....                                                    | 22        |
| 3.2.2.    | Limitations of the evidence .....                                    | 23        |
| 3.3.      | Prudency-Investment Need.....                                        | 23        |
| 3.3.1.    | Typical Assessment Framework for AER Review.....                     | 25        |
| 3.3.2.    | OGW Assessment of Prudency .....                                     | 27        |
| 3.4.      | Efficiency - Cost Estimation.....                                    | 28        |
| 3.4.1.    | Efficiency methodology .....                                         | 28        |
| 3.4.2.    | Top Down Benefits .....                                              | 28        |
| 3.4.3.    | Efficiency adjustment for planned headcount and duration .....       | 29        |
| 3.4.4.    | Efficiency adjustment for rates .....                                | 30        |
| 3.5.      | Top Down Efficiency - Tangible Benefits .....                        | 32        |
| 3.5.1.    | Job execution and scheduling benefits.....                           | 33        |
| 3.5.2.    | Job administration benefits.....                                     | 33        |

|           |                                                                         |           |
|-----------|-------------------------------------------------------------------------|-----------|
| 3.5.3.    | Inventory accuracy benefits.....                                        | 35        |
| 3.6.      | Key Findings .....                                                      | 38        |
| <b>4.</b> | <b>IT Investment Program: Health, Safety and Environment (HSE).....</b> | <b>41</b> |
| 4.1.      | Background/Approach.....                                                | 41        |
| 4.2.      | PQL's evidence provided and basis for preferring Option 1 .....         | 43        |
| 4.2.1.    | NPV Analysis.....                                                       | 44        |
| 4.2.2.    | Limitations of the evidence .....                                       | 44        |
| 4.3.      | Prudency-Investment Need.....                                           | 45        |
| 4.3.1.    | Regulatory Assessment Framework.....                                    | 48        |
| 4.3.2.    | OGW Assessment of Prudency .....                                        | 48        |
| 4.4.      | Efficiency - Cost Estimation.....                                       | 50        |
| 4.4.1.    | Efficiency methodology .....                                            | 50        |
| 4.5.      | Bottom Up Estimation .....                                              | 50        |
| 4.5.1.    | Efficiency based on Planned Headcount and Duration.....                 | 50        |
| 4.5.2.    | Initiatives - Bottom up revised efficiency.....                         | 52        |
| 4.6.      | Top Down Efficiency - Tangible Benefits .....                           | 54        |
| 4.6.1.    | Efficiency based on Indirect Benefits.....                              | 54        |
| 4.6.2.    | Efficiency based on Non-Financial Contributions to the business .....   | 55        |
| 4.7.      | Key Findings .....                                                      | 59        |
| <b>5.</b> | <b>IT Investment Program: Support and Sustain (S&amp;S) .....</b>       | <b>61</b> |
| 5.1.      | Background/Approach.....                                                | 61        |
| 5.2.      | PQL's evidence provided and basis for preferring Option 1 .....         | 64        |
| 5.2.1.    | Basis for recommending Option 1. ....                                   | 65        |
| 5.2.2.    | NPV Analysis.....                                                       | 65        |
| 5.2.3.    | Limitations of the evidence .....                                       | 65        |
| 5.3.      | Prudency-Investment Need.....                                           | 66        |
| 5.3.1.    | Regulatory Assessment Framework.....                                    | 69        |
| 5.3.2.    | OGW Assessment of Prudency .....                                        | 70        |
| 5.4.      | Efficiency - Cost Estimation.....                                       | 71        |
| 5.4.1.    | Efficiency methodology .....                                            | 71        |
| 5.5.      | Bottom Up Estimation .....                                              | 71        |
| 5.5.1.    | Efficiency adjustment for planned headcount and duration .....          | 71        |
| 5.5.2.    | Initiatives - Bottom up revised efficiency.....                         | 73        |
| 5.6.      | Top Down Efficiency - Tangible Benefits .....                           | 74        |
| 5.6.1.    | Efficiency based on Indirect Benefits.....                              | 75        |
| 5.6.2.    | Efficiency based on Non-Financial Contributions to the business .....   | 75        |
| 5.6.3.    | Option 1 - Recommended Option - Existing Platform Sustainability .....  | 75        |
| 5.7.      | Key Findings .....                                                      | 77        |
| <b>6.</b> | <b>IT Investment Program: Recurrent Capex and Devices.....</b>          | <b>79</b> |

|                     |                                                      |           |
|---------------------|------------------------------------------------------|-----------|
| 6.1.                | Recurrent Capex .....                                | 79        |
| 6.1.1.              | Historical comparability .....                       | 80        |
| 6.2.                | Client Devices .....                                 | 81        |
| 6.2.1.              | PQL's proposed action and justification.....         | 81        |
| 6.2.2.              | Prudency and efficiency .....                        | 81        |
| 6.3.                | Key findings.....                                    | 81        |
| <b>7.</b>           | <b>Concluding comments.....</b>                      | <b>82</b> |
| 7.1.                | Prudency .....                                       | 82        |
| 7.2.                | Efficiency .....                                     | 83        |
| 7.3.                | Summary of prudency and efficiency conclusions ..... | 84        |
| <b>Appendix A :</b> | <b>Benchmark rates.....</b>                          | <b>86</b> |
| A.1                 | Regulatory basis and precedent .....                 | 86        |
| A.2                 | Methodology overview .....                           | 86        |
| A.3                 | Detailed method .....                                | 87        |
| A.3.1               | Salary data source and role mapping .....            | 87        |
| A.3.2               | Raw hourly rate .....                                | 87        |
| A.3.3               | On-costs .....                                       | 87        |
| A.3.4               | Overheads.....                                       | 88        |
| A.3.5               | Combined multiplier and benchmark rates .....        | 88        |
| A.3.6               | Price base and escalation .....                      | 88        |
| A.3.7               | Adaptations from the AER method .....                | 88        |
| A.4                 | Application to Powerlink IT rates.....               | 89        |
| A.5                 | Outcomes .....                                       | 89        |
| A.6                 | Revised rate schedule (\$FY2025-26) .....            | 91        |
| <b>Appendix B :</b> | <b>SAP System Module Review .....</b>                | <b>95</b> |

## Executive summary

The Australian Energy Regulator (AER) engaged Oakley Greenwood (OGW), together with Cell Engineering, to review aspects of the information and communication technology (ICT) and cyber security expenditure that Powerlink Queensland (PQL) has proposed for the 2027-32 regulatory control period (the next RCP). Our review covers PQL's proposed non-network ICT and cyber security expenditure across five programs – IT/OT cyber security, Enterprise Asset Management (EAM), Health, Safety and Environment (HSE), IT support and sustain (S&S), and recurrent ICT capex and client devices – assessed against the expenditure criteria and objectives in Chapter 6A of the National Electricity Rules (NER). This report is intended to assist the AER in its Draft Determination on PQL's revenue requirements for the next RCP.

Overall, PQL's demonstration of the prudence of its proposed investment is mixed. We accept the investment need for the recurrent ICT capex and client devices program in full, and we accept the need to sustain the current level of cyber security defence maturity (cyber Initiative 1). For the EAM, HSE and S&S programs, PQL makes a credible case at the corporate level, but the case for the specific preferred option in each is incomplete: detailed risk registers and the mapping of initiatives to the risks they are intended to mitigate remain outstanding and can be addressed in the revised proposal; the residual risk ratings underpinning the HSE and S&S justifications are unsupported; and an enterprise-level evaluation of options – including the synergies available from consolidating onto the SAP [REDACTED] platform in parallel with the EAM program – has not been performed.

We were also unable to conclude that cyber Initiatives 2 and 3 are prudent. Both propose capability uplift beyond the sustainment of existing maturity already provided by Initiative 1, and the incremental need has not been substantiated: for Initiative 2, the SOCI Act compliance driver relies on a Security Profile target above PQL's only current obligation (an existing CIRMP already maintained above the SP-1 baseline), while for Initiative 3 no quantification of the financial or risk-reduction benefit of the proposed reactive and proactive capabilities has been provided. As neither uplift is supported by an NPV analysis, we have excluded both from the prudent and efficient forecast.

On efficiency, we tested PQL's cost estimates using top-down benchmarks and a bottom-up build of planned headcount, duration and labour rates. Our labour rates were benchmarked using the AER's established method (Attachment 16 to the AER's Ergon Energy 2025-30 Draft Decision), updated to the Hays Salary Guide FY25/26 Technology occupation set. Applying these benchmarks, together with adjustments to headcount and project durations where they departed from industry norms, we identified efficiency reductions in each of the cyber security, EAM, HSE and S&S programs. Across those programs, PQL's cost estimates have generally not been third-party validated or market tested, and tangible benefits – although described qualitatively – have not been quantified or netted off in PQL's NPV analyses; for the EAM program alone these benefits could offset up to approximately \$8.76M of the proposed expenditure.

Our concluded prudence position and revised expenditure for each program are summarised in Table ES.1. The revised amounts are stated on the basis described in the relevant program section and, because the cyber security and recurrent figures are whole-of-program while the EAM, HSE and S&S figures are the bottom-up totex for the preferred option, they are not directly additive across programs. Our conclusions are based on the available information provided by Powerlink in its initial proposal and their subsequent Information Request responses. Our detailed findings are set out in Sections 2 to 6, our overall conclusions in Section 7, and the benchmark labour rates methodology in Appendix A.

Table ES.1: Summary of OGW concluded position by program (\$FY27 real)

| Program                            | PQL proposed | OGW revised | Concluded position                                                                                                                                                                    |
|------------------------------------|--------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IT/OT cyber security               | \$96.05M     | \$34.02M    | Initiative 1 prudent and efficiency-adjusted (10.5 FTE); Initiatives 2 and 3 not established as prudent and excluded                                                                  |
| Enterprise Asset Management (EAM)  | \$25.23M     | \$20.01M    | Investment need plausible but case not supported based on available information; duration and rate adjusted; tangible benefits (up to ~\$8.76M) not yet netted off                    |
| Health, Safety & Environment (HSE) | \$5.37M      | \$4.78M     | Corporate need accepted; option selection and risk-based justification not established; rate-adjusted only (FTE count not able to be assessed)                                        |
| Support & Sustain (S&S)            | \$8.36M      | \$7.08M     | Corporate need accepted; option and risk-based justification incomplete; duration and rate adjusted. Investment need plausible but case not supported based on available information. |
| Recurrent capex & client devices   | \$16.11M     | \$16.11M    | Prudent and efficient on the basis of historical expenditure trends                                                                                                                   |

## 1. Introduction

The AER has engaged Oakley Greenwood (OGW), together with Arche Energy, to review and provide advice on aspects of Powerlink Queensland's (PQL) proposed expenditure over the 2027-32 regulatory control period (next RCP) relating to information and communication technology (ICT). This encompasses PQL's information technology (IT), operational technology (OT) and IT/OT cyber security expenditure.

Our review is based on information that PQL provided in support of its Revenue Proposal and on aspects of the National Electricity Rules (NER) relevant to the assessment of expenditure allowances for a Transmission Network Service Provider (TNSP).

### 1.1. Purpose of this report

The purpose of this report is to provide the AER with a technical review of aspects of the ICT and cyber security expenditure that PQL has proposed in its Revenue Proposal for the next RCP.

The assessment contained in this report is intended to assist the AER in its own analysis of the proposed expenditure allowance as an input to its Draft Determination on PQL's revenue requirements for the next RCP.

### 1.2. Scope of requested work

Our scope of work, covered by this report, is as defined by the AER. Relevant aspects of this are summarised:

*Scope of work covered by this report.*

*The scope of this review, as requested by the AER, covers PQL's proposed non-network ICT and cyber security expenditure for the 2027-32 RCP, comprising:*

- *IT/OT cyber security – capex, related project opex and opex step changes*
- *Enterprise Asset Management (EAM)*
- *Health, Safety and Environment (HSE)*
- *IT support and sustain (S&S)*
- *Recurrent ICT capex and client devices*

*Our review addresses both capex (ex ante) and related opex, and both recurrent (refresh/sustain) and non-recurrent (capability uplift) expenditure within these programs.*

Other aspects of PQL's expenditure – including network replacement (repex) and augmentation (augex), and non-ICT opex – are outside the scope of this report and are addressed in the AER's separate reviews.

### 1.3. Our review approach

In conducting this review, we first reviewed the Revenue Proposal documents that PQL submitted to the AER. This includes PQL's ICT and digital business cases, a range of supporting appendices and attachments, and certain Excel cost models which are relevant to our scope.

We next collated several information requests (IRs). The AER combined these with IR topics from its own review and issued these to PQL.

Our review team engaged with PQL, including through on-site meetings and workshops on the scoped topics, which provided the opportunity to consolidate our understanding of its proposal.

PQL provided the AER with responses to information requests and, where they added relevant information, these responses are referenced within this review.

We have subjected the findings presented in this report to our peer review and Quality Assurance processes, and we presented summaries of our findings to the AER prior to finalising this report.

### 1.3.1. Conformance with NER requirements

In undertaking our review, we have been cognisant of the relevant aspects of the NER under which the AER is required to make its determination, together with relevant AER guidelines. As PQL is a TNSP, the relevant expenditure provisions are contained in Chapter 6A of the NER (rather than Chapter 6, which applies to distribution).

#### ***Capex objectives and criteria***

The most relevant aspects of the NER in this regard are the 'capital expenditure criteria' and the 'capital expenditure objectives.' Specifically, the AER must accept the TNSP's capex forecast included in its Revenue Proposal if it is satisfied that the forecast reasonably reflects the capital expenditure criteria, and these in turn reference the capital expenditure objectives.

The NER's capital expenditure criteria and capital expenditure objectives, as they apply to a TNSP, are reproduced in Figure 1.2 and Figure 1.3.

#### *NER capital expenditure criteria*

*The AER must accept the forecast of required capital expenditure of a Transmission Network Service Provider that is included in a Revenue Proposal if the AER is satisfied that the total of the forecast capital expenditure for the regulatory control period reasonably reflects each of the following (the capital expenditure criteria):*

- (1) the efficient costs of achieving the capital expenditure objectives;*
- (2) the costs that a prudent operator would require to achieve the capital expenditure objectives; and*
- (3) a realistic expectation of the demand forecast and cost inputs required to achieve the capital expenditure objectives.*

Source: NER 6A.6.7(c) Forecast capital expenditure.

#### *NER capital expenditure objectives*

*A Revenue Proposal must include the total forecast capital expenditure for the relevant regulatory control period which the Transmission Network Service Provider considers is required in order to achieve each of the following (the capital expenditure objectives):*

- (1) meet or manage the expected demand for prescribed transmission services over that period;*
  - (2) comply with all applicable regulatory obligations or requirements associated with the provision of prescribed transmission services;*
  - (3) to the extent that there is no applicable regulatory obligation or requirement in relation to:*
    - (i) the quality, reliability or security of supply of prescribed transmission services; or*
    - (ii) the reliability or security of the transmission system through the supply of prescribed transmission services,*
- to the relevant extent:*
- (iii) maintain the quality, reliability and security of supply of prescribed transmission services; and*
  - (iv) maintain the reliability and security of the transmission system through the supply of prescribed transmission services;*

*(4) maintain the safety of the transmission system through the supply of prescribed transmission services; and*

*(5) contribute to achieving emissions reduction targets through the supply of prescribed transmission services.*

Source: NER 6A.6.7(a) Forecast capital expenditure.

### ***Opex objectives and criteria***

The most relevant aspects of the NER in this regard are the 'operating expenditure criteria' and the 'operating expenditure objectives.' The NER's opex criteria and opex objectives, as they apply to a TNSP, are reproduced in Figure 1.4 and Figure 1.5.

#### *NER operating expenditure criteria*

*The AER must accept the forecast of required operating expenditure of a Transmission Network Service Provider that is included in a Revenue Proposal if the AER is satisfied that the total of the forecast operating expenditure for the regulatory control period reasonably reflects each of the following (the operating expenditure criteria):*

*(1) the efficient costs of achieving the operating expenditure objectives;*

*(2) the costs that a prudent operator would require to achieve the operating expenditure objectives; and*

*(3) a realistic expectation of the demand forecast and cost inputs required to achieve the operating expenditure objectives.*

Source: NER 6A.6.6(c) Forecast operating expenditure.

#### *NER operating expenditure objectives*

*A Revenue Proposal must include the total forecast operating expenditure for the relevant regulatory control period which the Transmission Network Service Provider considers is required in order to achieve each of the following (the operating expenditure objectives):*

*(1) meet or manage the expected demand for prescribed transmission services over that period;*

*(2) comply with all applicable regulatory obligations or requirements associated with the provision of prescribed transmission services;*

*(3) to the extent that there is no applicable regulatory obligation or requirement in relation to:*

*(i) the quality, reliability or security of supply of prescribed transmission services; or*

*(ii) the reliability or security of the transmission system through the supply of prescribed transmission services,*

*to the relevant extent:*

*(iii) maintain the quality, reliability and security of supply of prescribed transmission services; and*

*(iv) maintain the reliability and security of the transmission system through the supply of prescribed transmission services; and*

*(4) maintain the safety of the transmission system through the supply of prescribed transmission services; and*

*(5) contribute to achieving emissions reduction targets through the supply of prescribed transmission services.*

Source: NER 6A.6.6(a) Forecast operating expenditure.

### ***Relevant AER guidelines***

PQL's ICT and cyber security expenditure is categorised as non-network ICT. In assessing it, we have also had regard to the AER's Non-network ICT capex assessment approach guideline (2019) and the AER's Expenditure Forecast Assessment Guideline for Electricity Transmission. The ICT guideline requires proposed non-recurrent ICT expenditure to be allocated across three subcategories – (i) maintaining existing services, functionalities, capability and/or market benefits; (ii) complying with new or altered regulatory obligations or requirements; and (iii) new or expanded ICT capability, functions and services – with a different assessment emphasis (including, where relevant, a positive-NPV or least-cost expectation) applying to each.

For the cyber security program specifically, we have taken account of PQL's obligations under the Security of Critical Infrastructure Act 2018 (SOCIA Act) and its use of the Australian Energy Sector Cyber Security Framework (AESCSF) as the reference framework for assessing and targeting its cyber security maturity.

***How we have interpreted the expenditure criteria and objectives in our assessment***

We have taken particular note of the following aspects of the capex and opex criteria and objectives:

Drawing on the wording of the first and second criteria, our findings refer to efficient and prudent expenditure. We interpret this as encompassing the extent to which the need for a project, program or opex item has been prudently established, and the extent to which the proposed solution can be considered to be an appropriately justified and efficient means for meeting that need.

The criteria require that the forecast 'reasonably reflects' the expenditure criteria, and the third criterion refers to a 'realistic expectation'. In our review we have sought to allow for a margin as to what is considered reasonable and realistic, and we have formulated negative findings where we consider that a particular aspect is outside of those bounds.

We note the wording 'meet or manage' in the first objective, encompassing the need for the NSP to show that it has properly considered demand management and non-network options.

We tend towards a strict interpretation of compliance (under the second objective), with the onus on the NSP to evidence specific compliance requirements rather than to infer them.

We note the word 'maintain' in objectives 3 and 4 and, accordingly, we have sought evidence that the NSP has demonstrated that the proposed expenditure is required to reasonably maintain – as opposed to enhancing or diminishing – the aspects referred to in those objectives.

### 1.3.2. Technical review

Our assessments comprise a technical review. While we are aware of stakeholder inputs on aspects of what PQL has proposed, our technical assessment framework is based on engineering considerations and economics.

We have sought to assess PQL's expenditure proposal based on PQL's own analysis and its own assessment of technical requirements and economics, together with the analysis it has provided to support its proposal. Our findings are therefore based on this supporting information and, to the extent that PQL may subsequently provide additional information or a varied proposal, our assessment may differ from the findings presented in the current report.

We have been provided with a range of reports, internal documents, responses to information requests and modelling in support of what PQL has proposed, and our assessment takes account of this range of information. To the extent that we found discrepancies in this information, our default position is to revert to PQL's Revenue Proposal documents, as provided on its submission date, as the 'source of record' in respect of what we have assessed.

## 1.4. This report

### 1.4.1. Report structure

In the following assessment sections, for each ICT program in scope we have presented:

an overview of the proposed expenditure and a summary of PQL's justification for that expenditure;

our assessment of the prudence of the investment need and the efficiency of the proposed cost estimate, drawing on both top-down and bottom-up analysis; and

our key findings and the implications of those findings for the expenditure allowance to be determined by the AER in its Draft Determination.

The report addresses, in turn, the IT/OT cyber security, EAM, HSE, and support and sustain (S&S) programs, followed by recurrent ICT capex and client devices. We also provide Appendix A, setting out our benchmark IT labour rates methodology and revised rate schedule.

We have taken as read the considerable volume of material and analysis that PQL provided, and we have not sought to replicate this in our report except where we consider it to be directly relevant to our findings.

### 1.4.2. Information sources

We have examined relevant documents that PQL has published and/or provided to the AER in support of the areas of focus and programs that the AER has designated for review. This included further information provided at meetings and further documents provided in response to our information requests. These documents are referenced directly where they are relevant to our findings.

Except where specifically noted, this report was prepared based on information provided prior to the finalisation of this report, and any information provided subsequent to that time may not have been taken into account.

Unless otherwise stated, documents that we reference in this report are PQL documents comprising its Revenue Proposal and including the various appendices and annexures to that proposal.

We also reference responses to information requests, using the format IR#XXX being the reference numbering applied by the AER.

### 1.4.3. Presentation of expenditure amounts

Expenditure is presented in this report in real FY2026-27 terms (\$FY27 real), unless stated otherwise. In some cases, we have converted to this basis from information provided by the business in other terms.

While we have endeavoured to reconcile expenditure amounts presented in this report to source information, in some cases there may be discrepancies in the source information provided to us and minor differences due to rounding. Any such discrepancies do not affect our findings.

## 2. IT Investment Program: IT/OT Cyber Security

### 2.1. Background/Approach

Option 1 Preferred Option: Prudent and Proactive Cyber Security Management (NPV IT:-\$28.3M, OT:-\$27.8M)

Powerlink (PQL) have presented three primary initiatives that comprise the 2027-2032 Revenue Proposal for Cyber Security;

- Sustaining Cyber Security Defence Maturity
- SOCI Act and Proactive Risk Mitigation
- Managing the Evolving Cyber Security Threat

Each of these initiatives are comprised of a combination of IT Capex, IT Project Opex, OT Capex, and Sec. Systems Capex (Refer Table 1 to Table 3). The detailed IT investment plan provided by PQL as part of the response to IR#012A shows continued expenditure across all three initiatives for the duration of the RCP.

Table 1: Initiative 1: Sustaining cyber security defence maturity (\$FY27 real)

| Description  | IT Capex | IT Opex | OT Capex | Sec Systems Capex | Totex   |
|--------------|----------|---------|----------|-------------------|---------|
| ■ [REDACTED] | \$4.0M   | \$14.8M | \$19.0M  | -                 | \$37.9M |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |

Table 2: Initiative 2: SOCI Act and proactive risk mitigation (\$FY27 real)

| Description  | IT Capex | IT Opex | OT Capex | Sec Systems Capex | Totex   |
|--------------|----------|---------|----------|-------------------|---------|
| ■ [REDACTED] | -        | \$12.4M | \$5.5M   | \$20.5M           | \$38.4M |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |

Table 3: Initiative 3: Managing the evolving cyber security threat (\$FY27 real)

| Description  | IT Capex | IT Opex | OT Capex | Sec Systems Capex | Totex   |
|--------------|----------|---------|----------|-------------------|---------|
| ■ [REDACTED] | \$5.5M   | \$11.2M | \$3.6M   | -                 | \$20.3M |
| ■ [REDACTED] |          |         |          |                   |         |
| ■ [REDACTED] |          |         |          |                   |         |

**Option 2 - (Alternate) Option: Cyber Security Defence Uplift and Risk Minimisation (NPV N/A)**

This option builds upon the investment cases comprising option 1 and PQL states it aims to minimise all viable risk by uplifting PQL's cyber security defences. This involves an increase in security profile level to SP-3 as well as the ongoing maintenance and operation of those defences.

Identified areas of investment are:

- Upgrade of the substation WAN connections and digital assets
- Physical and logical separation of IT and OT networks
- Additional identity and access management uplift
- Uplift in governance, tooling, and procedures
- Uplift in vulnerability management response capability
- Modifications and uplift to network architecture, documentation, and processes

**Base Case: Counterfactual (NPV N/A)**

The base case represents no investment in either of the presented options and has been presented as an unviable option by PQL.

**2.1.1. NPV Analysis**

Table 4: PQL's IT cyber security option NPV analysis

| NPV              |      | IT Cyber<br>Option 1:<br>Recommended | OT Cyber<br>Option 1:<br>Recommended | Option 2:<br>Alternative | Base Case |
|------------------|------|--------------------------------------|--------------------------------------|--------------------------|-----------|
| Capex            | \$ M | (8.7)                                | (43.2)                               |                          |           |
| Opex             | \$ M | (33.5)                               | -                                    |                          |           |
| Benefit          | \$ M | -                                    | -                                    |                          |           |
| Tax benefit/paid | \$ M | 11.4                                 | 8.6                                  |                          |           |
| Terminal value   | \$ M | 2.6                                  | 6.8                                  |                          |           |
| Total            | \$ M | (28.3)                               | (27.8)                               |                          |           |

PQL has provided the AER with separate NPV analyses for IT and OT. The analysis for both the IT cyber security program and the OT programs including secondary systems field engineering, were negative with a combined NPV of -\$56.1M. These analyses combine all three initiatives comprising option 1.

We note that PQL has not provided any risk offset benefit calculations based on cyber security investment as part of these analyses. We consider that a baseline risk established using single loss event (SLE) and annual rate of occurrence (ARO) with a cyber risk offset benefit would result in positive NPV values allowing for more accurate assessments of prudence for the investment.

PQL has not provided an NPV analysis for either of option 2 or the base case option. We note that the method in which PQL has calculated the NPV for option 1 would result in a larger negative value for option 2 due to the additive nature of the proposed investment. However, using this method the base case or counterfactual option of 'do nothing' would result in an NPV value of zero, the highest of the three options. We agree, however, that the base case is an unviable option due to the presented threat scenarios and rising risk.

We consider the prudency case incomplete and in order to conduct robust prudency analyses of the provided options, we require PQL to provide an NPV analysis for each option, preferably for each initiative within each option, showing adequate risk offset calculations.

Documentation reviewed:

- PQL - Appendix 4.06 - IT Plan 27-32 - January 2026 - CONFIDENTIAL
- PQL - IT/OT Cyber Security Program Investment Case - January 2026 - CONFIDENTIAL
- IR#012A
- IR#013
- IR#021
- IR#027

### 2.1.2. Key Limitations

- Estimate sheets and alignment with initiatives unclear. Our review of the estimations (P7, P83-P88, P99, P100) and how they contribute to the different IT and OT Initiatives is ambiguous and doesn't present a cohesive argument.

## 2.2. Prudency-Investment Need

PQL have defined their RCP investments for Cyber Security across three initiatives, the first of which aims to sustain the organisations cyber security defence maturity. Initiative 1 - "Sustaining Cyber Security Defence Maturity", can be summarised as PQL's intent to refresh and update existing capabilities and defence maturities against known schedules or timelines.

We consider the sustainment of existing cyber security defence capability outlined in Initiative 1 as a prudent investment. We consider an increase in risk associated with a decrease in investment is not acceptable and is commensurate with the base case. We note that maintaining the current level of cyber security defence maturity is prudent and requires managed uplift in services and capabilities as the threat landscape is constantly evolving.

Initiative 2 - SOCI Act and Proactive Risk Mitigation provided by PQL states the investment driver is SOCI act compliance. As a TNSP PQL is obligated to maintain a CIRMP under the SOCI act 2018 and has elected to align with the AESCSFv2 for its cyber security infrastructure. The AESCSFv2 provides a framework of practices and anti-practices across a number of domains that PQL is assessed against in order to determine their Security Profile level.

As a TNSP the AESCSFv2 classifies PQL at the top of the "High" band for criticality and recommends that PQL target the highest SP level of 3. This is currently not specified as an obligation but is instead indicated as a suggestion by the AESCSF.

PQL was assessed under the AESCSFv1 in 2019 and achieved [REDACTED] and have noted that this was commensurate with the average of other TNSPs. An additional assessment in 2025 against the AESCSFv2 saw PQL achieve a rating of [REDACTED]

Information provided in a workshop with AER by PQL indicates that the 2026 AESCSFv2 assessment resulted in a revised rating of [REDACTED]. It is unclear with the provided information if the proposed investments and work efforts are to regain the [REDACTED] rating with the same MIL's or if there is a different risk/value based approach.

PQL anticipates that the government will introduce mandatory cyber security maturity standards in the future and that this could require TNSPs to meet higher baseline requirements such as SP-3 ratings. Should PQL be designated a SoNS there are additional obligations that would impact cyber security investment requirements. It is unclear if these have been included in the revenue proposal.

We note that there are currently no regulatory obligations above SP-1 and that PQL has an existing CIRMP in place prior to the RCP with a higher SP rating. We consider that without a clear NPV analysis on investments in SOCI act compliance that are over and beyond sustainment of existing compliance and maturity defined by Initiative 1 that **investment in Initiative 2 is not prudent.**

We consider Initiative 3 as detailed by PQL to be investment in reactive capabilities and targeted proactive capabilities for cyber security defence. Without a clear NPV analysis on the financial or risk benefit of uplift of capabilities in these areas we consider that **investment in Initiative 3 is not prudent.**

### 2.3. Efficiency - Cost Estimation

PQL has not provided clear project/program cost estimates at the initiative level and has instead provided individual IT/OT/Sec Systems program/project costings. These programs and projects span across all three initiatives.

The programs that comprise the overall Cyber Security spend are:

- OT Cyber Security Program (SCFISM) Capex: \$19.25M Opex: -
  - The cost calculations for this program are based on the labour requirements which comprise 96% of the total spend with the remaining 4% allocated to vendors. The required resources equate to 7.2 FTEs annualised over the RCP with 3 specific cyber security specialists and 1.5 security analysts. PQL has presented the resourcing as a constant requirement for the period of the RCP. The entirety of the program has been classified as Capex.
  - The [REDACTED] replacement programs are costed external to the OT cyber security program.
- [REDACTED] (OT) (SCF002) Capex: \$4.11M Opex: -
  - The primary cost driver for this program is infrastructure at 79% which can be deemed to be the hardware assets being installed to replace the aging infrastructure. The remaining costs are labour and vendors. The required resources equate to 0.95 FTEs annualised over the RCP though the project has been detailed as a short 10 month project.
- [REDACTED] (OT) (SCF004) Capex: \$1.71M Opex: -
  - The primary cost driver for this program is infrastructure at 79% which can be deemed to be the hardware assets being installed to replace the aging infrastructure. The remaining costs are labour and vendors. The required resources equate to 0.95 FTEs annualised over the RCP though the project has been detailed as a short 14 month project.
- OT Security Management and Services Upgrade (SCF005) Capex: \$3.03M Opex: -

- The cost calculations for this program are based on the labour requirements which comprise 92% of the total spend with the remaining 4% allocated to vendors. The required resources equate to 1.2 FTEs annualised over the RCP. PQL has presented the resourcing as a constant requirement for the period of the RCP with the same resourcing levels for the design, construct/test, and deploy/hypercare phases. The entirety of the program has been classified as Capex.
- IT Cyber Security Program Capex: \$9.55M Opex: \$38.38M
  - The cost calculations for this program are based on the labour requirements which comprise 92% of the total spend. Of the labour costings, 24.9% of the spend is classified as Capex with the remaining as project Opex. The required resources equate to 20.8 FTEs annualised over the RCP, split between core program delivery and targeted capability delivery. The combined requirements are for 6 specific cyber security specialists and 6 security analysts. PQL has presented the resourcing as a constant requirement for the period of the RCP.
- Secondary Systems Field Engineering Capex: \$20.52M Opex: -
  - PQL has provided a per site cost breakdown at \$205K with a projected execution rate of 20 sites per year for the duration of the RCP totalling 100 sites. The cost breakdown is indicative of standard hardware replacement, and it is assumed that these costs have been prepared based on previous expenditure as no additional data has been provided.

We note that the cost breakdown provided by PQL for the three initiatives provided for comparison in Table 5 do not match the **total of the projects and programs that comprise the overall cybersecurity estimates. There is an approximate reduction of \$3M from the infrastructure and increase of \$3M to labour in the project/program calculations. It is not clear where the misalignment in attribution of expenditure estimates originated.**

Table 5: Difference in PQL investment case to project estimate

|                | Investment Case Total | Project/Program Total |
|----------------|-----------------------|-----------------------|
| TOTEX          | \$96,500,000          | \$96,535,455          |
| Labour         | \$80,700,000          | \$83,789,701          |
| Vendors        | \$5,000,000           | \$4,936,072           |
| Software       | \$1,000,000           | \$1,026,011           |
| Infrastructure | \$9,800,000           | \$6,783,669           |

We also note that there are discrepancies in the indicated investment amounts proposed in the investment proposal presented by PQL and the amounts indicated in the detailed investment plans and investment roadmaps also provided by PQL.

PQL has provided cost estimates for work efforts to reconcile AESCSF SP rating shortcoming for IT and OT streams. No breakdowns between the streams have been provided for work efforts where both are applicable. The total expenditure for AESCSF reconciliation efforts is \$11.15M and it has to be assumed that this expenditure has been included in existing costings for IT and OT cyber security.

A selection of work packages has been provided by PQL as part of IR21 that details forty (40) work packages. Most, but not all align with ASD CIUP findings/recommendations and AESCSF domains. These work packages account for 18 months of program activities; however, PQL's staffing for BAU is for the full term of the RP and is unaccounted for.

It should be noted that the IT/OT cyber security teams will be providing consulting and integration services only to the NGNO project which will be providing its own cyber management plan. This detail was provided in the business case scope overview as part of IR21 response.

## 2.4. Top Down benchmarks

Table 6 provides a comparison of other NSPs cyber expenditure. Raw comparisons between NSPs with regards to cyber security Totex spend in relation to number of employees or operating substations is indicative only and such high-level comparisons miss specific program details. Such details include the separate System security OT contingent project that Transgrid has proposed in 2026.

Other NSPs targeting SP3 with much lower Totex investments with the possible exception of Transgrid. PQL has provided no peer comparisons in the investment proposals.

Table 6: PQL Peer cyber security expenditure comparison

| NSP                | FTEs              | Substations | Totex (Cyber)                   | Totex/Substation | Totex/FTE |
|--------------------|-------------------|-------------|---------------------------------|------------------|-----------|
| PQL                | 1937 <sup>1</sup> | 152         | \$96.6M<br>(FY27)               | \$0.65M          | \$49.6k   |
| Electranet         | 565 <sup>2</sup>  | 99          | \$18.2M <sup>4</sup><br>(FY23)  | \$0.26M          | \$45.8K   |
| Transgrid          | 1537 <sup>3</sup> | 104         | \$18M <sup>6</sup><br>(FY23)    | \$0.13M          | \$11.7K   |
| Ausgrid<br>(DNSP)  | 3182 <sup>2</sup> | N/A         | \$70.3M <sup>5</sup><br>(FY24)  | N/A              | \$22.1K   |
| SA Power<br>(DNSP) | 2900 <sup>2</sup> | N/A         | \$71.35M <sup>7</sup><br>(FY25) | N/A              | \$24.6K   |

<sup>1</sup> Total prescribed and non-prescribed FTEs as noted in PQL's 2024/2025 Annual Report

<sup>2</sup> Approximation based on industry profilers

<sup>3</sup> Revised forecast for 2022-23, Transgrid 2023-28 Revised Revenue Proposal

<sup>4</sup> OPEX Step change, AER Electranet Final Decision ElectraNet transmission determination 1 July 2023 to 30 June 2028

<sup>5</sup> Adjusted Totex, Ausgrid 2024 to 2029 Regulatory Proposal review of proposed expenditure on ICT cyber security

<sup>6</sup> Reduced from the original 2023-2038 RCP estimate of \$25M as part of the 2023-2028 Investment proposal

<sup>7</sup> SAPN 2025/26 to 2029/30 Regulatory Proposal Review of Cyber Security and ADMS Expenditure Forecast

The FTE staffing figure provided by PQL referenced in the above table contains both prescribed and non-prescribed staff. We note that in this total 949 FTEs are prescribed and 988 are non-prescribed. PQL has not provided any further detail on the breakdown of prescribed to non-prescribed Cybersecurity FTE staffing figures. We consider that without sufficient detail for the ratio of prescribed to non-prescribed cybersecurity work efforts by nominated FTEs that we would be unable to ascertain more direct comparisons to PQL's peers.

## 2.5. Bottom up estimate

As noted previously PQL has provided detailed estimates for projects that span across the three initiatives and has not provided proportionate allocation of these estimates to these initiatives making bottom up appraisal difficult. We have adopted a different approach for the revised budget for the initiatives. We have used the project estimates to determine a percentage change based on our changes to the labour rates for an efficient and prudent organisation.

We have adopted a top down approach to determine the FTEs for the Initiative 1 only that we deem prudent.

### 2.5.1. Efficiency adjustment for rates

OGW has applied rate benchmarks using AER's methodology<sup>1</sup> to derive benchmark rates for different job positions based on an efficient and prudent organisation. Details of the methodology applied are available in Appendix A. Of key consideration are the daily rates for the roles specified in Table 7 compared to the OGW benchmark rates. We note that there have been different rates applied between the IT stream Cyber Security Specialist position, and the OT stream Cyber Security "Team" position. In this instance we assume that the "Team" description is equivalent to the Specialist role and have applied the lower rate for the purposes of adjustments. We do not currently have suitable comparative rates for the Digital and Telecom Networks, and System Integration positions listed in the OT resourcing models. We have not adjusted these position rates due to their low head count.

Table 7: PQL Role Daily Rate Comparison

| Role                             | PQL Rate (Daily) | OGW Benchmark (Daily) |
|----------------------------------|------------------|-----------------------|
| Project Coordinator              | \$840            | \$761                 |
| IT Security Analyst              | \$1,850          | \$1,713               |
| Change Management Specialist     | \$2,770          | \$1,523               |
| Application Specialist           | \$1,200          | \$1,142               |
| Senior IT Infrastructure Analyst | \$1,770          | \$1,428               |

Using the OGW benchmark rates for a prudent and efficient organisation, we have recalculated the project estimates<sup>2</sup> provided by PQL to determine the % change as shown in Table 8.

Table 8: OGW Revised labour spend analysis based on rates (\$FY27 real)

| Project/Program                  | Initiatives | PQL Original | OGW Revised  | % change of total | % change of Labour |
|----------------------------------|-------------|--------------|--------------|-------------------|--------------------|
| IT Cyber Security Program P_7    | 1-3         | \$47,937,508 | \$45,329,059 | -5.44%            | -5.93%             |
| OT Cyber Security Program SCFISM | 1-3         | \$19,249,358 | \$17,420,021 | -9.50%            | -9.88%             |
| ██████████ Renewal (OT) SCF002   | 1           | \$4,107,103  | \$4,071,976  | -0.86%            | -4.71%             |

<sup>1</sup> AER, Ergon Energy 2025-30 draft decision, Attachment 16.

<sup>2</sup> P\_7, SCFISM, SCF005, SCF002, and SCF004 initiative estimates.

|                                           |   |             |             |        |         |
|-------------------------------------------|---|-------------|-------------|--------|---------|
| Renewal<br>(OT) SCF004                    | 1 | \$1,714,752 | \$1,688,659 | -1.52% | -4.65%  |
| OT Sec Mgmt & Svcs<br>Upgrade (OT) SCF005 | 1 | \$3,026,734 | \$2,725,086 | -9.97% | -11.14% |

We have considered adjustment to the only prudent program - Initiative 1. PQL has stated that Initiative 1 accounts for \$17.3M of labour spend for the IT Cyber Security Program (P\_7). Without further attribution of project estimates across the Initiatives, we assume that an unweighted rate reduction of 5.93% applies across all three initiatives based on the evidence presented and calculations in Table 8. This calculation results in a reduction of labour spend in Initiative 1 for IT Cyber Security of \$1.03M for a total of \$16.26M.

The same analysis and assumptions have been applied by OGW to the OT Cyber Security program and projects. The total OT labour spend for Initiative 1 is stated by PQL as \$12.16M with an attribution of \$8.15M from the OT Cyber Security Program once the sub-project totals are subtracted due to the OT Roadmap stating that the firewall renewal projects, and the Security Management and Services Upgrade project are included within Initiative 1. Applying the total reduction for the sub-projects, and a partial reduction for the OT Cyber Security program in the same manner as the IT cyber security program results in a total reduction of \$0.81M for a total of \$7.34M. Combined with the reduction for the sub-projects, the total OT Cyber security labour spend would be reduced to \$10.99M.

Table 9: PQL Revised expenditure for Initiative 1 based on IT Cyber Security Program (\$FY27 real)

|                |      | Proposed |       |       | Adjustment |        | Final |       |       |
|----------------|------|----------|-------|-------|------------|--------|-------|-------|-------|
|                |      | Opex     | Capex | Total | Opex       | Capex  | Opex  | Capex | Total |
| Labour         | \$ M |          |       |       |            |        |       |       |       |
| Vendors        | \$ M |          |       |       |            |        |       |       |       |
| Software       | \$ M |          |       |       |            |        |       |       |       |
| Infrastructure | \$ M | -        | -     | -     | -          | -      | -     | -     | -     |
| Total          | \$ M | 14.80    | 4.00  | 18.80 | (0.71)     | (0.39) | 14.09 | 3.67  | 17.76 |

Table 10: PQL Revised expenditure for Initiative 1 based OT Cyber Security Program (\$FY27 real)

|        |      | Proposed |       |       | Adjustment |       | Final |       |       |
|--------|------|----------|-------|-------|------------|-------|-------|-------|-------|
|        |      | Opex     | Capex | Total | Opex       | Capex | Opex  | Capex | Total |
| Labour | \$ M | -        |       |       |            |       |       |       |       |

|                |      | Proposed |       |       | Adjustment |        | Final |       |       |
|----------------|------|----------|-------|-------|------------|--------|-------|-------|-------|
|                |      | Opex     | Capex | Total | Opex       | Capex  | Opex  | Capex | Total |
| Vendors        | \$ M | -        |       |       |            |        |       |       |       |
| Software       | \$ M | -        | -     | -     | -          | -      | -     | -     | -     |
| Infrastructure | \$ M | -        | -     | -     | -          | -      | -     | -     | -     |
| Total          | \$ M | -        | 8.58  | 8.58  | -          | (0.81) | -     | 7.77  | 7.77  |

Table 11: PQL Revised expenditure for Initiative 1 for (OT) (SCF002) (\$FY27 real)

|                |      | Proposed |       |       | Adjustment |        | Final |       |       |
|----------------|------|----------|-------|-------|------------|--------|-------|-------|-------|
|                |      | Opex     | Capex | Total | Opex       | Capex  | Opex  | Capex | Total |
| Labour         | \$ M | -        |       |       |            |        |       |       |       |
| Vendors        | \$ M | -        |       |       |            |        |       |       |       |
| Software       | \$ M | -        | -     | -     | -          | -      | -     | -     | -     |
| Infrastructure | \$ M | -        |       |       |            |        |       |       |       |
| Total          | \$ M | -        | 4.11  | 4.11  | -          | (0.04) | -     | 4.07  | 4.07  |

Table 12: PQL Revised expenditure for Initiative 1 for Renewal (OT) (SCF004) (\$FY27 real)

|                |      | Proposed |       |       | Adjustment |        | Final |       |       |
|----------------|------|----------|-------|-------|------------|--------|-------|-------|-------|
|                |      | Opex     | Capex | Total | Opex       | Capex  | Opex  | Capex | Total |
| Labour         | \$ M | -        |       |       |            |        |       |       |       |
| Vendors        | \$ M | -        | -     | -     | -          | -      | -     | -     | -     |
| Software       | \$ M | -        | -     | -     | -          | -      | -     | -     | -     |
| Infrastructure | \$ M | -        |       |       |            |        |       |       |       |
| Total          | \$ M | -        | 1.71  | 1.71  | -          | (0.02) | -     | 1.69  | 1.69  |

Table 13: PQL Revised expenditure for Initiative 1 for OT Sec Mgmt &amp; Svcs Upgrade (SCF005) (\$FY27 real)

|                |      | Proposed |       |       | Adjustment |        | Final |       |       |
|----------------|------|----------|-------|-------|------------|--------|-------|-------|-------|
|                |      | Opex     | Capex | Total | Opex       | Capex  | Opex  | Capex | Total |
| Labour         | \$ M | -        |       |       |            |        |       |       |       |
| Vendors        | \$ M | -        |       |       |            |        |       |       |       |
| Software       | \$ M | -        | -     | -     | -          | -      | -     | -     | -     |
| Infrastructure | \$ M | -        | -     | -     | -          | -      | -     | -     | -     |
| Total          | \$ M | -        | 3.03  | 3.03  | -          | (0.30) | -     | 2.73  | 2.73  |

Table 14: PQL Revised expenditure for Initiative 1 for combined IT/OT (\$FY27 real)

|                |      | Proposed |       |       | Adjustment |        | Final |       |       |
|----------------|------|----------|-------|-------|------------|--------|-------|-------|-------|
|                |      | Opex     | Capex | Total | Opex       | Capex  | Opex  | Capex | Total |
| Labour         | \$ M |          |       |       |            |        |       |       |       |
| Vendors        | \$ M |          |       |       |            |        |       |       |       |
| Software       | \$ M |          |       |       |            |        |       |       |       |
| Infrastructure | \$ M | -        |       |       |            |        |       |       |       |
| Total          | \$ M | 14.80    | 21.43 | 36.54 | (0.71)     | (1.50) | 14.09 | 19.93 | 34.02 |

The total reduction to the Initiative 1 cost estimate when using the revised labour rates results in a reduction of \$2.25M for a total of \$34.02M.

#### 2.5.2. Efficiency adjustment for planned headcount and duration

PQL has provided labour resource estimates at a program level for the IT and OT cyber security programs. We find that there is not sufficient justification for the size of these teams with the provided evidence of work packages for the first 18 months of the RCP.

We note that industry benchmarks for cyber security professionals within an organisation such as PQL would indicate that the recommendation is for 1 dedicated cyber security team member for every 5-10 IT staff members, who in turn generally account for 1 in every 25 overall staff members<sup>3,4</sup> or a standard team composition of 10-15 staff. The total proposed headcount across the IT and OT cybersecurity programs, and the SCF005 program, has been proposed by PQL as 29.2 FTEs. This is exclusive of short term projects such as the firewall renewals, and secondary systems field engineering. This figure would place the ratio of cyber security team to total staff at 1.49:100, approximately 180% over the industry benchmark. We consider the nature of PQL's operations to be of higher risk than industry standard but would suggest staffing ratios closer to 0.5:100. Using Powerlink's 2025 published staff figure of 1947 and a conservative ration of 1:25 and 1:7.5 for IT and Cyber professionals the resultant Cyber team headcount would be approximately 10.4.

PQL have proposed a resourcing level of 29.2 FTEs across the IT and OT cyber security programs. We consider this to be an overly large labour projection using high-cost resources, especially for the IT program. Industry comparisons and benchmarking would suggest that a more reasonable resourcing level would be 24 FTEs with most of the reductions in labour occurring in the IT program.

We consider that noting the lack of prudence for Initiative 2 and Initiative 3 in the preferred investment option we propose a downwards adjustment of the investment amount. The reduction from excluding Initiative 2 is \$38.4M, the reduction from excluding Initiative 3 is \$20.3M, and the reduction from revised labour rates for Initiative 1 is \$2.17M. The remainder of the investment amount after these reductions is \$37.9M, down from the proposed \$96.6M. We note that a removal of labour resource estimates from Initiative 2 and Initiative 3 would indicate a drop of 64% of labour expenses for FTE's resulting in an approximate combined team size of **10.5 FTEs** which is in line with industry benchmarking.

## 2.6. Key Findings

We consider the prudence of the proposed cyber security investment in sustaining the current level of defence maturity as defined by Initiative 1 is reasonable. However, we also consider that a more detailed NPV analysis should be conducted using a risk based approach for sub-initiative or project inclusion in forecasting. There has been no NPV analysis provided for the alternative option, though the approach PQL has taken to calculate the NPV would invalidate it as a lower NPV option. We consider that a baseline risk established using SLE and ARO with a cyber risk offset would result in positive NPV values allowing for more accurate assessments of prudence for the investment.

Without clear NPV analyses for Initiatives 2 and 3 as part of the preferred option, and without clear regulatory obligation requirements that are not already being met, we are unable to consider Initiative 2 or Initiative 3 as prudent. Additional detail regarding these initiatives in subsequent proposals would be beneficial in determining their prudence for investment.

We find the three Initiatives of the investment proposal to have little alignment on the allocation of proposed project estimates in general. Based on OGW benchmark rates for a prudent and efficient organisation, we have instead calculated an efficiency adjustment percentage for the project estimates that span across all the Initiatives to determine an adjustment to the prudent Initiative 1.

<sup>3</sup> 1 DOT Security, "IT Staffing Ratios: How Big Should Your Team Be?", <https://dotsecurity.com/insights/blog-it-staffing-ratios>.

<sup>4</sup> 2 NinjaOne, "IT Staffing Ratio Guide: How Many IT Staff Do You Need?", <https://www.ninjaone.com/blog/it-staffing-ratio/>

We have also considered that the efficient headcount based on the size of PQL and the number of FTE's nominated for Initiative 1 only; down from a proposed 29.2 FTEs to approximately 10.5 FTEs, align closely and are in line with industry metrics (Refer Section 2.5.2).

The total reduction to the Initiative 1 cost estimate is a reduction of 2.25M for a total of \$34.02M. We consider the adjusted value of the investment proposal to be comparable to peer NSPs as outlined in Section 2.4. Table 15 provides an overall summary.

Table 15: Summary of adjusted budget forecasts for IT/OT Cyber Security

|              |      | Proposed |       |       | Adjustment |         | Final |       |       |
|--------------|------|----------|-------|-------|------------|---------|-------|-------|-------|
|              |      | Opex     | Capex | Total | Opex       | Capex   | Opex  | Capex | Total |
| Initiative 1 | \$ M | 14.80    | 23.10 | 37.90 | (0.71)     | (1.50)  | 14.09 | 19.93 | 34.02 |
| Initiative 2 | \$ M | 12.40    | 26.00 | 38.40 | -          | -       | -     | -     | -     |
| Initiative 3 | \$ M | 11.10    | 9.10  | 20.20 | -          | -       | -     | -     | -     |
| Total        | \$ M | 38.40    | 58.10 | 96.50 | (24.28)    | (38.40) | 14.12 | 19.70 | 34.02 |

### 3. IT Investment Program: Enterprise Asset Management (EAM)

*Enable improved Enterprise Asset Management, using PQL's foundational IT platforms (SAP, Digital Engineering and Strategic Data Management)*

*References: IR#13 initiative estimates and base case NPV calculation - EAM program*

#### 3.1. Background/Approach

PQL frames the EAM investment around two broad categories of need:

**Asset management continuous improvement.** Powerlink argues that while its asset management system is fundamentally sound, data fragmentation across multiple systems (SAP, the Portfolio Risk System, engineering document repositories, GIS, and various spreadsheet-based tools) creates inconsistency and limits decision-making quality.

The four continuous improvement focus areas are: consistent asset information model standards (including unique asset identification across the lifecycle); optimised asset information systems and processes; data governance improvement; and asset analytics and decision support (including future AI/ML capability).

**Technology sustainability and extensibility.** Powerlink argues that several existing systems are approaching end-of-life or are already unsupported. The four drivers here are: transition from the legacy SAP Plant Maintenance (PM) module to the modern SAP Enterprise Asset Management (EAM) suite; replacement of Excel-based manual asset data capture with [REDACTED] direct validation; consolidation of ratings and configuration data stores (currently in end-of-life repositories); and modernisation of the fragmented supply chain management environment.

The evidence provided by PQL identifies four inherent risks, all rated "4 - Significant":

- R1 System Supportability/Sustainability;
- R2 Asset Data Quality;
- R3 Supply Chain Management Effectiveness; and
- R4 Field Asset Data Risk.

Likelihoods range from C-Possible (R1, R2, R4) to B-Likely (R3). PQL's documentation does not validate, or explain why, these risks are assigned these ratings.

PQL considered three options.

#### Option 1 Preferred Option: EAM Program ( -\$15.7M NPV)

This is an improvement-within-existing-platforms approach. It builds on Powerlink's current SAP [REDACTED] investment by transitioning to the modern SAP EAM module and improving connected systems.

This option identifies and outlines improvements to current operational practices and current levels of service by integrating a number of activities that use manual or bespoke applications relating to field data, supply chain management, external access, and engineering/construction management. These expenditures are in addition to the current operating practices.

Table 16: PQL EAM Initiatives (\$)

| Initiative                                       | Description                                                                                                                                                                                                                                              | Capex   | Opex    | Totex   |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|
| 1:EAM System & Data Integration                  | Asset data will be consolidated into SAP [REDACTED] and a Common Data Environment, with a single asset model maintained across the full lifecycle from planning through to decommissioning.                                                              | \$0.49M | \$8.34M | \$8.83M |
| 2:Field Automation                               | Field crews will get mobile access to a consolidated view of asset information (specs, maintenance history, CAD drawings, safety data), and will be able to capture and update asset condition data in the field to feed back into maintenance planning. | \$0.25M | \$3.68M | \$3.93M |
| 3:Supply Chain Management                        | [REDACTED] will replace a fragmented, largely manual set of supply chain tools with an integrated platform covering sourcing, contracts, materials, inventory, and warehousing, with mobile access for field teams.                                      | \$0.57M | \$6.89M | \$7.45M |
| 4:Multi-environment & external Integration       | Curated access to asset, project, and operational data will be provided to a range of internal and external users (including contractors), improving insights for operations, planning, and decision-making.                                             | \$0.09M | \$1.91M | \$2.01M |
| 5:Digital Engineering Construction Establishment | Building on existing 3D design capabilities, Powerlink will adopt ISO 19650-aligned construction lifecycle management, covering advanced work planning, smart completions, and digital forms.                                                            | \$0.11M | \$2.89M | \$3.01M |

### Option 2 - Alternate Option (-\$25.2M NPV)

This is a more transformational option involving re-platforming asset management onto a new real-time digital twin system that would integrate SAP, AEMS operational data, IoT sensors, and GIS into a dynamic virtual representation of the asset base. It would add approximately \$15M over Option 1 (estimated at a \$12-18M range midpoint) to establish the Digital Twin foundation platform. Initiatives 2-5 are assumed to cost the same as Option 1. The Digital Twin partially addresses the SAP EAM Transition driver (marked "Partial" in the alignment table) because it does not focus on SAP's modern EAM capabilities directly, achieving similar outcomes through the Digital Twin instead. Timing is the same as Option 1.

**Option 3 - Base Case - Counterfactual (-\$16.1M NPV; deferred full investment)**

PQL would continue operating existing systems with reactive workarounds estimated at \$5.25M over the period (interim ratings database, configuration management, manual data capture improvements, SCM interfacing, and ad hoc rectification). Critically, the base case still assumes that Option 1 would be implemented approximately four years later (i.e., in the 2032-37 period) at equivalent real-terms cost – so it is not a "do nothing" scenario; it is a deferral scenario.

Section 3.4.2 of Powerlink's business case sets out the assumptions underlying its Base Case (Counterfactual). The opening assumption states that "No targeted investments will be made in asset management systems or related process improvements" - which might suggest a genuine do-nothing baseline. However, the same section immediately goes on to state that:

"Interim work-around actions will be taken, to enable ad hoc extensions as assumed below. These work-arounds may take the form of additional custom spreadsheet developments, macros, stand-alone databases, custom inter-system synchronisation interfaces and manual processes."

OGW's view is that PQL's own language acknowledges that the Base Case involves extending current system functionality (on an ad hoc, reactive basis) rather than simply sustaining it. This is inconsistent with a true do-nothing or maintain-only counterfactual.

PQL's forecast costs for each option, broken down by cost category and split between capex and project opex and project opex (FY27 real terms, pre-CAM), are summarised in Table 17.

Table 17: PQL's forecast costs for each option

| EAM Initiative Costs and Totals (FY27 Real Terms)       |                |                 |                 |
|---------------------------------------------------------|----------------|-----------------|-----------------|
| <b>Option 1: Existing EAM Systems Improvement</b>       |                |                 |                 |
| Cost Category                                           | Capex          | Project Opex    | Project Totals  |
| Labour                                                  |                |                 |                 |
| Vendors                                                 |                |                 |                 |
| Software                                                |                |                 |                 |
| Infrastructure                                          |                |                 |                 |
| <b>Totals</b>                                           | <b>\$1.52M</b> | <b>\$23.71M</b> | <b>\$25.23M</b> |
| <b>Option 2: EAM Real Time Digital Twin</b>             |                |                 |                 |
| Cost Category                                           | Capex          | Project Opex    | Project Totals  |
| Labour                                                  |                |                 |                 |
| Vendors                                                 |                |                 |                 |
| Software                                                |                |                 |                 |
| Infrastructure                                          |                |                 |                 |
| <b>Totals</b>                                           | <b>\$1.52M</b> | <b>\$38.70M</b> | <b>\$40.22M</b> |
| <b>Option 3: Base Case: Counterfactual</b>              |                |                 |                 |
| Cost Category                                           | Capex          | Project Opex    | Project Totals  |
| Interim ratings workaround(s)                           |                |                 |                 |
| Interim configuration management - database workarounds |                |                 |                 |

|                                                      |                |
|------------------------------------------------------|----------------|
| Manual data capture and validation                   | ██████         |
| Interim interfacing to Supply Chain Management tools | ██████         |
| Other ad hoc customisation and urgent work arounds   | ██████         |
| <b>Totals</b>                                        | <b>\$5.25M</b> |

### 3.2. Evidence Provided and Basis for Preferring Option 1

PQL's business case presents:

- a description of current system limitations and data fragmentation; a structured risk assessment framework (four inherent risks, likelihood/consequence ratings);
- an initiative-by-initiative bottom-up cost estimate using "standard labour rates and consistent delivery methods";
- PQL's NPV analysis is based on a 10-year horizon considering each of the three options proposed. The analysis did not include any benefits for Option 1 or Option 2. All options are a net cost with the only benefits resulting from tax benefits and terminal value.

In Section 3.5 of the Revenue Proposal, PQL delivers a side-by-side comparison and summarises the outcomes of each option against the eight investment drivers. This side-by-side comparison is provided within the business case as Table 17: Options Comparison.

PQL's basis for recommending Option 1:

Option 1 is recommended over Options 2 and 3 on the basis that:

- Option 1 addresses all eight of the identified investment drivers, whereas Option 2 addresses seven of the eight investment drivers and only partially addresses the eighth, "SAP EAM Transition", investment driver in favour of using a Real Time Digital Twin. In our opinion maintenance digital twin systems are more prudent for dynamic process applications and there is limited experience and application in transmission networks; and
- Option 1 has the best NPV at -\$15.7M versus -\$25.2M for Option 2 and -\$16.1M for the Base Case. On risk, both Options 1 and 2 achieve similar residual risk outcomes (ranging from 2-Low to 3-Moderate), while the base case leaves all risks unchanged at 4-Significant.

#### 3.2.1. NPV Analysis

Table 18: PQL's Option NPV analysis

| NPV              |             | Option 1:<br>Recommended | Option 2: Alternative | Base Case     |
|------------------|-------------|--------------------------|-----------------------|---------------|
| Capex            | \$ M        | (1.4)                    | (1.4)                 | (1.2)         |
| Opex             | \$ M        | (21.0)                   | (34.6)                | (22.3)        |
| Tax benefit/paid | \$ M        | 6.6                      | 10.7                  | 6.8           |
| Terminal value   | \$ M        | 0.1                      | 0.1                   | 0.6           |
| <b>Total</b>     | <b>\$ M</b> | <b>(15.7)</b>            | <b>(25.2)</b>         | <b>(16.1)</b> |

### 3.2.2. Limitations of the evidence

Benefits are almost entirely non-financial – they are characterised as risk mitigation, strategic contribution, and indirect operational efficiency. This is a significant limitation for NPV analysis since the benefits side of the NPV must be carrying this weight implicitly.

PQL provided Initiative Estimates for Option 1 and Option 2. While we understand the preliminary nature of the cost estimates, PQL has not provided any evidence or methodology in determining these bottom up estimates. No market testing has been discussed or provided to support that these internal estimates are the most efficient.

The \$15M additional Digital Twin cost is explicitly an estimate with a \$12-18M range – the midpoint is used in the Business Case NPV Calculation comparison without sensitivity analysis being presented.

The base case workaround costs (\$5.25M) and the assumption that Option 1 is deferred by four years (rather than permanently avoided) are internal PQL assumptions.

Risk ratings are self-assessed by PQL without reference to external benchmarks, independent validation or a detailed risk register.

Documentation reviewed:

- Powerlink - Appendix 4.06 - IT Plan 27-32 - January 2026 - CONFIDENTIAL
- Powerlink - IT02 Enterprise Asset Management - January 2026 - CONFIDENTIAL
- IR#012A
- IR#013
- OGW RFI Register - IT02 (RFIs IT02.01 to IT02.18)
- EAM Business Case Review (D. Harrison, Arche Energy), 23 June 2026
- SA Power Networks - Determination 2015-2020 Proposal, Attachment 20.40: IT Enterprise Management Business Case

### 3.3. Prudency-Investment Need

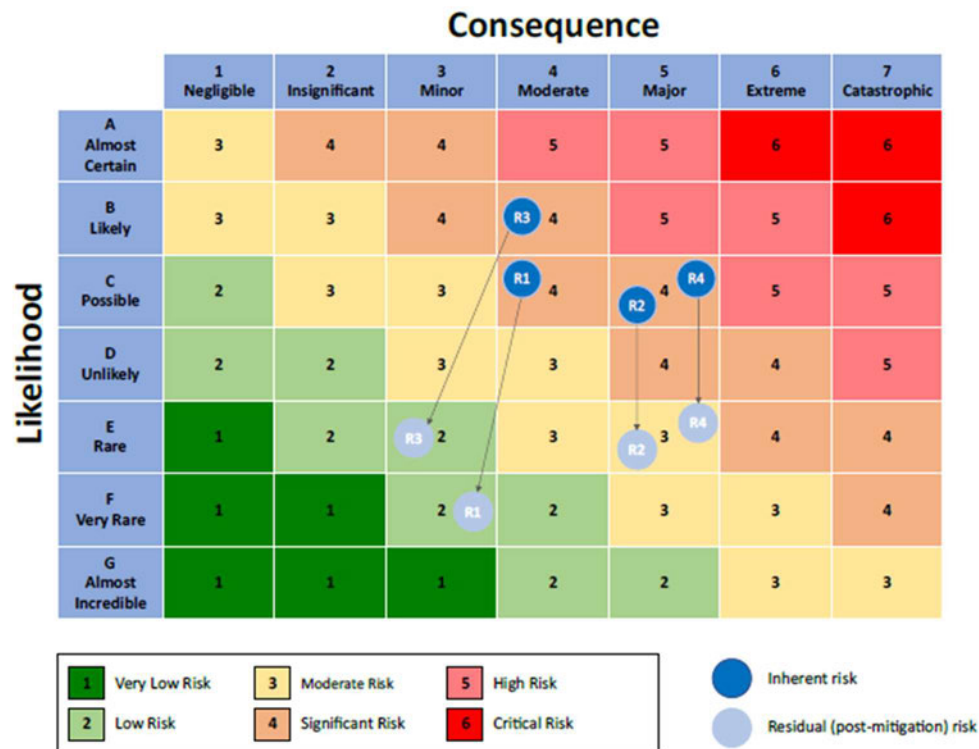
*Expenditure Guidance Classification / Threat Landscape / Current State of Maturity / Project Risks, Options Analysis and Selection*

PQL has presented a risk-based assessment to support the prudency for the different options. PQL identifies the risk level (Inherent risk) prior to the initiative and the residual risk level after the mitigation has been delivered. PQL has provided a qualitative description of the risk and residual risk based on the likelihood and consequence but fails to relate these back to the consequence and likelihood categories<sup>5</sup> and does not provide supporting information to substantiate the category ratings. In our view, the prudency is incomplete and unable to fully support the investment need. The risk assessment needs to document the key requirement tables identified in PQL's own Risk Assessment Matrix Checklist including any supporting quantitative information where possible.

5

RSK-CKL-A116508 Risk Assessment Matrix Checklist provides key consequence categories and threshold levels (2 Consequence Table) for - corporate strategy, financial and contractual, legal and compliance, stakeholder, network operations, safety, environment, people.

Figure 1: PQL risk assessment



OGW has requested the detailed risk register from PQL.

The risk assessment addresses four key risks to justify the investment:

- R1 System Supportability, Sustainability and Extensibility Risk - optimised, improved, or renewed for continuous asset management improvement
- R2 Asset Data Quality Risk - retire manual asset data practices
- R3 Supply Chain Management Effectiveness Risk - consolidation of supply chain systems and data with SAP to reduce/remove current manual and non-standardised practices
- R4 Field Asset Data Risk - updated platform to provide field access for timely asset configuration data and information

We consider that these risks and the mitigation controls are primarily about improvements to existing processes and practices in PQL that apply across the operational organisation. We expect that these improvements would lead to operational and cost efficiencies such as saved labour, improved accuracy and reduced rework. Our tangible benefits assessment in the Efficiency section below identifies and, where data permits, quantifies these benefits.

We reviewed PQL's inherent and residual risk ratings for the four identified risks (Refer Table 19). The table below summarises the inherent and residual risk ratings as used in the Revenue Proposal, together with our review commentary. In our view, PQL has not provided data to support the derivation of the residual likelihood and consequence ratings, and in two cases (R1 and R3) the residual consequence ratings appear understated.

Table 19: OGW's commentary on PQL risk assessment

| Risk                                                                             | Inherent Risk Rating | Residual Risk - Post Recommended Option | Commentary                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------|----------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Risk R1<br>System Supportability,<br>Sustainability and<br>Extensibility<br>Risk | 4 - Significant      | 2 - Low                                 | 1. No data to support derivation of Residual Consequence<br>2. If the nature of the Risk Consequence is unchanged how is a Consequence of 3 - Minor justified? OGW's view is that this should remain at 4 - Moderate giving a Residual Risk of F4: 2 - Low     |
| Risk R2<br>Asset Data Quality Risk                                               | 4 - Significant      | 3 - Moderate                            | 1. No data to support derivation of Residual Likelihood                                                                                                                                                                                                        |
| Risk R3<br>Supply Chain<br>Management<br>Effectiveness Risk                      | 4 - Significant      | 2 - Low                                 | 1. No data to support derivation of Residual Likelihood<br>2. If the nature of the Risk Consequence is unchanged how is a Consequence of 3 - Minor justified? OGW's view is that this should remain at 4 - Moderate giving a Residual Risk of E4: 3 - Moderate |
| Risk R4<br>Field Asset Data Risk                                                 | 4 - Significant      | 3 - Moderate                            | 1. No data to support derivation of Residual Likelihood                                                                                                                                                                                                        |

### 3.3.1. Typical Assessment Framework for AER Review

In reviewing this type of IT opex/capex business case, the standard AER framework asks whether the proposed expenditure is prudent (the need is genuine and the investment decision is reasonable, the preferred option delivers the highest net benefit of the options considered) and efficient (the scope and cost are least-cost for the required outcome).

The NPV framework is the primary analytical tool for the options comparison where the preferred option should have the highest NPV (least negative, or positive where benefits are monetised).

The key challenge in this case is that benefits identified by PQL are predominantly non-financial, which means their NPV comparison is effectively a cost comparison dressed up as an NPV. If the benefit streams are not monetised, then the NPV simply reflects the quantum and timing of costs plus the implicit value attributed to risk reduction, which is a much weaker analytical foundation than a full cost-benefit NPV.

Prudence is assessed by reference to the specific objectives listed in NER clause 6A.6.7(a) (capex) and clause 6A.6.6(a) (opex) and not against a generalised concept of sound business management or IT best practice. An investment that delivers efficiency or capability improvements beyond what is required to meet those objectives may be worthwhile, but it is not automatically prudent for the purposes of the Rules. In these circumstances, a detailed cost-benefit assessment is required to ensure the incremental benefits exceed the incremental costs.

PQL is free to invest in IT programs and projects outside of the regulatory framework where the business case provides a positive financial benefit and can be self-funded.

The prudence test also requires the investment need to be adequately demonstrated. This means Powerlink must establish:

- a clear link between the identified investment drivers and one or more of the NER objectives listed above - specifically, how the absence of the proposed investment would put Powerlink's ability to meet those objectives at material risk; and
- that the risk profile associated with not investing is unacceptable - i.e., that failing to make the investment would result, or would be likely to result, in a breach of, or material degradation against, the relevant NER objective.

We consider that the Base Case (counterfactual) is not a pure "do nothing" or maintain-only scenario, with PQL acknowledging that the Base Case involves extending current system functionality:

- *"Interim work-around actions will be taken, to enable ad hoc extensions as assumed below. These work-arounds may take the form of additional custom spreadsheet developments, macros, stand-alone databases, custom inter-system synchronisation interfaces and manual processes."* An interim workaround taken to enable an extension - even an ad hoc one - is not, by definition, a measure directed purely at maintaining existing capability;
- *"Manual data capture validation critical improvements"* (\$750k) - described as *"critical improvements"*, which implies enhancement rather than maintenance; and
- *"Other ad hoc system customisation and urgent data rectification works"* (\$750k) - which includes customisation and rectification works that, again, go beyond pure system maintenance.

PQL justifies the prudence of the program through the reduction of risk based on its own risk assessment and asserts that manual and legacy systems improved by automation will lead to efficiency gains through improved accuracy from site access to data, integrated supply chain management, curated access to information, and integration of design capabilities.

Based on the SA Power Networks (SAPN) Business Case<sup>6</sup> for EAM, we note that it presented four options, providing a clearer case compared to PQL's submission:

- Option 0 - Do nothing: where existing processes, people, systems and data are maintained using siloed systems, manual data transfer systems, data duplication, and low end to end maturity across asset lifecycle.
- Option 1 - BAU: Improvement to asset management using the same tools, processes, and systems (equivalent to PQL Option 3 Counterfactual)
- Option 2 - Balanced approach to EAM: a significant transformational change, the rate of change across business functions, capabilities and asset types will be balanced by an assessment of the realistic capacity of the business to absorb the rate of change.
- Option 3 - Optimistic Approach to EAM: a more aggressive implementation of solutions across business functions, capabilities and asset types

The SAPN Business Case also demonstrated that there are tangible benefits with a positive NPV:

- *Improved maintenance processes leads to enhanced workforce productivity covering:*

6

SA Power Networks - Determination 2015-2020 Proposal, Attachment 20.40 SA Power Networks: IT Enterprise Management Business Case.

- *Productivity of all resources will be improved from Maintenance planners bundling work using increased knowledge and mapping technologies through to field execution and close out. In addition, there will be less duplication of effort - data entry in one place rather than across multiple systems & databases; and*
- *Greater certainty of the maintenance schedule and a reduction in unplanned events allows for less waste and re-work resulting in a lower material cost.*

### 3.3.2. OGW Assessment of Prudence

Our assessment of prudence was necessarily constrained by the limitations of the evidence PQL has provided. In forming our view we:

- reviewed the stated investment drivers and PQL's risk assessment against PQL's own Risk Assessment Matrix Checklist, noting the absence of the detailed risk register and of data supporting the selection of consequence, likelihood and risk ratings;
- compared the three options presented, including PQL's 10-year NPV analysis – noting that, with no benefits monetised, all options are a net present cost and the NPV comparison is effectively a comparison of costs and is justified on the implicit value attributed to risk reduction;
- reviewed the initiative scopes, bottom-up cost estimates and delivery schedules (assessed in detail in the Efficiency sections below); and
- issued RFIs IT02.01 to IT02.18 to test the gaps identified.

On the information available, we consider Option 1 to be more prudent than Option 2. Option 1 addresses all eight identified investment drivers, has the lowest NPV cost of the three cases (-\$15.7M versus -\$25.2M for Option 2 and -\$16.1M for the Base Case), and builds on PQL's existing [REDACTED] enterprise platform rather than introducing a new Digital Twin platform at an additional, uncertain cost (\$12-18M range) without demonstrated incremental benefit. While not verified, it is assumed that the unification of business processes onto the single SAP platform during the [REDACTED] transition was justified (and considered prudent) at the time, in preference to a best-of-breed approach; addressing the documented inherent risks within that enterprise platform is consistent with that decision. The Base Case is not a genuine "do nothing" counterfactual – it is a deferral scenario involving \$5.25M of interim workarounds for the 27-32 RP that extend system functionality, with all four inherent risks left unchanged at 4-Significant and the full investment assumed to occur approximately four years later at equivalent real-terms cost.

This conclusion rests on assumptions we could not verify based on available information – PQL's self-assessed risk ratings, the Base Case workaround costs, and the four-year deferral assumption. Accordingly, our finding that the investment need is prudent is made on the balance of probabilities and available information for this draft report.

Based on the information provided, we note the following key points for this draft decision report which can be addressed with further information in the revised proposal:

- At the highest organisational level, why it would be prudent to address the documented inherent risks using the enterprise software (i.e. [REDACTED] (Option 1) rather than implementing another suite of tools and systems (Option 2).
- The rationale for using the risk-based approach is opaque in the absence of the data and the Powerlink Risk Management Procedure, which would provide clarity around the selection of consequence, likelihood and risk rating.

- The prudence of the project is not clear as there is no risk-based view of the prevailing inherent risks, how they are being treated by the business, nor whether the prevailing treatments are adequately controlling the risks.
- The prudence of the project, and particularly the Option 1 initiatives, is not clear as the proposal aligns the five initiatives with the investment drivers but does not align them to their role in the mitigation of the inherent risks. (For example: how does Initiative 1: EAM System & Data Integration actually contribute to the residual risks as described?)
- We have not been able to review the prudence of the project with regard to the benefits for the end consumer.

### 3.4. Efficiency - Cost Estimation

*Methodology/Benchmarking/ Initiative project review - scope definition, adequately costed*

#### 3.4.1. Efficiency methodology

Based on PQL's Initiative Estimates, the vast majority of the costs are attributable to labour and OGW has focused on bottom-up estimations for hourly rates and the unit quantities (hours). We have also considered a top-down assessment to further quantify tangible benefits from the EAM Program.

OGW's bottom-up estimation has reviewed the assumed hourly rates and developed benchmarked maximum hourly rates in accordance with the AER's methodology<sup>7</sup> previously used for Ergon Energy.

The top-down benefits have been sourced from public data and information that informs the benefits that the SAP EAM module should achieve.

#### 3.4.2. Top Down Benefits

PQL has not provided sufficient evidence to demonstrate that Option 1 would result in the greatest net benefits to consumers; in fact, it is a net present cost.

Consistent with the SAPN precedent discussed in Section 3.3.1, we consider it reasonable to expect that Option 1 would deliver tangible efficiencies over current BAU operations that should translate to quantifiable benefits with reduced operational costs (reduced time for activities, increased accuracy, and reduced rework/waste). PQL, however, has not quantified or netted off any such benefits in its NPV analysis.

Based on the information provided, we note the following key points for this draft decision report which can be addressed with further information in the revised proposal:

- The proposed project budget for the recommended Option (Option 1) is broken down into five initiatives but as there is no positive link between the initiatives and the Residual Risk, the efficiency of each initiative in managing the Inherent Risks cannot be assessed.
- PQL has not provided data or explained its methodology used to calculate the budget estimates.
- Estimates for Option 1 have not been validated by a third party or market tested Bottom Up Estimation.

<sup>7</sup>

AER, Draft Decision, Ergon Energy Electricity Distribution Determination 2025 to 2030, Attachment 16 - Alternative control services.

### 3.4.3. Efficiency adjustment for planned headcount and duration

The planned headcount and duration for each initiative in the preferred option have been compared to the general market indicators and industry experience. Our findings are summarised in the Table 20 to Table 22. We have derived an FTE-months metric for the expected industry benchmarks for comparison to the PQL FTE-months.

Table 20: PQL summary of resourcing

| Initiative                                                       | PQL Planned Headcount | PQL Planned Average Utilisation | PQL FTE | PQL Planned Duration Months | PQL metric (FTE Months) |
|------------------------------------------------------------------|-----------------------|---------------------------------|---------|-----------------------------|-------------------------|
| Initiative 1: EAM System and Data Integration                    | 12                    | 70%                             | 8.4     | 23                          | 193.2                   |
| Initiative 2: Field Automation                                   | 14                    | 45%                             | 6.3     | 16                          | 100.8                   |
| Initiative 3: Supply Chain Management                            | 18                    | 51%                             | 9.18    | 18                          | 165.24                  |
| Initiative 4: Multi-Environment and External Integration         | 9                     | 35%                             | 3.15    | 16                          | 50.4                    |
| Initiative 5: Digital Engineering Construction and Commissioning | 10                    | 36%                             | 3.6     | 22                          | 79.2                    |

Table 21: OGW's industry benchmarking

| Initiative                                                       | Industry Reference FTE | Industry Reference Duration Months | Industry metric range (FTE-months) |
|------------------------------------------------------------------|------------------------|------------------------------------|------------------------------------|
| Initiative 1: EAM System and Data Integration                    | 6-12                   | 6 - 12                             | 36-144                             |
| Initiative 2: Field Automation                                   | 18 - 40                | 6 - 15                             | 108-600                            |
| Initiative 3: Supply Chain Management                            | 10 - 35                | 6 - 9                              | 60-315                             |
| Initiative 4: Multi-Environment and External Integration         | 8 - 15                 | 6 - 14                             | 48-210                             |
| Initiative 5: Digital Engineering Construction and Commissioning | 18-45                  | 9 - 24                             | 162-1080                           |

Table 22: PQL comparison to industry benchmarking

| Initiative                                                       | Industry metric range (FTE-months) | PQL Metric | Benchmark Alignment | Commentary                                                                                                           |
|------------------------------------------------------------------|------------------------------------|------------|---------------------|----------------------------------------------------------------------------------------------------------------------|
| Initiative 1: EAM System and Data Integration                    | 36-144                             | 193.2      | >                   | Duration reduced from 23 months to 17 months with 12 pax @ 70% utilisation.                                          |
| Initiative 2: Field Automation                                   | 108-600                            | 100.8      | OK                  | Long Duration compensates for low headcount                                                                          |
| Initiative 3: Supply Chain Management                            | 60-315                             | 165.24     | OK                  |                                                                                                                      |
| Initiative 4: Multi-Environment and External Integration         | 48-210                             | 50.4       | OK - see note       | Given the Rise system is already in place, OGW's view is the duration should be reduced from 16 months to 10 months. |
| Initiative 5: Digital Engineering Construction and Commissioning | 162-1080                           | 79.2       | OK                  | Long Duration compensates for low headcount                                                                          |

#### 3.4.4. Efficiency adjustment for rates

OGW has applied rate benchmarks using AER's methodology<sup>8</sup> to derive benchmark rates for different job positions based on an efficient and prudent organisation. Details of the methodology applied are available in Appendix A. The revised position rate table has been used for each PQL Initiative Estimate with the adjusted headcount and duration to produce a revised Initiative estimate. These detailed revised estimates are shown in Table 23 to Table 27.

8

AER, Ergon Energy 2025-30 draft decision, Attachment 16.

Table 23: PQL's and OGW's revised budget forecast - Initiative 1

| Initiative 1: EAM System & Data Integration |                            |                |                |                                          |                |                |
|---------------------------------------------|----------------------------|----------------|----------------|------------------------------------------|----------------|----------------|
| Duration                                    | PQL as Submitted<br>Months |                |                | OGW Revised - Duration & Rates<br>Months |                |                |
| Planning and Analysis                       | 3                          |                |                | 3                                        |                |                |
| Design                                      | 5                          |                |                | 5                                        |                |                |
| Configure, Build and Test                   | 14                         |                |                | 8                                        |                |                |
| Deployment and Hypercare                    | 1                          |                |                | 1                                        |                |                |
| <b>Total Duration</b>                       | <b>23</b>                  |                |                | <b>17</b>                                |                |                |
| Costs (FY27 Real Terms)                     | Capex                      | Opex           | Totex          | Capex                                    | Opex           | Totex          |
| Labour                                      |                            |                |                |                                          |                |                |
| Vendors                                     | -                          |                |                |                                          |                |                |
| Software                                    | -                          |                |                |                                          |                |                |
| Infrastructure                              | -                          |                |                |                                          |                |                |
| <b>Total</b>                                | <b>\$0.49M</b>             | <b>\$8.34M</b> | <b>\$8.83M</b> | <b>\$0.33M</b>                           | <b>\$5.56M</b> | <b>\$5.88M</b> |

Table 24: PQL's and OGW's revised budget forecast - Initiative 2

| Initiative 2: Field Automation |                            |                |                |                               |                |                |
|--------------------------------|----------------------------|----------------|----------------|-------------------------------|----------------|----------------|
| Duration                       | PQL as Submitted<br>Months |                |                | OGW Revised - Rates<br>Months |                |                |
| Planning and Analysis          | 3                          |                |                | 3                             |                |                |
| Design                         | 3                          |                |                | 3                             |                |                |
| Configure, Build and Test      | 9                          |                |                | 9                             |                |                |
| Deployment and Hypercare       | 1                          |                |                | 1                             |                |                |
| <b>Total Duration</b>          | <b>16</b>                  |                |                | <b>16</b>                     |                |                |
| Costs (FY27 Real Terms)        | Capex                      | Opex           | Totex          | Capex                         | Opex           | Totex          |
| Labour                         |                            |                |                |                               |                |                |
| Vendors                        | -                          |                |                |                               |                |                |
| Software                       | -                          |                |                |                               |                |                |
| Infrastructure                 | -                          |                |                |                               |                |                |
| <b>Total</b>                   | <b>\$0.25M</b>             | <b>\$3.68M</b> | <b>\$3.93M</b> | <b>\$0.24M</b>                | <b>\$3.24M</b> | <b>\$3.48M</b> |

Table 25: PQL's and OGW's revised budget forecast - Initiative 3

| Initiative 3: Supply Chain Management |                            |                |                |                               |                |                |
|---------------------------------------|----------------------------|----------------|----------------|-------------------------------|----------------|----------------|
| Duration                              | PQL as Submitted<br>Months |                |                | OGW Revised - Rates<br>Months |                |                |
| Planning and Analysis                 | 3                          |                |                | 3                             |                |                |
| Design                                | 3                          |                |                | 3                             |                |                |
| Configure, Build and Test             | 11                         |                |                | 11                            |                |                |
| Deployment and Hypercare              | 1                          |                |                | 1                             |                |                |
| <b>Total Duration</b>                 | <b>18</b>                  |                |                | <b>18</b>                     |                |                |
| Costs (FY27 Real Terms)               | Capex                      | Opex           | Totex          | Capex                         | Opex           | Totex          |
| Labour                                |                            |                |                |                               |                |                |
| Vendors                               | -                          |                |                |                               |                |                |
| Software                              | -                          |                |                |                               |                |                |
| Infrastructure                        | -                          |                |                |                               |                |                |
| <b>Total</b>                          | <b>\$0.57M</b>             | <b>\$6.89M</b> | <b>\$7.45M</b> | <b>\$0.54M</b>                | <b>\$6.02M</b> | <b>\$6.56M</b> |

Table 26: PQL's and OGW's revised budget forecast - Initiative 4

| Initiative 4: Multi-Environment & External Integration |                            |                |                |                               |                |                |
|--------------------------------------------------------|----------------------------|----------------|----------------|-------------------------------|----------------|----------------|
| Duration                                               | PQL as Submitted<br>Months |                |                | OGW Revised - Rates<br>Months |                |                |
| Planning and Analysis                                  | 2                          |                |                | 2                             |                |                |
| Design                                                 | 3                          |                |                | 3                             |                |                |
| Configure, Build and Test                              | 10                         |                |                | 4                             |                |                |
| Deployment and Hypercare                               | 1                          |                |                | 1                             |                |                |
| <b>Total Duration</b>                                  | <b>16</b>                  |                |                | <b>10</b>                     |                |                |
| Costs (FY27 Real Terms)                                | Capex                      | Opex           | Totex          | Capex                         | Opex           | Totex          |
| Labour                                                 |                            |                |                |                               |                |                |
| Vendors                                                | -                          |                |                |                               |                |                |
| Software                                               | -                          |                |                |                               |                |                |
| Infrastructure                                         | -                          |                |                |                               |                |                |
| <b>Total</b>                                           | <b>\$0.09M</b>             | <b>\$1.91M</b> | <b>\$2.01M</b> | <b>\$0.05M</b>                | <b>\$1.15M</b> | <b>\$1.20M</b> |

Table 27: PQL's and OGW's revised budget forecast - Initiative 5

| Initiative 5: Digital Engineering Construction and Commissioning |                            |                |                |                               |                |                |
|------------------------------------------------------------------|----------------------------|----------------|----------------|-------------------------------|----------------|----------------|
| Duration                                                         | PQL as Submitted<br>Months |                |                | OGW Revised - Rates<br>Months |                |                |
| Planning and Analysis                                            | 3                          |                |                | 3                             |                |                |
| Design                                                           | 5                          |                |                | 5                             |                |                |
| Configure, Build and Test                                        | 13                         |                |                | 13                            |                |                |
| Deployment and Hypercare                                         | 1                          |                |                | 1                             |                |                |
| <b>Total Duration</b>                                            | <b>22</b>                  |                |                | <b>22</b>                     |                |                |
| Costs (FY27 Real Terms)                                          | Capex                      | Opex           | Totex          | Capex                         | Opex           | Totex          |
| Labour                                                           |                            |                |                |                               |                |                |
| Vendors                                                          | -                          |                |                |                               |                |                |
| Software                                                         | -                          |                |                |                               |                |                |
| Infrastructure                                                   | -                          |                |                |                               |                |                |
| <b>Total</b>                                                     | <b>\$0.11M</b>             | <b>\$2.89M</b> | <b>\$3.01M</b> | <b>\$0.11M</b>                | <b>\$2.78M</b> | <b>\$2.89M</b> |

### 3.5. Top Down Efficiency - Tangible Benefits

There has been no evaluation by PQL of the tangible benefits to be gained from the implementation of the preferred option. Based on industry norms and general industry research, we recommend the tangible benefits be quantified and netted off by Powerlink to offset the planned expenditure.

Based on public domain information<sup>9</sup> regarding SAP EAM systems, it is expected that the following key benefits would result:

- Execution efficiency. Job duration should be reduced by 10%-30% with mobile access to work orders, documentation and asset history.

<sup>9</sup>

A range supported by named cases: Statkraft (~30%, power generation utility, 600+ technicians), Ingredion (25% wrench time uplift), Torex Gold (30% maintenance efficiency), with Gartner's nine-month FSM payback survey supporting the payback-period assumption.

- Scheduling efficiency. Automation of scheduling results in optimised logistics, leading to a 10-25% increase in jobs scheduled.
- Administration reduction. 20%-40% reduction in maintenance administration overhead.
- Inventory accuracy. SAP EWM-specific accuracy claims are drawn predominantly from vendor and partner sources: reported inventory accuracy improvements of 15-30%, customer accuracy outcomes of 98-99.9%, and mechanisms comprising scan-verified stock movements, system-directed put-away, bin-level tracking, and cycle counting in place of periodic wall-to-wall stocktakes.<sup>10</sup>

### 3.5.1. Job execution and scheduling benefits

In applying these benefits, we have assumed a conservative lower range of 10% as applied to PQL's Initiative 1 for execution efficiency and equally 10% to Initiative 2 for scheduling efficiency. The annual net benefit was quantified by assuming these reductions in costs relate directly to direct routine and non-routine maintenance labour expenditure<sup>11</sup>.

### 3.5.2. Job administration benefits

The administration benefits are calculated based on improved tool time. For example:

- Utility tool time ranges from 28%-36% - we have assumed PQL is 36%.
- SSAM benefits claim 20%-40% tool time uplift
- We assume 30% uplift to non-tool time of 64% and of this 20% is converted to savings
- Net tangible benefits saving through reduction of Administration of 4% of overall direct maintenance labour costs.

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<sup>10</sup>Aiden (SAP partner), SAP Extended Warehouse Management solution overview: inventory accuracy improvements of 15-30% attributed to real-time tracking, error reduction and reliable counting methods. CJV Partners reports SAP customers typically achieving 98-99% inventory accuracy. SAPinsider reports Schwing America achieving 99.9% inventory accuracy with mobile barcoding in an SAP warehouse environment. These are vendor/partner sources and should be weighted accordingly for regulatory purposes.

<sup>11</sup> PQL Annual Information Order - FY2025(CA RIN 2.12 Input Tables)

Table 28: OGW tangible benefits adjustment Initiative 1: EAM System and Data Integration

| Initiative                                    | Key Activity                                                          | Business Benefit                                                                                    | Potential Impact                                                                             | Nom. Target                                                                                                                                                     | F2025 Data                                                                                                                                                                                   | Budget Impact                                        |
|-----------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Initiative 1: EAM System and Data Integration | Implementation of SAP Service and Asset Manager Implementation (SSAM) | A. Increased Workforce Productivity                                                                 | 10-30% faster job completion (typical industry benchmark)<br><br>More jobs completed per day | 10% Increase in productivity/reduction in apparent cost from SSAM Implementation (Add Note here on Duplication)                                                 | Annual Information Order - FY2025(CA RIN 2.12 Input Tables) - Direct Labour expenditure incl. Routine and non-Routine Mtce = \$30,773,521                                                    | Direct Labour Expenditure reduction (refer Table 31) |
|                                               |                                                                       | B. Better execution of maintenance tasks and faster reporting of issues improves asset reliability. | Lower MTTR (mean time to repair)                                                             | 10% Reduction in MTTR                                                                                                                                           | Chapter 3 Incentive Schemes Table 13.2, Annual Information Order - FY2025(EB RIN 3.6 Quality of Service Data) - Average outage duration = 58.3 minutes, Total number of forced Outages = 154 | Average outage duration - 52.5 minutes               |
|                                               |                                                                       | C. SSAM automates the paper trail, reduces admin effort, and cuts rework.                           | Many organisations see a 10-15% reduction in maintenance administration overhead.            | 15% Reduction in Mtce Administration Overhead (Access, Permitting etc, Work Planning, Work Scheduling, Parts and Materials, Higher burden due to HV Equipment.) | No data available - Would be known to PQL                                                                                                                                                    | Reduction in Admin time = 4% of Maintenance Cost     |

Table 29: OGW tangible benefits adjustment Initiative 2: Field Automation

| Key Activity                                                                | Business Benefit                               | Potential Impact                                                                    | Nom. Target                                                                                                    | F2025 Data                                                                                                                                | Budget Impact                                        |
|-----------------------------------------------------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| SAP Field Automation, Implement SAP Field Service Management (FSM) and SSAM | A. Higher Technician & Dispatcher Productivity | 10-25% more jobs completed per day                                                  | 10% Increase in productivity/reduction in apparent cost from FSM Implementation (Add Note here on Duplication) | Annual Information Order - FY2025(CA RIN 2.12 Input Tables) - Direct Labour expenditure incl. Routine and non-Routine Mtce = \$30,773,521 | Direct Labour Expenditure reduction (refer Table 31) |
|                                                                             |                                                | Up to 50% dispatcher productivity improvement                                       | No industry data available                                                                                     | No data available - Would be known to PQL                                                                                                 | Assumed included in productivity gains               |
|                                                                             | B. Reduced Travel Time & Fuel Costs            | Lower fuel and fleet costs, Reduced carbon emissions, More jobs completed per shift | No industry data available                                                                                     | No data available - Would be known to PQL                                                                                                 | Assumed included in productivity gains               |
|                                                                             | C. Higher First-Time Fix Rates                 | Fewer repeat visits, Lower cost-to-serve, Faster resolution of issues               | Reduced Truck rolls @ Nom. \$500 - \$2500 each.                                                                | No data available - Would be known to PQL                                                                                                 | Assumed included in productivity gains               |

### 3.5.3. Inventory accuracy benefits

We note that PQL's inventory is \$172M (2025) with annual expenses (turnover) of around \$9.0M pa<sup>12</sup>. The annual expensed turnover is relatively low and we assume a large proportion of the stock value is held in critical, large singular assets. Additionally, it is assumed PQL's stocks have a long shelf life. This means the balance is overwhelmingly held stock rather than flow-through stock: benefits therefore arise principally from holding the right stock accurately, rather than from throughput efficiencies.<sup>13</sup>

<sup>12</sup> Powerlink Queensland, Annual Report and Financial Statements 2024/25.

<sup>13</sup> Implied inventory turnover of approximately 0.05 times per annum (\$8.8M expensed against a \$172.1M average-to-closing balance), compared with turnover of 4-12 times per annum typical of the retail and distribution settings from which most published WMS benefit benchmarks are drawn.

EWM-specific accuracy claims are drawn predominantly from vendor and partner sources: reported inventory accuracy improvements of 15-30%, customer accuracy outcomes of 98-99.9%, and mechanisms comprising scan-verified stock movements, system-directed put-away, bin-level tracking, and cycle counting in place of periodic wall-to-wall stocktakes.<sup>14</sup> For the purpose of our review, the causal mechanisms are well established and uncontroversial; the quantum attached to them by vendor literature is being treated as an upper bound given the assumption regarding large singular assets and low percentage turnover.

We have estimated an annual net benefit of 10% of the expensed stock covering the following benefits:

- **Reduced inventory holdings and carrying cost.** Improved record accuracy and bin-level visibility reduce duplicate purchasing, enable safety stock to be set against reliable records, and surface stranded or misallocated stock. Commercial literature claims carrying cost reductions of 10-25%; given Powerlink's low-turnover strategic spares profile, this report adopts a much more conservative 1-5% reduction in required holdings. The carrying cost rate applied to the released capital is 10% per annum (range 8-12%), built up from financing, warehousing and obsolescence components.
- **Avoided obsolescence and write-offs.** Accurate records, shelf-life and rotation management reduce stock deterioration and duplicate-driven surplus.
- **Inventory management labour productivity.** Cycle counting in place of periodic stocktakes, scan-based receipting and system-directed put-away reduce manual effort.

14

Aiden (SAP partner), SAP Extended Warehouse Management solution overview: inventory accuracy improvements of 15-30% attributed to real-time tracking, error reduction and reliable counting methods. CJV Partners reports SAP customers typically achieving 98-99% inventory accuracy. SAPinsider reports Schwing America achieving 99.9% inventory accuracy with mobile barcoding in an SAP warehouse environment. These are vendor/partner sources and should be weighted accordingly for regulatory purposes.

Table 30: OGW tangible benefits adjustment Initiative 3: Supply Chain Management

| Key Activity                                                         | Business Benefit                                                           | Potential Impact                                                          | Nom. Target                                                                                                                                                                        | F2025 Data                                                                                                                 | Budget Impact                                                                        |
|----------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| SCM Tranche 1: Implementation of SAP Master Data Governance (MDG)    | A. Correct equipment data and location details, Accurate service addresses | Operational Efficiency and fewer Truck Rolls                              | No industry data available                                                                                                                                                         | No data available - Would be known to PQL                                                                                  | Assumed included in productivity gains                                               |
|                                                                      | B. Correct equipment data and location details, Accurate service addresses | Fewer repeat visits, Lower cost-to-serve, Faster resolution of issues     | 10% Reduction in re-work                                                                                                                                                           | No data available - Would be known to PQL                                                                                  | Assumed included in productivity gains                                               |
| SCM Tranche 2: Deployment of SAP Extended Warehouse Management (EWM) | A. Inventory Accuracy & Shrinkage Reduction                                | Reduced write-offs, Lower working capital, Fewer job delays               | Inventory accuracy in broader industry can range from as low as 70% to as high as 99%. A 1% improvement in accuracy can have a value of \$0.5m to \$1m to a transmission operator. | FY2025, Total Maintenance and construction stock value \$172m. No inventory accuracy factor available. Cite data foot note | 10% of expensed inventory due to improvement in inventory accuracy. (refer Table 31) |
|                                                                      | B. Optimised Warehouse Labour & Productivity                               | 15-30% labour productivity improvement, Lower overtime, Faster throughput | 15% Post implementation and rationalisation                                                                                                                                        |                                                                                                                            | Assumed included in productivity gains                                               |

OGW has assumed for calculating the NPV benefits that the efficiency gains occur with a learning curve: 25% in FY31, 50% in FY32, 75% in FY33 and 100% from FY34 onwards. These are provided in Table 31.

Table 31: OGW's estimated benefits from the EAM program and timing attribution based on planned roll-out.

| Benefit                                                                                   | Benefit Annual Value (\$FY27) | FY31 | FY32 | FY33 | FY34 | FY35 | RP 27-32 Benefits |
|-------------------------------------------------------------------------------------------|-------------------------------|------|------|------|------|------|-------------------|
| Increased Workforce Productivity - 10% faster job completion (typical industry benchmark) | \$3.28M                       | 25%  | 50%  | 75%  | 100% | 100% | \$2.46M           |
| Reduction in Admin time = 4% of Maintenance Cost                                          | \$1.30M                       | 25%  | 50%  | 75%  | 100% | 100% | \$0.96M           |

|                                                                               |         |         |         |         |         |         |         |
|-------------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|
| Higher Technician & Dispatcher Productivity - 10% more jobs scheduled per day | \$3.28M | 25%     | 50%     | 75%     | 100%    | 100%    | \$2.46M |
| Inventory Accuracy - 10% of expensed stock                                    | \$0.9M  | 25%     | 50%     | 75%     | 100%    | 100%    | \$0.65M |
| Total benefits                                                                |         | \$2.19M | \$4.38M | \$6.57M | \$8.76M | \$8.76M | \$6.57M |

Table 32 provides an NPV result using OGW's revised efficiencies and benefits. The NPV calculation only considers the benefits for Option 1 which presents a positive NPV. Option 3 would achieve the same benefits but delayed to the next regulatory period and would have a lower NPV than Option 1. We also note that SAPN presented a positive NPV case for the implementation of EAM of a similar magnitude of totex and benefit<sup>15</sup>.

Table 32: OGW's revised Option NPV analysis

| NPV              |      | Option 1:<br>Recommended | Option 2:<br>Alternative | Base Case |
|------------------|------|--------------------------|--------------------------|-----------|
| Capex            | \$ M | (1.2)                    | (1.3)                    | (1.0)     |
| Opex             | \$ M | (17.2)                   | (32.8)                   | (18.9)    |
| Benefit          |      | 25.9                     | -                        | -         |
| Tax benefit/paid | \$ M | (2.3)                    | 10.1                     | 5.8       |
| Terminal value   | \$ M | 0.1                      | 0.1                      | 0.5       |
| Total            | \$ M | 5.3                      | (23.9)                   | (13.6)    |

### 3.6. Key Findings

We note that Powerlink's prudency case is incomplete: key supporting information – the detailed risk register and the mapping of initiatives to the mitigation of the inherent risks – which can be addressed in the revised proposal. Our findings are based on the information that has been presented to date.

Noting the limitation above and based on our estimation of benefits and assessment of costs, Option 1 is expected to deliver improvements to existing organisational practices across the four risk categories, and it is expected that the outcomes would drive operational efficiencies and reduce field and corporate operating costs. However, PQL's cost estimates have not been validated by a third party or market tested, the planned durations of Initiatives 1 and 4 exceed industry norms for the planned headcount, and no tangible benefits have been quantified to offset the proposed expenditure.

Based on our bottom-up assessment of planned headcount, duration and labour rates against industry norms, we recommend the Option 1 forecast be reduced from \$25.23M to \$20.01M. This comprises: (a) a reduction of \$3.04M from shortening the durations of Initiatives 1 and 4 by 6 months each to align with industry norms; and (b) a further reduction of \$2.18M from applying efficient unit labour rates across all five initiatives.

15

SAPN Business Case for EAM (FY14): Totex \$26.9M, NPV \$2M

In addition, tangible benefits identified from Initiatives 1-3 – including workforce productivity gains, reduced maintenance administration overhead, and inventory accuracy improvements (estimated at up to \$7.86M of direct labour reductions and \$0.9M of inventory value benefit long term) – have not been quantified or netted off by PQL in its NPV analysis. These benefits would further offset the proposed expenditure and can be addressed in the revised proposal.

Table 33: OGW's revised budget forecasts for the IT EAM Program (\$FY27)

| Initiative                                                       | PQL Proposed Initiative Estimate |          | OGW Adjustment |           | Adjusted Forecast |          |
|------------------------------------------------------------------|----------------------------------|----------|----------------|-----------|-------------------|----------|
| Bottom Up Duration and Rates Adjustment                          |                                  |          |                |           |                   |          |
|                                                                  | Capex                            | Opex     | Capex          | Opex      | Capex             | Opex     |
| Initiative 1: EAM System and Data Integration                    | \$0.49M                          | \$8.34M  | (\$0.16M)      | (\$2.78M) | \$0.33M           | \$5.56M  |
| Initiative 2: Field Automation                                   | \$0.25M                          | \$3.68M  | (\$0.01M)      | (\$0.44M) | \$0.24M           | \$3.24M  |
| Initiative 3: Supply Chain Management                            | \$0.57M                          | \$6.89M  | (\$0.03M)      | (\$0.87M) | \$0.54M           | \$6.02M  |
| Initiative 4: Multi-Environment and External Integration         | \$0.09M                          | \$1.91M  | (\$0.04M)      | (\$0.76M) | \$0.05M           | \$1.15M  |
| Initiative 5: Digital Engineering Construction and Commissioning | \$0.11M                          | \$2.89M  |                | (\$0.11M) | \$0.11M           | \$2.78M  |
| Bottom up Subtotal                                               | \$1.51M                          | \$23.71M |                |           | \$1.27M           | \$18.75M |
| Benefits Adjustment                                              |                                  |          |                |           |                   |          |
| Initiative 1: EAM System and Data Integration                    |                                  |          |                | (\$2.46M) |                   | \$3.10M  |
| Initiative 2: Field Automation                                   |                                  |          |                | (\$0.98M) |                   | \$2.26M  |
| Initiative 3: Supply Chain Management                            |                                  |          |                | (\$2.46M) |                   | \$3.56M  |
| Initiative 4: Multi-Environment and External Integration         |                                  |          |                | (\$0.68M) |                   | \$0.48M  |
| Initiative 5: Digital Engineering Construction and Commissioning |                                  |          |                | -         |                   | -        |
| Final Total                                                      |                                  |          |                |           | \$1.27M           | \$12.18M |

## 4. IT Investment Program: Health, Safety and Environment (HSE)

*Renew and consolidate Powerlink's HSE systems and data stores into a sustainable, integrated HSE solution for compliance, sustainability and business improvement.*

### 4.1. Background/Approach

Powerlink (PQL) frames the HSE investment around two broad categories of need:

**HSE continuous improvement and compliance.** PQL argues that while it has strong procedural foundations for HSE management, continuous improvement is required to address current and emerging business drivers. The existing HSE technology comprises a stand-alone software system (PQ Switch) together with a set of satellite solutions supporting chemical safety, asbestos management, ESG reporting and safety audit and risk management, supplemented by a wide variety of Microsoft Excel spreadsheets, legacy reports and manual processes for reporting on HSE compliance obligations.

The five continuous improvement focus areas are: psychosocial safety risk management; chemical safety risk management; asbestos risk management; assurance and audit of high-risk activities; and permit management.

**Technology sustainability and extensibility.** PQL argues that its HSE activities are managed through a disparate set of systems, legacy custom tools and interfaces, with a range of manual processes in place to deal with shortcomings in the current HSE solution. The three drivers here are: renewal and consolidation into a sustainable integrated HSE solution (including integration of HSE management processes with SAP); integration of GIS and HSE data sets; and HSE data reporting sustainability and flexibility (leveraging the [REDACTED] Cloud Data Analytics Platform, CDAP).

The evidence provided by PQL identifies four inherent risks, all rated "4 - Significant":

- R1 Ineffective capabilities to manage psychosocial safety;
- R2 System Supportability, Sustainability and Extensibility;
- R3 Environmental and Climate Change Reporting; and
- R4 Lack of integrated capability to effectively capture and report on asbestos and chemical safety risks.

Likelihoods range from D-Unlikely (R4) through C-Possible (R1, R3) to B-Likely (R2), with consequences of 4-Moderate (R1-R3) and 5-Major (R4). These, when combined, result in inherent risks of 4-Significant for all four Risks (R1 - R4). PQL's documentation does not validate, or explain why, these risks are assigned these ratings.

PQL considered two options against a base case (counterfactual).

#### Option 1 - Preferred Option: "HSE Renewal, Consolidation and Improvement" (NPV -3.8M)

This is a renewal-and-consolidation approach. PQL will undertake a renewal of existing HSE systems for longer term sustainability and extensibility, along with consolidation of existing manual processes and custom tools into the core HSE system. The option comprises three initiatives, delivered as an integrated IT delivery program as shown in Table 1.

Table 34: PQL HSE Initiatives – Option 1 (FY27 Real, pre-CAM)

| Initiative                                                | Description                                                                                                                                                                                                                                                                                                                                    | Capex          | Opex           | Totex          |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| <b>1: HSE Management System Renewal and Consolidation</b> | Renewal of the core HSE solution as the foundation for long-term sustainability and extensibility, consolidating satellite systems and data stores into a single solution, standardising data capture methods, and integrating with SAP HCM, SAP EAM and the Field Automation Platform. Duration 16 months.                                    | \$0.11M        | \$2.48M        | \$2.59M        |
| <b>2: HSE Data and Reporting</b>                          | Reliable, repeatable and automated safety and environmental reporting built on the renewed HSE system, replacing custom analytics, manual data transfers and legacy reports with out-of-the-box reporting and/or dashboards on the CDAP, progressively utilising AI/ML and pattern recognition. Duration 10 months.                            | \$0.05M        | \$1.23M        | \$1.28M        |
| <b>3: HSE Spatial Integration</b>                         | Integration of the HSE management system with the GIS for planning and operational visibility, including spatial layering of HSE data sets, environmental constraints, approvals/permits mapping, and biodiversity and cultural heritage data, replacing legacy custom-built spatial modelling and manual spatial analysis. Duration 9 months. | \$0.09M        | \$1.41M        | \$1.50M        |
| <b>Total</b>                                              |                                                                                                                                                                                                                                                                                                                                                | <b>\$0.25M</b> | <b>\$5.12M</b> | <b>\$5.37M</b> |

**Option 2 – (Alternate) Option: “Uplift HSE Systems, Practices and Analytics” (NPV -5.8M)**

This is a more transformational option involving a technology and process transformation of PQL's HSE function, uplifting the HSE capability to operate within a tightly integrated enterprise solution aligned with the SAP ERP (including HCM), EAM and GIS platforms. It is delivered via two initiatives:

- HSE Solution Uplift (\$7.06M, 24 months) and
- HSE Spatial Integration (\$2.25M, 11 months), for a total of \$9.31M (\$0.42M Capex, \$8.89M Project Opex).

The uplifted solution includes native SAP ERP/EAM integration, workflow automation, mobile risk and incident capture, and predictive analytics capability (AI, machine learning and pattern recognition) to identify potential hazards and recommend preventive actions in real time. Both options are assessed by PQL as addressing all eight identified investment drivers.

**Base Case – Counterfactual (NPV -\$4.1M; deferred full investment)**

PQL would continue operating the existing suite of HSE solutions and legacy tools, with interim work-around investments estimated at \$1.8M over the period (interim psychosocial safety configuration \$0.5M; manual permit management data capture improvements \$0.2M; interim geospatial/environmental interfacing \$0.6M; interim environmental and climate change reporting \$0.2M; and other ad hoc customisation and urgent data rectification \$0.3M).

Critically, the base case assumes that Option 1 would be implemented approximately four years later (i.e. in the 2032-37 period) at equivalent real-terms cost – so it is not a “do nothing” scenario; it is a deferral scenario.

Section 3.4.2 of PQL's business case acknowledges that "Interim work-around investments will be made, to enable ad hoc extensions. These work-arounds may take the form of additional custom spreadsheet developments, macros, stand-alone databases, custom inter-system synchronisation interfaces and manual processes." OGW's view is that PQL's own language acknowledges that the Base Case involves extending current system functionality (on an ad hoc, reactive basis) rather than simply sustaining it. This is inconsistent with a true do-nothing or maintain-only counterfactual.

PQL's forecast costs for each option, broken down by cost category and split between capex and project opex (FY27 real terms, pre-CAM), are summarised in Table 2.

Table 35: PQL's forecast costs for each option

| HSE Costs and Totals (FY27 Real)                      |       |              |                |
|-------------------------------------------------------|-------|--------------|----------------|
| Option 1: HSE Renewal, Consolidation and Improvement  | Capex | Project Opex | Totex          |
| Labour                                                |       |              |                |
| Vendors                                               | -     |              |                |
| Software                                              | -     |              |                |
| Infrastructure                                        | -     |              |                |
| <b>Total</b>                                          |       |              |                |
| Option 2: Uplift HSE Systems, Practices and Analytics | Capex | Project Opex | Totex          |
| Labour                                                |       |              |                |
| Vendors                                               |       |              |                |
| Software                                              |       |              |                |
| Infrastructure                                        | -     | -            | -              |
| <b>Total</b>                                          |       |              |                |
| Base Case: Counterfactual (interim workarounds)       | Capex | Project Opex | Totex          |
| Interim psychosocial safety configuration             | -     | -            |                |
| Manual permit management improvements                 | -     | -            |                |
| Interim geospatial / environmental interfacing        | -     | -            |                |
| Interim environmental and climate change reporting    | -     | -            |                |
| Other ad hoc customisation and rectification          | -     | -            |                |
| <b>Total</b>                                          |       |              | <b>\$1.80M</b> |

## 4.2. PQL's evidence provided and basis for preferring Option 1

PQL's business case presents:

- a description of the current HSE technology landscape (PQ Switch, satellite solutions, Excel spreadsheets and manual processes) and its limitations; a structured risk assessment framework (four inherent risks with likelihood/consequence ratings);
- an initiative-by-initiative bottom-up cost estimate using "standard labour rates and consistent delivery methods", with shared program activities apportioned across initiatives;
- a 10-year NPV comparison across the two options and the base case; residual risk ratings post-mitigation for Options 1 and 2; a statutory and regulatory compliance obligations table; and a high-level delivery schedule with DTEC governance arrangements.

Basis for recommending Option 1. PQL's recommendation rests on two stated grounds:

- Option 1 addresses all eight identified investment drivers (as does Option 2 – unlike the EAM business case, the alignment tables show full alignment for both options); and
- Option 1 has the best NPV at -\$3.4M versus -\$5.8M for Option 2 and -\$4.1M for the Base Case. On risk, both Options 1 and 2 achieve identical residual risk outcomes (2-Low for R1-R3 and 3-Moderate for R4), while the base case leaves all risks unchanged at 4-Significant.

#### 4.2.1. NPV Analysis

Table 36: PQL's Option NPV analysis

| NPV              |      | Option 1:<br>Recommended | Option 2: Alternative | Base Case |
|------------------|------|--------------------------|-----------------------|-----------|
| Capex            | \$ M | (0.2)                    | (0.4)                 | (0.2)     |
| Opex             | \$ M | (4.6)                    | (8.0)                 | (5.6)     |
| Tax benefit/paid | \$ M | 1.4                      | 2.5                   | 1.7       |
| Terminal value   | \$ M | 0                        | 0                     | 0.1       |
| Total            | \$ M | (3.4)                    | (5.8)                 | (4.1)     |

PQL's NPV analysis is based on a 10-year horizon considering each of the three options proposed. The analysis did not include any benefits for Option 1 or Option 2. All options are a net cost with the only benefits resulting from tax benefits and terminal value.

Option 3 NPV is based on the assumption that Option 1 is deferred by four years with work around costs in those four years.

#### 4.2.2. Limitations of the evidence

Benefits are almost entirely non-financial – they are characterised as risk mitigation, strategic contribution, and indirect operational efficiency/avoided costs (Benefits B1-B4, plus B5 for Option 2). No direct financial quantification of benefit streams is provided (no labour saving in FTEs, no avoided incident or compliance-breach cost values, no reporting effort reduction estimates). This is a significant limitation for NPV analysis since the benefits side of the NPV must be carrying this weight implicitly.

The underlying NPV calculation and its component build-up have not been provided, so the NPV results cannot be verified or tested for sensitivity.

The scope of work for each option, and for each initiative within Option 1, is not adequately detailed to evaluate the fiscal efficiency of each option, nor to identify and evaluate any direct and/or indirect benefits from the program.

With regard to Option 3 the base case workaround costs (\$1.8M) and the assumption that Option 1 is deferred by four years (rather than permanently avoided) are internal PQL assumptions

Risk ratings (both Inherent and Residual) are self-assessed by PQL without reference to external benchmarks, independent validation or a detailed risk register.

There is no evidence that PQL have identified, tested or evaluated the potential for conflict (and waste) or synergies between the three programs of work (IT02, IT03 and IT04) where projects such as GIS occur across all three initiatives.

Documentation reviewed:

- PQL - Appendix 4.06 - IT Plan 27-32 - January 2026 - CONFIDENTIAL
- PQL - IT03 Health, Safety and Environment - January 2026 - CONFIDENTIAL
- OGW RFI Register - IT03
- HSE Business Case Review (D. Harrison, Arche Energy)
- PQL - IT02 Enterprise Asset Management - January 2026 - CONFIDENTIAL (for cross-program consistency and synergies)
- PQL - IR#024 Q27 - Attachment 1 - Risk Assessment Matrix Checklist - June 2026 - PUBLIC

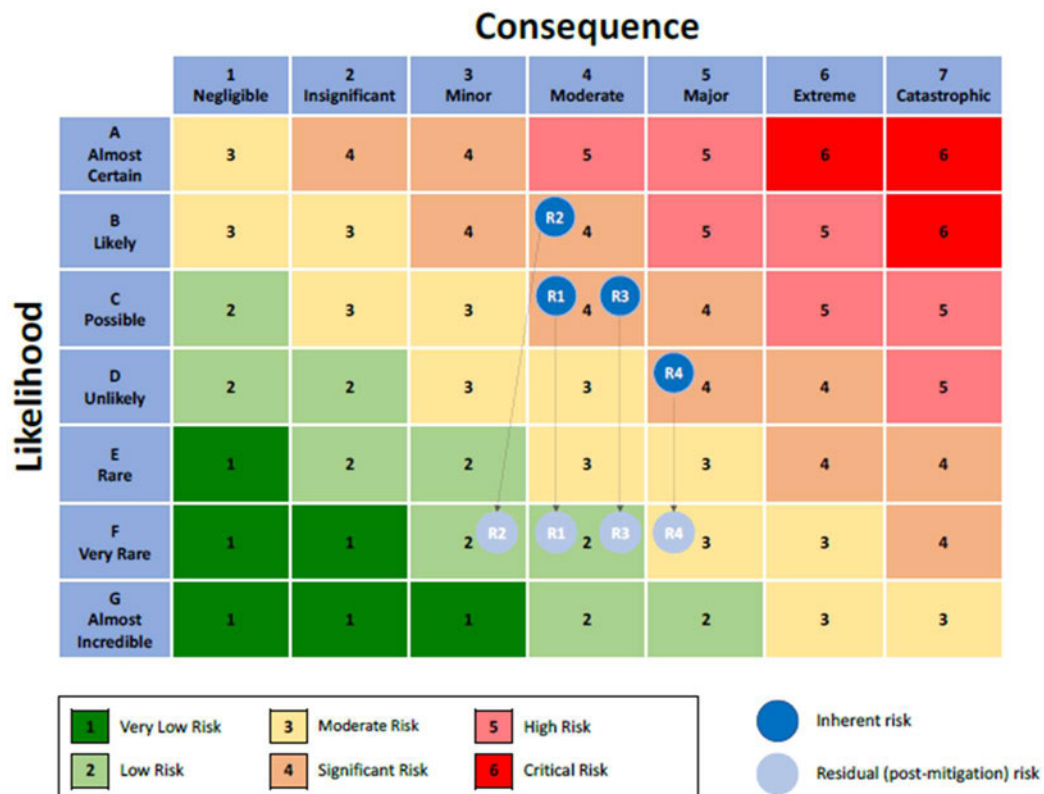
### 4.3. Prudency-Investment Need

*Expenditure Guidance Classification / Threat Landscape / Current State of Maturity / Project Risks, Options Analysis and Selection*

PQL has presented a risk-based assessment to support the prudency of the different options. PQL identifies the risk level (inherent risk) prior to the initiative and the residual risk level after the mitigation has been delivered. PQL has provided a qualitative description of the risk and residual risk based on likelihood and consequence but fails to relate these back to the consequence and likelihood categories in PQL's own Risk Assessment Matrix Checklist and does not provide supporting information to substantiate the category ratings. In our view the prudency case is incomplete and unable to fully support the investment need at the option level. The risk assessment needs to document the key requirement tables identified in PQL's Risk Assessment Matrix Checklist, including any supporting quantitative information where possible.

PQL also identifies a range of legislative and regulatory compliance obligations relevant to HSE, including the Work Health and Safety Act 2011 (and Regulation), the Queensland Electrical Safety Act 2002 (as amended in 2024), the Environmental Protection Act 1994, the Environment Protection and Biodiversity Conservation Act 1999, the National Greenhouse and Energy Reporting Act 2007, and the mandatory climate-related financial disclosure obligations under the Corporations Act 2001 (AASB S2). These obligations support the corporate-level case for investment need.

Figure 2: PQL recommended option risk assessment



OGW has requested the detailed risk register from PQL.

The risk assessment addresses four key risks to justify the investment:

- R1 Ineffective capabilities to manage psychosocial safety – renewed solution to incorporate psychosocial safety functionality, removing “off-system” data capture and manual processes;
- R2 System Supportability, Sustainability and Extensibility Risk – renewed solution to provide a stable, supported platform replacing legacy satellite software, custom tools and ad hoc Excel spreadsheets;
- R3 Environmental and Climate Change Reporting – new reporting and analytics capability, leveraging the CDAP, to meet current and anticipated future reporting obligations; and
- R4 Lack of integrated capability to effectively capture and report on asbestos and chemical safety risks – renewal to inherently cater for chemical safety and incorporate asbestos data from PQL's external service provider

We consider that these risks and the mitigation controls are primarily about improvements to existing HSE processes and practices that apply across the operational organisation. We would expect these improvements to lead to operational and cost efficiencies such as saved labour in data capture and reporting, improved accuracy, and reduced rework; however, as discussed in the Efficiency section below, none of these have been quantified by PQL.

Table 37: OGW's commentary on PQL risk assessment (applies equally to the Alternative Option)

| Risk                                                                                                             | Inherent Risk Rating | Residual Risk - Post Recommended Option   | OGW Commentary                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Risk R1<br>Ineffective capabilities to manage psychosocial safety                                                | 4 - Significant      | PQL: 2 - Low<br>OGW: 3 - Moderate         | 1. No data/justification to support the reduced Residual Likelihood of F - Very Rare. Systems are rarely considered perfect; a more suitable Residual Likelihood is D - Unlikely (annually to once every 7 years). A residual profile of D4 gives a Residual Risk of 3 - Moderate.                                                                                                                                        |
| Risk R2<br>System Supportability, Sustainability and Extensibility Risk                                          | 4 - Significant      | PQL: 2 - Low<br>OGW: 3 - Moderate         | 1. No data/justification to support the reduced Residual Likelihood of F - Very Rare; D - Unlikely is more suitable, giving D4: 3 - Moderate.<br>2. PQL also reduces the Residual Consequence from 4 - Moderate to 3 - Minor. If the nature of the risk consequence is unchanged, how is a consequence of 3 - Minor justified? Data supporting this reduction has not been provided.                                      |
| Risk R3<br>Environmental and Climate Change Reporting                                                            | 4 - Significant      | PQL: 2 - Low<br>OGW: 3 - Moderate         | 1. No data/justification to support the reduced Residual Likelihood of F - Very Rare; D - Unlikely is more suitable, giving D4: 3 - Moderate.                                                                                                                                                                                                                                                                             |
| Risk R4<br>Lack of integrated capability to effectively capture and report on asbestos and chemical safety risks | 4 - Significant      | PQL: 3 - Moderate<br>OGW: 4 - Significant | 1. No data/justification to support the reduced Residual Likelihood of F - Very Rare; D - Unlikely is more suitable. With the consequence unchanged at 5 - Major, a residual profile of D5 gives a Residual Risk of 4 - Significant.<br>2. A residual risk that remains 4 - Significant after the investment raises the question of whether the recommended option adequately mitigates the risk it is justified against. |

#### 4.3.1. Regulatory Assessment Framework

In reviewing this type of IT opex/capex business case, the standard AER framework asks whether the proposed expenditure is prudent (the need is genuine and the investment decision is reasonable) and efficient (the scope and cost are least-cost for the required outcome).

The NPV framework is the primary analytical tool for the options comparison, where the preferred option should have the highest NPV (least negative, or most positive where benefits are monetised).

The key challenge in this case is that the benefits identified by PQL are predominantly non-financial, which means their NPV comparison is effectively a cost comparison dressed up as an NPV. If the benefit streams are not monetised, then the NPV simply reflects the quantum and timing of costs plus the implicit value attributed to risk reduction, which is a much weaker analytical foundation than a full cost-benefit NPV. This weakness is compounded in IT03 because both options address all eight investment drivers and achieve identical residual risk outcomes, so the comparison collapses to cost alone.

Prudence is assessed by reference to the specific objectives listed in NER clause 6A.6.7(a) (capex) and clause 6A.6.6(a) (opex) and not against a generalised concept of sound business management or IT best practice. An investment that delivers efficiency or capability improvements beyond what is required to meet those objectives may be worthwhile, but it is not automatically prudent for the purposes of the Rules. In these circumstances, a detailed cost-benefit assessment is required to ensure the incremental benefits exceed the incremental costs.

Second, the prudence test requires the investment need to be adequately demonstrated. This means PQL must establish:

- a clear link between the identified investment drivers and one or more of the NER objectives listed above – specifically, how the absence of the proposed investment would put PQL's ability to meet those objectives at material risk; and
- that the risk profile associated with not investing is unacceptable – i.e., that failing to make the investment would result, or would be likely to result, in a breach of, or material degradation against, the relevant NER objective.

We consider that the Base Case (counterfactual) is not a pure “do nothing” or maintain-only scenario, with PQL acknowledging that the Base Case involves extending current system functionality through \$1.8M of interim work-arounds (custom spreadsheet developments, macros, stand-alone databases, custom inter-system synchronisation interfaces and manual processes), and assuming the Option 1 investment is still undertaken four years later at equivalent real-terms cost.

#### 4.3.2. OGW Assessment of Prudence

Our assessment of prudence was necessarily constrained by the limitations of the evidence PQL has provided. In forming our view we:

- reviewed the stated investment drivers, the statutory and regulatory compliance obligations, and PQL's risk assessment against PQL's own Risk Assessment Matrix Checklist, noting the absence of the detailed risk register and of data supporting the selection of consequence, likelihood and the risk ratings;
- compared the two options and base case presented, including PQL's 10-year NPV analysis – noting that, with no benefits monetised and included in the underlying NPV calculation, all options are a net present cost and the NPV comparison is effectively a comparison of costs;

- reviewed the initiative scopes, cost estimates and delivery schedules to the extent the available detail permitted (assessed in the Efficiency sections below); and
- considered the consistency of the proposed approach with the parallel IT02 Enterprise Asset Management business case.

At the highest, organisational, level it would be prudent to address the documented inherent risks within the business. Based on the inherent risks identified by PQL, and the breadth of statutory HSE compliance obligations, it is clear the organisation carries significant risk exposure arising from the existing HSE platforms, processes and tools. However, the case for each option as presented is not adequate, at this stage, to select the preferred option and consequently justify the expenditure.

**Is Option 1 the most prudent course of action?** Based on cost alone and supported by an NPV calculation absent of tangible benefits then, Option 1 would appear, in the absence of other considerations, to be the more prudent solution. However, we note an apparent enterprise architecture inconsistency between this business case and the parallel EAM (IT02) business case. In isolation from the cost/NPV drivers, Option 1 renews a bespoke platform built on best-of-breed solutions unified into a single HSE system, while Option 2 delivers the risk controls using and extending the existing [REDACTED] enterprise-wide platform.

While not verified, we assume that the unification of business processes onto the single SAP platform during the [REDACTED] transition was justified (and considered prudent at the time), in preference to a best-of-breed approach. The IT02 EAM business case continues that direction: its R1 (System Supportability, Sustainability and Extensibility) mitigation optimises, improves or renews PQL's asset management systems around SAP, and its R4 (Field Asset Data Risk) mitigation includes providing field crews with consolidated safety risk information (e.g. asbestos, chemical and other site risk details). The EAM scope is therefore looking to minimise bespoke and/or best-of-breed solutions in preference for consolidating effort into the single unified enterprise-wide SAP platform – while this business case proposes to “invest in renewal of the organisation's HSE systems and custom tools”.

This business case should be expanded to include a thorough evaluation of the enterprise-level risks and opportunities arising from the selection between Options 1 and 2 before a recommendation is made between the two options presented.

We have also not been able to review the prudence of the project with regard to the benefits for the end consumer.

Accordingly, our finding is that the investment may indeed be prudent at the corporate level, but prudence at the option level cannot be confirmed. Based on the information provided, we note the following key points for this draft decision report which can be addressed with further information in the revised proposal:.

- The rationale for the risk-based approach is opaque in the absence of the detailed risk register, the PQL Risk Management Procedure, and the data supporting the selection of consequence, likelihood and (in particular) residual likelihood ratings.
- The prudence of the option selection is not clear: an enterprise-level evaluation of the risks and opportunities of renewing a best-of-breed HSE platform (Option 1) versus extending the SAP enterprise platform (Option 2) is required, including consistency with the EAM program direction.
- The proposal aligns the three initiatives with the investment drivers but does not align them to their role in the mitigation of the inherent risks (for example, how does Initiative 2: HSE Data and Reporting contribute to the residual position of R3?).

- We have not been able to review the prudence of the project with regard to the benefits for the end consumer.

We find the assessment and support for the prudence of the preferred Option 1 incomplete.

#### 4.4. Efficiency - Cost Estimation

*Methodology/Benchmarking/ Initiative project review - scope definition, adequately costed*

##### 4.4.1. Efficiency methodology

Based on PQL's initiative estimates, the vast majority of the costs are attributable to labour [REDACTED] for Initiative 1; [REDACTED] for Initiative 2; [REDACTED] for Initiative 3). Consistent with our approach on the EAM Program, OGW's methodology is a bottom-up estimation reviewing assumed hourly rates and unit quantities (hours) against benchmarked maximum hourly rates in accordance with the AER's methodology previously used for Ergon Energy, complemented by a top-down assessment of tangible benefits.

However, the application of this methodology to IT03 has been constrained by the available evidence:

The proposed project budget for the recommended option is broken down into three initiatives, but as there is no positive link between the initiatives and the residual risks, the efficiency of each initiative in managing the inherent risks cannot be assessed.

- The scope of work for Options 1 and 2 is not adequate to draw a conclusion with respect to cost efficiency.
- PQL has not provided data or explained the methodology used to calculate the budget estimates beyond stating that bottom-up estimates were developed using "standard labour rates and consistent delivery methods".
- We have been unable to confirm whether the estimates for Option 1 have been validated by a third party or market tested.

We were also unable to find any identification or evaluation of synergies (or risks) between the HSE, EAM and S & S business cases. Some of the work proposed under the EAM and S&S business cases will overlap with the HSE business case, creating opportunities to share staff and minimise duplication of effort.

As an example, both business cases call out GIS integration: EAM Initiative 1 includes integration with "the Digital Engineering Common Data Environment (CDE) platform, the [REDACTED] GIS, and the Electronic Document and Records Management System (EDRMS)", while HSE Initiative 3 will "integrate the HSE management system with our GIS". Similarly, both programs integrate with the SAP EAM works management solution and the Field Automation Platform.

#### 4.5. Bottom Up Estimation

##### 4.5.1. Efficiency based on Planned Headcount and Duration

For the HSE Program, OGW compared PQL's planned headcount, average utilisation and duration for each initiative against general market indicators and industry experience. For IT03, PQL has provided data from which the planned headcount and average utilisation could be derived see Table 38. The limited scope detail for Option 1 impacted our ability to undertake benchmarking of the duration and FTE count, as a result there is inadequate information available to draw a conclusion with respect to cost efficiency for Option 1.

The Option 2 data interpreted from the information provided by PQL is provided in Table 39. The scope detail for Option 2, although limited, provided the basis to infer general market indicators for both duration and headcount this process is summarised in Table 40. The duration for Option 2 - Initiative 1 has been revised down from 24 to 18 months Table 41.

Table 38 Option 1 - PQL Summary of resourcing and duration

| Initiative – Option 1                                                    | PQL Planned Headcount | PQL Planned Average Utilisation | PQL FTE | PQL Planned Duration Months | PQL metric (FTE Months) |
|--------------------------------------------------------------------------|-----------------------|---------------------------------|---------|-----------------------------|-------------------------|
| Option 1 - Initiative 1: HSE Management System Renewal and Consolidation | 11                    | 36%                             | 3.9     | 16                          | 63.3                    |
| Option 1 - Initiative 2: HSE Data and Reporting                          | 10                    | 31%                             | 3.1     | 10                          | 31                      |
| Option 1 - Initiative 3: HSE Spatial Integration                         | 11                    | 29%                             | 3.2     | 9                           | 28.7                    |

Table 39: Option 2 - PQL Summary of resourcing and duration

| Initiative – Option 2                                    | PQL Planned Headcount | PQL Planned Average Utilisation | PQL FTE | PQL Planned Duration Months | PQL metric (FTE Months) |
|----------------------------------------------------------|-----------------------|---------------------------------|---------|-----------------------------|-------------------------|
| Option 2 - Initiative 1 - HSE Solution Uplift            | 13                    | 59%                             | 7.67    | 24                          | 184.08                  |
| Option 2 - Initiative 2: Environment Spatial Integration | 11                    | 40%                             | 4.4     | 11                          | 48.4                    |

Table 40: Option 2 - OGW's industry benchmarking

| Option 2 Initiative                                      | Industry FTE reference | Industry Reference Duration Months | Industry metric range (FTE-months) | Industry FTE reference |
|----------------------------------------------------------|------------------------|------------------------------------|------------------------------------|------------------------|
| Option 2 - Initiative 1 - HSE Solution Uplift            | 14-18                  | 4-9                                | 56-162                             | 144                    |
| Option 2 - Initiative 2: Environment Spatial Integration | 8-11                   | 4-6                                | 32-66                              | 49                     |

Table 41: PQL comparison to industry benchmarking

| Option 2 Initiative                                      | PQL metric (FTE Months) | Industry FTE reference | Benchmark Alignment         | OGW Commentary                                                 |
|----------------------------------------------------------|-------------------------|------------------------|-----------------------------|----------------------------------------------------------------|
| Option 2 - Initiative 1 - HSE Solution Uplift            | 185                     | 56-162                 | PQL FTE Months excessive    | Reduce duration from 24 Months to 18 months (FTE Months = 140) |
| Option 2 - Initiative 2: Environment Spatial Integration | 48                      | 32-66                  | PQL FTE Months Within Range | Long Duration compensates for low headcount                    |

#### 4.5.2. Initiatives - Bottom up revised efficiency

OGW has applied industry benchmarks, where available, to the PQL allocations for each initiative and made adjustments to each of PQL's Initiative Estimates based on the benchmark adjustments as summarised below in Table 9.

Table 42: OGW's revision to resource allocation to the initiatives for Option 2

| Initiative                                                               | Duration adjustment                                                                    | Rates Adjustment |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------|
| Option 1 - Initiative 1: HSE Management System Renewal and Consolidation | Inadequate data for benchmarking - No adjustment                                       | As per benchmark |
| Option 1 - Initiative 2: HSE Data and Reporting                          | Inadequate data for benchmarking - No adjustment                                       | As per benchmark |
| Option 1 - Initiative 3: HSE Spatial Integration                         | Inadequate data for benchmarking - No adjustment                                       | As per benchmark |
| Option 2 - Initiative 1 - HSE Solution Uplift                            | FTE Months excessive - Duration reduced from 24 Months to 18 months (FTE Months = 140) | As per benchmark |
| Option 2 - Initiative 2: Environment Spatial Integration                 | Withing range of bench marked data                                                     | As per benchmark |

Table 43: PQL's and OGW's revised budget forecast - Option 1 Initiative 1

| Option 1: Initiative 1: HSE Management System Renewal and Consolidation |           |         |                     |           |         |         |
|-------------------------------------------------------------------------|-----------|---------|---------------------|-----------|---------|---------|
| PQL as Submitted                                                        |           |         | OGW Revised - Rates |           |         |         |
| Duration                                                                | Months    |         |                     | Months    |         |         |
| Planning and Analysis                                                   | 3         |         |                     | 3         |         |         |
| Design                                                                  | 3         |         |                     | 3         |         |         |
| Configure, Build and Test                                               | 9         |         |                     | 9         |         |         |
| Deployment and Hypercare                                                | 1         |         |                     | 1         |         |         |
| <b>Total Duration</b>                                                   | <b>16</b> |         |                     | <b>16</b> |         |         |
| Costs (FY27 Real Terms)                                                 | Capex     | Opex    | Totex               | Capex     | Opex    | Totex   |
| Labour                                                                  |           |         |                     |           |         |         |
| Vendors                                                                 | -         |         |                     | -         |         |         |
| Software                                                                | -         | \$0.10M | \$0.10M             | -         | \$0.10M | \$0.10M |

|                |                |                |                |                |                |                |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Infrastructure | -              | \$0.10M        | \$0.10M        | -              | \$0.10M        | \$0.10M        |
| <b>Total</b>   | <b>\$0.11M</b> | <b>\$2.48M</b> | <b>\$2.59M</b> | <b>\$0.11M</b> | <b>\$2.25M</b> | <b>\$2.36M</b> |

Table 44: PQL's and OGW's revised budget forecast - Option 1 Initiative 2

| Option 1: Initiative 2: HSE Data and Reporting |                            |                |              |                               |                |                |
|------------------------------------------------|----------------------------|----------------|--------------|-------------------------------|----------------|----------------|
| Duration                                       | PQL as Submitted<br>Months |                |              | OGW Revised - Rates<br>Months |                |                |
| Planning and Analysis                          | 2                          |                |              | 2                             |                |                |
| Design                                         | 2                          |                |              | 2                             |                |                |
| Configure, Build and Test                      | 5                          |                |              | 5                             |                |                |
| Deployment and Hypercare                       | 1                          |                |              | 1                             |                |                |
| <b>Total Duration</b>                          | <b>10</b>                  |                |              | <b>10</b>                     |                |                |
| <b>Costs (FY27 Real Terms)</b>                 | <b>Capex</b>               | <b>Opex</b>    | <b>Totex</b> | <b>Capex</b>                  | <b>Opex</b>    | <b>Totex</b>   |
| Labour                                         |                            |                |              |                               |                |                |
| Vendors                                        | -                          | -              | -            | -                             | -              | -              |
| Software                                       | -                          | -              | -            | -                             | -              | -              |
| Infrastructure                                 | -                          |                |              |                               |                |                |
| <b>Total</b>                                   | <b>\$0.05M</b>             | <b>\$1.23M</b> | <b>1.28M</b> | <b>\$0.04M</b>                | <b>\$1.05M</b> | <b>\$1.09M</b> |

Table 45: PQL's and OGW's revised budget forecast - Option 1 Initiative 3

| Option 1: Initiative 3: HSE Spatial Integration |                            |                |                |                               |                |                |
|-------------------------------------------------|----------------------------|----------------|----------------|-------------------------------|----------------|----------------|
| Duration                                        | PQL as Submitted<br>Months |                |                | OGW Revised - Rates<br>Months |                |                |
| Planning and Analysis                           | 1                          |                |                | 1                             |                |                |
| Design                                          | 2                          |                |                | 2                             |                |                |
| Configure, Build and Test                       | 5                          |                |                | 5                             |                |                |
| Deployment and Hypercare                        | 1                          |                |                | 1                             |                |                |
| <b>Total Duration</b>                           | <b>9</b>                   |                |                | <b>9</b>                      |                |                |
| <b>Costs (FY27 Real Terms)</b>                  | <b>Capex</b>               | <b>Opex</b>    | <b>Totex</b>   | <b>Capex</b>                  | <b>Opex</b>    | <b>Totex</b>   |
| Labour                                          |                            |                |                |                               |                |                |
| Vendors                                         | -                          |                |                |                               |                |                |
| Software                                        | -                          | -              | -              | -                             | -              | -              |
| Infrastructure                                  | -                          | -              | -              | -                             | -              | -              |
| <b>Total</b>                                    | <b>\$0.09M</b>             | <b>\$1.41M</b> | <b>\$1.50M</b> | <b>\$0.09M</b>                | <b>\$1.11M</b> | <b>\$1.20M</b> |

Table 46: PQL's and OGW's revised budget forecast - Option 2 Initiative 1

| Option 2 - Initiative 1 - HSE Solution Uplift |                            |                                            |
|-----------------------------------------------|----------------------------|--------------------------------------------|
| Duration                                      | PQL as Submitted<br>Months | OGW Revised - Duration and Rates<br>Months |
| Planning and Analysis                         | 3                          | 3                                          |
| Design                                        | 6                          | 6                                          |
| Configure, Build and Test                     | 14                         | 8                                          |

|                                |                |                |                |                |                |                |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Deployment and Hypercare       | 1              |                |                | 1              |                |                |
| <b>Total Duration</b>          | <b>24</b>      |                |                | <b>18</b>      |                |                |
| <b>Costs (FY27 Real Terms)</b> | <b>Capex</b>   | <b>Opex</b>    | <b>Totex</b>   | <b>Capex</b>   | <b>Opex</b>    | <b>Totex</b>   |
| Labour                         |                |                |                |                |                |                |
| Vendors                        | -              |                |                | -              |                |                |
| Software                       | -              |                |                | -              |                |                |
| Infrastructure                 | -              | -              | -              | -              | -              | -              |
| <b>Total</b>                   | <b>\$0.25M</b> | <b>\$6.80M</b> | <b>\$7.06M</b> | <b>\$0.17M</b> | <b>\$4.60M</b> | <b>\$4.77M</b> |

Table 47: PQL's and OGW's revised budget forecast - Option 2 Initiative 2

| Option 2 - Initiative 2 - HSE Spatial Integration |                  |                |               |                     |                |                |
|---------------------------------------------------|------------------|----------------|---------------|---------------------|----------------|----------------|
|                                                   | PQL as Submitted |                |               | OGW Revised - Rates |                |                |
| <b>Duration</b>                                   | <b>Months</b>    |                |               | <b>Months</b>       |                |                |
| Planning and Analysis                             | 1                |                |               | 1                   |                |                |
| Design                                            | 3                |                |               | 3                   |                |                |
| Configure, Build and Test                         | 6                |                |               | 6                   |                |                |
| Deployment and Hypercare                          | 1                |                |               | 1                   |                |                |
| <b>Total Duration</b>                             | <b>11</b>        |                |               | <b>11</b>           |                |                |
| <b>Costs (FY27 Real Terms)</b>                    | <b>Capex</b>     | <b>Opex</b>    | <b>Totex</b>  | <b>Capex</b>        | <b>Opex</b>    | <b>Totex</b>   |
| Labour                                            |                  |                |               |                     |                |                |
| Vendors                                           | -                |                |               | -                   |                |                |
| Software                                          | -                | -              | -             | -                   | -              | -              |
| Infrastructure                                    | -                | -              | -             | -                   | -              | -              |
| <b>Total</b>                                      | <b>\$0.17M</b>   | <b>\$2.08M</b> | <b>\$2.25</b> | <b>\$0.17M</b>      | <b>\$1.62M</b> | <b>\$1.79M</b> |

#### 4.6. Top Down Efficiency - Tangible Benefits

There has been no identification or evaluation by PQL of the tangible benefits to be gained from the implementation of the preferred option. The benefits identified (B1-B4, plus B5 for Option 2) are characterised as non-financial (risk mitigation and strategic contribution) or indirect financial (operational efficiency and avoided costs), without quantification.

Due to the limited insight into the scope of Options 1 and 2, there was no opportunity to interpret packages of work or undertake industry benchmarking of any tangible benefits that may arise. We note, however, that the benefit descriptions themselves point to quantifiable efficiencies that PQL should be able to estimate – including reduced time and effort to capture, track and remediate HSE risks and incidents; reduced manual data capture and duplication across multiple HSE systems; reduced effort to produce required HSE compliance reporting; and avoided costs of managing HSE incidents (workforce downtime, incident investigation and remediation).

##### 4.6.1. Efficiency based on Indirect Benefits

There are some indirect financial benefits identified in the business case for both Options 1 and 2; due to their nature and the absence of quantification, no indirect (financial) benefits can be derived from the project to support its justification.

#### 4.6.2. Efficiency based on Non-Financial Contributions to the business

The business case identifies a number of non-financial benefits attributable to the project (system sustainability, workforce engagement, and contribution to the HSE strategic objectives). This is consistent with the enterprise risk management focus of the project. The intangible benefits of the program are consistent with the risk management basis of the work and are difficult to challenge due to the absence of data.

#### Option 1 - Recommended Option - HSE Renewal, Consolidation and Improvement

Due to the nature of the information provided by PQL we were unable to attribute the four Benefits identified to any particular initiative, as shown in Table 15 below.

Table 48: The three initiatives in Option 1 and the Benefits

| Initiative                                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Key benefits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Initiative 1:<br>HSE Management System Renewal and Consolidation | This first planned investment will therefore establish the foundation for long term sustainability and extensibility, through renewal of the core HSE solution to meet the full set of capability requirements. In parallel, the initiative will leverage the opportunity to also standardise the organisation's HSE data capture methods, to enable consistent end-to-end visibility of safety and environment data, incident management, root cause analyses, alerting and response management. | <p>B1. System sustainability and extensibility benefit</p> <p>PQL will retain access to supported versions of the HSE solution, thereby ensuring the organisation's HSE function can continue to operate in an effective and efficient manner.</p> <p>B2. Increased level of workforce engagement across HSE activities</p> <p>The renewed HSE solution will provide staff and contractors with an improved UX covering all dimensions of HSE, making it easier to capture and track HSE risks and incidents. This leads to staff being more responsive to HSE matters and having better line of sight to how risks and incidents are being managed.</p> <p>B3. Improved efficiency in HSE compliance and reporting activities</p>                                                                                                           |
| Initiative 2:<br>HSE Data and Reporting                          | This initiative will build on the foundations of the renewed HSE system and processes, to enable reliable, repeatable and automated safety and environmental reporting, including ongoing compliance with all HSE management obligations.                                                                                                                                                                                                                                                         | <p>With the consolidation of the HSE activities into a single technology platform and with improved integration to other core systems (e.g. ERP including HCM, EAM and GIS), there are productivity benefits across the PQL workforce. These benefits include:</p> <ul style="list-style-type: none"> <li>• Increase in delivery agility through an optimised and fit-for-purpose approach to managing HSE risks and incidents</li> <li>• Reduced time and effort to capture, track and remediate HSE risks and incidents</li> <li>• Reduced level of manual data capture and duplication across multiple HSE systems</li> <li>• Reduced effort to produce required HSE compliance reporting</li> <li>• More targeted and cost efficient HSE interventions resulting from improved data quality and enhanced analytics capability</li> </ul> |
| Initiative 3:<br>HSE Spatial Integration                         | This final initiative will integrate the HSE management system with our GIS for planning and operational visibility across PQL's large service area                                                                                                                                                                                                                                                                                                                                               | <p>B4. Continuous improvement to reduce HSE incidents</p> <p>Renewed HSE capability will support the overall improvement in HSE performance including the reduction in workplace and environment incidents, through better targeting of HSE engagement and communication programs enable by improved data and spatial awareness overlays.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

Table 16 further summarises the Non-Financial and Indirect Financial benefits of implementing the three initiatives making up Option 1.

Table 49 Business benefits and potential impact of option 1.

| Initiative                                                    | Business Benefits      | Potential Impact           | Nom. Target                                                                                                                            | F2025 Data | Budget Impact |
|---------------------------------------------------------------|------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------|---------------|
| Initiative 1: HSE Management System Renewal and Consolidation | B1. Non-Financial      | B1. Risk Mitigation        | See mitigation of inherent Risk 2 as summarised in Table 9.                                                                            | N/A        | Nil           |
|                                                               | B2. Non-Financial      | B2. Strategic Contribution | Contributes to the HSE strategic objectives of having empowered people and a healthy and engaged workforce.                            | N/A        | Nil           |
|                                                               | B3. Non-Financial      | B3. Strategic Contribution | Contributes to the strategic HSE objective of Agile Delivery                                                                           | N/A        | Nil           |
| Initiative 2: HSE Data and Reporting                          | B3. Indirect Financial | B3. Operational Efficiency | Contributor towards PQL's operational efficiency and productivity commitments.                                                         | N/A        | Not Available |
|                                                               | B4. Non-Financial      | B4. Strategic Contribution | Contributes to the strategic HSE objective of having a healthy and engaged workforce.                                                  | N/A        | Nil           |
|                                                               | B4. Indirect Financial | B4. Avoided Costs          | Avoids the costs associated with managing HSE incidents including workforce downtime, incident investigation and incident remediation. | N/A        | Not Available |
| Initiative 3: HSE Spatial Integration                         | B1. Non-Financial      | B1. Risk Mitigation        | See mitigation of inherent Risk 4 as summarised in Table 9.                                                                            | N/A        | Nil           |
|                                                               | B3. Non-Financial      | B3. Strategic Contribution | Contributes to the strategic HSE objective of Agile Delivery                                                                           | N/A        | Nil           |

#### Option 2 - Alternative Option - Uplift HSE Systems, Practices and Analytics.

As with Option 1 above, due to the nature of the information provided by PQL OGW were unable to attribute the five Benefits identified to any particular initiative, as shown in Table 17 below.

Table 50 The two initiatives in Option 2 and the Benefits

| Initiative                                       | Description                                                                                                                                                                         | Key benefits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Initiative 1:<br>HSE Solution Uplift             | This initiative establishes the foundation for long term sustainability and extensibility, through uplifting the core HSE solution to meet the full set of capability requirements. | <p>B1. PQL will retain access to supported versions of the HSE solution, thereby ensuring the organisation's HSE function can continue to operate in an effective and efficient manner.</p> <p>B2. Increased level of workforce engagement across HSE activities<br/>The renewed HSE solution will provide staff and contractors with an improved UX covering all dimensions of HSE, making it easier to capture and track HSE risks and incidents. This leads to staff being more responsive to HSE matters and having better line of sight to how risks and incidents are being managed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Initiative 2:<br>Environment Spatial Integration | This initiative will integrate the uplifted HSE solution with our GIS for planning and operational visibility across PQL's large service area.                                      | <p>B3. Improved efficiency in HSE compliance and reporting activities<br/>With the consolidation of the HSE activities into a single technology platform tightly integrated with the core SAP (ERP including HCM and EAM) and GIS platforms, there are productivity benefits across the PQL workforce. These benefits include:</p> <ul style="list-style-type: none"> <li>• Increase in delivery agility through an optimised and fit-for-purpose approach to managing HSE risks and incidents</li> <li>• Reduced time and effort to capture, track and remediate HSE risks and incidents</li> <li>• Reduced level of manual data capture and duplication across multiple HSE systems</li> <li>• Reduced effort to produce required HSE compliance reporting</li> <li>• More targeted and cost efficient HSE interventions resulting from improved data quality and enhanced analytics capability</li> </ul> <p>B4. Continuous improvement to reduce HSE incidents<br/>Renewed HSE capability will support the overall improvement in HSE performance including the reduction in workplace and environment incidents, through better targeting of HSE engagement and communication programs enable by improved data and spatial awareness overlays.</p> <p>B5. Seamless integration and data-driven insights<br/>The tight integration of the HSE with the SAP platform enables embedding HSE processes into the ERP and EAM workflows, improving data visibility, enabling better decision-making, and creating more efficient work practices</p> |

Table 18 further summarises the Non-Financial and Indirect Financial benefits of implementing the three initiatives making up Option 2.

Table 51 Business benefits and potential impact of option 2.

| Initiative                        | Business Benefits | Potential Impact           | Nom. Target                                                                                                 | F2025 Data | Budget Impact |
|-----------------------------------|-------------------|----------------------------|-------------------------------------------------------------------------------------------------------------|------------|---------------|
| Initiative 1: HSE Solution Uplift | B1. Non-Financial | B1. Risk Mitigation        | See mitigation of inherent Risk 2 as summarised in Table 15.                                                | N/A        | Nil           |
|                                   | B2. Non-Financial | B2. Strategic Contribution | Contributes to the HSE strategic objectives of having empowered people and a healthy and engaged workforce. | N/A        | Nil           |
|                                   | B3. Non-Financial | B3. Strategic Contribution | Contributes to the strategic HSE objective of Agile Delivery                                                | N/A        | Nil           |

| Initiative                                    | Business Benefits      | Potential Impact           | Nom. Target                                                                                                                            | F2025 Data | Budget Impact |
|-----------------------------------------------|------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------|---------------|
| Initiative 2: Environment Spatial Integration | B3. Indirect Financial | B3. Operational Efficiency | Contributor towards PQL's operational efficiency and productivity commitments.                                                         | N/A        | Not Available |
|                                               | B4. Non-Financial      | B4. Strategic Contribution | Contributes to the strategic HSE objective of having a healthy and engaged workforce.                                                  | N/A        | Nil           |
|                                               | B4. Indirect Financial | B4. Avoided Costs          | Avoids the costs associated with managing HSE incidents including workforce downtime, incident investigation and incident remediation. | N/A        | Not Available |
|                                               | B5. Indirect Financial | B5. Operational Efficiency | Contributor towards PQL's operational efficiency and productivity commitments                                                          | N/A        | Nil           |

Table 19 provides a revised NPV result by applying OGW's revised durations and rates. There are no tangible benefits identified or evaluated by PQL. Unlike IT02 EAM, OGW have been unable to identify or quantify any tangible benefits for Options 1 or 2 due to the nature of the scope of work attributed to each option.

The NPV calculation considers the tax benefit only, which is a financial treatment and not a true benefit of the project/option. Option 3 would achieve similar benefits over the longer term, due to the deferral of the option 1 works to the next regulatory period and would have a lower NPV than Option 1.

With the revised duration applied to Initiative 2 of Option 2 and the revised benchmark rates applied across the board, the NPV gap between Option 1 and Option 2 has narrowed significantly

Table 52: OGW's revised Option NPV analysis

| NPV              |      | Option 1:<br>Recommended | Option 2:<br>Alternative | Base Case |
|------------------|------|--------------------------|--------------------------|-----------|
| Capex            | \$ M | (0.2)                    | (0.3)                    | (0.2)     |
| Opex             | \$ M | (4.4)                    | (5.6)                    | (5.5)     |
| Benefit          |      | -                        | -                        | -         |
| Tax benefit/paid | \$ M | 1.4                      | 1.7                      | 1.7       |
| Terminal value   | \$ M | 0.0                      | 0.0                      | 0.1       |
| Total            | \$ M | (3.2)                    | (4.1)                    | (4.0)     |

## 4.7. Key Findings

At the corporate level, PQL makes a case for prudence: the organisation carries significant risk<sup>16</sup> exposure arising from the existing HSE platforms, processes and tools, and it has a broad set of statutory HSE compliance obligations. At this stage and in our opinion, the case for each option as presented is incomplete.

The residual risk ratings that underpin the risk-based justification are unsupported. There is no data or justification for the Residual Likelihood of F - Very Rare applied to all four risks under both options; applying a more suitable likelihood of D - Unlikely increases the residual risks to 3-Moderate (R1-R3) and 4-Significant (R4). A residual risk that remains 4-Significant after the investment raises the question of whether the proposed options and initiatives adequately mitigate the risk they are justified against.

The selection between Option 1 (renewal of a best-of-breed HSE platform and custom tools) and Option 2 (uplift tightly integrated with the [REDACTED] enterprise platform) requires an enterprise-level evaluation that has not been performed or articulated in the submission, particularly given the parallel EAM business case is consolidating onto the SAP platform and overlaps with this program (GIS integration, SAP EAM works management and Field Automation Platform integration). Synergies between the HSE and EAM business cases – opportunities to share staff and minimise duplication of effort – have not been identified by PQL in our view.

We were unable to provide our assessment of the appropriateness of the FTE count for the preferred Option 1 in our bottom up analysis due to the limited scope definition by PQL. The efficiency adjustments have been made on our benchmark rates only. An evaluation of investment efficiency for the alternate, Option 2, with regard to the FTE count is limited and could not be confirmed due to a lack of critical data with the submission.

The scope of work for Options 1 and 2 is not adequate to draw a conclusion with respect to cost efficiency; data provided, prevents benchmarking of resourcing against industry norms; the estimates have generally not been confirmed or third-party validated or market tested; and no tangible benefits have been quantified or netted off in the NPV analysis, notwithstanding that the benefit descriptions point to quantifiable labour and avoided-cost efficiencies.

These findings are based on the limited information provided by PQL.

16

Based on PQL's risk matrix assessment

Table 53: OGW's revised budget forecasts for the IT HSE Program - Option 1 (\$FY27)

| Initiative                                         | PQL Proposed Initiative Estimate |         |         | OGW Adjustment |           |           | OGW Adjusted Forecast |         |         |
|----------------------------------------------------|----------------------------------|---------|---------|----------------|-----------|-----------|-----------------------|---------|---------|
| Bottom Up Duration and Rates Adjustment            |                                  |         |         |                |           |           |                       |         |         |
|                                                    | Capex                            | Opex    | Totex   | Capex          | Opex      | Totex     | Capex                 | Opex    | Totex   |
| 1: HSE Management System Renewal and Consolidation | \$0.11M                          | \$2.48M | \$2.59M |                | (\$0.23M) | (\$0.23M) | \$0.11M               | \$2.25M | \$2.36M |
| 2: HSE Data and Reporting                          | \$0.05M                          | \$1.23M | \$1.28M | (\$0.01M)      | (\$0.14M) | (\$0.15M) | \$0.04M               | \$1.09M | \$1.13M |
| 3: HSE Spatial Integration                         | \$0.09M                          | \$1.41M | \$1.50M |                | (\$0.21M) | (\$0.21M) | \$0.09M               | \$1.20M | \$1.29M |
| Bottom up Subtotal                                 | \$0.25M                          | \$5.12M | \$5.37M | (\$0.01M)      | (\$0.58M) | (\$0.59M) | \$0.24M               | \$4.54M | \$4.78M |
| Benefits Adjustment                                |                                  |         |         |                |           |           |                       |         |         |
| 1: HSE Management System Renewal and Consolidation |                                  |         |         |                |           | Nil       |                       |         |         |
| 2: HSE Data and Reporting                          |                                  |         |         |                |           | Nil       |                       |         |         |
| 3: HSE Spatial Integration                         |                                  |         |         |                |           | Nil       |                       |         |         |
| Final Total                                        | \$0.25M                          | \$5.12M | \$5.37M |                |           |           | \$0.24M               | \$4.54M | \$4.78M |

## 5. IT Investment Program: Support and Sustain (S&S)

*Enable Powerlink (PQL) support a program where their major systems are periodically upgraded to ensure supportability, sustainability and security, consistent with prudent asset lifecycle management principles.*

### 5.1. Background/Approach

Powerlink frames the Support and Sustain (S&S) investment around three broad categories of need:

**Grid Planning Systems Sustainability.** Powerlink argues that Electricity grid planning is an increasingly critical and complex transmission network management activity.

They currently use a variety of in-house developed tools, together with the Power System Simulator for Engineering (PSSE) and Power System Computer Aided Design (PSCAD) products, enhanced by custom workflow scripting, to undertake the required analysis underpinning the organisation's network augmentation, expansion and contingency planning.

PQL argues that in the coming period, they will need to invest to renew these grid planning capabilities, for sustainability of the core products, and to remove the current heavy reliance on custom tooling including Excel spreadsheets with extensive use of [REDACTED]

[REDACTED] The planned renewal will enable sustainable, repeatable Electromagnetic Transient (EMT) modelling, as well as the Stability Limit analysis which forms the basis for network constraint advice to the Australian Energy Market Operator (AEMO).

**SAP Enterprise Resource Planning (ERP) Sustainability** Powerlink argues that SAP is Powerlink's core enterprise management system, with functionality spanning: Finance and Accounting - Budgeting, Planning and Forecasting - Cost Allocation Management - Human Capital Management (HCM) and Payroll - Asset, Maintenance and Works Management - Logistics and Warehouse Management - Business Process Management.

In the current regulatory control period (2022-27), Powerlink has successfully transitioned from the legacy SAP [REDACTED] software platform to the current generation [REDACTED] environment. As such, the existing system is a sound foundation for Powerlink's business operations. However, given the rapid evolution of SAP's software, in the latter half of the coming regulatory control period, it will be necessary to transition Powerlink's existing legacy SAP configurations, custom code and integrations in order to retain access to current and emerging product features.

This "clean core" investment will deliver ongoing platform sustainability, while also emphasising agility, operational simplicity, security and process best-practice.

**GIS Spatial Data Management Sustainability** Powerlink argues that their current Geographic Information System (GIS) platform is built on the [REDACTED] and serves as a critical business application, acting as the authoritative source of location-based data across the organisation. They claim it plays a vital role in supporting the planning, operation and maintenance of Queensland's transmission network.

During the current regulatory control period, Powerlink has retained the [REDACTED] while transitioning the underlying [REDACTED] database [REDACTED] cloud-hosted datastore. Toward the end of the upcoming regulatory control period, Powerlink will undertake a sustainability upgrade of the GIS platform, including integration with the upgraded SAP Enterprise Asset Management (EAM) facility, to ensure ongoing supportability, and to enable future operational needs.

Powerlink further argues that the Support and Sustain investment program reflects prudent asset lifecycle management of their critical system platforms.

The evidence provided by PQL identifies three inherent risks, all rated "4 - Significant":

- R1 System Supportability and Security Risk;
- R2 Operational Compliance Risk; and
- R3 Extensibility and Business Improvement Risk

Likelihoods range from C-Possible (R1, R3) to B-Likely (R2). PQL's documentation does not validate, or explain why, these risks are assigned these ratings.

PQL considered three options.

**Option 1 Preferred Option: Existing Platform Sustainability (NPV-\$4.8M)**

In this recommended option, the existing Powerlink ERP, Grid Planning and Spatial systems will undergo sustainability upgrades or renewals, for ongoing supportability, security, extensibility and best practice enablement.

Table 54: PQL S&amp;S Initiatives (FY27 real)

| Initiative                      | Description                                                                                                                                                                                                                                                                                                                                  | Capex   | Opex    | Totex   |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|
| 1: Grid Planning Sustainability | This initiative will renew and sustain Powerlink's core Grid Planning capabilities.                                                                                                                                                                                                                                                          | \$1.71M | \$0M    | \$1.71M |
| 2: SAP ERP Sustainability       | This initiative will transition Powerlink's existing legacy SAP configurations, customisations and integrations consistent with "clean core" principles, in order to retain access to current and emerging product features into the next decade.                                                                                            | \$0M    | \$3.10  | \$3.10M |
| 3: GIS Spatial Sustainability   | This initiative will include a sustainability upgrade of Powerlink's GIS spatial data management platform and data stores. The next generation v12 product is forecast to require a significant upgrade project for Powerlink, including integration with the underlying [REDACTED] spatial data store and all other dependent applications. | \$0.15M | \$3.40M | \$3.55M |

#### Option 2 - (Alternate) Option: Systems Renewal and Extension (NPV -\$8.0M)

In this alternative option, Powerlink will undertake a significant renewal activity for the existing core system implementations which will extend the solution capabilities and automate a range of functions using the process orchestration and AI workflow management.

#### Base Case - Counterfactual (NPV -\$5.8M; deferred full investment)

PQL would continue operating the existing suite of major systems and legacy tools, estimated at \$2.1M over the period (near term requirements EMT Power Flow Simulation, Transient Stability Limit analysis, and PSSE scenario management \$0.6M; Interim SAP custom code changes and enhancements \$0.75M; [REDACTED] GIS interim works and support extension \$0.5M; and Other ad hoc system customisation and urgent data rectification works \$0.25M).

Critically, the base case assumes that Option 1 (excluding the GIS upgrade) would be implemented approximately four years later (i.e. in the 2032-37 period) at equivalent real-terms cost – so it is not a “do nothing” scenario; it is a deferral scenario.

Section 3.4.2 of PQL's business case acknowledges that “Interim work-around investments”, and code extensions will be made to address near term requirements. OGW's view is that PQL's own language acknowledges that the Base Case involves extending current system functionality (on an ad hoc, reactive basis) rather than simply sustaining it. This is inconsistent with a true do-nothing or maintain-only counterfactual.

PQL's forecast costs for each option, broken down by cost category and split between capex and project opex (FY27 real terms, pre-CAM), are summarised Table 17.

Table 55: PQL's forecast costs for each option (FY27 Real)

| EAM Initiative Costs and Totals                                                                                                                                                  |                |                 |                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------|-----------------|
| <b>Option 1: Existing EAM Systems Improvement</b>                                                                                                                                |                |                 |                 |
| Cost Category                                                                                                                                                                    | Capex          | Project Opex    | Project Totals  |
| Labour                                                                                                                                                                           |                |                 |                 |
| Vendors                                                                                                                                                                          |                |                 |                 |
| Software                                                                                                                                                                         |                |                 |                 |
| Infrastructure                                                                                                                                                                   |                | -               | -               |
| <b>Totals</b>                                                                                                                                                                    | <b>\$1.86M</b> | <b>\$6.49M</b>  | <b>\$8.35M</b>  |
| <b>Option 2: EAM Real Time Digital Twin</b>                                                                                                                                      |                |                 |                 |
| Cost Category                                                                                                                                                                    | Capex          | Project Opex    | Project Totals  |
| Labour                                                                                                                                                                           |                |                 |                 |
| Vendors                                                                                                                                                                          |                |                 |                 |
| Software                                                                                                                                                                         |                |                 |                 |
| Infrastructure                                                                                                                                                                   |                | -               | -               |
| <b>Totals</b>                                                                                                                                                                    | <b>\$3.98M</b> | <b>\$10.58M</b> | <b>\$14.56M</b> |
| <b>Option 3: Base Case: Counterfactual</b>                                                                                                                                       |                |                 |                 |
| Cost Category                                                                                                                                                                    | Capex          | Project Opex    | Project Totals  |
| Interim custom code extensions and workarounds to address near term requirements for EMT Power Flow Simulation, Transient Stability Limit analysis, and PSSE scenario management |                |                 | \$0.6M          |
| Interim SAP custom code changes and enhancements                                                                                                                                 |                |                 | \$0.75M         |
| GIS interim works and support extension                                                                                                                                          |                |                 | \$0.5M          |
| Other ad hoc system customisation and urgent data rectification works                                                                                                            |                |                 | \$0.25M         |
| Option 1 (Recommended) excluding the GIS upgrade would still be undertaken 4 years later (i.e. in the following regulatory period)                                               |                |                 | -               |
| <b>Totals</b>                                                                                                                                                                    |                |                 | <b>\$2.1M</b>   |

## 5.2. PQL's evidence provided and basis for preferring Option 1

PQL's business case presents:

- a description of the three system groups which are identified for sustainability upgrade investment; a structured risk assessment framework (three inherent risks with likelihood/consequence ratings);

- an initiative-by-initiative bottom-up cost estimate using “standard labour rates and consistent delivery methods”, with shared program activities apportioned across initiatives;
- a 10-year NPV comparison across the two options and the base case; residual risk ratings post-mitigation for Options 1 and 2; a benefits table for options 1 and 2

#### 5.2.1. Basis for recommending Option 1.

PQL's recommendation rests on two stated grounds:

- Option 1 addresses all the (five) identified business and technical investment drivers (as does Option 2 – unlike the EAM business case, the alignment tables show full alignment for both options); and
- Option 1 has the best NPV at -\$4.8M versus -\$8.0M for Option 2 and -\$5.8M for the Base Case.

On risk;

- Option 1 delivers a residual risk outcome of 2-Low for R1 and R3 and 3-Moderate for R2; Option 2 delivers a residual risk outcome of 2-Low for all three inherent risks; while the base case was not assessed for residual risk.

PQL also highlights, Option 2 “Systems Renewal and Extension” is also a suitable response to the investment drivers, but the higher cost of this alternative option likely outweighs the possible incremental future benefits that may be enabled.

#### 5.2.2. NPV Analysis

Table 56: PQL's Option NPV analysis

|                  |      | Option 1:<br>Recommended | Option 2:<br>Alternative | Base Case |
|------------------|------|--------------------------|--------------------------|-----------|
| Capex            | \$ M | (1.6)                    | (3.5)                    | (1.5)     |
| Opex             | \$ M | (5.4)                    | (8.8)                    | (6.3)     |
| Tax benefit/paid | \$ M | 1.9                      | 3.2                      | 1.9       |
| Terminal value   | \$ M | 0.3                      | 1.1                      | 0.1       |
| Total            | \$ M | (4.8)                    | (8.0)                    | (5.8)     |

PQL's NPV analysis is based on a 10-year horizon considering each of the three options proposed. The analysis did not include any benefits for Option 1 or Option 2. All options are a net cost with the only benefits resulting from tax benefits and terminal value.

Option 3 NPV is based on the assumption that Option 1 is deferred by four years with work around costs in those four years.

#### 5.2.3. Limitations of the evidence

Benefits are non-financial, or indirect financial, in nature – they are characterised as risk mitigation, and indirect operational efficiency. This is a significant limitation for NPV analysis since the benefits side of the NPV must be carrying this weight implicitly.

PQL provided Initiative Estimates for Option 1 and Option 2. While we understand the preliminary nature of the cost estimates, PQL has not provided any evidence or methodology in determining these bottom up estimates. No market testing has been discussed or provided to support these internal estimates are the most efficient.

The scope of work for each option, and for each initiative within Option 1, is not adequately detailed to evaluate the fiscal efficiency of each option, nor to identify and evaluate any direct and/or indirect benefits from the program.

The base case workaround costs (\$2.1M) and the assumption that Option 1 is deferred by four years (rather than permanently avoided) are internal PQL assumptions.

Risk ratings (both Inherent and Residual) are self-assessed by PQL without reference to external benchmarks, independent validation or a detailed risk register. PQL have provided no data to support the consequence and/or likelihood data used in the selection of inherent and/or residual risk.

There is no evidence that PQL have identified, tested or evaluated the potential for conflict (and waste) or synergies between the three programs of work (IT02, IT03 and IT04) where projects such as GIS occur across all three initiatives.

Documentation reviewed:

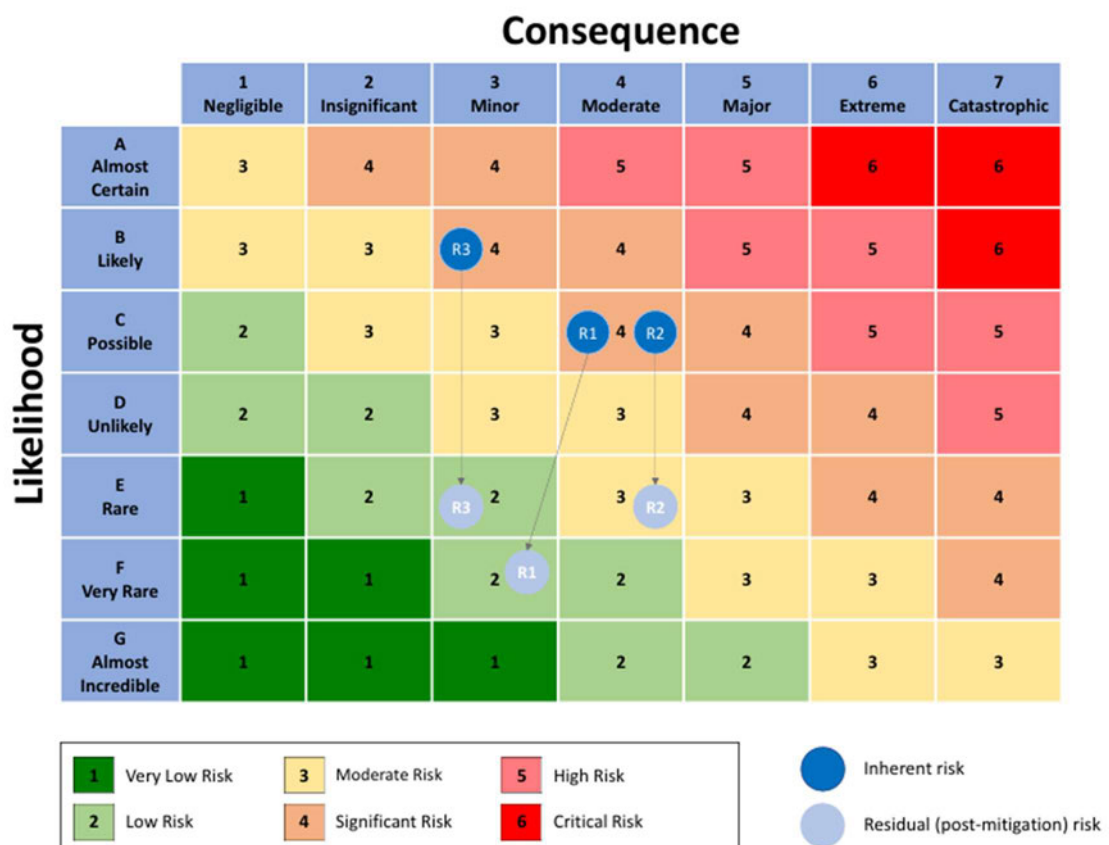
- Powerlink - Appendix 4.06 - IT Plan 27-32 - January 2026 - CONFIDENTIAL
- Powerlink - IT04 Support & Sustain - January 2026 - CONFIDENTIAL
- IR#012A
- IR#013
- OGW RFI Register - IT02 (RFIs IT02.01 to IT02.18)
- Powerlink - IR#024 Q27 - Attachment 1 - Risk Assessment Matrix Checklist - June 2026 - PUBLIC
- S & S Business Case Review (D. Harrison, Arche Energy), 23 June 2026
- AEMO PSSE Version 36 Transition - Fact Sheet - Updated 4 June 2026  
[https://www.aemo.com.au/-/media/files/electricity/nem/network\\_connections/psse\\_v36\\_transition\\_final.pdf](https://www.aemo.com.au/-/media/files/electricity/nem/network_connections/psse_v36_transition_final.pdf)
- AEMO Access Standard Assessment Guide - January 2019 [https://www.aemo.com.au/-/media/Files/Electricity/NEM/Network\\_Connections/Access-Standard-Assessment-Guide-20190131.pdf](https://www.aemo.com.au/-/media/Files/Electricity/NEM/Network_Connections/Access-Standard-Assessment-Guide-20190131.pdf)

### 5.3. Prudence-Investment Need

*Expenditure Guidance Classification / Threat Landscape / Current State of Maturity / Project Risks, Options Analysis and Selection*

PQL has presented a risk based assessment to support the prudence for the different options. PQL identifies the risk level (Inherent risk) prior to the initiative and residual risk level after the mitigation has been delivered. PQL has provided a qualitative description of the risk and residual risk based on the likelihood and consequence but fails to relate these back to the consequence and likelihood categories<sup>17</sup> and does not provide supporting information to substantiate the category ratings. In our view the prudence is incomplete and unable to fully support the investment need. The risk assessment needs to document the key requirement tables identified in PQL's own Risk Assessment Matrix Checklist including any supporting quantitative information where possible.

Figure 3: PQL risk assessment Option 1



OGW has requested the detailed risk register from PQL.

The risk assessment addresses three key risks to justify the investment:

- R1 System Supportability and Security Risk - critical business systems will be upgraded to current software versions for supportability and security
- R2 Operational Compliance Risk - retire the legacy customisations and Excel macros

<sup>17</sup>

RSK-CKL-A116508 Risk Assessment Matrix Checklist provides key consequence categories and threshold levels (2 Consequence Table) for - corporate strategy, financial and contractual, legal and compliance, stakeholder, network operations, safety, environment, people.

- R3 Extensibility and Business Improvement Risk - upgrades of core software products, use of “clean core” principles, retirement of custom code and progressive adoption of vendor standardised workflows

We consider that these risks and the mitigation controls are primarily about improvements to existing processes and practices in PQL that apply across the operational organisation. We expect that these improvements would lead to operational and cost efficiencies such as saved labour, improved accuracy and reduced rework; however, as discussed in the Efficiency section below, none of these have been quantified by PQL.

OGW observe that (Figure 3) the Recommended Option achieves a residual risk of 2-Low (R1 and R3) while R2 only achieves a residual risk of 3-Moderate, while the Alternative Option risk mitigation controls do achieve a Residual Risk of 2-Low for all three inherent risks (R1, R2 and R3). OGW has noted that the PQL Revenue Proposal is silent on this variation in the mitigation of the risk between the recommended option and the alternate option and the impacts this has on the business but also understand that the residual risk of 3-Moderate is acceptable by PQL.

We reviewed PQL’s inherent and residual risk ratings for the three identified risks (Refer Table 19). The table below summarises the inherent and residual risk ratings as used in the Revenue Proposal, together with our review commentary. In our view, PQL has not provided data to support the derivation of the residual likelihood and consequence ratings, and in the case of R1 the residual consequence ratings appear understated.

Table 57: OGW’s commentary on PQL risk assessment - Option 1 (Preferred Option)

| Risk                                                   | Inherent Risk Rating | Residual Risk - Post Recommended Option | OGW Commentary                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------|----------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Risk R1<br>System Supportability and Security Risk     | 4 - Significant      | PQL: 2 - Low<br><br>OGW: 3 - Moderate   | 1. There is no data to support the reduced Residual Likelihood of F - Very Rare.<br><br>2. Residual Likelihood may be D: Unlikely with a definition of Annually to once every 7 years. A Residual Risk profile of D3 has a Residual Risk of 3 - Moderate.                        |
| Risk R2<br>Operational Compliance                      | 4 - Significant      | PQL: 3 - Moderate                       |                                                                                                                                                                                                                                                                                  |
| Risk R3<br>Extensibility and Business Improvement Risk | 4 - Significant      | PQL: 2 - Low                            | 1. There is no data/justification to support the reduced Residual Likelihood of E - Rare<br><br>2 A more suitable Residual Likelihood may be D: Unlikely with a definition of Annually to once every 7 years. A Residual Risk profile of E3 retains the Residual Risk of 2 - Low |

Table 58: OGW's commentary on PQL risk assessment - Option 2 (Alternate Option)

| Risk                                                   | Inherent Risk Rating | Residual Risk - Post Recommended Option | OGW Commentary                                                                                                                                                                                                                                                         |
|--------------------------------------------------------|----------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Risk R1<br>System Supportability and Security Risk     | 4 - Significant      | PQL: 2 - Low<br><br>OGW: 3 - Moderate   | 1. There is no data to support the reduced Residual Likelihood of F - Very Rare.<br><br>2. Residual Likelihood may be D: Unlikely with a definition of Annually to once every 7 years. A Residual Risk profile of D3 has a Residual Risk of 3 - Moderate.              |
| Risk R2<br>Operational Compliance                      | 4 - Significant      | PQL: 2 - Low<br><br>OGW: 3 - Moderate   | 1. There is no data to support the reduced Residual Likelihood of F - Very Rare.<br><br>2. Residual Likelihood may be D: Unlikely with a definition of Annually to once every 7 years. A Residual Risk profile of D3 has a Residual Risk of 3 - Moderate.              |
| Risk R3<br>Extensibility and Business Improvement Risk | 4 - Significant      | PQL: 2 - Low<br><br>OGW: 3 - Moderate   | 1. There is no data/justification to support the reduced Residual Likelihood of F - Very rare<br><br>2. Residual Likelihood may be D: Unlikely with a definition of Annually to once every 7 years. A Residual Risk profile of D3 has a Residual Risk of 3 - Moderate. |

### 5.3.1. Regulatory Assessment Framework

In reviewing this type of IT opex/capex business case, the standard AER framework asks whether the proposed expenditure is prudent (the need is genuine and the investment decision is reasonable, the preferred option delivers the highest net benefit of the options considered and efficient (the scope and cost are least-cost for the required outcome).

The NPV framework is the primary analytical tool for the options comparison where the preferred option should have the highest NPV (least negative, or positive where benefits are monetised).

The key challenge in this case is that benefits identified by PQL are predominantly non-financial, which means their NPV comparison is effectively a cost comparison dressed up as an NPV. If the benefit streams are not monetised, then the NPV simply reflects the quantum and timing of costs plus the implicit value attributed to risk reduction, which is a much weaker analytical foundation than a full cost-benefit NPV.

Prudence is assessed by reference to the specific objectives listed in NER clause 6A.6.7(a) (capex) and clause 6A.6.6(a) (opex) and not against a generalised concept of sound business management or IT best practice. An investment that delivers efficiency or capability improvements beyond what is required to meet those objectives may be worthwhile, but it is not automatically prudent for the purposes of the Rules. In these circumstances, a detailed cost-benefit assessment is required to ensure the incremental benefits exceed the incremental costs.

Also, PQL is free to invest in IT programs and projects outside of the regulatory framework where the business case provides a positive financial benefit and can be self-funded.

Second, the prudence test requires the investment need to be adequately demonstrated. This means Powerlink must establish:

- a clear link between the identified investment drivers and one or more of the NER objectives listed above - specifically, how the absence of the proposed investment would put Powerlink's ability to meet those objectives at material risk; and
- that the risk profile associated with not investing is unacceptable - i.e., that failing to make the investment would result, or would be likely to result, in a breach of, or material degradation against, the relevant NER objective.

We consider that the Base Case (counterfactual) is not a pure “do nothing” or maintain-only scenario, PQL would continue operating the existing suite of major systems and legacy tools, estimated at \$2.1M), and assuming the Option 1 investment is still undertaken four years later at equivalent real-terms cost.

PQL justifies the prudence of the program through the reduction of risk based on its own risk assessment and asserts that the program will contribute towards Powerlink IT and business operational productivity and efficiency.

### 5.3.2. OGW Assessment of Prudence

Our assessment of prudence was necessarily constrained by the limitations of the evidence PQL has provided. In forming our view we:

- reviewed the stated investment drivers and PQL's risk assessment against PQL's own Risk Assessment Matrix Checklist, noting the absence of the detailed risk register and of data supporting the selection of consequence, likelihood and risk ratings;
- compared the two options and base case presented, including PQL's 10-year NPV analysis – noting that, with no benefits monetised and included in the underlying NPV calculation, all options are a net present cost and the NPV comparison is effectively a comparison of costs;
- reviewed the initiative scopes, bottom-up cost estimates and delivery schedules (assessed in detail in the Efficiency sections below); and
- considered the consistency of the proposed approach with the parallel IT02 Enterprise Asset Management business case.

On the information available, we consider Option 1 to be more prudent than Option 2. Option 1 addresses all five identified investment drivers, has the lowest NPV cost of the three cases (-\$4.8M versus -\$8.0M for Option 2 and -\$5.8M for the Base Case) and a Residual Risk profile that appears to be satisfactory to PQL. The Base Case is not a genuine “do nothing” counterfactual – it is a deferral scenario involving \$2.1M of interim workarounds for the 27-32 RP that extends system functionality, and in the absence of analysis by PQL, delivers no change to the business risk profile on the PQL assumption that Option 1 will ultimately be implemented in full four years later at equivalent real-terms cost.

This conclusion rests on assumptions we could not verify - the planned scope of work to be performed under each initiative and in particular the prevailing and target versions of the software to be implemented – PQL's self-assessed risk ratings, the Base Case workaround costs, and the four-year deferral assumption. This can be addressed in the revised proposal. Accordingly, our finding that the investment need is prudent is made on the balance of probabilities and remains subject to the provision of further data by PQL.

## 5.4. Efficiency - Cost Estimation

*Methodology/Benchmarking/ Initiative project review - scope definition, adequately costed*

### 5.4.1. Efficiency methodology

Based on PQL's initiative estimates, the vast majority of the costs are attributable to labour [REDACTED] for Initiative 1; [REDACTED] for Initiative 2; [REDACTED] for Initiative 3). Consistent with our approach on the EAM Program, OGW's methodology is a bottom-up estimation reviewing assumed hourly rates and unit quantities (hours) against benchmarked maximum hourly rates in accordance with the AER's methodology previously used for Ergon Energy, complemented by a top-down assessment of tangible benefits.

However, the application of this methodology to IT04 has been constrained by the available evidence:

The proposed project budget for the recommended option is broken down into three initiatives, but as there is no positive link between the initiatives and the residual risks, the efficiency of each initiative in managing the inherent risks cannot be assessed.

- The scope of work for Options 1 and 2 is not adequate to draw a conclusion with respect to cost efficiency.
- PQL has not provided data or explained the methodology used to calculate the budget estimates beyond stating that bottom-up estimates were developed using "standard labour rates and consistent delivery methods".
- We have been unable to confirm whether the estimates for Option 1 have been validated by a third party or market tested.

We were also unable to find any identification or evaluation of synergies (or risks) between the HSE, EAM and S & S business cases. Some of the work proposed under the EAM and HSE business cases will overlap with the S&S business case, creating opportunities to share staff and minimise duplication of effort.

As an example, the three business cases call out GIS integration: EAM Initiative 1 includes integration with "the Digital Engineering Common Data Environment (CDE) platform, the [REDACTED] GIS, and the Electronic Document and Records Management System (EDRMS)", while HSE Initiative 3 will "integrate the HSE management system with our GIS", and in this case Initiative 3 will deliver "GIS Spatial Sustainability". Similarly, all three programs integrate with the SAP EAM works management solution and the Field Automation Platform.

## 5.5. Bottom Up Estimation

### 5.5.1. Efficiency adjustment for planned headcount and duration

The planned headcount and duration for each initiative in the preferred option has been compared to the general market indicators and industry experience based on general assumptions relating to the scope of work and extent of the changes likely required. Our findings are summarised in the Table 20 to Table 22. We have derived a metric FTE-months for both the expected industry benchmarks for comparison to the PQL FTE-months.

Table 59: PQL summary of resourcing

| Initiative                                                | PQL Planned Headcount | PQL Planned Average Utilisation | PQL FTE | PQL Planned Duration Months | PQL metric (FTE Months) |
|-----------------------------------------------------------|-----------------------|---------------------------------|---------|-----------------------------|-------------------------|
| Option 1 - Initiative 1: S&S Grid Planning Sustainability | 11                    | 29%                             | 3.2     | 12                          | 38                      |
| Option 1 - Initiative 2: S&S SAP ERP Sustainability       | 13                    | 33%                             | 4.3     | 17                          | 73                      |
| Option 1 - Initiative 3: S&S GIS Spatial Sustainability   | 10                    | 46%                             | 4.6     | 16                          | 74                      |

Table 60: OGW's industry benchmarking

| Initiative                                                | Scope Modules         | Industry reference - Person days | Industry metric (FTE-months) |
|-----------------------------------------------------------|-----------------------|----------------------------------|------------------------------|
|                                                           | PSSE Upgrade          | 120-160                          | 6-8                          |
| Option 1 - Initiative 1: S&S Grid Planning Sustainability | PSCAD Upgrade         | 90-130                           | 4.5-6.5                      |
|                                                           | Initiative 1 Total    |                                  | 12.5                         |
| Option 1 - Initiative 2: S&S SAP ERP Sustainability       | N/A                   |                                  |                              |
| Option 1 - Initiative 3: S&S GIS Spatial Sustainability   | Upgrade to [REDACTED] | 1896-2320                        | 105                          |

Table 61: PQL comparison to industry benchmarking

| Initiative                                                | PQL metric (FTE Months) | OGW Reference Nom. | Benchmark Alignment                          | OGW Commentary                               |
|-----------------------------------------------------------|-------------------------|--------------------|----------------------------------------------|----------------------------------------------|
| Option 1 - Initiative 1: S&S Grid Planning Sustainability | 38                      | 12.5               | PQL FTE Months appear excessive              | Decrease duration from 12 Months to 7 months |
| Option 1 - Initiative 2: S&S SAP ERP Sustainability       | 73                      | N/A                |                                              | No Industry data available                   |
| Option 1 - Initiative 3: S&S GIS Spatial Sustainability   | 75                      | 105                | PQL FTE Months Lower than industry reference | Increase duration by 3 Months                |

The OGW nominal reference of FTE Months for initiatives 1 and 3 (Table 60 and Table 22) were developed using WBS structures derived from the software vendors (PSSE: [REDACTED] GIS: [REDACTED]). In the case of initiative 1 (PSSE and PSCAD upgrades) the comparison of the FTE Months supplied by PQL (38) is significantly higher than the nominal reference derived by OGW (12.5), triggering a decrease in the project duration by 5 months. In the case of initiative 3 [REDACTED] Upgrade) the comparison of the FTE Months supplied by PQL (75) is materially lower than the nominal reference derived by OGW (105) using the same methodology employed for initiative 1. This material difference in the data was treated by increasing the duration of initiative 3 by 3 months.

### 5.5.2. Initiatives - Bottom up revised efficiency

OGW has applied industry benchmarks, where available, to the PQL allocations for each initiative as summarised in Table 62 and adjusted each of PQL's Initiative Estimates based on the benchmark adjustments as summarised below in Table 9.

Table 62: OGW's revision to resource allocation to the initiatives for Option 1 and 2

| Initiative                                                       | Duration adjustment                              | Rates Adjustment |
|------------------------------------------------------------------|--------------------------------------------------|------------------|
| Option 1 - Initiative 1: S&S Grid Planning Sustainability        | Decrease duration from 12 Months to 7 months     | As per benchmark |
| Option 1 - Initiative 2: S&S SAP ERP Sustainability              | Inadequate data for benchmarking - No adjustment | As per benchmark |
| Option 1 - Initiative 3: S&S GIS Spatial Sustainability          | Increase duration by 3 Months                    | As per benchmark |
| Option 2 - Initiative 1 - Grid Planning Systems Reimplementation | Inadequate data for benchmarking - No adjustment | As per benchmark |
| Option 2 - Initiative 2 - SAP ERP Reconfiguration                | Inadequate data for benchmarking - No adjustment | As per benchmark |
| Option 2 - Initiative 3 - GIS Reconfiguration                    | Inadequate data for benchmarking - No adjustment | As per benchmark |

Table 63: PQL's and OGW's revised budget forecast - Initiative 1

| Option 1 - Initiative 1: S&S Grid Planning Sustainability |                            |            |            |                                          |            |            |
|-----------------------------------------------------------|----------------------------|------------|------------|------------------------------------------|------------|------------|
| Duration                                                  | PQL as Submitted<br>Months |            |            | OGW Revised - Duration & Rates<br>Months |            |            |
| Planning and Analysis                                     | 2                          |            |            | 1                                        |            |            |
| Design                                                    | 2                          |            |            | 1                                        |            |            |
| Configure, Build and Test                                 | 7                          |            |            | 4                                        |            |            |
| Deployment and Hypercare                                  | 1                          |            |            | 1                                        |            |            |
| <b>Total Duration</b>                                     | <b>12</b>                  |            |            | <b>7</b>                                 |            |            |
| Costs (FY27 Real Terms)                                   | Capex                      | Opex       | Totex      | Capex                                    | Opex       | Totex      |
| Labour                                                    | [REDACTED]                 | [REDACTED] | [REDACTED] | [REDACTED]                               | [REDACTED] | [REDACTED] |
| Vendors                                                   | [REDACTED]                 | [REDACTED] | [REDACTED] | [REDACTED]                               | [REDACTED] | [REDACTED] |
| Software                                                  | [REDACTED]                 | [REDACTED] | [REDACTED] | [REDACTED]                               | [REDACTED] | [REDACTED] |

|                |                |          |                |                |          |                |
|----------------|----------------|----------|----------------|----------------|----------|----------------|
| Infrastructure | -              |          |                |                |          |                |
| <b>Total</b>   | <b>\$1.71M</b> | <b>0</b> | <b>\$1.71M</b> | <b>\$1.08M</b> | <b>0</b> | <b>\$1.08M</b> |

Table 64: PQL's and OGW's revised budget forecast - Initiative 2

| Option 1 - Initiative 2: S&S SAP ERP Sustainability |                            |      |       |                               |      |       |
|-----------------------------------------------------|----------------------------|------|-------|-------------------------------|------|-------|
| Duration                                            | PQL as Submitted<br>Months |      |       | OGW Revised - Rates<br>Months |      |       |
| Planning and Analysis                               | 3                          |      |       | 3                             |      |       |
| Design                                              | 3                          |      |       | 3                             |      |       |
| Configure, Build and Test                           | 10                         |      |       | 10                            |      |       |
| Deployment and Hypercare                            | 1                          |      |       | 1                             |      |       |
| <b>Total Duration</b>                               | <b>17</b>                  |      |       | <b>17</b>                     |      |       |
| Costs (FY27 Real Terms)                             | Capex                      | Opex | Totex | Capex                         | Opex | Totex |
| Labour                                              |                            |      |       |                               |      |       |
| Vendors                                             |                            |      |       |                               |      |       |
| Software                                            |                            |      |       |                               |      |       |
| Infrastructure                                      |                            |      |       |                               |      |       |
| <b>Total</b>                                        |                            |      |       |                               |      |       |

Table 65: PQL's and OGW's revised budget forecast - Initiative 3

| Option 1 - Initiative 3: S&S GIS Spatial Sustainability |                            |      |       |                                          |      |       |
|---------------------------------------------------------|----------------------------|------|-------|------------------------------------------|------|-------|
| Duration                                                | PQL as Submitted<br>Months |      |       | OGW Revised - Duration & Rates<br>Months |      |       |
| Planning and Analysis                                   | 0                          |      |       | 0                                        |      |       |
| Design                                                  | 4                          |      |       | 4                                        |      |       |
| Configure, Build and Test                               | 11                         |      |       | 14                                       |      |       |
| Deployment and Hypercare                                | 1                          |      |       | 1                                        |      |       |
| <b>Total Duration</b>                                   | <b>16</b>                  |      |       | <b>19</b>                                |      |       |
| Costs (FY27 Real Terms)                                 | Capex                      | Opex | Totex | Capex                                    | Opex | Totex |
| Labour                                                  |                            |      |       |                                          |      |       |
| Vendors                                                 |                            |      |       |                                          |      |       |
| Software                                                |                            |      |       |                                          |      |       |
| Infrastructure                                          |                            |      |       |                                          |      |       |
| <b>Total</b>                                            |                            |      |       |                                          |      |       |

## 5.6. Top Down Efficiency - Tangible Benefits

There has been no identification or evaluation by PQL of the tangible benefits to be gained from the implementation of the preferred option. The benefits identified (B1-B3) are characterised as non-financial (risk mitigation and strategic contribution) or indirect financial (operational efficiency and avoided costs), without quantification.

Due to the limited insight into the scope of Options 1 and 2, there was no opportunity to interpret packages of work or undertake industry benchmarking of tangible benefits that may arise. We note, however, that the benefit descriptions themselves point to quantifiable efficiencies that PQL should be able to estimate – Operational Efficiency arising from the implementation of continuous improvement initiatives leveraging AI and business automation capability can be rapidly deployed resulting in greater efficiency benefits within the subsequent regulatory control period; and, - The reconfigured ERP, GIS and Grid Planning solutions, coupled with seamless integration of the associated data stores and AI capability, will provide enhanced capability to analyse complex data sets. This will result in identification of more efficient business processes and improve the quality of data across the disparate data holdings, resulting in Operational Efficiencies

### 5.6.1. Efficiency based on Indirect Benefits

There are some indirect financial benefits identified in the business case for both Options 1 and 2; due to their nature and the absence of quantification, no indirect (financial) benefits can be derived from the project to support its justification.

### 5.6.2. Efficiency based on Non-Financial Contributions to the business

The business case identifies a number of non-financial benefits attributable to the project (business risk mitigation). This is consistent with the enterprise risk management focus of the project. The intangible benefits of the program are consistent with the risk management basis of the work and are difficult to challenge due to the absence of data.

### 5.6.3. Option 1 - Recommended Option - Existing Platform Sustainability

Due to the nature of the information provided by PQL we were unable to attribute the three Benefits identified to any particular initiative, as shown in Table 66 below.

Table 66: The three initiatives in Option 1 and the Benefits

| Initiative                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Key benefits                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Initiative 1:<br>Grid Planning<br>Sustainability | <p>This initiative will renew and sustain Powerlink's core Grid Planning capabilities, including:</p> <ul style="list-style-type: none"> <li>- Upgrade of software products, to ensure sustainability of key systems including the Power System Simulator for Engineering (PSSE) and Power System Computer Aided Design (PSCAD) products.</li> <li>- Implementation of a sustainable EMT Power Flow Simulation tool integrated with PSCAD and PSSE</li> <li>- Renewal or replacement of the Transient Stability Limit Analysis facility, to enable efficient, accurate limit calculations and modelling, including with flexible configuration of renewable energy generation and batteries. .</li> </ul> | B1. System sustainability and extensibility benefit Powerlink will retain access to the supported versions of all Grid Planning, ERP and Spatial Management systems (including SAP, the [REDACTED] GIS and various Grid Planning software and tools), thereby ensuring the organisation's core business data and systems remain secure and available. |
| Initiative 2:<br>SAP ERP<br>Sustainability       | <p>This initiative will occur in the latter part of the coming regulatory control period, to transition Powerlink's existing legacy SAP configurations, customisations and integrations consistent with "clean core" principles, in order to retain access to current and emerging product features into the next decade. This transition will include:</p> <ul style="list-style-type: none"> <li>- Up-front Assessment and Planning</li> <li>- Residual Custom Code Remediation</li> <li>- Data Cleansing and Migration</li> <li>- Process Standardisation</li> <li>- Integration Renewal</li> </ul>                                                                                                    |                                                                                                                                                                                                                                                                                                                                                       |

|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Initiative 3:<br>GIS Spatial<br>Sustainability | - Change Management and Training                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | B2. Vendor best practice and feature enablement benefit<br>Implementation of current versions of core software products in alignment with "clean core" principles will retire custom code, integrations and inhouse custom code. This will enable ongoing business continuous improvement and rapid take-up of new vendor-supported product features and best practices. |
|                                                | <p>This initiative will also occur in the latter part of the coming regulatory control period, performing a sustainability upgrade of Powerlink's GIS spatial data management platform and data stores.</p> <p>The upgrade is expected to involve:</p> <ul style="list-style-type: none"> <li>- Audit of existing [REDACTED] services, configurations and customisations</li> <li>- Identification of deprecated components and migration to vendor-supported alternatives</li> <li>- Planned upgrade of core [REDACTED] components and adaptors</li> <li>- Validation of hosted services, layers, system integrations and other data sources to ensure compatibility with the new software generation</li> <li>- Testing, validation and optimisation of the migrated system</li> </ul> | B3. Whole-of-business asset data analytics benefit<br>Upon implementation of current software versions, and retirement of custom code and integrations, core data will be accessible through the Strategic Data Platform (SDP) to enable whole-of-business analytics, reporting and decision support.                                                                    |

Table 67 further summarises the Non-Financial and Indirect Financial benefits of implementing the three initiatives making up Option 1.

Table 67 Business benefits and potential impact of option 1.

| Business Benefits | Potential Impact           | Nom. Target                                                                           | F2025 Data | Budget Impact |
|-------------------|----------------------------|---------------------------------------------------------------------------------------|------------|---------------|
| B1. Non-Financial | B1. Risk Mitigation        | See mitigation of inherent Risk 2 as summarised in Table 58                           | N/A        | Nil           |
| B2. Non-Financial | B2. Operational Efficiency | Contributor towards Powerlink IT and business operational productivity and efficiency | N/A        | Not Available |
| B3. Non-Financial | B3. Strategic Contribution | Contributor towards PQL's operational efficiency and productivity commitments.        | N/A        | Not Available |

Table 32 provides an NPV result using OGW's revised efficiencies (Rates and/or Duration). Option 1 which presents the least negative NPV in the absence of inclusion of tangible benefits from the initiatives. Option 3 would achieve the next higher (less negative) NPV but delayed to the next regulatory period which, again would be further improved with the inclusion of tangible benefits in the NPV calculation.

Table 68: OGW's revised Option NPV analysis

| NPV              |      | Option 1:<br>Recommended | Option 2:<br>Alternative | Base Case |
|------------------|------|--------------------------|--------------------------|-----------|
| Capex            | \$ M | (1.1)                    | (3.2)                    | (1.0)     |
| Opex             | \$ M | (5.0)                    | (7.9)                    | (6.1)     |
| Benefit          |      | -                        | -                        | -         |
| Tax benefit/paid | \$ M | 1.7                      | 2.9                      | 1.8       |
| Terminal value   | \$ M | 0.2                      | 1.0                      | 0.1       |
| Total            | \$ M | (4.2)                    | (7.3)                    | (5.2)     |

## 5.7. Key Findings

At the corporate level, PQL makes a case for prudence: the organisation carries significant risk<sup>18</sup> exposure arising from the existing major business systems, and it has a broad set of statutory and compliance obligations. At this stage and in our opinion, the case for each option as presented is incomplete.

We found the support for prudence case incomplete: key supporting information – a well-defined scope of work, the detailed risk register and the mapping of initiatives to the mitigation of the inherent risks – which can be addressed in the revised proposal. Our findings are based on the information that has been presented to date.

The residual risk ratings that underpin the risk-based justification are unsupported. There is no data or justification for the Residual Likelihood of F - Very Rare applied to risks R1 and R3; applying a more suitable likelihood of D - Unlikely increases the residual risks to 3-Moderate (R1) R3) and R2 has a residual risk of 3 - Moderate despite the project. A residual risk that remains 4-Significant after the investment raises the question of whether the proposed options and initiatives adequately mitigate the risk they are justified against.

Synergies between this project, HSE and EAM business cases – opportunities to share staff and minimise duplication of effort – have not been identified or evaluated by PQL.

Investment efficiency cannot be confirmed due to a lack of critical data with the submission. The scope of work for Options 1 and 2 is not adequate to draw a conclusion with respect to cost efficiency; data provided, prevents or inhibits the quality of benchmarking of resourcing against industry norms; the estimates have generally not been confirmed or third-party validated or market tested; and no tangible benefits have been quantified or netted off in the NPV analysis, notwithstanding that the benefit descriptions point to quantifiable labour and avoided-cost efficiencies.

The OGW nominal reference of FTE Months for initiatives 1 and 3 are based on using WBS structures derived from the software vendors (PSSE: ██████████ GIS: ██████). In the case of initiative 1 (PSSE and PSCAD upgrades) the comparison of the FTE Months proposed by PQL (38) is significantly higher than the nominal reference derived by OGW (12.5). We have reduced the project duration by five months.

<sup>18</sup>

Based on PQL's risk matrix assessment

However, in the case of initiative 3 [REDACTED] the comparison of the FTE Months proposed by PQL (75) is materially lower than the nominal reference derived by OGW (105). This material difference in the durations was treated by OGW increasing the duration of initiative 3 by three months.

Table 69 OGW's revised budget forecasts for the ITP S & S Program - Option 1 (FY27 Real)

| Initiative                              |     | PQL Proposed Initiative Estimate |      |       | OGW Adjustment |        |        | OGW Adjusted Forecast |      |       |
|-----------------------------------------|-----|----------------------------------|------|-------|----------------|--------|--------|-----------------------|------|-------|
| Bottom Up Duration and Rates Adjustment |     |                                  |      |       |                |        |        |                       |      |       |
|                                         |     | Capex                            | Opex | Totex | Capex          | Opex   | Totex  | Capex                 | Opex | Totex |
| 1: Grid Planning Sustainability         | \$M | 1.71                             | -    | 1.71  | (0.62)         | -      | (0.63) | 1.08                  | -    | 1.08  |
| 2: SAP ERP Sustainability               | \$M | -                                | 3.10 | 3.10  | -              | (0.46) | (0.46) | -                     | 2.64 | 2.64  |
| 3: GIS Spatial Sustainability           | \$M | 0.15                             | 3.40 | 3.55  | -              | (0.20) | (0.20) | 0.15                  | 3.20 | 3.35  |
| Bottom up Subtotal                      | \$M | 1.86                             | 6.50 | 8.36  | (0.62)         | (0.66) | (1.28) | 1.24                  | 5.84 | 7.08  |
| Benefits Adjustment                     |     |                                  |      |       |                |        |        |                       |      |       |
| 1: Grid Planning Sustainability         | \$M |                                  |      |       |                |        | Nil    |                       |      |       |
| 2: SAP ERP Sustainability               | \$M |                                  |      |       |                |        | Nil    |                       |      |       |
| 3: GIS Spatial Sustainability           | \$M |                                  |      |       |                |        | Nil    |                       |      |       |
| Final Total                             | \$M | 1.86                             | 6.50 | 8.36  |                |        |        | 1.24                  | 5.84 | 7.08  |

6. IT Investment Program: Recurrent Capex and Devices

*Enable Powerlink (PQL) support a program where their major systems are periodically upgraded to ensure supportability, sustainability and security, consistent with prudent asset lifecycle management principles.*

This section assesses the prudence and efficiency of PQL's forecast Recurrent and Client Devices capital expenditure for the 2027-32 regulatory control period. Both programs are cyclic, asset-lifecycle replacement expenditures forecast on a trended basis rather than through discrete business cases. Accordingly, the assessment focuses on consistency with PQL's historical investment trend and on the reasonableness of the underlying asset replacement cycles.

Table 70: Program summary

|   |                |                                                                                                                                                                                 |
|---|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5 | RECURRENT      | ▶ Recurrent investments in core IT infrastructure and applications for resilience of services. Also, invest in efficient minor IT works to meet evolving business requirements. |
| 6 | CLIENT DEVICES | ▶ Cyclic renewals of our end-point devices (including laptops and desktop PCs), to support effective business operations.                                                       |

6.1. Recurrent Capex

The Recurrent program covers the cyclic, trended renewal of Powerlink's core IT infrastructure asset classes – server infrastructure, storage and backup infrastructure, IT appliances, data networking infrastructure (routers, switches, firewalls and wireless access points) and video-conferencing devices – together with a forecast of Minor IT Investments across the application planning segments. PQL's justification is grounded in prudent asset-lifecycle management: each asset class is renewed at a nominated replacement age (Table 71), with the server, IT appliance, networking and video-conferencing classes on a five-year cycle and storage and backup on a seven-year cycle. PQL states that these renewals keep its technology serviceable, supportable and secure, and specifically that data networking devices are replaced in line with vendor “end-of-support” / “end-of-life” designations to preserve access to active patching and security updates and to maintain compatibility with hosted applications. Recurrent capex is forecast at \$9.74M on a direct-cost basis, or \$11.33M inclusive of the capitalised overhead.

The recurrent capex is prudent for maintenance expenditure.

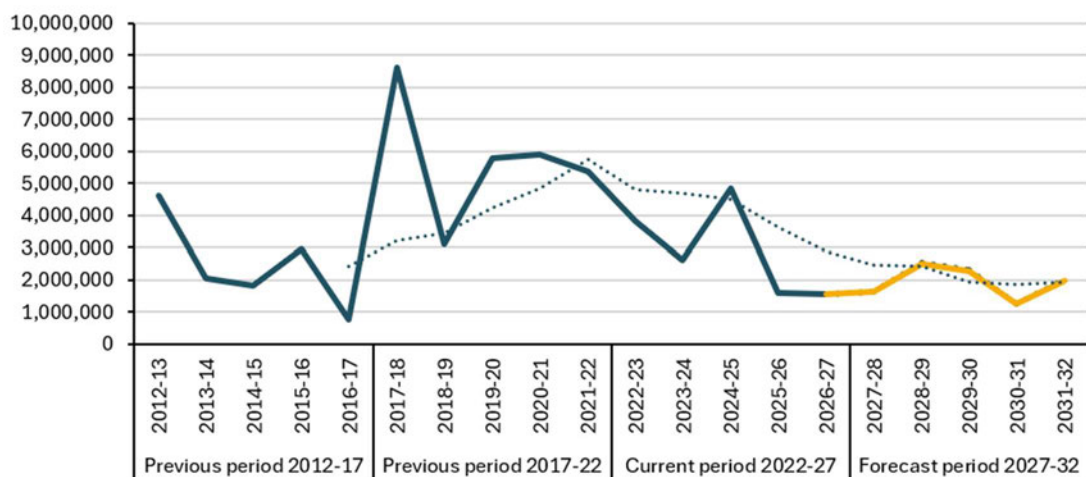
Table 71: PQL Recurrent Infrastructure Asset Lifecycle Management Guidelines

| Asset Category                    | Asset Class                            | Asset Lifecycle Management Guideline                                                                                                                                                       | Forecast Replacement Age |
|-----------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Server Infrastructure             | Rackmount Server                       | Infrastructure is replaced upon identified obsolescence following extended warranty period which is typically 5 years                                                                      | 5 years                  |
|                                   | Blade Server                           | Infrastructure is replaced upon identified obsolescence following extended warranty period which is typically 5 years                                                                      | 5 years                  |
|                                   | Blade Server Enclosure                 | Infrastructure is replaced upon identified obsolescence                                                                                                                                    | 10 years                 |
| Storage and Backup Infrastructure | High performance storage (Tier 1)      | Infrastructure is replaced following warranty expiry                                                                                                                                       | 7 years                  |
|                                   | SAN storage array (Tier 2+)            | Infrastructure is replaced following warranty expiry                                                                                                                                       | 7 years                  |
|                                   | High speed database appliances         | Infrastructure is replaced following warranty expiry                                                                                                                                       | 7 years                  |
|                                   | Backup facilities                      | Backup facilities are renewed following warranty expiry.                                                                                                                                   | 7 years                  |
| IT Appliances                     | Vault nodes and other appliances       | Devices are replaced through a cyclic renewal program or on failure                                                                                                                        | 5 years                  |
| Data Networking Infrastructure    | LAN devices                            | Devices are replaced in line with vendor "end of support" / "end of life" designations, to ensure vendor support is available (i.e. availability of active patching and security updates). | 5 years                  |
|                                   | Data Centre, WAN And Perimeter Devices | Devices are replaced in line with vendor "end of support" / "end of life" designations, to ensure vendor support is available (i.e. availability of active patching and security updates). | 5 years                  |
| Video Conferencing Devices        | Video Conferencing Units               | Devices are replaced through a cyclic renewal program or on failure                                                                                                                        | 5 years                  |
|                                   | Meeting Room Displays                  | Devices are replaced through a cyclic renewal program or on failure                                                                                                                        | 5 years                  |

### 6.1.1. Historical comparability

OGW has compared the forecast recurrent capex against previous regulatory periods as shown in Figure 4. The forecast plotted in the trend analysis corresponds to the direct-cost line, exclusive of capitalised overheads. The forecast period shows a further declining annual expenditure based on a 5 year moving average and below the previous periods on average. Considering the low term increase in PQL FTEs we find PQL recurrent capex efficient.

Figure 4: PQL IT annual Recurrent Capex expenditure (\$FY27 real)



## 6.2. Client Devices

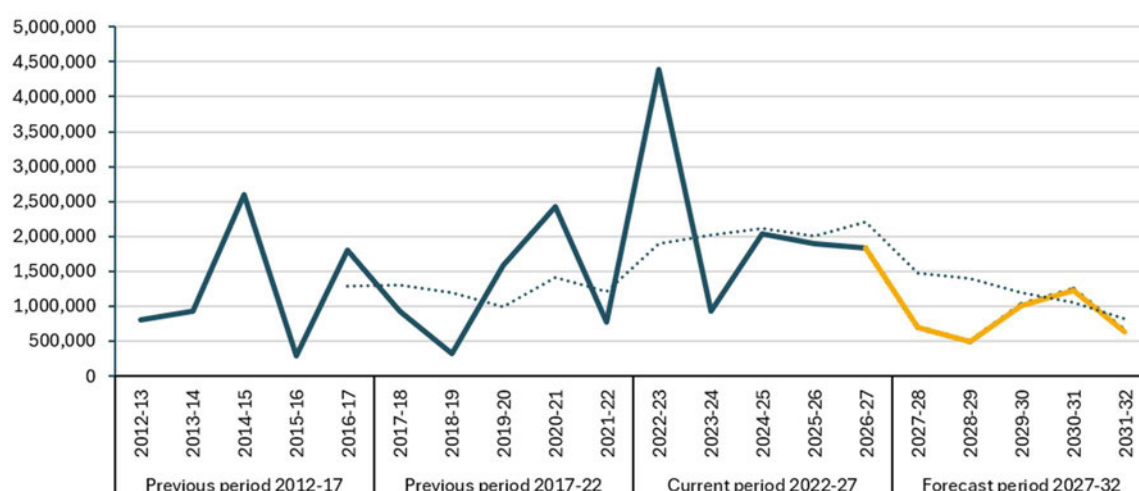
### 6.2.1. PQL's proposed action and justification

The Client Devices program covers the cyclic renewal of end-user technology – laptop computers, desktop computers, tablet devices, and monitors and peripherals. PQL's justification mirrors the Recurrent program: cyclic renewal under prudent asset-lifecycle management principles, with each device class replaced upon identified obsolescence following an extended warranty period. The nominated replacement ages are four years for general laptops, three years for high-powered laptops, four years for field / tablet devices and general desktops, and five years for monitors and high-resolution plotters. Powerlink states this ensures its end-user technology remains serviceable, supportable and secure. Client Devices capex is forecast at \$4.11M on a direct-cost basis, or \$4.78M inclusive of the capitalised overhead.

### 6.2.2. Prudence and efficiency

As a steady-state fleet-replacement program, the appropriate test is again trend consistency and the reasonableness of the replacement cycles. The nominated replacement ages are consistent with typical end-user device economics and warranty / support horizons, and the forecast represents a steady annual run-rate (approximately \$0.9M per year on a direct-cost basis) consistent with cyclic renewal of an established device fleet rather than any step change or expansion. On this basis we consider the Client Devices capex to be prudent and efficient.

Figure 5: PQL IT annual Devices capex expenditure (\$FY27 real)



## 6.3. Key findings

OGW finds the capex proposed by PQL for the Recurrent Capex and Devices programs prudent and efficient based on historical expenditure trends.

Table 72: Recurrent Capex and Devices proposed expenditure (\$FY27 real)

| Program         |     | Direct Cost | Capitalised overhead | Total |
|-----------------|-----|-------------|----------------------|-------|
| Recurrent Capex | \$M | 9.74        | 1.59                 | 11.33 |
| Direct Devices  | \$M | 4.11        | 0.67                 | 4.78  |

## 7. Concluding comments

Drawing together our program-by-program assessment, this section sets out our overall conclusions on the prudence of the investment need that PQL has demonstrated across its proposed ICT and cyber security expenditure for the next RCP, and on the efficiency adjustments we consider to be justified on the information provided. These conclusions should be read together with the detailed findings, assumptions and supporting tables in Sections 2 to 6 and the benchmark labour rates methodology in Appendix A. Our review remains subject to a number of PQL responses to information requests that were outstanding at the time of writing, and our conclusions may be revised as that information is provided.

### 7.1. Prudence

Across the five programs reviewed, PQL's demonstration of prudence is mixed. We accept the investment need in full for one program and, in part, for a second; for the remaining programs the prudence case as presented is incomplete and, on the information currently available, we are unable to reach a concluded position on the preferred option.

We consider the recurrent ICT capex and client devices program to be prudent, its scope and forecast being consistent with historical expenditure trends and the ongoing need to sustain existing assets. Within the IT/OT cyber security program, we consider the investment need in sustaining the current level of defence maturity (Initiative 1) to be reasonable and prudent, reflecting PQL's obligations and threat exposure as a TNSP. We recommend, however, that a more detailed NPV analysis using a risk-based approach (for example, a baseline risk established using SLE and ARO with a cyber risk offset) be adopted for sub-initiative inclusion in future forecasting.

By contrast, we are unable to conclude that Initiatives 2 and 3 of the cyber security program are prudent. Both propose capability uplift beyond the sustainment of existing defence maturity that Initiative 1 already provides, and in each case PQL has not substantiated the incremental investment need. Initiative 2 - SOCI Act and proactive risk mitigation - cites compliance with the Security of Critical Infrastructure (SOCI) Act 2018 as its investment driver. However, PQL's only current obligation is to maintain a Critical Infrastructure Risk Management Program (CIRMP), which it already has in place at a Security Profile (SP) level above the SP-1 baseline. The higher SP-3 target that PQL references is a recommendation of the AESCSFv2 rather than a present regulatory obligation, and the future obligations PQL anticipates - potential mandatory higher maturity standards, or a System of National Significance (SoNS) designation - are not confirmed, and it is unclear whether they have been reflected in the proposal. Absent an NPV or risk-based analysis demonstrating the benefit of investing in SOCI Act compliance over and above the sustainment already funded under Initiative 1, we do not consider Initiative 2 to be prudent.

Initiative 3 comprises investment in reactive and targeted proactive cyber defence capabilities - again, an uplift beyond the maturity sustained by Initiative 1. PQL has not provided an NPV analysis, or any other quantification of the financial or risk-reduction benefit, to support this uplift, and on the information provided we are unable to conclude that Initiative 3 is prudent. For both initiatives, a clear articulation of the incremental risk being addressed, together with a supporting NPV analysis, in a subsequent proposal would assist in establishing their prudence; on the current evidence we have excluded both from the prudent and efficient forecast.

For the EAM, HSE and S&S programs, PQL makes a credible case at the corporate level: each program addresses genuine risk exposure and a broad set of statutory or compliance obligations arising from ageing platforms, systems and tools. In each case, however, the case for the specific preferred option is incomplete. Key supporting information – detailed risk registers and the mapping of initiatives to the inherent risks they are intended to mitigate – remains outstanding and can be addressed in the revised proposal. For the HSE and S&S programs, the residual risk ratings that underpin the risk-based justification are unsupported: the residual likelihood ratings applied are not evidenced, and adopting a more defensible likelihood materially increases the residual risk, in one case leaving it Significant even after the proposed investment. This raises the question of whether the proposed initiatives adequately mitigate the risks against which they are justified.

We also note that the selection between the preferred and alternative options for the HSE and S&S programs requires an enterprise-level evaluation that has not been performed or articulated in the submission, particularly given the parallel EAM business case is consolidating onto the [REDACTED] platform and overlaps with these programs. Synergies across the EAM, HSE and S&S business cases – opportunities to share resources and avoid duplicated effort – have not been identified or evaluated by PQL. In our view these matters should be resolved before the investment need for the preferred options can be accepted as prudent.

## 7.2. Efficiency

Where the information provided allowed, we tested the efficiency of PQL's cost estimates using both top-down benchmarks and a bottom-up build of planned headcount, duration and labour rates. Our labour rate assessment applies the AER's established benchmarking method (as set out in Attachment 16 to the AER's Ergon Energy 2025-30 Draft Decision), updated to the Hays Salary Guide FY25/26 Technology occupation set, to derive a maximum reasonable benchmark rate for each role. Where PQL's proposed rate is at or below the benchmark we retain it; where it exceeds the benchmark we substitute the benchmark rate. The methodology and revised rate schedule are set out in Appendix A.

On this basis, and as detailed in Sections 2 to 6, we consider a number of efficiency adjustments to be justified. For cyber security, we assess an efficient headcount for Initiative 1 of approximately 10.5 FTE, against the 29.2 FTE proposed, which – together with a rate-based adjustment – gives a revised Initiative 1 forecast of \$33.90M (a reduction of \$2.25M). For EAM, we recommend the Option 1 forecast be reduced from \$25.23M to \$20.01M, comprising a \$3.04M reduction from shortening the durations of Initiatives 1 and 4 to align with industry norms and a further \$2.18M reduction from applying efficient unit labour rates across all five initiatives. For HSE, we apply a rate-based reduction from \$5.37M to \$4.78M. For S&S, our adjustments produce a net reduction from \$8.36M to \$7.08M, reflecting both a shortening of Initiative 1 – where PQL's proposed effort materially exceeds our nominal reference – and a lengthening of Initiative 3, where the proposed effort falls materially short.

Two limitations recur across the EAM, HSE and S&S programs and constrain the efficiency conclusions that can be drawn. First, PQL's cost estimates have generally not been third-party validated or market tested, and for the HSE and S&S programs the scope definition provided is not sufficient to benchmark proposed resourcing against industry norms; for HSE in particular we were unable to assess the appropriateness of the proposed FTE count for the preferred option. Second, PQL has not quantified or netted off tangible benefits in its NPV analysis, notwithstanding that its own benefit descriptions point to quantifiable labour and avoided-cost efficiencies. For the EAM program alone, the tangible benefits we identified – workforce productivity gains, reduced maintenance administration overhead and inventory accuracy improvements – represent up to approximately \$7.86M of direct labour reductions and \$0.9M of inventory value benefit that would further offset the proposed expenditure. These benefits can be addressed in the revised proposal.

OGW also conducted a review of the application of the different SAP modules across the different Initiatives for each program and is shown in Appendix B. By evaluating each Program/Project and the SAP modules mentioned in the business cases there is clearly an opportunity for conflict and/or duplication of effort and/or rework within the SAP Module/Systems in the absence of overall program alignment and management. There is an opportunity for the Projects/Programs to be managed/coordinated to optimise the effort/change management/project management and stakeholder engagement. This alignment between the Programs/Projects will reduce waste and duplicated effort within the program and decrease the overall cost of the works. PQL has not addressed the efficient benefits of this synergy.

We particularly note the HSE Option 1 (preferred option) program is a bespoke best in class and departs from the SAP enterprise approach which would be expected efficiency benefits with the GIS program - but PQL claim that the GIS is a lower cost at \$1.2M for the bespoke preferred option and \$1.9M for option 2 (alternative option) which is the SAP option. Our expectations that there would significant doubling up and reworking for the implementation of Option 1.

We consider the recurrent ICT capex and client devices program to be efficient as well as prudent, on the basis of its consistency with historical expenditure trends.

### 7.3. Summary of prudence and efficiency conclusions

Table 73 summarises, for each program, our concluded prudence position and the revised expenditure position that follows from the efficiency adjustments described above. The figures are drawn from the Key Findings of the respective program sections and are stated on the basis described in each of those sections. The cyber security and recurrent figures are whole-of-program, while the EAM, HSE and S&S figures are the bottom-up totex for the preferred option; the amounts are therefore not directly additive across programs, and should be addressed in the revised proposal. Where we have been unable to conclude on prudence, the associated expenditure should be treated as not yet substantiated rather than as a determined allowance.

Table 73: Summary of OGW concluded position by program (\$FY27 real)

| Program                           | PQL proposed | OGW revised | Concluded position                                                                                                                                                 |
|-----------------------------------|--------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IT/OT cyber security              | \$96.05M     | \$34.02M    | Initiative 1 prudent and efficiency-adjusted (10.5 FTE); Initiatives 2 and 3 not established as prudent and excluded                                               |
| Enterprise Asset Management (EAM) | \$25.23M     | \$20.01M    | Investment need plausible but case not supported based on available information; duration and rate adjusted; tangible benefits (up to ~\$8.76M) not yet netted off |

| Program                            | PQL proposed | OGW revised | Concluded position                                                                                                                                                                    |
|------------------------------------|--------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Health, Safety & Environment (HSE) | \$5.37M      | \$4.78M     | Corporate need accepted; option selection and risk-based justification not established; rate-adjusted only (FTE count not able to be assessed)                                        |
| Support & Sustain (S&S)            | \$8.36M      | \$7.08M     | Corporate need accepted; option and risk-based justification incomplete; duration and rate adjusted. Investment need plausible but case not supported based on available information. |
| Recurrent capex & client devices   | \$16.11M     | \$16.11M    | Prudent and efficient on the basis of historical expenditure trends                                                                                                                   |

## Appendix A: Benchmark rates

This appendix sets out the methodology used to derive revised labour rates for the IT project roles underpinning Powerlink Queensland's forecast ICT expenditure. The revised rates provide an independent, benchmark-based check on the standard daily and hourly rates adopted in Powerlink's project cost estimates, covering both external contractor roles (denoted "(E)") and internal roles (denoted "(I)").

The methodology replicates the labour rate assessment approach applied by the Australian Energy Regulator (AER) in section 16.1.4.1 of Attachment 16 (Alternative control services) to its Draft Decision on the Ergon Energy Distribution Determination 2025-30 (September 2024). That approach, which continues the method developed in Marsden Jacob Associates' reports for the AER, derives a "maximum reasonable benchmark rate" for each labour category from published salary survey data, loaded for on-costs and overheads. Proposed rates at or below the benchmark are accepted; proposed rates above the benchmark are substituted with the benchmark rate.

All rates are expressed in FY2025-26 dollars. Escalation to FY2026-27 and later years is applied downstream in the project estimates model using the standard escalation matrix and is outside the scope of this paper.

### A.1 Regulatory basis and precedent

The AER's assessment of labour rates for ancillary network services provides an established regulatory precedent for testing the efficiency of proposed labour rates. In its Ergon Energy 2025-30 draft decision, the AER:

derived salary ranges for its labour benchmark categories using Queensland salary data from the most recent, publicly available Hays Salary Guide;

derived a raw hourly rate from the maximum salary in each category, dividing by the number of weeks in a year and hours in a week (adopting a 38-hour week consistent with the Hays data);

escalated the raw rate for on-costs (leave, superannuation, workers' compensation and payroll tax);

escalated for overheads, applying a maximum overhead rate of 61 per cent based on Marsden Jacob's analysis, with the profit margin allocation included within the overall overhead allowance; and

where a proponent's labour rate exceeded the resulting maximum reasonable benchmark rate, substituted the benchmark rate in determining prices.

This methodology adopts the same construction and decision rule, adapted for IT project labour as described in section 4.7.

### A.2 Methodology overview

The revised rates are derived in six steps:

Map each Powerlink IT role to the most closely matching occupation in the Hays Salary Guide FY25/26, Technology section (Queensland).

Take the maximum of the Hays stated salary range for the matched occupation as the benchmark salary cap.

Convert the benchmark salary to a raw hourly rate using a 38-hour week (annual salary ÷ 1,976 hours).

Load the raw rate for on-costs (multiplier of 1.4603) and overheads (61 per cent), giving a combined multiplier of 2.3510, to produce the maximum reasonable benchmark project rate per hour; the benchmark daily rate is the hourly rate multiplied by eight hours.

Compare each role's proposed standard rate with its benchmark maximum.

Retain the proposed rate where it is at or below the benchmark; substitute the benchmark rate where the proposed rate exceeds it.

## A.3 Detailed method

### A.3.1 Salary data source and role mapping

Benchmark salaries are drawn from the Hays Salary Guide FY25/26, Technology section, using Queensland data by role. This is the same salary data source used by the AER, updated to the current edition and to the Technology occupation set, which better reflects the specialist ICT roles engaged on Powerlink's programs than the electricity-distribution occupations used in the AER's ancillary network services benchmarking.

Each Powerlink role is mapped to the Hays Technology occupation that most closely matches its function and seniority (for example, Security Architect (E) is mapped to the Hays "Cyber Security Architect" role, and Senior SAP Systems Analyst (I) to "Senior Business Analyst"). For a small number of Powerlink-specific roles with no direct Hays Technology equivalent (for example, Grid Planning Engineer and Senior Asset Intelligence Specialist), a benchmark salary was assigned by reference to comparable Hays roles and the Hays energy category data. Consistent with the AER's use of the maximum salary in each category, the maximum of the Hays stated range is used as the benchmark cap. The full mapping is set out in Appendix A.

### A.3.2 Raw hourly rate

The raw hourly rate is the benchmark annual salary divided by 1,976 hours (52 weeks × 38 hours). A 38-hour week is used, consistent with both the AER's current approach and the basis of the Hays data. An adjustment for productive time is then applied as an on-cost loading (section 4.3), which is arithmetically equivalent to dividing the salary by productive hours.

### A.3.3 On-costs

The raw hourly rate is escalated for on-costs using the multiplicative loadings in Table 1. These mirror the on-cost categories applied by the AER (leave, superannuation, workers' compensation and payroll tax).

Table 74: On-cost loadings

| On-cost component            | Loading | Multiplier | Basis                                                                                                    |
|------------------------------|---------|------------|----------------------------------------------------------------------------------------------------------|
| Superannuation allowance     | 12.5%   | 1.1250     | Conservative allowance (Powerlink's actual contribution is 14.75%)                                       |
| Productive time adjustment   | 18.18%  | 1.1818     | 44 productive weeks (52 weeks less 4 weeks annual leave, 2 weeks sick leave and 2 weeks public holidays) |
| Workers' compensation        | 0.74%   | 1.0074     | Queensland premium rate                                                                                  |
| Payroll tax                  | 4.95%   | 1.0495     | Queensland rate for wages above \$6.5 million                                                            |
| Leave loading                | 1.35%   | 1.0135     | 17.5% loading on 4 weeks annual leave                                                                    |
| Long service leave allowance | 2.50%   | 1.0250     | Accrual allowance                                                                                        |

| On-cost component | Loading | Multiplier | Basis                            |
|-------------------|---------|------------|----------------------------------|
| Total on-costs    |         | 1.4603     | Product of the above multipliers |

Source: *rates\_calc Technology PQL mapping workbook, 'Rates methodology' tab.*

### A.3.4 Overheads

Consistent with the AER's approach, a maximum overhead rate of 61 per cent is applied to the on-cost-loaded rate. This is the maximum overhead rate the AER considers efficient, based on Marsden Jacob's analysis, and includes the profit margin allocation within the overall overhead allowance. No separate margin is added.

### A.3.5 Combined multiplier and benchmark rates

The combined on-cost and overhead multiplier is  $1.4603 \times 1.61 = 2.3510$ . The maximum reasonable benchmark project rate per hour is therefore:

$$\text{Benchmark rate (\$/hr)} = (\text{Hays QLD maximum salary} \div 1,976) \times 2.3510$$

The benchmark daily rate is the hourly rate multiplied by eight hours. Table 2 provides a worked example.

Table 75: Worked example – Security Architect (E)

| Step                                                | Value                                                    |
|-----------------------------------------------------|----------------------------------------------------------|
| Matched Hays Technology role                        | Cyber Security Architect                                 |
| Hays QLD maximum salary (FY25/26)                   | \$240,000                                                |
| Raw hourly rate ( $\$240,000 \div 1,976$ )          | \$121.46                                                 |
| Benchmark project rate ( $\$121.46 \times 2.3510$ ) | \$285.55 per hour                                        |
| Benchmark daily rate ( $\$285.55 \times 8$ )        | \$2,284.38 per day                                       |
| Proposed rate – Security Architect (E)              | \$181.25 per hour (\$1,450 per day)                      |
| Assessment                                          | Proposed rate is 63% of the benchmark maximum – retained |

### A.3.6 Price base and escalation

Because the Hays FY25/26 data is current, the benchmark rates are already expressed in FY2025-26 dollars and no escalation for stale salary data (the CPI, wage price index and salary-stickiness adjustments the AER applied to its older Hays vintages) is required within the rate build. Rates are escalated to FY2026-27 and later years within the project estimates model using the standard escalation matrix.

### A.3.7 Adaptations from the AER method

The AER's method is adapted in the following respects, reflecting the nature of IT project labour:

**Role-by-role mapping.** Roles are benchmarked individually against matched Hays Technology occupations, rather than grouped into the AER's six broad categories. This provides a more precise benchmark across a large and specialised IT role set.

**No after-hours rates.** The AER's 1.75× after-hours multiplier is not applied, as IT project labour is engaged on a business-hours basis.

**No vehicle allowance.** The AER's hourly vehicle cost is not added, as it is not applicable to office-based IT labour.

**Conservative superannuation loading.** The 12.5 per cent superannuation allowance is below Powerlink's actual 14.75 per cent contribution, which makes the benchmark cap conservative (lower).

#### A.4 Application to Powerlink IT rates

Each of the 87 Powerlink IT roles was assessed against its benchmark maximum using the AER's decision rule:

Where the proposed rate is at or below the benchmark maximum, the proposed standard rate is retained in the revised rate schedule; and

Where the proposed rate exceeds the benchmark maximum, the benchmark maximum is substituted as the revised rate.

This mirrors the AER's treatment in section 16.1.4.1, under which proposed labour rates below the maximum reasonable benchmark rates were accepted and those above were substituted with the benchmark rates.

#### A.5 Outcomes

Table 3 summarises the outcome of the assessment. Of the 87 roles assessed, 49 proposed rates were retained as they sit at or below the benchmark maximum, and 38 were substituted with the benchmark rate. Substitutions are concentrated in the internal (I) role set, where proposed daily rates exceeded the benchmark by between 1 per cent and 141 per cent.

Table 76: Assessment outcomes by role type

| Role type    | Roles assessed | Retained (at or below benchmark) | Substituted with benchmark |
|--------------|----------------|----------------------------------|----------------------------|
| External (E) | 45             | 41                               | 4                          |
| Internal (I) | 42             | 8                                | 34                         |
| Total        | 87             | 49                               | 38                         |

Source: rates\_calc Technology PQL mapping workbook, 'Final PQL mapped rates' tab.

Table 77: Roles substituted with the benchmark maximum rate (\$FY2025-26)

| Powerlink role                       | Proposed \$/hr | Matched Hays role            | Benchmark max \$/hr | Revised \$/hr |
|--------------------------------------|----------------|------------------------------|---------------------|---------------|
| Project Coordinator (E)              | 105.00         | Project Coordinator (E)      | 95.18               | 95.18         |
| Application Specialist (E)           | 150.00         | Applications Support         | 142.77              | 142.77        |
| Process Analyst (E)                  | 162.50         | Business Analyst             | 154.67              | 154.67        |
| Legal / Contract Advisor (E)         | 200.00         | Legal / Contract Advisor (E) | 142.77              | 142.77        |
| Project Coordinator (I)              | 221.58         | Project Co-ordinator         | 130.88              | 130.88        |
| Senior IT Infrastructure Analyst (I) | 221.76         | Senior Business Analyst      | 178.47              | 178.47        |
| BI Data Analyst (I)                  | 225.43         | Data Analyst                 | 166.57              | 166.57        |

| Powerlink role                               | Proposed \$/hr | Matched Hays role                        | Benchmark max \$/hr | Revised \$/hr |
|----------------------------------------------|----------------|------------------------------------------|---------------------|---------------|
| SAP Basis Analyst (I)                        | 225.43         | SAP Test Analyst                         | 166.57              | 166.57        |
| SAP Finance Analyst (I)                      | 225.43         | SAP Test Analyst                         | 166.57              | 166.57        |
| SAP Security Analyst (I)                     | 225.43         | Cyber Security Analyst (SecOps)          | 214.16              | 214.16        |
| Senior Database Engineer (I)                 | 225.43         | Senior Business Analyst                  | 178.47              | 178.47        |
| Senior SAP Integration Analyst (I)           | 225.43         | Senior Business Analyst                  | 178.47              | 178.47        |
| Senior SAP Systems Analyst (I)               | 225.43         | Senior Business Analyst                  | 178.47              | 178.47        |
| Change Analyst (I)                           | 225.45         | Change Analyst                           | 142.77              | 142.77        |
| IT Portfolio Learning Specialist (I)         | 225.45         | IT Portfolio Learning Specialist (I)     | 142.77              | 142.77        |
| IT Portfolio Test Specialist (I)             | 225.45         | Test Lead                                | 178.47              | 178.47        |
| Project Manager (I)                          | 225.45         | Project Manager                          | 178.47              | 178.47        |
| Senior Project Manager (I)                   | 225.45         | Senior Project Manager                   | 214.16              | 214.16        |
| IT Infrastructure Architect (I)              | 230.76         | Infrastructure Architect                 | 226.06              | 226.06        |
| IT Security Analyst (I)                      | 230.76         | Cyber Security Analyst (SecOps)          | 214.16              | 214.16        |
| SAP Supply Chain Data & Process Analyst (I)  | 232.47         | Data Analyst                             | 166.57              | 166.57        |
| SAP Works Management Analyst (I)             | 232.47         | Business Analyst                         | 154.67              | 154.67        |
| Health and Wellbeing Advisor (I)             | 233.98         | Health and Wellbeing Advisor (I)         | 178.47              | 178.47        |
| Information Support Specialist (I)           | 259.91         | Data Analyst                             | 166.57              | 166.57        |
| Analytics and Insights Specialist (I)        | 265.44         | Data Architect                           | 261.75              | 261.75        |
| Information Management Specialist (I)        | 272.79         | Information Management Specialist (I)    | 113.03              | 113.03        |
| Senior Analytics and Insights Specialist (I) | 272.79         | Senior Data Analyst                      | 190.37              | 190.37        |
| Senior Data Specialist (I)                   | 275.05         | Senior Data Analyst                      | 190.37              | 190.37        |
| Senior Spatial Specialist (I)                | 275.05         | Senior Spatial Specialist (I)            | 160.62              | 160.62        |
| Spatial Analyst (I)                          | 275.05         | GRC Analyst                              | 214.16              | 214.16        |
| Senior Business Analyst (I)                  | 279.93         | Senior Business Analyst                  | 178.47              | 178.47        |
| Systems Integration Specialist (I)           | 287.73         | Integration Architect                    | 237.96              | 237.96        |
| Change Specialist (I)                        | 295.91         | Change Manager                           | 190.37              | 190.37        |
| OT Infra & App Cyber Security Specialist (I) | 303.24         | Cyber Security Architect                 | 285.55              | 285.55        |
| Senior Asset Intelligence Specialist (I)     | 316.51         | Senior Asset Intelligence Specialist (I) | 297.45              | 297.45        |
| Metering Data Specialist (I)                 | 322.93         | Data Architect                           | 261.75              | 261.75        |
| Change Management Specialist (I)             | 346.63         | Change Manager                           | 190.37              | 190.37        |

| Powerlink role             | Proposed \$/hr | Matched Hays role          | Benchmark max \$/hr | Revised \$/hr |
|----------------------------|----------------|----------------------------|---------------------|---------------|
| Grid Planning Engineer (I) | 351.17         | Grid Planning Engineer (I) | 273.65              | 273.65        |

Note: revised daily rates equal the revised hourly rate multiplied by eight hours. Source: rates\_calc Technology PQL mapping workbook.

## A.6 Revised rate schedule (\$FY2025-26)

Table A.1 sets out, for each Powerlink IT role: the proposed standard rate; the matched Hays Salary Guide FY25/26 Technology (QLD) occupation and the resulting benchmark maximum rate; and the revised rate adopted following the assessment. Roles marked "Substituted" exceeded the benchmark maximum and have been capped at the benchmark rate.

Table A.1: Role mapping, benchmark maximums and revised rates

| Powerlink role                      | Proposed \$/hr | Matched Hays role                       | Benchmark max \$/hr | Outcome     | Revised \$/hr | Revised \$/day |
|-------------------------------------|----------------|-----------------------------------------|---------------------|-------------|---------------|----------------|
| Document Writer (E)                 | 100.00         | Document Writer (E)                     | 190.37              | Retained    | 100.00        | 800.00         |
| Project Coordinator (E)             | 105.00         | Project Coordinator (E)                 | 95.18               | Substituted | 95.18         | 761.46         |
| Project Scheduler (E)               | 106.25         | Project Scheduler                       | 178.47              | Retained    | 106.25        | 850.00         |
| Test Analyst (E)                    | 106.25         | Test Analyst                            | 118.98              | Retained    | 106.25        | 850.00         |
| Test Lead (E)                       | 118.75         | Test Lead                               | 178.47              | Retained    | 118.75        | 950.00         |
| Training Lead (E)                   | 118.75         | Training Lead (E)                       | 166.57              | Retained    | 118.75        | 950.00         |
| Change Comms Specialist (E)         | 125.00         | Change Analyst                          | 142.77              | Retained    | 125.00        | 1,000.00       |
| Data Migration Analyst (E)          | 125.00         | Data Analyst                            | 166.57              | Retained    | 125.00        | 1,000.00       |
| Change Analyst (E)                  | 137.50         | Change Analyst                          | 142.77              | Retained    | 137.50        | 1,100.00       |
| Developer (E)                       | 137.50         | SAP Developer                           | 190.37              | Retained    | 137.50        | 1,100.00       |
| Infrastructure Analyst (E)          | 137.50         | Operational Technology Analyst (OT/IOT) | 261.75              | Retained    | 137.50        | 1,100.00       |
| Reporting and Analytics Analyst (E) | 137.50         | Data Analyst                            | 166.57              | Retained    | 137.50        | 1,100.00       |
| Integration Analyst (E)             | 143.75         | Business Analyst                        | 154.67              | Retained    | 143.75        | 1,150.00       |
| Network Specialist (E)              | 143.75         | Network Architect                       | 237.96              | Retained    | 143.75        | 1,150.00       |
| Test Manager (E)                    | 143.75         | Test / QA Manager                       | 190.37              | Retained    | 143.75        | 1,150.00       |
| Application Specialist (E)          | 150.00         | Applications Support                    | 142.77              | Substituted | 142.77        | 1,142.19       |
| Business Analyst (E)                | 150.00         | Business Analyst                        | 154.67              | Retained    | 150.00        | 1,200.00       |
| Database Administrator (E)          | 150.00         | DBA                                     | 154.67              | Retained    | 150.00        | 1,200.00       |
| Reporting and Analytics Lead (E)    | 150.00         | Data Architect                          | 261.75              | Retained    | 150.00        | 1,200.00       |

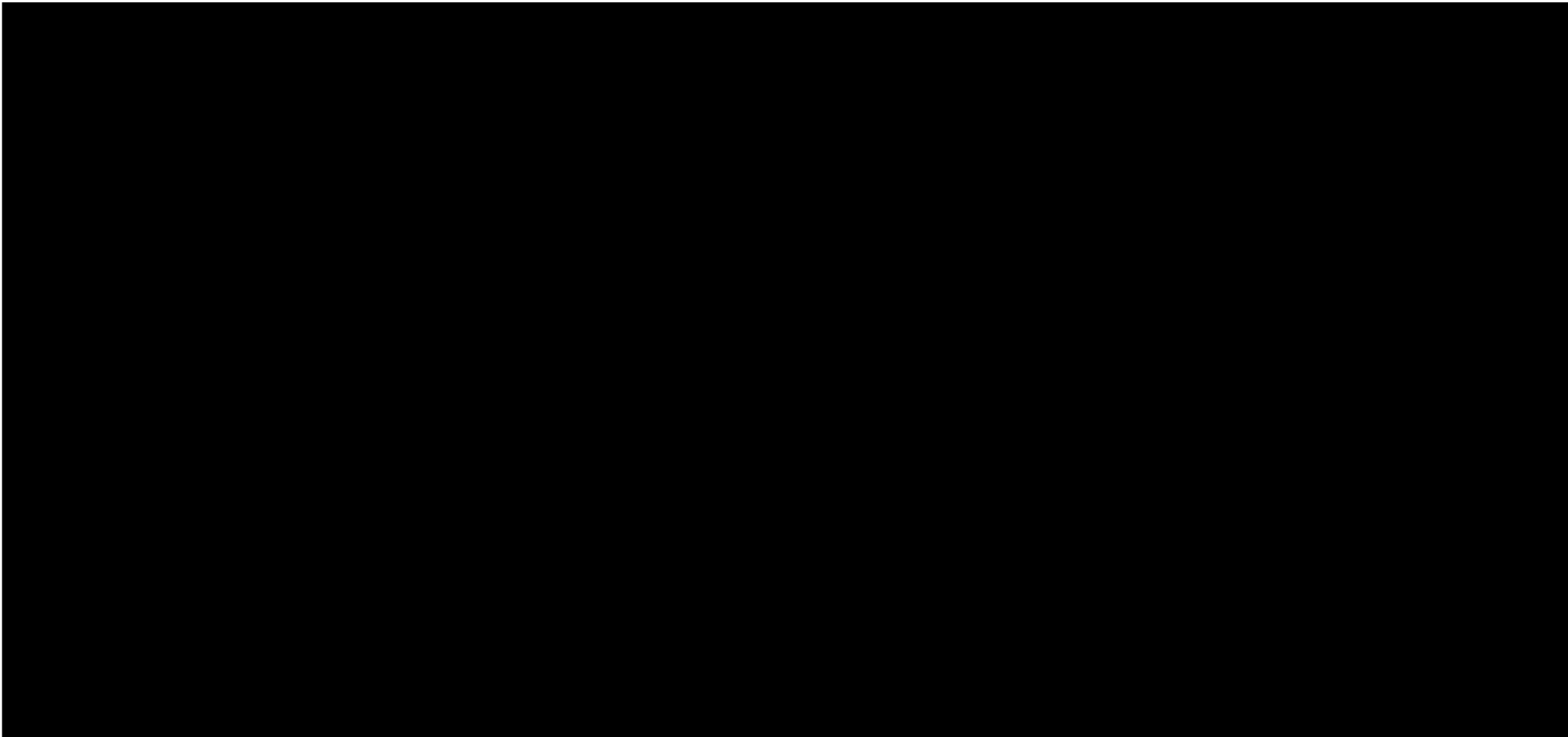
| Powerlink role                     | Proposed \$/hr | Matched Hays role               | Benchmark max \$/hr | Outcome     | Revised \$/hr | Revised \$/day |
|------------------------------------|----------------|---------------------------------|---------------------|-------------|---------------|----------------|
| Technical - Other (E)              | 150.00         | Integration Architect           | 237.96              | Retained    | 150.00        | 1,200.00       |
| Technical Analyst / Developer (E)  | 150.00         | Integration Architect           | 237.96              | Retained    | 150.00        | 1,200.00       |
| Integration Developer (E)          | 156.25         | Integration Architect           | 237.96              | Retained    | 156.25        | 1,250.00       |
| Integration System Specialist (E)  | 156.25         | Integration Architect           | 237.96              | Retained    | 156.25        | 1,250.00       |
| Security Analyst (E)               | 156.25         | Cyber Security Analyst (SecOps) | 214.16              | Retained    | 156.25        | 1,250.00       |
| Change Manager (E)                 | 162.50         | Change Manager                  | 190.37              | Retained    | 162.50        | 1,300.00       |
| Data Migration Lead (E)            | 162.50         | Data Architect                  | 261.75              | Retained    | 162.50        | 1,300.00       |
| Data Specialist (E)                | 162.50         | Data Architect                  | 261.75              | Retained    | 162.50        | 1,300.00       |
| Infrastructure Specialist (E)      | 162.50         | Infrastructure Architect        | 226.06              | Retained    | 162.50        | 1,300.00       |
| Process Analyst (E)                | 162.50         | Business Analyst                | 154.67              | Substituted | 154.67        | 1,237.37       |
| Project Manager (E)                | 162.50         | Project Manager                 | 178.47              | Retained    | 162.50        | 1,300.00       |
| Cloud Specialist (E)               | 168.75         | Cloud Architect                 | 261.75              | Retained    | 168.75        | 1,350.00       |
| Integration Lead (E)               | 168.75         | Integration Architect           | 237.96              | Retained    | 168.75        | 1,350.00       |
| Organisation Design Lead (E)       | 175.00         | Technical Lead                  | 220.11              | Retained    | 175.00        | 1,400.00       |
| Senior Project Manager (E)         | 177.50         | Senior Project Manager          | 214.16              | Retained    | 177.50        | 1,420.00       |
| Information Architect (E)          | 181.25         | Business Architect              | 237.96              | Retained    | 181.25        | 1,450.00       |
| Integration Architect (E)          | 181.25         | Integration Architect           | 237.96              | Retained    | 181.25        | 1,450.00       |
| Security Architect (E)             | 181.25         | Cyber Security Architect        | 285.55              | Retained    | 181.25        | 1,450.00       |
| Solution Architect (E)             | 181.25         | Solution Architect              | 237.96              | Retained    | 181.25        | 1,450.00       |
| Technical Architect (E)            | 181.25         | Technical Lead                  | 220.11              | Retained    | 181.25        | 1,450.00       |
| Asset Management Specialist (E)    | 187.50         | Asset Management Specialist (E) | 202.26              | Retained    | 187.50        | 1,500.00       |
| PPM Specialist (E)                 | 187.50         | Solution Architect              | 237.96              | Retained    | 187.50        | 1,500.00       |
| Program Manager (E)                | 197.50         | Program Manager                 | 237.96              | Retained    | 197.50        | 1,580.00       |
| Legal / Contract Advisor (E)       | 200.00         | Legal / Contract Advisor (E)    | 142.77              | Substituted | 142.77        | 1,142.19       |
| Digital Engineering Specialist (E) | 212.50         | Solution Architect              | 237.96              | Retained    | 212.50        | 1,700.00       |
| Enterprise Architect (E)           | 212.50         | Enterprise Architect            | 285.55              | Retained    | 212.50        | 1,700.00       |
| Project Coordinator (I)            | 221.58         | Project Co-ordinator            | 130.88              | Substituted | 130.88        | 1,047.01       |

| Powerlink role                              | Proposed \$/hr | Matched Hays role                    | Benchmark max \$/hr | Outcome     | Revised \$/hr | Revised \$/day |
|---------------------------------------------|----------------|--------------------------------------|---------------------|-------------|---------------|----------------|
| Infrastructure IT Analyst (I)               | 221.76         | Infrastructure Architect             | 226.06              | Retained    | 221.76        | 1,770.00       |
| Senior IT Infrastructure Analyst (I)        | 221.76         | Senior Business Analyst              | 178.47              | Substituted | 178.47        | 1,427.74       |
| BI Data Analyst (I)                         | 225.43         | Data Analyst                         | 166.57              | Substituted | 166.57        | 1,332.56       |
| SAP Basis Analyst (I)                       | 225.43         | SAP Test Analyst                     | 166.57              | Substituted | 166.57        | 1,332.56       |
| SAP Finance Analyst (I)                     | 225.43         | SAP Test Analyst                     | 166.57              | Substituted | 166.57        | 1,332.56       |
| SAP Security Analyst (I)                    | 225.43         | Cyber Security Analyst (SecOps)      | 214.16              | Substituted | 214.16        | 1,713.29       |
| Senior Database Engineer (I)                | 225.43         | Senior Business Analyst              | 178.47              | Substituted | 178.47        | 1,427.74       |
| Senior SAP Integration Analyst (I)          | 225.43         | Senior Business Analyst              | 178.47              | Substituted | 178.47        | 1,427.74       |
| Senior SAP Systems Analyst (I)              | 225.43         | Senior Business Analyst              | 178.47              | Substituted | 178.47        | 1,427.74       |
| Change Analyst (I)                          | 225.45         | Change Analyst                       | 142.77              | Substituted | 142.77        | 1,142.19       |
| IT Portfolio Learning Specialist (I)        | 225.45         | IT Portfolio Learning Specialist (I) | 142.77              | Substituted | 142.77        | 1,142.19       |
| IT Portfolio Test Specialist (I)            | 225.45         | Test Lead                            | 178.47              | Substituted | 178.47        | 1,427.74       |
| Project Manager (I)                         | 225.45         | Project Manager                      | 178.47              | Substituted | 178.47        | 1,427.74       |
| Senior Program Manager (I)                  | 225.45         | Program Manager                      | 237.96              | Retained    | 225.45        | 1,800.00       |
| Senior Project Manager (I)                  | 225.45         | Senior Project Manager               | 214.16              | Substituted | 214.16        | 1,713.29       |
| Business Architect (I)                      | 230.76         | Business Architect                   | 237.96              | Retained    | 230.76        | 1,850.00       |
| IT Infrastructure Architect (I)             | 230.76         | Infrastructure Architect             | 226.06              | Substituted | 226.06        | 1,808.47       |
| IT Security Analyst (I)                     | 230.76         | Cyber Security Analyst (SecOps)      | 214.16              | Substituted | 214.16        | 1,713.29       |
| Senior Business Architect (I)               | 230.76         | Business Architect                   | 237.96              | Retained    | 230.76        | 1,850.00       |
| Solution Architect (I)                      | 230.76         | Solution Architect                   | 237.96              | Retained    | 230.76        | 1,850.00       |
| Business Improvement Specialist (I)         | 232.47         | Business Architect                   | 237.96              | Retained    | 232.47        | 1,860.00       |
| SAP Supply Chain Data & Process Analyst (I) | 232.47         | Data Analyst                         | 166.57              | Substituted | 166.57        | 1,332.56       |
| SAP Works Management Analyst (I)            | 232.47         | Business Analyst                     | 154.67              | Substituted | 154.67        | 1,237.37       |
| Health and Wellbeing Advisor (I)            | 233.98         | Health and Wellbeing Advisor (I)     | 178.47              | Substituted | 178.47        | 1,427.74       |

| Powerlink role                               | Proposed \$/hr | Matched Hays role                        | Benchmark max \$/hr | Outcome     | Revised \$/hr | Revised \$/day |
|----------------------------------------------|----------------|------------------------------------------|---------------------|-------------|---------------|----------------|
| Asset Data Specialist (I)                    | 240.39         | Data Architect                           | 261.75              | Retained    | 240.39        | 1,920.00       |
| Information Support Specialist (I)           | 259.91         | Data Analyst                             | 166.57              | Substituted | 166.57        | 1,332.56       |
| Analytics and Insights Specialist (I)        | 265.44         | Data Architect                           | 261.75              | Substituted | 261.75        | 2,094.02       |
| Cyber Security Specialist (I)                | 267.63         | Cyber Security Architect                 | 285.55              | Retained    | 267.63        | 2,140.00       |
| Information Management Specialist (I)        | 272.79         | Information Management Specialist (I)    | 113.03              | Substituted | 113.03        | 904.23         |
| Senior Analytics and Insights Specialist (I) | 272.79         | Senior Data Analyst                      | 190.37              | Substituted | 190.37        | 1,522.92       |
| Senior Data Specialist (I)                   | 275.05         | Senior Data Analyst                      | 190.37              | Substituted | 190.37        | 1,522.92       |
| Senior Spatial Specialist (I)                | 275.05         | Senior Spatial Specialist (I)            | 160.62              | Substituted | 160.62        | 1,284.96       |
| Spatial Analyst (I)                          | 275.05         | GRC Analyst                              | 214.16              | Substituted | 214.16        | 1,713.29       |
| Senior Business Analyst (I)                  | 279.93         | Senior Business Analyst                  | 178.47              | Substituted | 178.47        | 1,427.74       |
| Systems Integration Specialist (I)           | 287.73         | Integration Architect                    | 237.96              | Substituted | 237.96        | 1,903.65       |
| Change Specialist (I)                        | 295.91         | Change Manager                           | 190.37              | Substituted | 190.37        | 1,522.92       |
| OT Infra & App Cyber Security Specialist (I) | 303.24         | Cyber Security Architect                 | 285.55              | Substituted | 285.55        | 2,284.38       |
| Senior Asset Intelligence Specialist (I)     | 316.51         | Senior Asset Intelligence Specialist (I) | 297.45              | Substituted | 297.45        | 2,379.56       |
| Metering Data Specialist (I)                 | 322.93         | Data Architect                           | 261.75              | Substituted | 261.75        | 2,094.02       |
| Change Management Specialist (I)             | 346.63         | Change Manager                           | 190.37              | Substituted | 190.37        | 1,522.92       |
| Grid Planning Engineer (I)                   | 351.17         | Grid Planning Engineer (I)               | 273.65              | Substituted | 273.65        | 2,189.20       |

Source: rates\_calc Technology PQL mapping workbook, 'Final PQL mapped rates' and 'Revised rate summary' tabs. Rates in \$FY2025-26; escalated to FY2026-27 within the estimates model.

## Appendix B: SAP System Module Review



Program/Project

P = Potentially, System/Module is potentially impacted by more than one Program/Project

N/A - System/Module is only impacted by one Program/Project