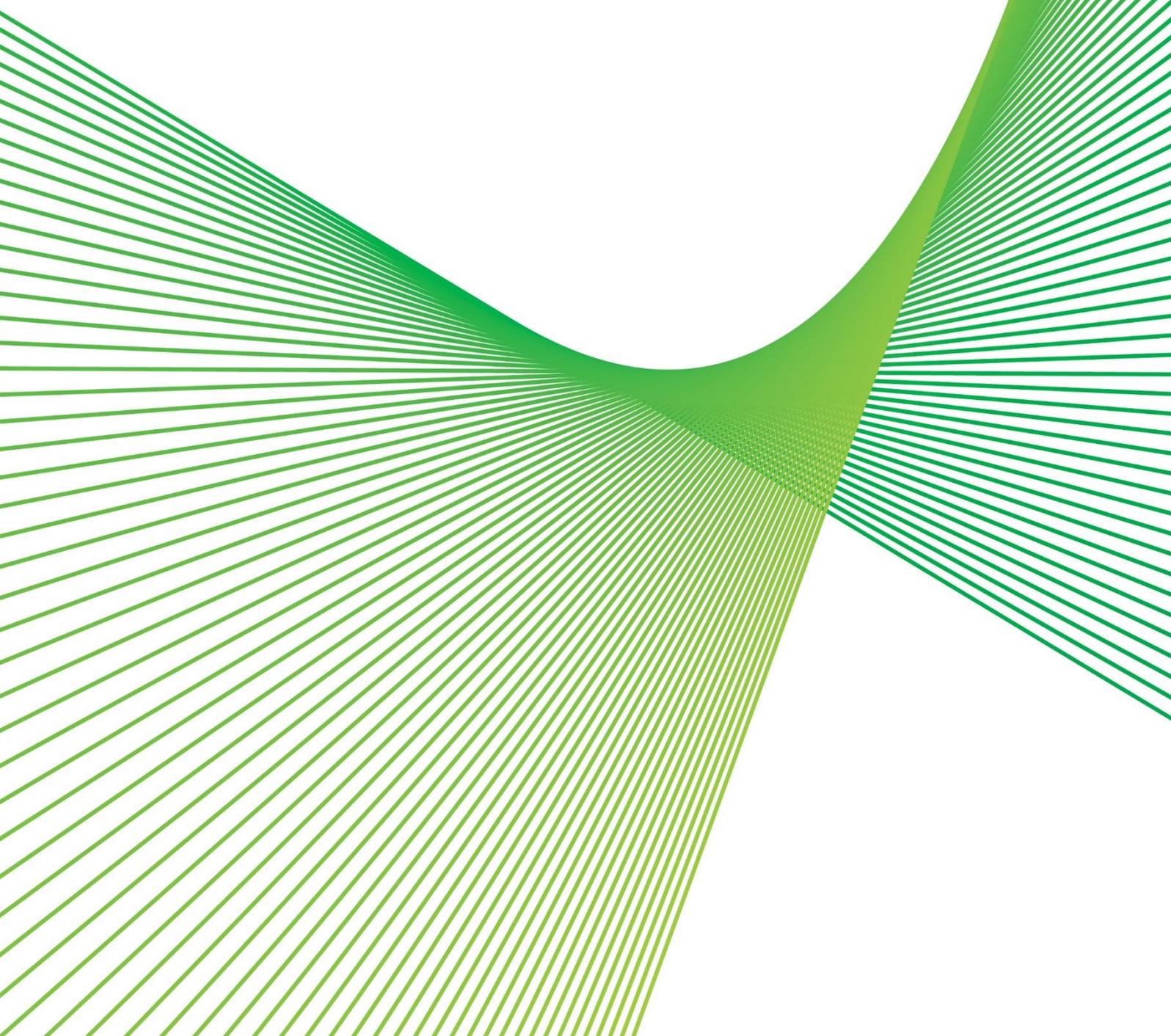


A.4 Labour and indirect costs

HumeLink Stage 1 (Early Works) Contingent Project Application

5 April 2022



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Glossary

Term	Description
AER	Australian Energy Regulator
ATO	Australian Taxation Office
CAM	Cost Allocation Methodology
CCE	Collaborative Contractor Engagement
CPA	Contingent Project Application
CPI	Consumer Price Index
CSE	Community and Stakeholder Engagement
ECI	Early contractor engagement
EIS	Environmental Impact Statement
EOI	Expression of Interest
ERP	Enterprise Resource Planning
FTE	Full Time Equivalents
NER	National Energy Rules
PEC	Project EnergyConnect
QNI	Queensland New South Wales Interconnector
RFT	Request for Tender

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1. Purpose, structure and scope of this document

1.1. Purpose of this document

This document explains and justifies our labour and indirect capital expenditure (capex) for Stage 1 (early works) for the HumeLink (the Project or HumeLink).

The project stages and target timing identified in Australian Energy Market Operator's (AEMO's) Draft 2022 Integrated System Plan (Draft 2022 ISP) are:¹

- Stage 1 – complete the early works by 2024, and
- Stage 2 – implement the Project by 2026-27, subject to decision rules and a feedback loop.

Our Stage 1 (early works) activities comprise direct, and indirect and labour capex activities:

- direct capex activities – these relate to procurement and land acquisitions, and
- indirect and labour capex activities – this relate to development and approvals (D&A) activities.

This document supports our Stage 1 Contingent Project Application (Application or CPA) for HumeLink and should be read in conjunction with our Principal Application document and other supporting documents, in particular our Capex Forecasting Methodology.

All dollar values in this document are real \$2017-18, unless otherwise stated, consistent with our 2018-23 Revenue Determination.² This document references other supporting documents for further detail.

1.2. Structure of this document

This document is structured as follows:

- Section 2 overviews our actual Stage 1 (early works) labour and indirect capex to 31 December 2021
- Section 3 summarises our actual and forecast Stage 1 (early works) labour and indirect capex
- Section 4 overviews the methodology we have used to calculate our forecast labour and indirect capex
- Section 5 overviews our forecast labour and labour-related capex for Project Management, Transaction Procurement Support, Community and Stakeholder Engagement, Land and Environment, and Other Support and Corporate Roles
- Section 6 overviews our forecast indirect capex for Procurement, Project Development, Land and Environment, Community and Stakeholder Engagement, and Regulatory Approvals and Other Support Costs, and
- Section 7 summarises the key assumptions underpinning our Stage 1 (early works) forecast labour and indirect capex.

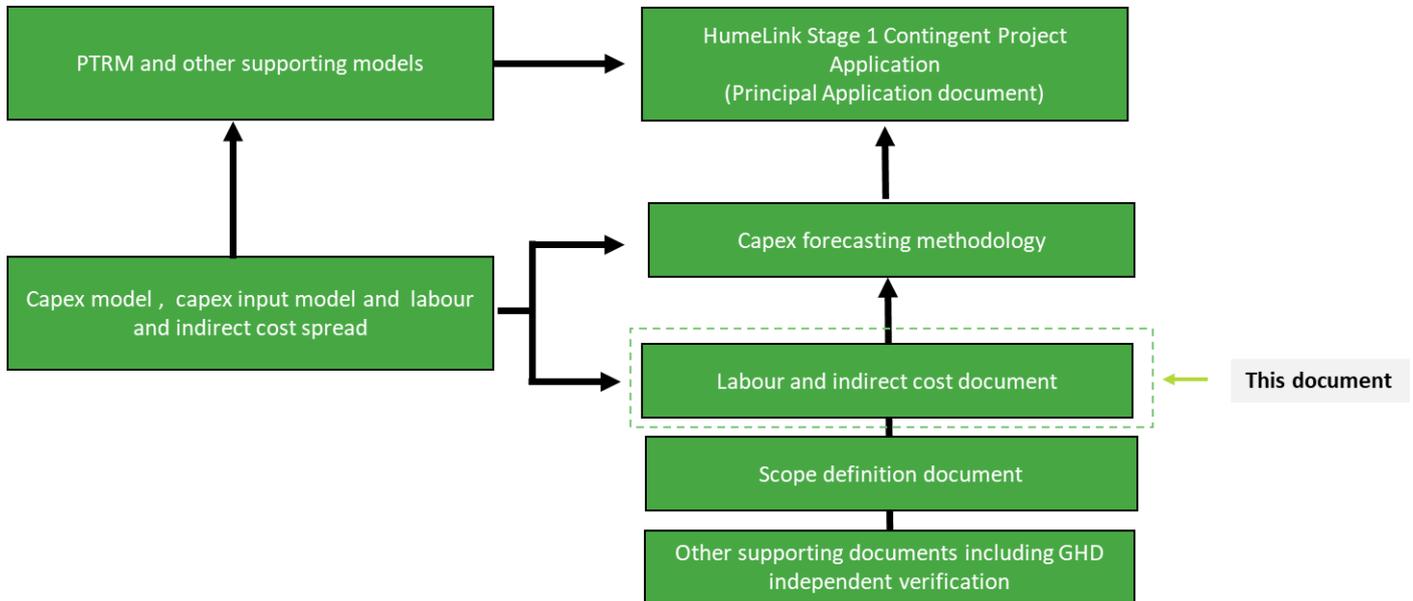
¹ AEMO, [Draft 2022 ISP](#), December 2021, p. 64

² The financial values exclude *both* inflation and any real input cost escalation (e.g. labour) from 30 June 2018 onwards.

1.3. Structure of our Stage 1 (early works) Application

Our Stage 1 Application is structured as illustrated in Figure 1.1 to be as clear and accessible as possible to the AER, customers and other stakeholders.

Figure 1.1: Stage 1 CPA document structure for HumeLink



1.4. Scope of this document

The scope of this document is limited to the labour and indirect capex for Stage 1 (early works), which comprise:

- actual costs up to 31 December 2021 and
- forecast costs from 1 January 2022 to 30 June 2024, which is when the early works are expected to be complete.

The majority of our Stage 1 (early works) labour and indirect capex has not yet been incurred.

Real labour escalation is not included as part of this report. Real labour escalation is undertaken in the Capex Forecast Model, as explained in the Capex Forecasting Methodology.

Forecast expenditure has been identified as either capex or opex in a manner consistent with relevant accounting standards including AASB 116. For Stage 1(early works), labour and all indirect costs are treated as capex as they are directly linked to Stage 2 (implementation) which will involve delivering the capital project.

The approach employed in this document is consistent with the approach we have employed with other Project costs which have been externally verified.

2. Our actual Stage 1 (early works) labour and indirect capex

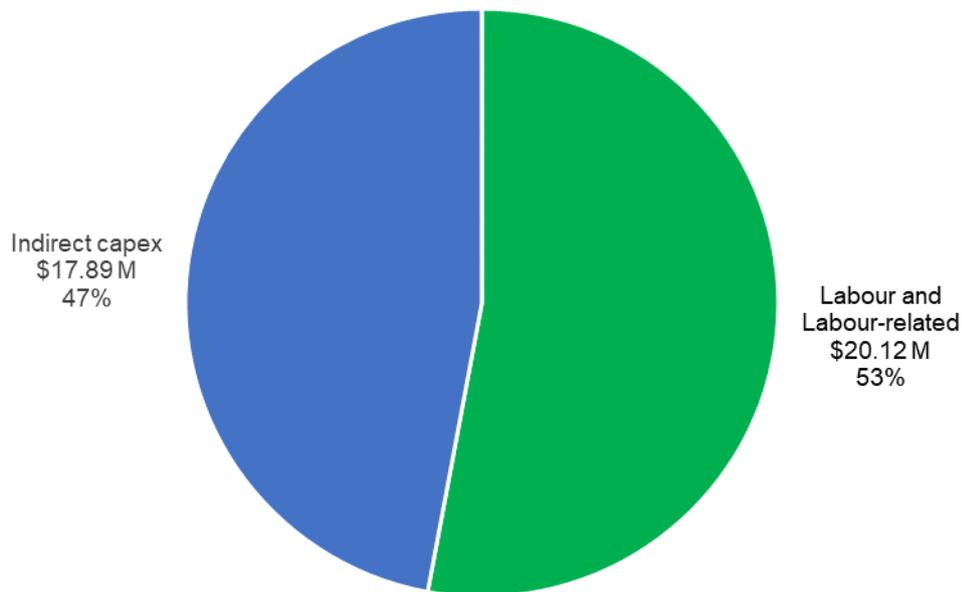
Our actual Stage 1 (early works) labour and indirect capex of \$38.00 million (Real 2017-18) was incurred between 1 July 2017 and 31 December 2021. Table 2-1 shows our actual labour and indirect capex by category and Figure 2-1 shows our indirect costs and labour (and labour related) costs.

Labour and labour-related capex includes on-costs, support costs, training, recruitment and IT hardware costs. Indirect capex includes consulting and legal fees, and outsourced labour and work related to the categories outlined in Table 2-1.

Table 2-1: Historical labour and indirect capex by category, from 1 July 2017 to 31 December 2021 (\$M, Real June 2018)

Capex category	2017-18	2018-19	2019-20	2020-21	2021-22	Total
Labour and labour-related	0.00	0.35	5.65	8.91	5.20	20.12
Project Management	0.00	0.23	2.66	3.36	2.49	8.75
Transaction Procurement Support	0.00	0.00	0.00	0.41	0.21	0.61
Community & Stakeholder Engagement	0.00	0.00	0.31	1.02	0.57	1.90
Land and Environment	0.00	0.07	1.21	2.07	1.11	4.46
Other Support and Corporate Roles	0.00	0.04	1.47	2.06	0.83	4.39
Indirect capex	0.38	0.28	2.89	6.41	7.93	17.89
Procurement	0.00	0.00	0.00	0.00	0.23	0.23
Project Development	0.00	0.00	0.05	1.65	1.40	3.10
Land and Environment	0.00	0.12	1.48	2.42	3.42	7.45
Community & Stakeholder Engagement	0.00	0.00	0.16	1.36	1.58	3.10
Regulatory Approvals and Other Support Costs	0.38	0.16	1.20	0.98	1.30	4.02
Total	0.38	0.64	8.54	15.32	13.14	38.00

Figure 2-1: Historical labour and indirect capex by nature, from 1 July 2017 to 31 December 2021 (\$M, Real June 2018)



Our actual costs are based on transactions recorded in Ellipse, our enterprise resource planning (ERP) system. This contains Labour costs, support costs and expenses for Stage 1 (early works) work orders. We have allocated and attributed actual capex to Stage 1 (early works) in accordance with our cost allocation methodology (CAM)³. We have also treated actual capex in accordance with our capitalisation standard⁴.

³ Transgrid Cost Allocation Methodology, January 2002.

⁴ Transgrid, Expenditure Capitalisation Standard, 2021

3. Summary of Stage 1 (early works) labour and indirect capex

Table 3-1 overviews our actual and forecast Stage 1 (early works) indirect, labour and labour-related capex. The capex sub-categories relate to work-stream activities and are described in detail in subsequent sections:

- Labour and labour-related activities: Project Management, Transaction Procurement Support, Community and Stakeholder Engagement, Land and Environment, and Other Support and Corporate Roles; and
- Indirect activities: Procurement (excluding early equipment procurement and design)⁵, Project Development, Land and Environment (excluding land acquisition except land agent fees), Community and Stakeholder Engagement, and Regulatory Approvals and Other Support Costs.

Table 3-1 shows our actual and forecast Stage 1 (early works) capex is \$191.48 million over the period 1 July 2017 to 30 June 2024. This comprises \$38.0 million (or 19.8%) of actual capex and \$153.47 million (or 80.1%) of forecast capex. This capex is incremental to our business-as-usual capex.

Table 3-1: Summary total capex – historical and forecast (\$M, Real June 2018)

Capex	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Total	% of total
Historical	0.38	0.64	8.54	15.32	13.14			38.00	19.85
Forecast					29.08	77.99	46.40	153.47	80.15
Total	0.38	0.64	8.54	15.32	42.22	77.99	46.40	191.48	100.00

Table 3-2 shows our total Stage 1 (early works) forecast labour and indirect capex by category.

Table 3-2: Forecast Stage 1 labour and indirect capex by category, from 1 January 2022 to 30 June 2024 (\$M, Real June 2018)

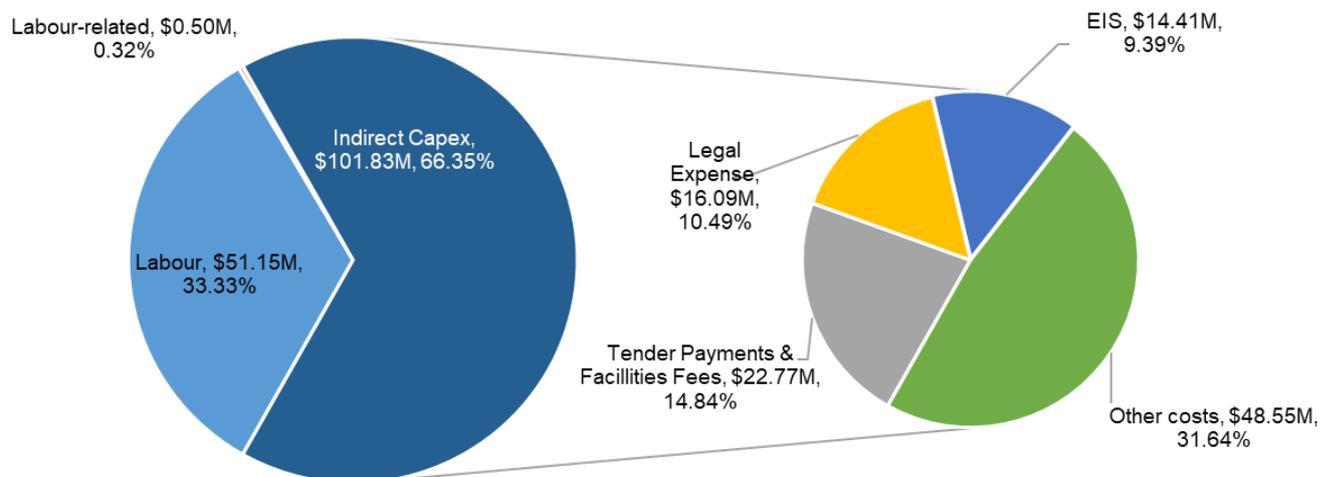
Capex category	2021-22	2022-23	2023-24	Total	% of total
Labour and labour-related	9.67	22.25	19.74	51.65	33.65
Project Management	4.93	12.12	11.89	28.93	18.85
Transaction Procurement Support	1.08	3.48	1.63	6.19	4.03
Community and Stakeholder Engagement	0.56	1.06	0.94	2.56	1.67
Land and Environment	1.93	4.01	3.56	9.50	6.19
Other Support & Corporate Roles	1.17	1.58	1.72	4.46	2.91
Indirect	19.41	55.75	26.67	101.83	66.35

⁵ These have been categorised as direct costs and are captured in our Capex Forecasting Methodology report.

Capex category	2021-22	2022-23	2023-24	Total	% of total
Procurement	1.42	24.79	1.12	27.33	17.80
Project Development	5.65	14.90	9.20	29.75	19.39
Land and Environment	7.84	10.21	3.35	21.40	13.94
Community and Stakeholder Engagement	2.73	4.01	8.73	15.46	10.08
Regulatory Approvals and Other Support Costs	1.78	1.84	4.26	7.88	5.14
Total	29.08	77.99	46.40	153.47	100.00

Figure 3-1 shows our Stage 1 (early works) forecast labour and indirect capex in terms of indirect costs and labour (and labour related) costs.

Figure 3-1: Forecast labour and indirect capex by nature, from 1 January 2022 to 30 June 2024 (\$M, Real 30 June 2018)

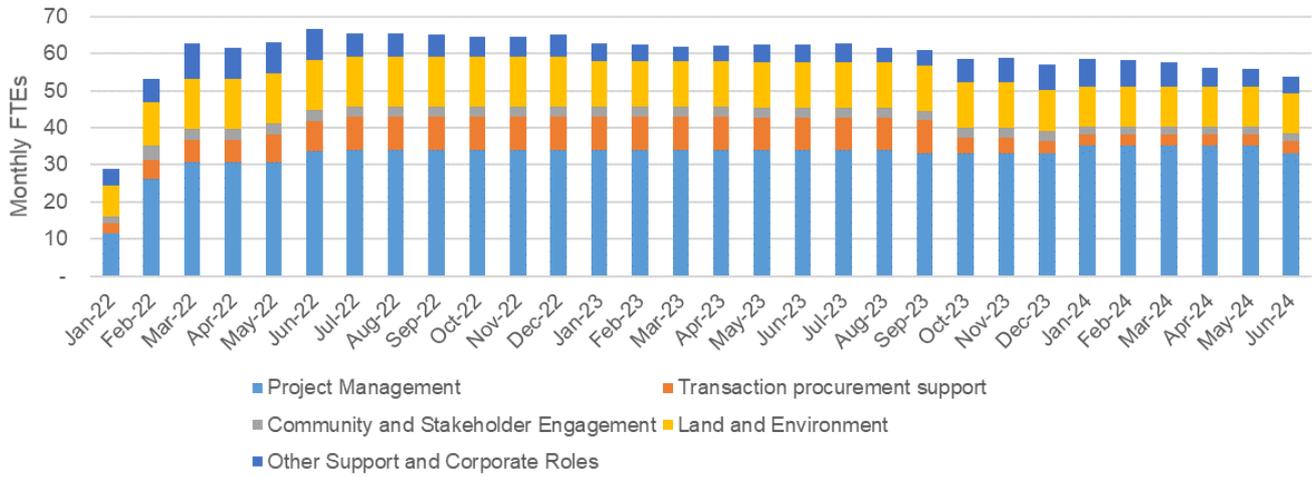


Note: Labour includes both internal and outsourced labour working as part of the project team.

Our Stage 1 labour and indirect capex comprises:

- 66% for indirect costs which include a range of costs including tender payments and facilities fees (\$22.77 million), legal expenses (\$16.09 million) and EIS costs (\$14.41 million).
- 33% for labour (and labour-related) costs. There are 60 FTEs on average in the project team (excluding outsourced labour). FTEs are lower in 2021-22 and higher in 2022-23 (see the chart of monthly FTEs below) given the profile of the activity over the development of the project.

Figure 3-2: Forecast monthly FTEs (1 January 2022 to 30 June 2024)



4. Methodology for forecast labour and indirect capex

We have determined our Stage 1 (early works) forecast labour and indirect capex based on a bottom-up build of costs over the period from 1 January 2022 to 30 June 2024. Our forecasting method is consistent with the methodology applied in our previous Applications for Project EnergyConnect and VNI Minor. As noted, our forecast capex has been treated in accordance with our capitalisation policy.

4.1. Labour

Our labour costs are based on the internal project team for Stage 1 (early works). This comprises 136 roles (average of 60 FTEs over the forecast period, not including outsourced labour relating to a Project Risk Manager, Project Director and Other tendering resources) organised into a number of sub-teams:⁶

- Project Management (38 roles / 32.76 FTEs + \$1.26 million of outsourced labour) to directly manage HumeLink.
- Transaction Procurement Support (12 roles / 6.62 FTEs + \$0.45 million of outsourced labour) to support the tender process, data room and ongoing support of contract administrative management.
- Community and Stakeholder Engagement (10 roles / 2.61 FTEs) to manage media and communications, and lead community engagement strategy and activities.
- Land and Environment (25 roles / 12.18 FTEs) to support environmental approval and land acquisition.
- Other Support and Corporate Roles (51 roles / 5.86 FTEs) to provide support for HumeLink including engineering and design, health and safety, legal, regulatory, risk & audit and network operations.

The forecast was built up based on:

- the month-by-month FTE requirements for each role type (e.g. Commercial Manager) to meet the project schedule; and
- hourly labour rates for each role type including on-costs and support costs (see assumptions in section 7).

4.2. Labour-related

Our labour-related costs include training, recruitment and IT hardware costs. Assumptions underpinning the training cost allowance are outlined in section 7.1.7. The cost build-up of recruitment and IT hardware expenses (as is applicable for each of the labour cost categories) is outlined in section 5.

4.3. Indirect capex

These costs comprise a wide range of professional and consulting services, together with tender payments and associated facilities costs. The requirements for each of these have been separately itemised/defined and phased according to the project schedule.

⁶ The Major Projects division in Transgrid dissolved in June 2021, meaning that all associated costs are reflected in historical labour costs and are not relevant to forecasting labour costs.

For some of items, supplier arrangements are already in place or quotes have been obtained, and these form the basis of the forecast costs. However, for many other items it is too early to take these procurement steps and the project team has drawn on recent experience, market conditions and reasonable assumptions to prepare the forecast costs (as described in section 7).

Travel and expenses (including accommodation, meal allowances and other expenses) have been categorised as indirect capex (which is consistent with the categorisation of historical travel and expenses). The general approach for forecasting these costs is outlined in section 7.2.

5. Labour and labour-related costs

5.1. Project Management

Our Stage 1 (early works) forecast capex for Project Management relates largely to incremental labour for managing and co-ordinating the Project's activities to efficiently deliver to the agreed scope, program and budget. This includes project scheduling, expenditure forecasting and reporting, and analysis of risk to mitigate the likelihood of undesirable outcomes from being realised.

Table 5-1 shows that our Project Management labour and labour-related capex is \$28.93 million and comprises:

- Internal labour costs – these comprise approximately 96% of forecast Project Management capex and reflect an average of approximately 32.76 FTEs across the forecast period.
- Outsourced labour costs – these reflect a project director and project risk manager who will work with the internal project team across the forecast period.
- Labour-related costs – these comprise training, recruitment and IT hardware expenses.

Table 5-1: Summary of labour and labour-related costs for Project Management (\$M, Real June 2018)

Category	Total capex
Labour	28.48
Internal	27.22
Outsourced	1.26
Labour-related costs	0.45
Training	0.12
Recruitment	0.19
IT hardware expenses	0.13
Total	28.93

5.1.1. Labour-related costs

Table 5-2 overviews the basis for each of our Stage 1 (early works) labour-related costs, which total \$0.44 million.

Table 5-2: Summary of labour-related costs for Project Management (\$M, Real June 2018)

Labour-related cost	Capex	Description / estimation methodology ⁷
Training	0.12	See section 7.1.7.
Recruitment	0.19	Total recruitment expenses based on 7 roles costing \$27,772 each. This is based on: <ul style="list-style-type: none"> An average salary package for each role of \$185,144 Agreed rates with our agency provider of 15% of the package per role.
IT expenses	0.13	Total IT expenses based on 42 new starters requiring \$3,036 worth of IT hardware each (laptop, phone and software), and additionally \$6,075 in Pegasus safety and training (covering all new starters).
Total	0.44	

5.2. Transaction Procurement Support

Table 5-3 shows our Stage 1 (early works) forecast transaction procurement support capex is \$6.19 million. This is based on a mix of internal and outsourced labour costs:

- Internal labour costs reflect an average of approximately 6.62 FTEs across the forecast period, and
- Outsourced labour is required to support the tender process, data room and ongoing contract administrative management and will work with the internal project team over the forecast period, at a cost of \$0.45 million.

Table 5-3: Summary of Labour and labour-related costs for Transaction Procurement Support (\$M, Real June 2018)

Category	Total capex
Labour	6.19
Internal	5.74
Outsourced	0.45
Labour-related costs	N/A
Total	6.19

⁷ Input costs referred to have been converted to \$Real 2017-18 and may not add up to total costs due to rounding.

5.3. Community and Stakeholder Engagement

Our Stage 1 (early works) forecast capex for Community and Stakeholder Engagement (CSE) relates to engagement required to deliver the Project in a sustainable way given that it will impact many land holders and communities.

Table 5-4 details our Community and Stakeholder Engagement labour and labour-related costs. These are based on internal labour costs and reflect an average of 2.61 FTEs over the forecast period to manage media and communications, and lead community strategy and activities.

Table 5-4: Summary of labour and labour-related costs for Community and Stakeholder Engagement (\$M, Real June 2018)

Category	Total capex
Labour (Internal)	2.56
Labour-related costs	N/A
Total	2.56

5.4. Land and Environment

HumeLink is a Greenfield project that will increase transfer capacity of the Southern Shared Network, between southern NSW and the major demand centres of Sydney, Newcastle and Wollongong. Due to the size of this project and the geographical expanse it will cover, significant resources will be required to manage the property and environmental implications of the project.

Table 5-5 details our Land and Environment labour and labour-related cost of \$9.50 million. These are based on:

- Internal labour costs (reflect an average of 12.18 FTEs over the forecast period to support environmental approval and land acquisition. There are no outsourced labour costs, and
- Labour-related costs comprise training.

Table 5-5: Summary of Labour and Labour-related costs for Land and Environment (\$M, Real June 2018)

Category	Total capex
Labour (Internal)	9.46
Labour-related costs (Training)	0.05
Total	9.50

5.5. Other Support and Corporate Roles

Other Support and Corporate Roles in Stage 1 (early works) relate to engineering, legal, regulatory (including preparation of the Stage 1 and Stage 2 Applications), spatial, finance, HR and ongoing procurement.

Table 5-6 shows our labour costs for Other Support and Corporate Roles. These are based on internal labour resources equivalent to an average of 5.86 FTEs for engineering and design, health and safety, legal, regulatory, risk and audit, and network operations.

Table 5-6: Summary of labour and labour-related costs for Other Support and Corporate Roles (\$M, Real 30 June 2018)

Category	Total capex
Labour (Internal)	4.46
Labour-related costs	N/A
Total	4.46

6. Indirect capex

6.1. Procurement

We will engage the construction market early (using early contractor engagement (ECI)) process to:

- ensure greater cost certainty to support the Stage 2 CPA
- improve project definition and site information, discuss innovations, design completeness, develop program assumptions, progress EIS and identify risks and opportunities.

Multiple contractors will be engaged to diversify capacity risk and increase competitive tension. Tenderers can bid on all sections of line and substations packages offered but can only win a maximum of two sections (packages are subject to the final scope of works being confirmed).

'Under bidder payments' for unsuccessful tenders are required to encourage the competitive participation of multiple bidders. These payments are in line with common industry practice and NSW government policy⁸. The bidder payment amounts have been determined in line with this policy, supporting the reimbursement of up to 50 per cent of the expected bid costs for projects exceeding \$100 million. The bidder payment amount selected considers specialist advice regarding higher level of payments for recent NSW infrastructure projects, the actual amounts paid for Project EnergyConnect (PEC) and the NSW government policy. Further, we will incur fees to utilise the Ansarada tender portal and data room. This will enable us to view and query responses from prospective bidders in a secure data room and gain access to real time reporting in order to evaluate prospective options in an effective and efficient manner⁹.

Implementation of the procurement strategy will proceed through five phases:

- Stage 1: Formal Market Sounding
- Stage 2: Expression of Interest (EOI)
- Stage 3: ECI Tender
- Stage 4: ECI Delivery
- Stage 5: Request for Tender (RFT) tender process and award of contracts.

Table 6-1 shows our Stage 1 (early works) forecast indirect non-labour capex for procurement is \$27.33 million.

⁸ Bid Cost Contributions Policy, NSW Treasury, May 2018.

⁹ Selection of Ansarada Tender portal was determined through an evaluation of the capabilities of multiple vendor options including Tenderlink and SharePoint. The evaluation process identified that given the scale and complexity of HumeLink, Ansarada was the only suitable option to meet project requirements.

Table 6-1: Summary of indirect capex for Procurement (\$M, Real June 2018)

Category	Capex	Description / estimation methodology ¹⁰
Contractor payments	22.22	<ul style="list-style-type: none"> • [REDACTED] • [REDACTED] • [REDACTED] • The bidder payment figure is supported by advice from Pro Squared Infrastructure Consultants.
Transaction management expenses	4.05	<ul style="list-style-type: none"> • Contractors will be engaged to support Transaction Management processes throughout the course of the Contract Program. The breakdown of costs is as follows: <ul style="list-style-type: none"> - Transaction Management stages 1 and 2: Market sounding and EOI - \$0.43 M. - Transaction Management stages 3: ECI - \$1.81 M. - Transaction Management stages 4 and 5: Tender stages - \$1.61 M. - Commercial advisory services - \$0.18 M. • These are based on purchase orders and quotes provided by Pro Squared Infrastructure Consultants, Connell Griffin, E3 Advisory, Portland and TSA.
Data room	0.56	Estimated based on a quote provided by Ansarada (250GB for 36 months).
Probity training and support	0.30	<ul style="list-style-type: none"> • Probity advisor – \$0.28 M <ul style="list-style-type: none"> - A Probity Advisor will be engaged throughout the Contract Program. Probity Mindset Training will also be conducted as part of the probity framework required. - Cost based on quote provided by O'Connor Marsden & Associates Pty Ltd • Conflict of Interest Register – \$0.02 M

¹⁰ Input costs referred to have been converted to \$Real June 2018, and may not add up to total costs due to rounding.

Category	Capex	Description / estimation methodology ¹⁰
		<ul style="list-style-type: none"> Estimated monthly costs of \$926 are for the probity advisor to maintain the Conflict of Interest Register throughout the contract program.
Independent Expert Review Group	0.08	<p>The calculation for this cost is \$2,314/day for 3 people over 12 days to independently review data.</p> <p>This estimation is based upon industry rates.</p>
Travel and expenses	0.07	<p>Travel and expenses involve staff travel and accommodation (car travel, accommodation and meals and flights) estimated at \$2,333 per month for two people from the contract program team visiting Wagga Wagga for 2 days per month.</p> <p>This assumes \$231/day for car travel, \$264/night for accommodation and meals, and \$407 return flight (Sydney to Wagga Wagga).</p>
Room hire, catering and othering	0.06	<p>Expenses related to room hire and catering for Contract related gatherings.</p> <p>Estimated calculations are as follows: function room hire estimated at \$463 per event with maximum 15 people attending at \$93 per head for catering. 32 events over the 18 month procurement period (approx. 1 – 2 events per month).</p> <p>[\$463 Venue Hire + (15 x \$93 Catering)] x 32 events = \$59,246</p>
Total capex	27.33	

6.2. Project Development

Table 6-2 shows our Stage 1 (early works) indirect forecast capex for Project Development of \$29.75 million. This includes consulting fees for legal assistance, project management, geotechnical and survey work, owners engineer, and specialist studies.

Table 6-2: Summary of indirect capex for Project Development (\$M, Real June 2018)

Category	Capex	Description / estimation methodology ¹¹
External legal expenses	16.09	Based on a quote from Corrs Chambers Westgarth to provide legal advice in relation to land matters, environmental and heritage issues and contract program matters.
Geotechnical and survey costs	5.48	<ul style="list-style-type: none"> • Substation Geotech Investigations – \$0.25M <ul style="list-style-type: none"> - This includes costs for geotech investigations at Bannaby, Maragle and Gugaa (Kemmis or Brunsdon site). - Based on actuals for Geotech investigation at Gugaa (Bye) site – \$31,053 for each of 6 bore holes. • Transmission Line Geotech Investigations – \$4.76 M (based on cost build up using PEC estimates) • Soil resistivity and tests: \$0.04 M Soil Resistivity testing is required at Bannaby substation and an alternate Gugaa site (Brunsdon or Kemmis, to be confirmed). <ul style="list-style-type: none"> - Based on actual cost of soil resistivity testing conducted at Gugaa (Bye) site (\$0.02 M). • Options Engineering Studies: \$0.22 M <ul style="list-style-type: none"> - Cost estimate based on initial quotes and expectations from increased revised scope. • Steer CCG for Undergrounding Studies: \$0.03M (based on quote for the Amplitude Community Technical Advisor). • LiDAR: \$0.19 M (based on quotation from supplier providing best value for money offer).
Project management and early/concept design engineering	2.95	Based on quotes provided by Aurecon. This covers the cost to manage various teams e.g. EIS, design, and community and stakeholder engagement.
Owners engineer	2.60	<ul style="list-style-type: none"> • Schedule of rates provided by GHD as part of the Owners Engineer Tender process. • Effort level (utilisation) is expected to fluctuate between 10% to 80% use of total resources allocated for the project. This is dependent on the activities at different stages of the project.

¹¹ Input costs referred to have been converted to \$Real June 2018 where possible, and may not add up to total costs due to rounding.

Category	Capex	Description / estimation methodology ¹¹
		<ul style="list-style-type: none"> The forecast cost is effort level multiplied by the total resources required on a monthly basis (\$226,511).
Project scheduling management consultant	1.46	<ul style="list-style-type: none"> Ongoing Schedule Support – \$1.29 M <ul style="list-style-type: none"> This includes costs for a full time scheduler, monthly status and reporting, planning and resequencing. Based on quote provided by TBH. Option 2 – QSRA & QCRA – \$0.17 M <ul style="list-style-type: none"> This cost is calculated on per Option 2 – QSRA and QCRA undertaken together (\$23,847) which will be performed approximately every six months with additional analyses performed for the Stage 1 CPA and Stage 2 CPA (total seven times over the course of the project development). Based on quote provided by TBH.
Travel and expenses	1.03	<ul style="list-style-type: none"> Project management – \$0.85 M <ul style="list-style-type: none"> Based on build-up of monthly expense of \$28,932 multiplied by 29 months with \$9,257 allowed for January 2022 due to COVID restrictions. \$28,932 monthly expense assumes 9 roles, 2 trips per month for 2 days at a time, air travel (\$408 return per person),¹² hire car (\$259 per day, with 7 cars required due to some sharing),¹³ and accommodation and meals (\$297 daily per person).¹⁴ Project controls – \$0.18 M <ul style="list-style-type: none"> Based on build-up of quarterly expense of \$18,369 multiplied by 10 quarters. \$18,369 quarterly expense assumes same unit rates as for Project management, and with 11 roles travelling per quarter for 3 days each time, and 2 roles sharing each car.

¹² \$408 return per person based on an average of the cost of 14 return flights from Sydney to Wagga Wagga over the period January to June 2021.

¹³ Assuming a four wheel drive is hired (at market rates, \$171.26), fuel allowance (\$60.17) and daily car wash (\$27.77) to comply with HumeLink biosecurity requirements.

¹⁴ Based on the ATO reasonable amounts for domestic travel expenses for employees with annual salary of \$129,251 to \$230,050 (comprises \$129.42 for food and drink, \$27.26 for incidentals, and \$140.71 for accommodation in Wagga Wagga).

Category	Capex	Description / estimation methodology ¹¹
Specialist studies	0.12	<p>Specialist studies include specialist tower investigation (Danube), specialist planning studies, insulation study, lightning study, flood, transport studies.</p> <p>The forecast includes:</p> <ul style="list-style-type: none"> • Subs Insulation Study – \$0.02 M. • Flood Studies – \$0.01 M. • Transport Studies – \$0.09 M. <p>Based on quotations.</p>
Project Implementation Plan	0.02	Based on quote provided by Advisian.
Total capex	29.75	

6.3. Land and Environment

Table 6-3 shows our Stage 1 (Early works) forecast indirect Land and Environment capex is \$21.40 million. This includes consulting fees associated with Environmental Impact Statement (EIS) preparation and land agent costs.

Table 6-3: Summary of indirect capex for Land and Environment (\$M, Real 30 June 2018)

Category	Capex	Description / estimation methodology ¹⁵
EIS	11.83	<p>Estimated based on Aurecon and GHD work orders and quotes, comprising:</p> <ul style="list-style-type: none"> • EIS preparation – \$2.23 M • EIS remainder work – \$4.29 M • Targeted species survey – \$1.39 M • Aurecon submission report and PIR – \$0.93 M • Ecological surveys – \$0.83 M • Construction environment support – \$0.74 M (external support is required to help provide input to CCE and tender development in regard to environmental requirements, tender review and evaluation, contractor workshops/engagement, review of CEMP, etc. The cost for this support role is assumed to be \$231/hour). • GHD support – \$0.28 M • Route options assessment validation – \$0.30 M

¹⁵ Input costs referred to have been converted to \$Real June 2018, unless otherwise specified, and may not add up to total costs due to rounding.

Category	Capex	Description / estimation methodology ¹⁵
		<ul style="list-style-type: none"> Digital EIS – \$0.28 M Offset broker – \$0.30 M Technical peer review – \$0.14 M (peer review of EIS technical assessments or EIS chapters will be engaged as required) Sustainability strategy – \$0.14 M
Land agents	6.64	This cost covers four Land Agents, two Property Administrators, and a Property Projects Officer which will be provided by a Land Agent. This assumes a monthly rate of \$32,400 for Land Agents (based on a quote provided by JLL for PEC).
EIS application fee	2.59	Based on the requirements outlined in Division 1AA of the EP&A Regulation 2000 and the NSW Planning Circular of 2010 defining capital investment value. The template spreadsheet used to calculate the EIS fee was originally developed for the Snowy Transmission Connection Project EIS.
Travel and expenses	0.31	<p>This includes expenses incurred by two members of the environmental team (flights - \$408 return per person, hire car – \$259 per day, accommodation and meals - \$297 per day¹⁶) for the following trips:</p> <ul style="list-style-type: none"> One trip to the region (Wagga, Tumut, Goulburn, Canberra) per month for one team member One trip every second month to the region for the other team member.
Total capex	21.37	

6.4. Community and Stakeholder Engagement

Table 6-4 shows our Stage 1 indirect forecast Community and Stakeholder Engagement capex is \$15.46 million. This includes consulting costs for community engagement, community giving and media and events.

Table 6-4: Summary of indirect capex for Community and Stakeholder Engagement (\$M, Real June 2018)

Category	Capex	Description / estimation methodology ¹⁷
Social Legacy Outcomes	7.58	<ul style="list-style-type: none"> NSW and Federal Government policies currently target a minimum 3% project spend on indigenous

¹⁶ Based on the ATO reasonable amounts for domestic travel expenses for employees with annual salary of \$129,251 to \$230,050 (comprises \$129.42 for food and drink, \$27.26 for incidentals, and \$140.71 for accommodation in Wagga Wagga).

¹⁷ Input costs referred to have been converted to \$Real June 2018 and may not add up to total costs due to rounding.

Category	Capex	Description / estimation methodology ¹⁷
		<p>employment and businesses and achieving social legacy outcomes/objectives.</p> <ul style="list-style-type: none"> For Project EnergyConnect we are targeting 5% and for HumeLink we will likely aim to achieve a similar or higher investment over the course of the development and delivery phases of the Project.
Community engagement	6.13	<ul style="list-style-type: none"> Based on quote provided by Aurecon. Includes Consultation Manager and Independent Facilitator: <ul style="list-style-type: none"> CSE support costs – \$5.90 M, including Community Engagement Stage 2 (\$0.10 M) and Community Engagement Stage 3 (\$5.80 M) Consultation Manager – \$0.18 M Consultation Manager Licence – \$0.04 M Independent Facilitator – \$0.01 M
Community giving (using grants)	0.56	Based on \$92,572 grants awarded approximately every 6 months.
Media and events	0.45	<p>Includes any necessary film crews to take footage of transmission lines and associated facilities.</p> <p>Forecast capex is based on internal estimates provided by TransGrid's Corporate Affairs team using standard rates.</p>
Travel and expenses	0.44	These costs comprise travel, accommodation and meal costs (assuming average daily cost of \$405) for 7 team members, and engagement expenses (producing newsletters or factsheets on a monthly basis - \$3,703 per month).
Latest community strategy work to comply with the recommendations made in the Stowe report	0.31	Based on quote provided by Cutler Merz.
Total capex	15.46	

6.5. Regulatory Approvals and Other Support Costs

Table 6-5 shows our Stage 1 (early work) forecast capex for Regulatory Approvals and Other Support Costs is \$7.88 million.

This capex includes costs for preparing our Stage 1 and Stage 2 Applications, including explaining and justifying our forecast costs, document preparation, regulatory modelling, commissioning expert reports, and independent assessment and verification of our costs. It also involves continued engagement with the

AER and AEMO. It also includes costs for updated RIT-T assessments, and support and indirect costs defined and allocated by Transgrid’s finance team.

Table 6-5: Summary of indirect capex for Regulatory Approvals and Other Support Costs (\$M, Real June 2018)

Category	Capex	Description / estimation methodology ¹⁸
Stage 2 submission	3.50	<p>These Stage 2 CPA costs are based on actual PEC CPA costs:</p> <ul style="list-style-type: none"> • Project Scope Definition – \$0.24 M • Capex Forecast Methodology – \$0.32 M • Economic Model and Draft Support – \$0.35 M • Independent Verification Economic – \$0.37 M • Independent Verification Engineering – \$0.40 M • Indirect Costs – \$0.18 M • Early Works Insurance Costs – \$1.28 M • Reg Other Contracts – \$0.24 M • Early Works Management Expenses – \$0.11 M
Indirect expenses – Project Governance and Assurance (PGA) allocation	2.65	Project allocation of broader review and rollout for project governance and assurance implementation including consultants and systems rollout for cost control, scheduling, contract management, document control and reporting (P6, InEight) and governance.
External independent verification and review of Stage 2 CPA submission	1.11	Based on quote provided by Ernst&Young. A further 20% contingency has been applied to this quote to allow for any changes to input scenarios which has been determined to be high probability.
Meetings and corporate activity expenses	0.28	Forecast based on actuals to date.
Stage 1 CPA documentation	0.25	<p>The forecast includes:</p> <ul style="list-style-type: none"> • Independent verification of our costs (including inputs methodologies and assumptions) – \$0.16 M • Stage 1 CPA Independent Expert Report – \$0.09 M
RIT-T documentation (including the PSCR, PADR and PACR)	0.08	<p>The forecast includes:</p> <ul style="list-style-type: none"> • RIT-T Competition Benefits Model – \$0.03 M • RIT-T Planning Drafting CPA – \$0.05 M
Board approval meeting expenses	0.02	Based on internal estimate.

¹⁸ Input costs referred to have been converted to \$Real June 2018 and may not add up to total costs due to rounding.

Category	Capex	Description / estimation methodology ¹⁸
Total	7.88	

7. Key Assumptions

This section explains and justifies the key assumptions and calculation underpinning our direct labour and indirect capex.

7.1. Labour

The number of incremental FTEs required for HumeLink is based on current practices, the complexity and timeframes of the project, plus relevant legislative requirements. The commencement of FTEs is phased over the duration of the project as per the project schedule¹⁹.

Labour cost estimates have been calculated based on the following:

- Standard Labour rates apply
- Labour on-costs will be incurred for all staff and contractors
- Resources seconded (fully or partially) from existing business as usual roles to HumeLink will be backfilled with internal Labour or via greater reliance on outsourced arrangements
- External contractor rates will be sourced from those contracts where appropriate
- No real Labour cost escalation is included in the rates (as this is applied subsequently in the HumeLink Capex Forecasting Methodology)

These conditions are explained further below.

7.1.1. Standard Labour Rates

Standard Labour rates, effective 1 July 2021²⁰, have been applied to calculate the capex forecast for HumeLink. These rates were used to calculate the capex forecast for the 2018-23 regulatory period.

Labour rates and role classifications were aligned to our 2021-22 Standard Labour rates²¹, our Employee's Agreement²² and assumptions on future increases. The Labour rates were restated to 30 June 2018 Labour rates using a discount factor to remove CPI inflation and real Labour escalation (as per the AER's Final Decision on the 2018-19 to 2022-23 Revenue Cap).

Labour including our internal staff, contractors and external Labour hire have been classified into a series of salary bands and the corresponding Labour rate has been used to estimate costs.

Consistent with our approved CAM:²³

- All project staff will timesheet and charge to a Work Order

¹⁹ All scheduling and resource forecasting for HumeLink has been undertaken utilising Transgrid's established systems and tools through PPM. The PPM tool is utilised for all of Transgrid's prescribed capital projects and regulatory submissions.

²⁰ 30 June 2018 labour rates have been calculated using standard rates as at 1 July 2021, which have been adjusted to 30 June 2018 rates through removing labour escalation and CPI inflation.

²¹ Labour and Support Cost Rates Effective July 2021.

²² Transgrid Employees Agreement 2016.

²³ Transgrid, Cost Allocation Methodology, 2002.

- Actual times (logged to work orders) will be used to determine Labour costs
- The time spent by all HumeLink team members is considered an incremental cost on the basis that there is no spare resource in Transgrid, so time spent by existing staff members on HumeLink will lead to higher costs for Transgrid through backfill with internal Labour or via greater reliance on outsourced arrangements.

Real Labour escalation is not included as part of this report. Real Labour escalation is undertaken in the Capex Forecast Model, as explained in the Capex Forecasting Methodology.

7.1.2. Labour On-Costs

A Labour on-cost rate has been applied to the base Labour costs in line with standard practice and our policies.

Table 7-1 - Labour on-cost rates

Labour On-Cost Rate		
Type	Rate (%)	Breakdown
Employees under Award – Enterprise Agreement	35.3	Annual Leave – 8%
		Long Service Leave – 5.8%
		Payroll Tax – 5.5%
		Superannuation – 15%
		Worker’s Compensation – 1%
Employees on individual employment contracts – Contract Officers	30.3%	Annual Leave – 8%
		Long Service Leave – 5.8%
		Payroll Tax – 5.5%
		Superannuation – 10%
		Worker’s Compensation – 1%

7.1.3. Labour Support Costs

A Labour support cost rate has been applied to the base Labour costs in line with standard practice and our policies. This captures a variety of corporate overheads including business and administration services, people support, IT support, legal services, recruitment (excluding external recruitment fees which are captured by Labour-related costs) and non-mandatory training and development.

7.1.4. Resource Backfill and Evidence

As described above, the following assumptions have been applied in this document:

- time spent by all HumeLink team members is considered an incremental cost on the basis that there is no spare resource in Transgrid; and
- time spent by existing staff members on HumeLink will lead to higher costs for Transgrid through backfill with internal Labour or via greater reliance on outsourced arrangements.

7.1.5. External Contractor Rates

The rates applied for external contracted Labour have been determined based on documentation provided by the external party detailing fees, rates and charges. These rates have been provided by the external party at current rates, being June 2022 dollars. These costs have been converted into real 30 June 2018 dollars for this document.

7.1.6. Escalation Factors

All costs have been restated to adjust for CPI, and Labour costs have also been restated to adjust for real Labour cost escalation back to 30 June 2018. Labour rates are escalated at 2% for Award staff (based on Enterprise Agreement increases) and 3% for Contract staff (assumed to reflect typical salary escalation).

7.1.7. Training

Training costs for staff within the Project Management and Land and Environment teams are based on our standard allowance of \$1,500 per person per annum (Real \$ June 2018). This allowance is for all FTEs that are Contract Officers or under an Enterprise Agreement (Award), and has been applied on a per FTE basis. This approach aligns with our training allowance for PEC.

The nature of training provided includes mandatory field training, soft skills and development training, professional development, and industry specific training for each role.

7.2. Travel and expenses

All costs in relation to travel and expenses (including accommodation, meal allowances and other expenses) have been determined in accordance with ATO Guidelines TD 2021/6²⁴.

7.3. External Advice – Consulting Fees and Other Services

Where possible, costs in relation to consulting fees and legal advice were sourced directly from external party documents that detail fees, rates and charges. All rates are assumed to have been provided at current rates which are assumed to be in dollars as at 2021-22. No escalation for CPI has been applied.

Details regarding the nature of anticipated costs and activities have been detailed in the relevant sections of this report. Where documentation has not been provided within the required time frame for the delivery of this report, we have used our experience from previous projects to estimate the costs of external advice.

²⁴ ATO, TD 2021/6, available at [td2021-006.pdf \(ato.gov.au\)](https://www.ato.gov.au/ato/content/ato/td2021-006.pdf).