

# **MARINUS** LINK

## Explanation of Capital Expenditure Requirements: *Hedging*

Chatham Financial



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**Marinus Link – Risk Management Considerations**

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## Introduction

The Marinus Link Project (“the Project”) involves the construction of a ~255km undersea High Voltage Direct Current (“HVDC”) cable and a ~90km underground HVDC cable, along with converter stations in Tasmania and Victoria, and will deliver low-cost, reliable and clean energy for customers in the National Electricity Market (“NEM”).

The project financing will come from equity (from three government shareholders) with the remaining capital funded via The Clean Energy Finance Corporation (“CEFC”) with fixed rate debt. The base currency of the Project is Australian Dollars (“AUD”).

The Final Investment Decision (“FID”) is aimed for May 2025. In the interim, the Project has signed Engineering, Procurement and Construction (“EPC”) contracts with the below construction and machinery Groups:

1. Prysmian Group, to manufacture the Submarine and Underground cables. This contract has price adjustment mechanisms linked to various commodities prices (E.g., LME Copper, LME Aluminum, LME Lead, Bunker Fuel), with the contract value risk quantified in EUR and USD.
2. Hitachi Group, to design and supply the build of the Tasmania and Victoria converter stations. This contract has supply cost exposures linked to various benchmark indices and exchange rates, such as USD, SEK and EUR.

Chatham have reviewed the contract price adjustment mechanisms in each schedule, with these contracts creating an exposure for the Project to currency and commodity movements up to the earlier of Financial close (“NTP”) which is expected to occur by March 2026 and notice-to-proceed (“NTP”) expected in August 2025.

1. Commodity Exposure Summary:

Type	Commodity (Metric Tonnes)	Local Price per Tonnes <sup>1</sup>	Converted to AUD
Prysmian: Submarine and Underground Cable	Copper	9,930 USD	
	Aluminium	2,673 USD	
	Lead	2,174 USD	
	Marine Gas Oil	577 EUR	
Total			

2. Foreign Exchange Exposure Summary:

Type	Local Currency	Local Currency Amount <sup>2</sup>	Converted to AUD
Prysmian: Submarine and Underground Cable	EUR		
Hitachi: Tasmania and Victoria Converter Stations	USD		
	SEK		
	EUR		
Total			

<sup>1</sup> Prevailing price at time of commodity hedge execution on the 24<sup>th</sup> September 2024.

<sup>2</sup> Prevailing price at time of foreign exchange hedge execution on the 24<sup>th</sup> September 2024.



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## Hedging Principles

Hedging is a financial technique that uses derivative products to reduce exposure to the volatility and unpredictability of foreign exchange and commodity markets, by providing a fixed exchange rate or commodity price for a future cash flow.

The use of hedging will provide several benefits to the Project, including:

1. Mitigating the risk of adverse foreign exchange and commodity movements that may affect performance and profitability.
2. Enhancing planning and forecasting by reducing uncertainty and aligning budget / forecast costs with realised costs.
3. Improving cash flow management by ensuring the Project has sufficient funds in the required currencies to meet future obligations.
4. Increasing competitiveness and attractiveness by offering more certainty and transparency to stakeholders.

However, hedging can present certain challenges and trade-offs, including:

1. Additional costs and fees for hedging instruments, such as margins or premiums. These costs reduce the net benefit of hedging.
2. Operational and contractual complexities for executing, monitoring and adjusting hedging instruments.
3. Loss of flexibility such as reduced participation in upside rate movements, or a change in the Project's circumstances, i.e. changes in cash flow timing and amount.
4. Potential liquidity / cash events such as settlements on short-dated trades, or cash posting on long-dated trades.
5. Basis risks where the hedge doesn't exactly match the underlying project exposure and hence does not move 1:1 with changes.
6. Introducing counterparty risk whereby the bank cannot perform its obligations under the hedging contracts, quotes uncompetitive pricing or decides to stop trading with the Project.
7. Hedging regulations and reporting requirements. There are no extensive requirements in Australian jurisdictions, however, trading with European and American counterparties introduces more stringent regulations with EMIR and Dodd-Frank considerations (Chatham can perform these reporting requirements on your behalf).

To create a prudent and efficient hedging strategy, a quantitative analysis will be required focused on the sensitivity of construction costs to changes in various commodity price and currency levels from now until the earlier of Financial Close or the hedge execution date. This will inform the Project on the size of the FX and commodity exposures, and consequently the size of any potential increase (and decrease) in the AUD required between now and an expected Financial Close date of March 2026.

Other key factors to consider, include:

1. Project Stakeholders and their risk appetite.
2. Need for cash flow certainty versus the flexibility of changing conditions.
3. Hedging product alternatives, their availability, benefits and costs.
4. Optimal hedging ratio, timing and duration.
5. Determination of a suitable hedging provider(s).
6. Market conditions and parameter constraints, such as size and tenor.

These considerations are addressed in the next two sections where relevant.

## Exposure Analysis Method

Chatham have conducted a series of simulations in order to estimate the size of the pre-NTP currency and commodity exposures, and consequently any potential increase in the AUD required between today and NTP under various scenarios.

Please see the introduction section above for a summary of the currency and commodity exposure sizes. This exercise utilises weak/strong currency and commodity scenarios that correspond with the plus (+) / minus (-) one and two standard deviation movements from the current forward curve, which correspond respectively with a 68% and 95% confidence level.

For the foreign currency exposure analysis, the standard deviation movements use forward looking volatility (i.e., implied volatility) based on the underlying foreign exchange (and interest rate) market, whereas for the commodity analysis, standard deviation price shocks have been incorporated from historical market volatility over the last 3-5 years.

Further, the foreign currency analysis assumes all currency rates (i.e., EUR, SEK and USD) continually appreciate or depreciate between now and an assumed NTP date of March 2026 (i.e., no historical Foreign Exchange correlations have been included); this is a slightly conservative approach. Whereas for the commodity analysis, we have accounted for historical commodity correlations.

These currency and commodity forward scenarios are then applied against the respective currency and commodity exposure sizes in each contract to determine the increase in AUD required per currency, between now and an assumed NTP date of March 2026. Despite there being a curve risk when hedging only the spot risk until NTP, and potentially not to the actual tenor of the exposure, the spot analysis will be the key focus at the time of the AER submission in Q4 2024 as:

1. The Project's currency risk mainly relating to spot risk (not forward). The exact hedging dates can be adjusted to mitigate the final hedge risks downstream.
2. We typically see Prysmian execute hedges for Projects at NTP, meaning the Project is effectively exposed to commodity risk only between now and NTP.

Please see a summary of the analysis findings below – a positive Cash Flow at Risk ("CFaR") represents the one-and-two downside standard deviation incremental cost over and above the tender offer:

### Currency CFaR (Hitachi and Prysmian Contract):

1. Up to \$ [redacted] m (-2 std. dev.) (15% of total AUD currency exposure).
2. Up to \$ [redacted] m (-1 std. dev.) (7.5% of total AUD currency exposure).

### Commodity CFaR (Prysmian contract):

1. For metals and FX on cable:
  - a. Up to \$ [redacted] m (-2 std. dev.) (75% of total AUD cable exposure)
  - b. Up to \$ [redacted] m (-1 std. dev.) (32% of total AUD cable exposure)
2. For the fuel exposure, MLPL will be executing a fuel call option that will cap the fuel exposure of the Project at a certain USD price / barrel (strike level of the option) between now and 2029/2030. This provides tail risk if energy prices rally significantly. The cost for this flexibility is limited to the cash premium of the call option which was ultimately deferred, and payable, post-NTP.
3. Correlation benefit of hedging metals and FX related to cable adjustment mechanism reduces the exposure:
  - a. From \$ [redacted] m to \$ [redacted] m (-2 std. dev.) (50% to 10% of total AUD exposure).
  - b. From \$ [redacted] m to \$ [redacted] m (-1 std. dev.) (21% to 7% of total AUD exposure).
4. We did not quantify the commodity risk in the Hitachi contract as it mostly cannot be hedged (except Copper, however this is an immaterial exposure size).
5. Despite a lower commodity exposure size for the Project (relative to currency), the analysis shows there is a higher propensity for left tail (downside commodity events) to occur, as represented by the commodity cash flows at risk being a much higher percentage of the relevant exposures.

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## Hedging Alternatives – Foreign Exchange

In this section we describe the timing and manner in which the Project can de-risk currency exposures, using low cost and efficient hedging products. A series of five hedging strategies / alternatives will be considered to mitigate the potential increase in AUD required per currency, with implementation to occur at the below timing points:

1. Pre-NTP: an outright FX forward was executed as it was assessed to be the most efficient (no upfront premium compared to option and a deal contingent product is significantly greater than the cost of an outright) and effective (~ 1:1 offset with underlying movement as it hedges the spot price movements) product. A summary of products is below:
  - a) Remain unhedged – all supply costs will be subject to exchange rate movements.
  - b) Execute an outright FX forward – this product locks in a known AUD amount required at NTP to fund supply costs, removing future uncertainty related to spot movement at no upfront cost.
  - c) Execute an outright FX option – this product establishes a known worst-case FX risk whilst permitting the Project to benefit from favourable FX movements, in exchange for a significant upfront premium.
  - d) Execute a deal contingent FX forward (“DCF”) – this product involves the bank underwriting the dead deal cost of the hedge if NTP does not occur. A premium (in the rate versus (b) above) is paid for the flexibility of not having to settle a hedge MtM liability if the deal fails to complete. The due diligence process for this trade is very involved and banks generally would want access to Project documents.
  - e) Execute a deal contingent FX option (“DCO”) – Here, similarly to (c) above, the option establishes a worst case risk, with the bank bearing the dead deal cost of having to pay the premium cost should NTP not ultimately occur. The due diligence process for this trade is involved and banks generally would want access to documents which the project may not be comfortable sharing.
2. At or near NTP: whilst the Hitachi and Prysmian contracts were signed in August 2024, a decision was made to first de-risk the Project until NTP, and at NTP, the hedging will be updated to match up to date expectations for the milestone payment dates in the Hitachi and Prysmian contracts. This approach not only splits the hedging costs into pre vs post NTP stages, but also affords the Project flexibility to accommodate changes in the Project timeline, and limit transaction costs in the unlikely event of a negative NTP decision.
3. Post NTP: further revisions of hedging dates may also be required once the building of the Project is underway.

### Market insights:

- The forward curve until the end of 2025 for USD, EUR and SEK will result in a slight drag in the amount of foreign currency purchased relative to current spot rates (when selling AUD). For USD, this drag is not material (-0.03% p.a.), whilst for EUR and SEK the drag is more substantial at roughly -1.85% and -2.05% p.a. respectively.
- The USD, EUR and SEK markets are very liquid with daily spot volumes average USD 40bn, USD 20bn and USD 15bn respectively. Additionally, they can cater for long tenors with up to 10Y for USD and EUR and 5Y for SEK.

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## Hedging Alternatives – Commodities

In this section we describe the timing and manner in which the Project can de-risk commodity exposures, using low cost and efficient hedging products. A similar set of hedging strategies will be considered, at the below timing points:

1. Pre-NTP: the hedge alternatives to mitigate the exposure include:
  - a. Remain unhedged – all commodity costs will be subject to commodity price movements.
  - b. Execute an outright commodity swap – this product locks in a known AUD, USD or EUR amount required at NTP to fund commodity payments, removing future uncertainty at no upfront cash cost.
  - c. Execute an outright commodity option – for an upfront premium this product establishes a known worst-case price whilst permitting the Project to benefit from favourable commodity movements.
  - d. Execute a deal contingent commodity swap – this product involves the bank underwriting the dead deal cost of the hedge if NTP does not occur. A premium is paid for the flexibility of not having to settle a hedge MtM liability if the deal fails to complete.
  - e. Execute a deal contingent commodity option – dead deal cost is not having to pay the premium cost.
2. At or near NTP: For the commodity market risk inherent to Prysmian contracts, we normally see Prysmian execute hedges on behalf of our infrastructure clients. This typically occurs at NTP, meaning the Project is effectively exposed to commodity risk only between now and NTP. The hedged price that Prysmian receives from its counterparties is then subsequently used to calculate the contract price adjustment.

### Market insights:

- Consideration will be given to the volatility of the spot market as well as the difference between the forward and spot rates when considering the amount and tenor of any hedging decision.
- An upward sloping forward curve (“contango”) is common to commodities and generally represents a bearish spot market and/or a market which recently witnessed a correction (front falling more than the back end of the curve). The carry of the curve represents cost of funding, storing commodities, buying insurance, etc, with the shape of the curve dictated by supply/demand along the curve. A downward sloping forward curve (“backwardation”) is commonly seen after a price rally. We do not usually recommend waiting for a downward sloping curve prior to hedging, as a downward sloping curve usually overlaps with bullish market conditions.
- The shape of the curve is key to making hedging decisions, and consumer clients (corporates, renewable projects, etc) account for the upward sloping curve as part of cost of hedging analysis. Prysmian for example, will pay this cost at the time of hedging (on behalf of Marinus), thereby effectively passing on this hedging cost to Marinus.



## Summary and Recommendation

- Over the course of March to June 2024, MLPL worked with Chatham to prepare a financial risk strategy that included a proposal to hedge the project’s FX and commodity price exposure.
- The rationale for hedging was based on MLPL having executed EPC contracts that contained fixed foreign currency requirements and commodity tonnages, making it important to secure cost certainty in a volatile market, especially given the relatively long timeframe to NTP. This approach would provide price certainty for MLPL, its shareholders, debt financiers, the AER and customers
- In June 2024, the MLPL Board approved a strategy to hedge the Marinus Link Project’s foreign exchange and commodity price exposures inherent in the underlying EPC contracts for both Cable and Converter. This was approved as part of MLPL’s overall financial risk management strategy. The hedging will be executed across two distinct time periods, being pre-NTP and post-NTP. The Board has approved the pre-NTP hedging execution and noted post-NTP hedging, with approval for post-NTP hedging to be sought at a later date (closer to NTP).
- In conjunction with Chatham, MLPL conducted a market sounding process during July 2024 and reached out to potential hedging banks to provide FX and commodity price hedging on an unsecured basis.
- The market sounding process concluded with the successful finding of unsecured hedging counterparts.
- MLPL executed hedging documentation and hedged FX and commodity price exposure during September 2024.
- The cost of hedging is composed of the following components:
  - Forward points: the difference between the spot rate of a currency pair and the future exchange rate, as driven by ever evolving yield differentials between the two countries. This component is unknown up until the point of execution.
  - Market slippages: covers the bank trading desk for a change in bid/ask spreads at the time a market order is executed. This component is locked in as part of the price discovery stage during the market sounding.
  - Credit cost: cost for executing credit intensive hedging products that require a future exchange of cashflow(s). This component is locked in as part of the price discovery stage during the market sounding.
- For pre-NTP, the total cost of hedging was circa A\$ [REDACTED] m.
- For post-NTP, the total cost of hedging attributed to market slippages and credit costs will be subject to a market sounding letter at that time which will ensure the most competitive outcome for the Project. However, Chatham conservatively estimate this to be circa A\$ [REDACTED] m in total. It is incrementally more expensive to execute in the longer dated forward hedging market, and with an extended weighted average life of hedging being required – circa 4Y for EUR, 2.75Y for USD and 2.5Y for SEK – we estimate a more material cost to hedging. Please note that the post-NTP cost above assumes a zero mark-to-market scenario at time of extension.

Proposal	Foreign Exchange	Commodity
Pre-Hedge	<ul style="list-style-type: none"> <li>• There will be a sizeable reduction in CFaR when hedging prior to NTP.</li> <li>• As such, Chatham would propose implementing hedging prior to NTP (rather than the Contractor).</li> </ul>	
Hedge Ratio	<ul style="list-style-type: none"> <li>• Now that the EPC contracts have been signed, and the tonnages / volumes locked in, and because the price adjustment will represent an immaterial percentage of the total contract value, we would propose hedging 100%.</li> <li>• Hedging 100% also represents an agnostic view on future FX rate movements and partially accounts for any FX risk on FX risk inherent to any performance bonds (the size of which also represents an immaterial percentage of the total contract value).</li> </ul>	
Hedge Tenor	<ul style="list-style-type: none"> <li>• Whilst the Hitachi and Prysmian contracts were signed in August 2024, a decision was made to first de-risk the Project until NTP, and then a few months prior to NTP, the hedging will be updated to match up to date</li> </ul>	<ul style="list-style-type: none"> <li>• It is market standard for Prysmian to execute hedges on the Project’s behalf at NTP, meaning the Project is effectively exposed to commodity risk between now and NTP. As such, the</li> </ul>

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	<p>expectations for the milestone payment dates in the Hitachi and Prysmian contracts.</p> <ul style="list-style-type: none"> <li>• This approach not only splits the hedging costs into pre vs post NTP stages, but also affords the Project flexibility to accommodate changes in the Project timeline, and limit break costs in the unlikely event of a negative NTP decision.</li> <li>• An estimated series of dates can be used, with longer dates preferable as it is easier to bring forward dates than extend, if needed subsequently.</li> </ul>	<p>Project should seek protection until the longest NTP date to avoid having to purchase additional protection.</p>
Hedge Product	<ul style="list-style-type: none"> <li>• FX forwards are the most appropriate product as they are the most efficient (lowest cost and are absent a cash premium) and effective hedging product (offsets 1:1 movement in FX).</li> </ul>	<ul style="list-style-type: none"> <li>• A commodity swap is the most efficient (lowest cost and are absent a cash premium) and effective hedging product (offsets 1:1 movement in commodity price). We would propose this product be used to hedge the Project's Copper, Aluminum and Lead exposure.</li> <li>• For the bunker fuel exposure, a purchased call option is most viable to protect the Project's tail risk because: <ul style="list-style-type: none"> <li>○ Non-hedgeable underlying fuel index in the Prysmian contract, leading to basis risk if using a swap.</li> <li>○ Lack of bank appetite for long dated bunker fuel swaps.</li> </ul> </li> </ul>
Hedge Entity	<ul style="list-style-type: none"> <li>• It is our understanding that the asset (both Cable 1 and Cable 2) will be developed and owned by the same entity and that future equity participation is assumed to be the same proportion as currently intended.</li> <li>• Although the capital structure of the Project is to be agreed in Q1 2024, and that we see a variety of structures, traditionally hedges are executed at the same entity as equity placement.</li> </ul>	

Disclaimer: this report has been prepared solely for Marinus Link Pty Ltd and does not serve as advice or a recommendation to, and Chatham does not accept liability to, any third parties who review the report.