

APPEA – LNG Taxation Estimates and Review

Summary Report

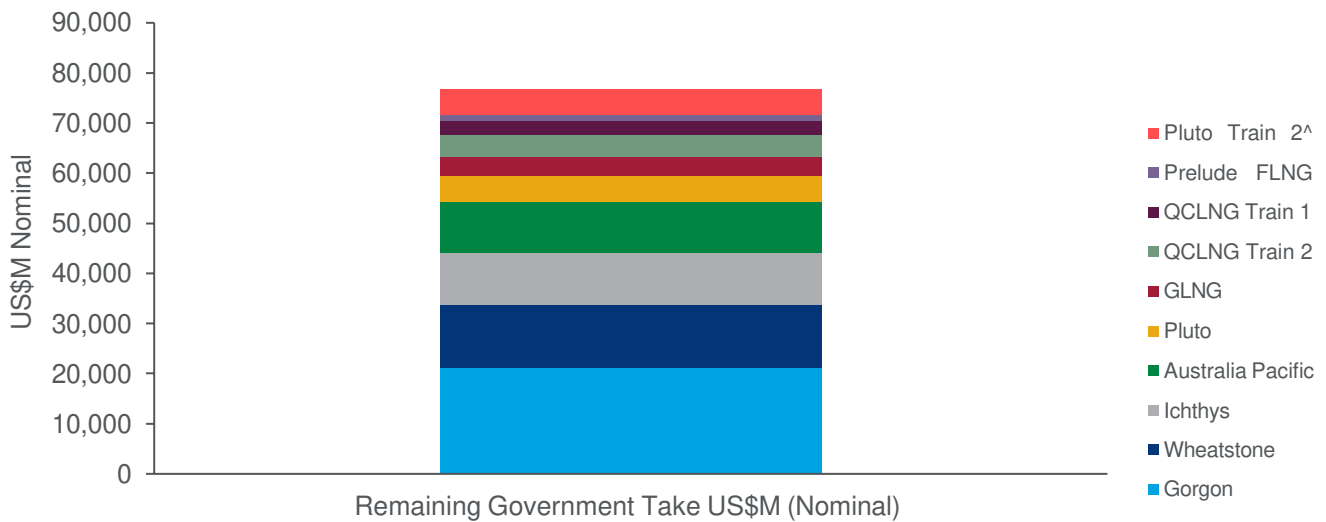
April 2023



Executive Summary

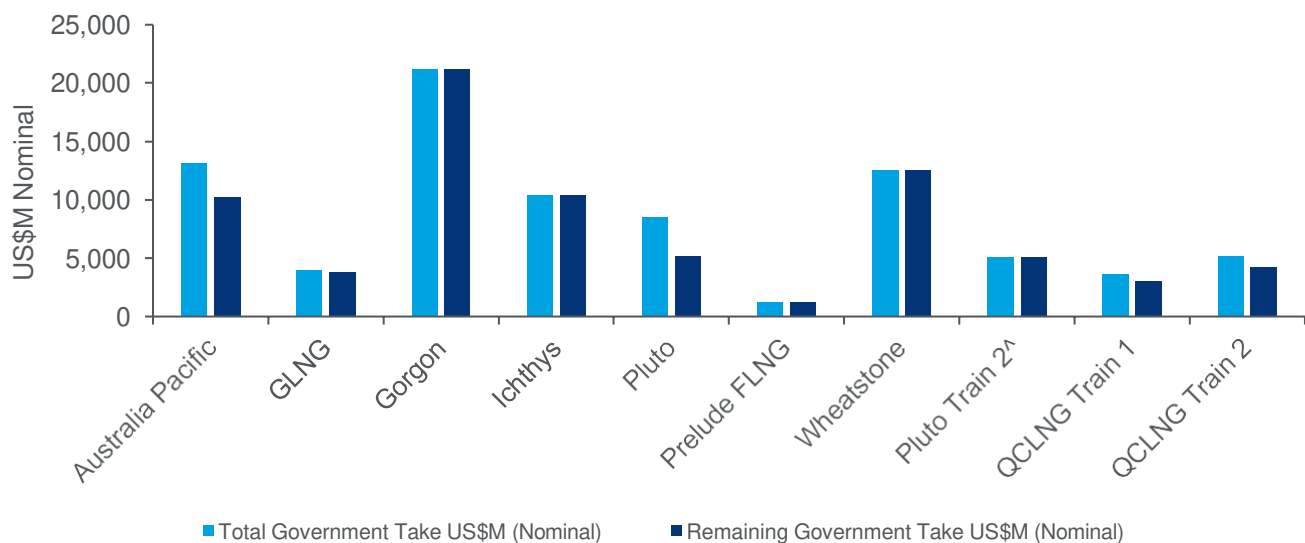
Australian LNG projects brought onstream between 2014 and 2017 are now earning and paying substantial levels of corporate taxation. Wood Mackenzie estimates A\$100bn (US\$76bn) of remaining government take is due from these projects over the next two decades. The total amount of taxation earned will ultimately depend upon commodity prices, offtake contract renegotiations and the ability of each project to export LNG at its respective full capacity, together with the costs each incur going forward to achieve this.

Estimated Remaining Government Take Across Recent Australian LNG Projects



Source: Wood Mackenzie,
 Note: Several projects are expected to run longer than the next two decades and accordingly may make a significantly larger contribution to governments. The contributions to governments include estimates of corporate income tax, PRRT, royalties and excise where applicable. ^ This includes the Scarborough Project under construction.

Estimated Remaining vs Total Government Take Across Recent Australian LNG Projects



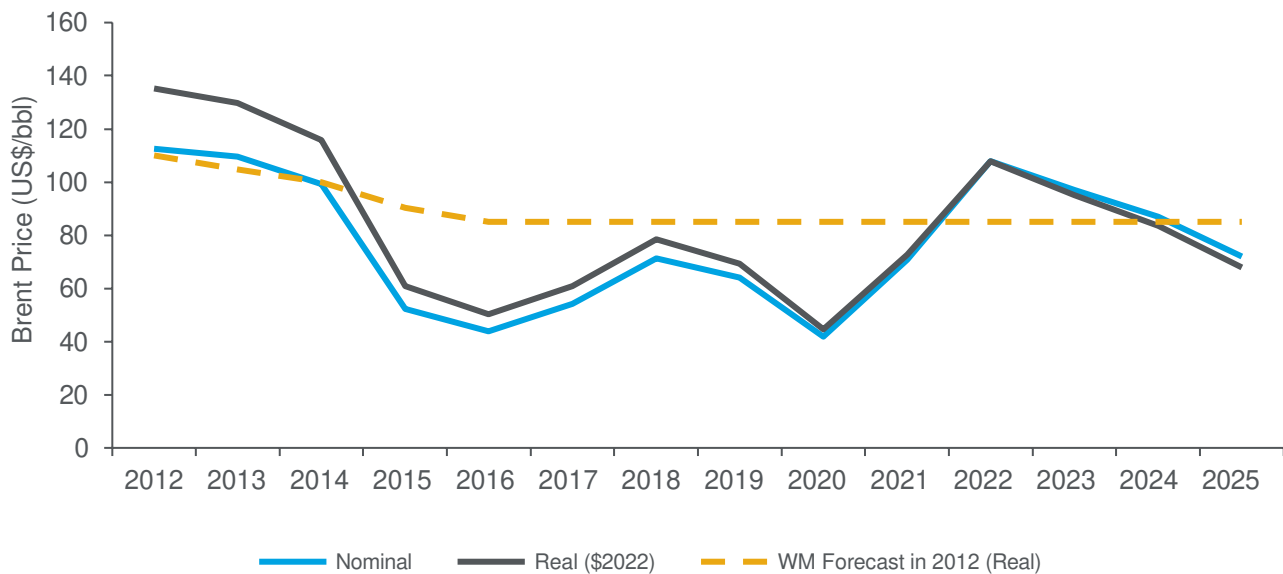
Source: Wood Mackenzie, ^ This includes the Scarborough Project under construction.



A time lag for taxation flows is typical of a profits-based taxation regime like Australia’s, which enables permitted project costs to be recovered before profitability is realised. As over US\$310bn has been invested in these projects to date (in capital and operational costs), a considerable negative starting balance had to be recovered before the projects started generating profits, and taxation on those profits was earned.

Actual project revenues to date have been somewhat lower than operator expectations at the time these projects were sanctioned. This is primarily due to lower-than-expected commodity prices through the last decade, periods of oversupply in the LNG market and delayed start up and operational issues affecting the amount of LNG for sale from many of the Australian projects. The current outlook for higher commodity prices over the coming few years should now directly flow through to upside tax take scenarios for the Australian Treasury.

Oil Price Forecast (2012) versus Reality (Real vs Nominal)



Source: Wood Mackenzie. Dotted line represents Wood Mackenzie's Macro Oil Forecast as at July 2012.



How LNG projects are funded, taxed and the typical timeframes and expectations for investment recovery and returns

The significant project scale, cost, engineering complexity and time horizon of contractual commitments required to develop an LNG supply project makes it a considerably higher risk investment than many other types of energy supply project.

This is partly because LNG projects incur and accumulate sizeable upfront capital costs, with capital spend incurred over several years before the project is in position to generate any revenues. Several years of positive cash flow are often required to pay down this balance, which eventually should enable the project to make a return on investment and its capital employed. These expenditures also need to be financed either through debt or equity, with corresponding fees and interest incurred in the interim period to attract and satisfy lenders and financiers.

Projects are also reliant on positive market conditions and prices for LNG, once the product is available for sale. LNG revenues are heavily influenced by prevailing oil prices in the period of sale, which companies have no control over.

Despite robust underlying gas and LNG demand throughout the last decade, the LNG market has at times struggled to absorb new supply capacity, exacerbated by the impacts of COVID-19 lockdowns on demand. This has led to periods in which sales volumes and the price paid for LNG have been lower than expected, also resulting in some contracts with Asian buyers being renegotiated down, further reducing actual revenues generated.

Adding to the economic risk profile, overall project lifecycles can stretch over 30-40 years, which expose LNG project proponents to a greater possibility of sub-surface, above ground, market, commodity price and/or fiscal risks during its operational life. Project proponents need to wear additional, unforeseen costs in such situations, which also affects their profitability.

A typical LNG project lifecycle

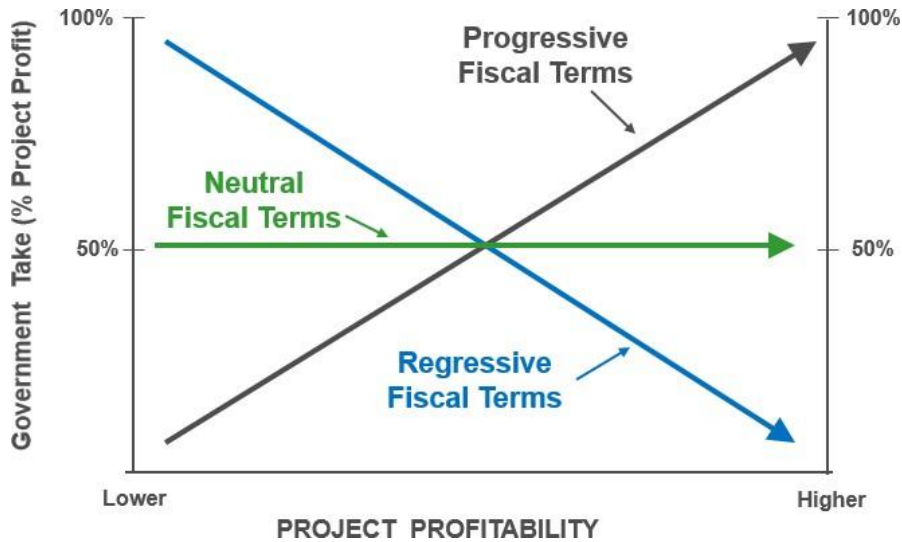
The lifecycle of a typical LNG project includes an initial 2-5 year 'pre-Final Investment Decision' phase in which Joint Ventures are formed, detailed project planning and preliminary engineering studies are carried out and LNG offtake is marketed to customers.

Once this is complete, and the partners are satisfied that they are in position to make a return on investment, will a project take the decision to proceed. The development and construction phase require a further 4 -6 years of investment activity, which can be followed by up to 1-3 years of a project optimising its production operations once first LNG sales are eventually made.

Throughout the bulk of this period, LNG projects incur significant costs and generate no revenues, leaving up a multi-billion-dollar accumulated debtor position (starting balance) which can only start to be paid down on first sales of LNG, which typically occurs many years into the project lifecycle.

Australia's LNG fiscal regime

Australia has a progressive tax regime for its oil and gas projects – this means projects are taxed largely on their profitability. Relevant corporate tax starts to be earned once project profitability is triggered. As profitability increases, so does the tax generated. However, there are also elements of regressivity in Australia's LNG fiscal regime. In this regard, under the Petroleum Resource Rent Tax even at low rates of profitability, government take may approach 100 percent during periods on certain projects.



In a profit-based tax regime Governments generate tax revenues only after all costs have been recovered, with the following provisions which may affect the timing of this:

- Depreciation, which may result in Government receiving income tax revenues before all costs are recovered
- Cumulative costs may be carried forward, which may delay Government revenue after production and positive cash flow starts
- Uplift/Investment credits may have been offered upfront to help incentivise investment and the development proceeding

All of the above features across Australia's LNG fiscal regime are the result of longstanding stable policy intent that provides certainty to long-term investors. In some circumstances, royalties and excise are paid in addition to profit-based taxes.

Australia's LNG industry in a global and historic context, and the role of a/its fiscal regime in attracting investment

Given the risk profile of LNG developments only a few companies globally have the expertise, risk tolerance and financial backing to undertake these types of projects. Jurisdictions with lower perceived regulatory or fiscal risk are typically able to attract more investment, as was the case with the nine Australian LNG projects sanctioned last decade.

Australia's LNG boom of the 2010s saw over US\$310bn of international oil and gas capital spent across the development and early operation of nine new LNG infrastructure projects. These projects were scoped and sanctioned throughout the early 2000s, with most of the world's biggest LNG developers at that time choosing Australia as the destination to invest a significant proportion of their total global capital budgets and collectively support Australia's transformation into one of the world's largest LNG exporting countries.

The construction phase for these projects occurred between 2009 and 2017 and contributed significantly to the second half of Australia's 'mining boom' - widely acknowledged by economists to have raised Australian real wages, disposable income and reducing unemployment as well as driving A\$70-100bn of annual export earnings from LNG from 2020 onwards.

Much of this US\$310bn of capital investment was spent over a 5-6-year period prior to any revenues being generated, and therefore the cumulative debt positions incurred by each project before first gas sales were significant.



Project payback starts to occur from the point revenues are generated from product sales, assuming these cover the ongoing operational costs.

In the Australian LNG context last decade, this payback period was also negatively affected by:-

- high upfront development costs with Australia being a comparatively high-cost environment for labour and geographical mobilisation
- cost escalation in the Australian resource sector through the 2012-2014 'mining boom', and a very strong Australian dollar through the construction period, both of which increased capex starting balances
- project construction delays and corresponding impact on first LNG sales and revenue generation
- project production underperformance versus the infrastructure's nominal capacity, due to a host of reasons from reservoir underperformance to increased domestic market commitments
- weak oil/LNG prices through the early years after project start up affecting revenue generation
- periodic weak market conditions in Australia's key Asian markets resulting in LNG contracts being negotiated down on pricing levels

The outlook

While taxable profits are negatively hit by low commodity prices, considerable upside also rings true when market conditions for producers are positive. The current global energy crisis is likely to see higher commodity prices maintained over the coming years. As long as Australian LNG producers are able to meet targeted output levels at a low cost, significant short-term upside taxation should continue to directly flow through to the Australian Treasury and State governments.



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