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Volume I  
**Chapter 7**  
Economics

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# 7 Economics

This chapter provides an assessment of the potential economic impacts and outcomes of the construction and operation of the project. This chapter is based on the economic assessment provided in Technical Appendix B: Economics.

Economics and social values are interrelated, as outlined in Section 16.2.2 of Volume 4, Chapter 16 – Social. The social impact assessment in Technical Appendix T: Social and ongoing project engagement were therefore used to inform the assessment of economic impacts and outcomes.

The EIS guidelines set out the following requirements related to economics:

- Section 9: Economic and social matters, including:
  - An overview of the economic costs and benefits of the project.
  - Employment opportunities expected to be generated by the project (including construction and operational phases).
  - Details of the relevant cost and benefits of alternative options to the proposed action.

Refer to Attachment 1: Guidelines for the Content of a Draft Environmental Impact Statement for the EIS guidelines.

The EES scoping requirements set out the following evaluation objective relevant to economics:

- ***Agriculture, land use and socioeconomic*** – *Avoid and, where avoidance is not possible, minimise adverse effects on agriculture, forestry and other land uses, social fabric of communities, and local infrastructure, businesses and tourism.*

Refer to Attachment 2: Scoping Requirements Marinus Link Environment Effects Statement for the EES scoping requirements.

The economics assessment considers the potential economic impacts and benefits of the project. Other aspects covered in the above EES evaluation objective are addressed in the following EIS/EES chapters:

- Volume 1, Chapter 8 – Community and stakeholder engagement
- Volume 3, Chapter 3 – Marine resource use
- Volume 4, Chapter 6 – Agriculture and forestry
- Volume 4, Chapter 15 – Land use and planning
- Volume 4, Chapter 16 – Social.

## 7.1 Method

The economic assessment completed for the project used an industry specific assessment method, as outlined in Volume 1, Chapter 5 – EIS/EES assessment framework. Further details of the method applied are provided in Technical Appendix B: Economics.

The methods used to assess the project's potential economic impacts and outcomes included:

- Defining the study areas for the economic assessment.
- Quantitative impact assessment to identify the direct and indirect economic outcomes of the project through:
  - Preparation of an economic model using best-practice computable general equilibrium modelling techniques to model the economies of North West Tasmania, Gippsland, Tasmania and Victoria.
  - Using the model to calculate impacts of the project on the following for each defined study area, over a five-year construction period and 20-year operational period (refer to Section 7.1.2) associated with:
    - Income
    - Value added to the gross economic product
    - Employment
    - Impacts from induced renewable energy project investments.
- Qualitative impact assessment to identify how the project will impact North West Tasmania and the Gippsland region in ways other than through input to the economy and generating employment.

The economic assessment has not developed specific EPRs as the impacts and outcomes identified are also addressed by the social assessment. The social assessment EPRs are referenced in this chapter and further discussed in Volume 2, Chapter 3 – Social and Volume 4, Chapter 16 – Social.

This method provides a more detailed assessment of the direct and indirect flows of income and investment to estimate the employment generated and the value to the economy. The broader economic assessment completed by Ernst and Young to inform the RIT-T and PACR uses the predicted cost of the project to calculate the economic outcomes and jobs generated. This approach is consistent with the requirements of AEMO and the ISP. The more detailed analysis completed by SGS (Technical Appendix B: Economics) that informs this chapter, is required to address the EIS guidelines and EES scoping requirements.

## 7.1.1 Study area

Four study areas were used for the economic assessment based on the following four geographies:

- ✓ Victoria
- ✓ Gippsland
- ✓ Tasmania
- ✓ North West Tasmania.

## 7.1.2 Assumptions and limitations

To assess the economic impact of construction of the project, estimations of capital and operational spending from the project and induced renewable energy generation project investments were used.

Capital costs for the construction phase of the project were assumed to be \$3.1 billion (2021 dollars) over five years. These capital costs were sourced from the AEMO's 2022 ISP (AEMO 2022) and included \$1.85 billion spending from development in Gippsland and \$1.25 billion spending from development in North West Tasmania.

Direct spending for the operational phase of the project was estimated to be \$26 million per annum, including \$13 million in both Gippsland and North West Tasmania.

Six renewable energy projects were identified in Tasmania as being dependent upon completion of the project, that had capital investment information available for analysis. These projects included two windfarm and four pumped hydro projects in North West Tasmania. The project will support these induced projects by providing the required energy distribution capacity to export generated energy to mainland Australia.

Induced projects were not considered in Victoria as the direction of energy transmission proposed for the project is from Tasmania to Victoria.

Capital costs for induced projects were sourced from the AEMO's 2022 ISP (AEMO 2022). Assumed spending from these induced renewable energy projects included the following amounts in North West Tasmania between 2029 and 2050:

- ✓ \$2.8 billion from wind farm construction.
- ✓ \$491 million from wind farm operation (between \$18 million and \$39 million per year).
- ✓ \$1.6 billion from pumped hydro construction.
- ✓ \$297 million from pumped hydro operation (between \$18 million and \$39 million per year).

Computer modelling detailed information on phasing of capital expenditure for the project was not available at the time of technical modelling. As such, capital expenditure was uniformly distributed across the 5-year construction period. Actual expenditure by year is likely to differ and will be determined by the original equipment manufacturers.

While the operational life of the project is expected to be at least 40 years, the computer modelling framework utilised for the assessment only estimates impacts for 20 years (2029 to 2050) as outlined in Technical Appendix B: Economics.

## 7.2 Existing conditions

Key aspects of the current economic conditions in study areas include:

- In recent decades, economic restructuring has resulted in the concentration of high-paying jobs, population growth and investment in capital cities, in contrast to regional areas such as Gippsland and North West Tasmania.
- Aboriginal and Torres Strait Islander labour force participation rates in South Gippsland and Latrobe City are lower than those across the broader population.
- The agriculture, forestry and fishing industry is a critical economic driver in both North West Tasmania (supporting 3,800 jobs) and Gippsland (supporting 9,200 jobs). Further discussion of the agriculture and forestry is provided in Volume 4, Chapter 6 – Agriculture and forestry. Further discussion of the fishing industry is provided in Volume 3, Chapter 3 – Marine resource use.
- Coastlines and state parks including Waratah Bay and Wilsons Promontory are key tourist attractions.
- Based on Australian Bureau of Statistics (ABS) data, the housing inventory has increased between 2006 and 2021 by:
  - 473 dwellings per annum in North West Tasmania.
  - 2,243 dwellings per annum in Gippsland.
- SGS's in-house housing demand model projects the following housing needs by 2040 to accommodate changing and growing demographics:
  - An additional 3,928 dwellings in North West Tasmania (i.e., an 8.3% increase).
  - An additional 26,214 dwellings in Gippsland (i.e., a 16.9% increase).

Further discussion of housing affordability and availability is provided in Volume 4, Chapter 6 – Social and Technical Appendix T: Social.

## 7.3 Construction impacts and outcomes

Economic impacts and outcomes have been assessed through modelling both the value added to gross economic product and full-time equivalent job years. The gross economic product is an estimate of how much money the project will generate in the economy, and full-time equivalent job-years over the duration of construction is a measure of how the project will affect employment.

Overall, the five-year construction phase of the project is predicted to generate significant economic benefits in terms of both gross economic product and employment. An industry participation plan will be developed for the whole project across Victoria and Tasmania that aims to integrate First Peoples, females, youth and socially vulnerable groups into the project workforce (EPR S05). The industry participation plan will help to realise the economic outcomes in terms of increased employment opportunities are extended out to potentially economically marginalised groups.

Table 7-1 summarises gross economic product and employment generated in the regional (Gippsland and North West Tasmania) and state (Victoria, Tasmania and combined) study areas. Whole numbers indicate an increase to gross economic product or an increase in employment; both are considered positive impacts.

A combined total of \$2.1 billion gross economic product is expected to be added to the Victorian and Tasmanian economies during project construction.

A community benefits sharing scheme will be developed for the project (EPR S04) to realise the benefits from the project across the broader community. Implementing community benefits sharing scheme will help to minimise the negative economic impact associated with predicted full-time equivalent (FTE) job-year losses in some sectors across both Tasmania and Victoria.

Table 7-1 Overall economic contributions of construction on gross economic product and employment

Study area	Economic contributions			
	Value added to gross economic product		Employment (full-time equivalent job-years)	
	Total	Peak year (2027)	Total	Peak year (2027)
Gippsland (Victoria)	\$642 million	\$187 million	2,159	671
Whole of Victoria (including Gippsland)	\$1.4 billion	\$421 million	5,247	1,653
North West Tasmania	\$352 million	\$108 million	1,297	430
Whole of Tasmania (including North West Tasmania)	\$681 million	\$213 million	2,661	895
Victoria and Tasmania combined	\$2.1 billion	\$634 million	7,908	2,548

### 7.3.1 Victoria

The modelling predicts that over the assumed five-year construction phase, the construction industry will benefit the most, with 2,244 FTE job-years created.

The tourism industry is also expected to benefit from the project, with the retail trade and accommodation and food services sectors together supporting an additional 900 FTE job-years during the construction period.

Health care and social assistance is also expected to benefit from an additional 381 FTE job-years during the construction period.

An additional 441 FTE job-years are predicted to be created in the rental sector, reflecting a likely trend towards temporarily increased demand for housing to accommodate the construction workforce.

A workforce and accommodation strategy will be developed for the project (EPR S02). This strategy would include a protocol for identifying and managing impacts due to accommodation requirements for the construction workforce. Increased demand for rental housing to accommodate the project workforce will facilitate the projected increase in FTE job years in the rental sector, but it also has the potential to restrict the availability and affordability of rental properties to residents. The workforce and accommodation strategy (as required by EPR S02) seeks to minimise this potential negative impact on the community.

The modelling indicates that the following industries could experience negative economic impacts during construction due to competition for workers with the project:

- agriculture, forestry and fishing (357 FTE job-years lost)
- manufacturing (337 FTE job-years lost)
- mining (6 FTE job-years lost).

A social impact management plan (SIMP) (EPR S01) will be developed prior to construction and be based on the final design. This plan will include an employment and training performance strategy, which will identify and address employment related issues, including potential temporary loss of workers in certain industries. The SIMP will also outline specific strategies to support local farming communities to address potential impacts resulting from the project.

## 7.3.2 Tasmania

Over the assumed five-year construction phase, the construction industry is predicted to benefit the most, with 1,337 FTE job-years created.

The modelling indicates that the following industries could experience negative economic impacts during construction due to competition for workers with the project:

- agriculture, forestry and fishing (241 FTE job-years lost)
- manufacturing (25 FTE job-years lost)
- mining (8 FTE job-years lost).

As in Victoria, the modelling predicts that the project construction will positively impact the rental sector, with an additional 134 FTE job-years created in Tasmania. A SIMP will also be prepared for the project components in Tasmania.

## 7.4 Operation impacts and outcomes

The operational phase of the project will be at least 40 years, but the modelling has been completed for 20 years due to limitations in the modelling framework utilised. Overall, the project is expected to generate significant positive economic outcomes in terms of both gross economic product and employment.

Table 7-2 summarises gross economic product and employment contributions in the regional (Gippsland and North West Tasmania) and state (Victoria, Tasmania and combined) study areas between the 2029 and 2050. Given the project is designed for a 40-year operational life, the presented figures under-estimate the economic impacts of the project, with economic benefits expected to continue beyond 2050.

The modelling predicts that a combined total of \$1.7 billion gross economic product will be added to the Victorian and Tasmanian economies during project operation.

Table 7-2 Overall impacts of operation on gross economic product and employment

Study area	Economic contributions			
	Value added to gross economic product		Employment (full-time equivalent job-years)	
	Total	Annual average	Total	Annual average
Gippsland (Victoria)	\$361 million	\$17 million	388	18
Whole of Victoria (including Gippsland)	\$981 million	\$47 million	592	28
North West Tasmania	\$306 million	\$15 million	306	15
Whole of Tasmania (including North West Tasmania)	\$679 million	\$32 million	494	24
Victoria and Tasmania combined	\$1.7 billion	\$79 million	1,086	52

### 7.4.1 Victoria

Over the modelled 20-year operational phase, the construction industry is likely to experience the most benefits, with 525 FTE job-years created.

The agriculture, forestry and fishing industry are predicted to experience continued negative economic impacts during operation, with 51 FTE job-years lost. This is a substantially reduced negative impact compared with the predicted 357 jobs lost in this sector in the construction phase.

The manufacturing and mining industries are also expected to experience positive economic impacts during operation, with 190 and 13 FTE job-years created respectively. This represents a positive recovery from the jobs lost in these sectors during construction.



The modelling also suggests that the healthcare and social assistance sector will lose 165 FTE job-years during operation, likely due to the temporary construction workforce returning to their hometowns and thereby reducing demand on these services.

The SIMP (EPR S01) will address the requirements for first response medical capabilities on-site for the construction workforce to minimise the impact on local health services. This should help to maintain the same level of access to first response medical attention for local residents and reduce the need for the health sector to grow temporarily to support the construction workforce and then experience downturn in operation of the project.

The rental sector is also predicted to lose 65 FTE job-years in operation when the construction workforce no longer requires accommodation. The workforce and accommodation strategy (EPR S02) will help to reduce the impact to the rental sector.

## 7.4.2 Tasmania

The construction industry remains the most likely sector to benefit from operation of the project during the modelled 20-year operational phase, with 285 FTE job-years created.

The modelling predicts that tourism will experience minor negative economic impacts during operation. Retail trade is expected to lose 38 FTE job-years, and accommodation and food services to lose 19 FTE job-years. The project's community benefits sharing scheme will (EPR S04) help to realise benefits across the community and minimise the negative economic impact associated with FTE job-year losses in some sectors.

As in Victoria, the modelling indicates that the healthcare and social assistance and rental sectors could lose 165 and 15 FTE job-years respectively, likely due to the temporary construction workforce returning to their hometowns and thereby reducing demand on these services.

Agriculture, forestry and fishing, manufacturing and mining also could experience positive economic impacts during operation, with the creation of 234, 208 and 9 jobs respectively.

## 7.5 Taxation and royalty revenues

The modelling for the project predicts that it will generate public taxation receipts totalling \$762 million between 2025 and 2050, from increased rates and revenues, property and payroll taxes and stamp duties, goods and services taxes and income taxes.

## 7.6 Induced projects

The construction and operation of the project is expected to induce the development of six renewable energy generation projects in Tasmania. Induced development means that these six projects would not be built if the project were not built. The reason for this is that these projects would generate significant amounts of electricity, and without another interconnector between Tasmania and mainland Australia (Marinus Link), there would not be enough of a market for all the additional electricity.

The total economic activity from the combined construction and operation of the six identified induced renewable energy projects was modelled to contribute:

- \$4.4 billion in the Tasmanian economy between 2028 and 2050 (average \$190 million per year), including \$2.1 billion to the North West Tasmania economy (average \$92 million per year).
- 11,705 FTE job-years to 2050 (average 509 job-years per annum) in the Tasmanian economy, including 5,051 job-years (average 220 job-years per annum) in the North West Tasmania economy.

Induced projects will be subject to their own environmental impact assessment and approvals process, separate to those required for the project.

## 7.7 Environmental performance requirements

EPRs set out the environmental outcomes that must be achieved during all phases of the project. In developing these EPRs, industry standards and guidelines, and the latest approaches to managing impacts were considered.

Although EPRs were not developed specifically to address economic impacts, the EPRs in Table 7-3, which were developed through the social impact assessment in Volume 4, Chapter 16 – Social, are relevant to the management of economic impacts.

Table 7-3 EPRs

EPR ID	EPR
S01	<p><b>Develop and implement a social impact management plan</b></p> <p>Prior to commencement of project works develop a social impact management plan. The plan must be developed in consultation with relevant government and local government agencies, key stakeholders, and directly affected parties to minimise social impacts across the project during construction. The social impact management plan should be location specific and address key components of the construction program, including the staging of land cable trenching and installation. The plan should be a public document and be readily available on the project website. The plan must include:</p> <ul style="list-style-type: none"> <li>➤ A high-level summary of community baseline conditions, a summary of the anticipated social impacts (positive and negative), potential residual impacts and consideration for cumulative impacts. The plan will be reviewed and updated to address any shifts in the socioeconomic environment on the baseline and impacts, and consider the ongoing cumulative impacts of projects in the region.</li> </ul>

EPR ID	EPR
	<ul style="list-style-type: none"> <li>➤ Incorporate key strategies, their objectives for managing social impacts and the responsibilities for implementation of the strategies including the workforce and accommodation strategy (EPR S02), community and stakeholder engagement framework (EPR S03), community benefits sharing scheme (EPR S04), and industry participation plan (EPR S05).</li> <li>➤ An employment and training performance strategy with a focus on providing local opportunities.</li> <li>➤ Describe the requirement for first response medical capabilities on-site for both local and non-local employees and contractors to minimise the impact on local health services.</li> <li>➤ Outline of a protocol to be developed for engaging with community and managing social impacts during an emergency that must be developed in consultation with local emergency response providers and referenced in the project's emergency response plan.</li> <li>➤ Specific strategies to support local farming communities in the region to address potential impacts resulting from the project.</li> </ul> <p>The social impact management plan must be implemented during construction.</p>

**S02 Develop and implement a workforce and accommodation strategy**

Develop a workforce and accommodation strategy to address the potential social impact from the project's workforce and accommodation requirements during construction. The strategy must:

- Be developed in consultation with government, industry and other relevant providers.
- Include a protocol for the identification and management of impacts due to accommodation requirements.
- Address cumulative impacts on accommodation and health services due to other large-scale construction and infrastructure projects in the identified local study areas.

The outcomes of the strategy must be addressed during construction planning.

**S04 Develop and implement a community benefits sharing scheme**

Prior to the commencement of project works, develop a community benefits sharing scheme in consultation with communities and First Peoples in the local study area.

The community benefits sharing scheme should be developed having regard to *Community Engagement and Benefit Sharing in Renewable Energy Development: A Guide for Renewable Energy Developers (July 2021)*.

**S05 Develop and implement an industry participation plan**

Prior to the commencement of project works, develop an industry participation plan to integrate First People, females, youth and socially vulnerable groups into the project workforce. The purpose of industry participation plan is to stimulate entrepreneurship, business and economic development, providing First Peoples and vulnerable groups with more opportunities to participate in the economy.

The plan must:

- Set out an employment and supplier-use participation target within the project's locality.
- Outline the project's social procurement policies and local procurement policies considering each component and phase of construction.
- Be developed in conjunction with the requirements under the Indigenous Employment and Supplier-use Infrastructure Framework (February 2019).
- Identify a range of potential opportunities for job-seekers and businesses to be involved in the project across the construction supply chain.
- Set employment targets with reference to the local First Peoples working age population within the project area and consistent with the 'locals first principle'.
- Identify opportunities for females, youth and other socially vulnerable groups to be involved in the project workforce.

The plan must be implemented during construction and operation.

In addition to the EPRs above, other EPRs that would reduce the potential for economic impacts resulting from the project, include:

- Agriculture and forestry (Volume 4, Chapter 6 – Agriculture and forestry)

Refer to Volume 5, Chapter 2 – Environmental Management Framework for a full list of all EPRs.

## 7.8 Conclusion

The modelling indicates that the economies of Victoria (including Gippsland) and Tasmania (including North West Tasmania) will benefit significantly from the construction and operation of the project. Positive economic impacts of the project include:

- Addition of around \$2.1 billion of gross economic product to Victoria and Tasmania during construction, and \$1.7 billion of gross economic product during operation.
- Generating \$762 million in public taxation revenue.
- Induced regional renewable energy project investments, which are modelled to add \$4.4 billion in the Tasmanian economy between 2028 and 2050.

The economic modelling indicates some minor negative impacts in terms of employment levels in specific sectors. Several of these relate to the trend whereby demand for certain services, including accommodation and food services, retail trade and health care and social assistance, increases temporarily during the construction phase. This is because of the presence of the construction workforce within the local communities during this time. During the operation phase, when the workforce has returned to their hometowns, this temporary demand is effectively reversed.

However, in both Victoria and Tasmania, for the three sectors mentioned above, the positive impact associated with increases in FTE job-years during the construction phase is greater than then the corresponding negative impact from reduced FTE job-years during operation; there are more FTE job-years gained in each industry than are lost, representing a net gain across the full life of the project.

It is important that measures to comply with EPRs are implemented in a coordinated and sequenced approach throughout the construction of the project. EPRs developed for the social impact assessment will assist in mitigating some potentially negative socioeconomic impacts while maximising the potentially positive socioeconomic opportunities arising from the project.