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Australian Competition and Consumer Commission (ACCC)  
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Dear ACCC

**RE: ACCC review of the LNG netback price series**

Shell Australia welcomes the opportunity to provide a submission to the ACCC's review of the LNG netback price series. Please find attached Shell's responses to the questions raised in the consultation paper. We would be grateful for the opportunity to discuss this further with the ACCC.

**Overview**

As a company that has been providing energy to Australians for 120 years, we are deeply aware of the need to play our part in supporting a well-functioning domestic gas market. As a core principle, we want to see markets work in a transparent, efficient and competitive manner. In that regard, we want both buyers and sellers to have choice. That includes ensuring additional supply is brought to the market, developing greater transparency in bilateral transactions through the Code of Conduct as well as expanding the ACCC's inquiry into the demand side in addition to supply, and developing a deeper, more liquid and more transparent traded hub for the East Coast market.

Shell Australia has constructively engaged with the ACCC's Gas Inquiry since its establishment in 2017. Over the past years we have also supported the introduction of the Heads of Agreement (HoA), the Australian Domestic Gas Security Mechanism, COAG pipeline reforms, and through APPEA we are currently working on a voluntary code of conduct. We also supported the ACCC's LNG netback price series as a way to provide further transparency. All of these reforms must work together in order to achieve further improvements in the market.

We welcome the opportunity to contribute to the ACCC's review of its LNG netback pricing methodology, and acknowledge that as the market changes, there is a need to review the methodology to ensure it is fit for purpose. At this time, we consider the current approach taken by the ACCC to the LNG netback pricing remains fit for purpose for domestic short-term sales (circa up to 2 years ahead). However, we acknowledge that as the supply/demand balance changes in future years it could be



prudent for the ACCC to consider at that point whether the methods remain suitable for new market dynamics.

When reviewing the LNG netback price series, it is worth distinguishing between domestic spot sales (being those transactions that take place on the Wallumbilla Gas Supply Hub), and prices for short term domestic gas sales which are entered into via bilateral agreements. Table 1 below shows that while over time domestic prices for either form of these short term transactions trend in line with [JKM] LNG netback pricing, day on day the correlation is weak as the two market (Australian East Coast domestic and LNG JKM spot) have inherently different influencers, not least of which is period of delivery. Domestic gas can be delivered within a day whereas even spot LNG requires 1-2 weeks to reach its destination. We recognize the importance of the ACCC's LNG netback price series as a consideration for domestic short-term sales. However, we also note that buyers under bilateral contracts want less risk and greater flexibility than a spot purchase at Wallumbilla, and all of those components need to be factored into the price.

Benchmarks such as the ACCC's LNG netback price series will only ever provide a useful starting point for discussions on short term Gas Supply Agreements (GSAs), as negotiated prices will always reflect a wider range of circumstances. Factors include: the cost of transportation, the cost of gas production, currency hedging, counterparty credit risk, the 'non-price' terms and flexibility products that C&I customers request in their GSA, retailer costs, margins and the length of contractual terms.

Further, comparing medium or long term domestic gas contracts (those beyond the prompt 2 years), which are agreed in what is generally a lumpy and relatively shallow domestic gas market, with short term spot prices in the much larger and more liquid Asian LNG market can provide a misleading view of the relationship between Asian LNG spot prices and the price outcomes that can be expected through medium to long term GSAs in the domestic gas market.

All of this means that while LNG netback prices are a factor influencing domestic prices, they should not be viewed in isolation. While calculating a netback price is not simple, the methodology to calculate a netback price and its underlying principles are well established. As the ACCC notes:

*It reflects the price that a gas supplier would expect to receive from a domestic buyer to be indifferent between supplying gas to the domestic market or to LNG export markets (all other things being equal). This is because it is a measure of the value foregone or opportunity cost of supplying gas to the domestic market compared to the alternative of exporting it as LNG.*

Shell supports and agrees with the ACCC's view on this underlying principle.

As noted by the ACCC, an Asian focussed price market, such as JKM, is and remains the most relevant international price marker for short term (circa up to 2 years) domestic sales. The use of JKM as a price marker reflects the expectation whereby the gas offered in the short term would be from production that, if not sold domestically, would have otherwise resulted in LNG exports which would be predominantly sold into a JKM market.

Shell does not support the use of the US Henry Hub for calculating the LNG netback price series. The fundamentals of the supply side in the US are vastly different given that the gas is largely a by-product of



liquids rich fracking compared to very lean CSG in Queensland. For this reason alone, the economics are not comparable. In addition, prices at Henry Hub are subject to local, that is, US demand and supply conditions, which have nothing to do with market conditions in Asian LNG markets or in domestic markets in Australia.

We note gas users have suggested deducting from the LNG netback price a component to reflect the capital costs associated with developing and constructing the LNG plant. Changes such as this would significantly disadvantage LNG producers who have already sunk large capital costs in building LNG plants and associated infrastructure. It could have flow on implications for further developments, particularly in new provinces or hubs, where material development scale is required to unlock these resources. Further, if these costs were not included in the LNG netback price then a gas supplier would no longer be indifferent between supplying gas to the domestic market or to LNG export markets (as one market would not cover all costs).

When reviewing the netback series, it is important to remain cognisant of the fact that the existence of an LNG export market has, in large part, enabled the development of Australia's significant gas resources on the East Coast which required the substantial scale and higher prices of LNG markets to bring these higher cost resources into development. It is essential that any changes made to the LNG netback price series are carefully thought through, including the potential to deter further investments if those changes significantly disadvantage LNG producers.

Please see below responses to the issues raised in the consultation paper. We are happy to expand on any of our comments. Please contact Jessica Mackey at [REDACTED] for any queries regarding this submission.

Yours Sincerely,

[submitted via email]

David Bold  
**Manager, Federal Government Relations**  
**Shell Australia**



## ACCC review of the LNG netback price series – Issues paper

### 1. The length of the forward LNG netback price series

Questions asked by the ACCC
<ol style="list-style-type: none"><li>1. Would there be merit in the ACCC publishing a longer-term LNG netback price series</li><li>2. The most appropriate period, or periods, over which to publish forward LNG netback prices, based on market trends in LNG markets and the east coast gas market.</li><li>3. Whether the ACCC should publish multiple forward LNG netback prices, based on different periods (to inform pricing for different GSA terms)</li><li>4. How important it is that the length of the forward LNG netback price series is consistent with the duration of domestic GSAs</li><li>5. Whether there are relevant market benchmarks for longer forward LNG netback price series, or methods/approaches to deriving such market benchmarks.</li><li>6. Issues that should be considered in calculating a longer-term LNG netback price series</li></ol>



#### ***1. Would there be merit in the ACCC publishing a longer-term LNG netback price series***

Publishing a longer-term (i.e. beyond 2 years) LNG netback price series would be of decreasing and limited benefit for the objective of improving transparency of gas prices in the East Coast gas market. For instance:

- The further out you look, the more important other domestic market factors become. For example: cost of production, development of regas terminals, pipeline constraints, counterparty credit etc.
- The parameters within the LNG netback price series formula itself (e.g. JKM) have greater uncertainty.
- Long term domestic gas contracts often have price reviews which generally means the parties are required to look at their price risk in terms of what clauses they will and will not agree, and how the market can evolve instead of how the price is different to a benchmark today for the future.

#### ***2. The most appropriate period, or periods, over which to publish forward LNG netback prices, based on market trends in LNG markets and the east coast gas market.***

As just a price parties have regard to, 1 or 2 years is appropriate based on the current inputs, e.g. JKM. Extending it beyond those time periods will be challenging and have limited benefit as raised in question 1.

#### ***3. Whether the ACCC should publish multiple forward LNG netback prices, based on different periods (to inform pricing for different GSA terms)***

Multiple forward prices would be useful if it is done to give a fair representation of the uncertainty. However, it is important to reinforce that the ACCC's LNG netback price series is still just an input parties would have regard to and domestic considerations also need to be taken into account. That is, a netback



price is not an actual price in the short-term domestic gas market. It is a calculation, based on a concept about how a business may set different prices for different products sold to different customers.

**4. How important it is that the length of the forward LNG netback price series is consistent with the duration of domestic GSAs**

As raised under question 1, beyond a certain duration the LNG netback price series becomes less useful and/or accurate. Notwithstanding, it is important that the periods match (e.g. 2022 domestic supply needs to have regard to the market dynamics forecast in 2022).

**5. Whether there are relevant market benchmarks for longer forward LNG netback price series, or methods/approaches to deriving such market benchmarks.**

**And**

**6. Issues that should be considered in calculating a longer-term LNG netback price series**

As raised in the points above, Shell does not support an extension of the LNG netback price series to longer-term (beyond 2 years) periods. However, if the ACCC proceeds with this approach against advice, then we propose an oil linked slope using ICE Brent with a consultant view on long term shipping may be the preferable approach.

Considerations/challenges with the above approach and other options include:

- Whether imported regasified LNG Prices are more relevant in the longer term;
- ICE Brent forward prices are readily accessible and transparent, but are a *forward* price not a forecast price for oil. These forward outlooks are primarily available from consultant reports. A subsequent LNG pricing outlook as it relates to oil depends on individuals' views of future LNG supply and demand. For example, if you think there is nothing but US Henry Hub LNG projects in the world and you are very bullish oil price then you would say a representation of LNG prices as a percentage of Brent is very low.

## 2. LNG netback price methodology

7. The influence of international gas markets on pricing in the east coast gas market
8. The relevance of different international LNG and gas price markets for LNG pricing in key LNG export markets and the east coast gas market.
9. Whether the relevance of different LNG and gas price markets is different for short-term versus long-term LNG netback prices
10. Whether the relevance of different LNG and gas price markets, for the LNG netback price series, is likely to change over time
11. Whether the ACCC should consider additional methodological approaches, such as averaging, to account for the impact of price volatility of price markers on calculated LNG netback prices.
12. Any other issues that should be considered when determining which LNG and gas reference price should be used for the ACCC LNG netback price series

**7. The influence of international gas markets on pricing in the east coast gas market**

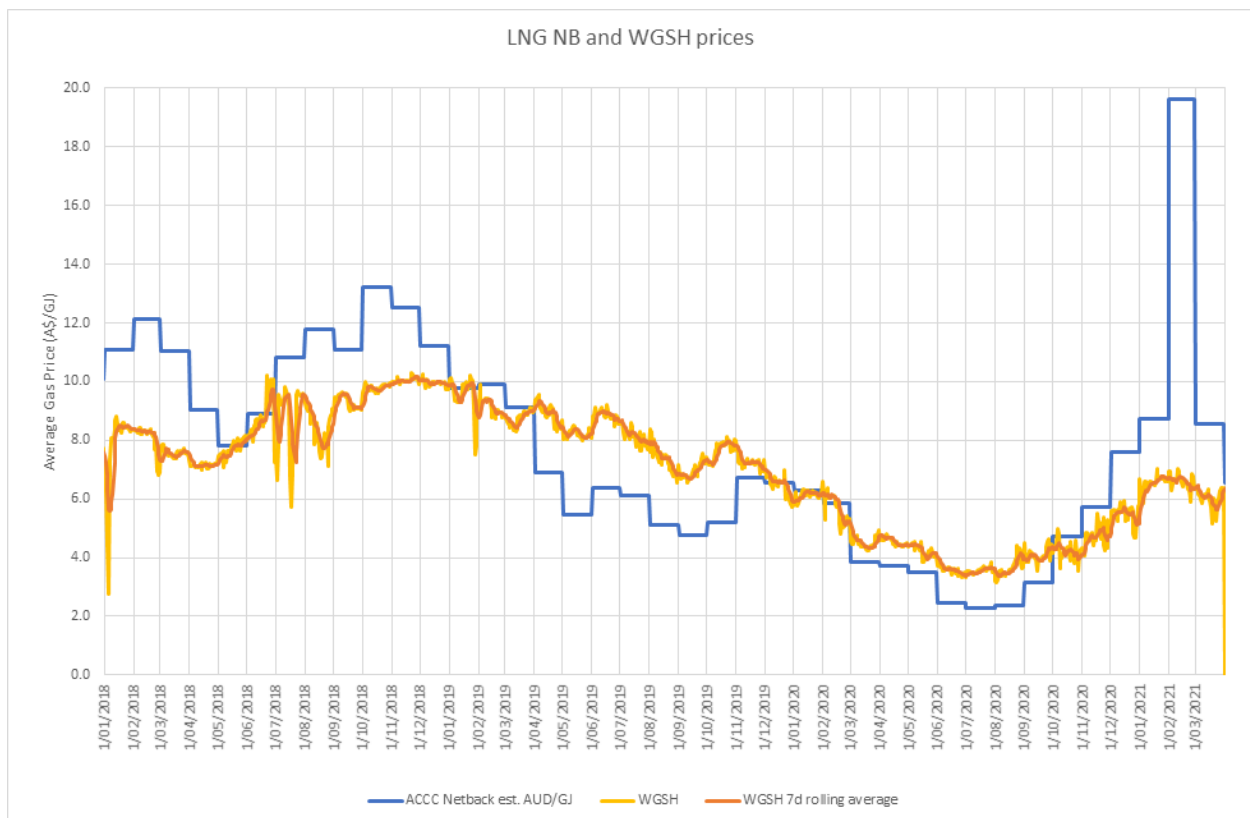


Several factors will ultimately influence the price of domestic gas. International LNG markets have some relevance to the east coast market but ultimately international prices still also reflect the a variety of supply and demand dynamics which could be different to that of the East Coast gas market. There are a range of other factors related to local demand and supply conditions and commercial and other arrangements that also play a role, and particularly in southern East Coast gas markets, those local conditions are the overwhelming influence, with international market trends and LNG netback pricing only playing a partial role.

Further, comparing medium or long term domestic gas contracts (those beyond the prompt 2 years), which are agreed in what is generally a lumpy and relatively shallow domestic gas market, with short-term spot prices in the much larger and more liquid Asian LNG market can provide a misleading view of the relationship between Asian LNG spot prices and the price outcomes that can be expected in the domestic gas market.

All of this means that while LNG netback prices are a factor influencing domestic prices, they should not be viewed in isolation. The chart below is a useful example of how LNG netback prices don't always track domestic prices - with recent spikes in LNG netback not reflected domestically. This chart also demonstrates that while over time short term domestic prices trend in line with LNG netback pricing, day on day the correlation is weak as the two market (Australian East Coast domestic and LNG JKM spot) have inherently different influencers.

**Table 1. LNG Netback and WGSB prices**





### **8. The relevance of different international LNG and gas price markets for LNG pricing in key LNG export markets and the east coast gas market.**

There are essentially 3 major suppliers of LNG in the world today: Qatar, the US (Henry Hub), and Australia. Henry Hub (by-product of oil) and Qatar (with a fundamentally different cost base to Australian LNG) leaves Australian LNG as the best benchmark for the East Coast gas market relative to other major LNG suppliers.

As noted by the ACCC, an Asian focussed price market, such as JKM, is and remains the most relevant international price marker for short term (circa up to 2 years) domestic sales. The use of JKM as a price marker reflects the expectation whereby the gas offered in the short term would be from production that, if not sold domestically, would have otherwise resulted in LNG exports which would be predominantly sold into a JKM market. However, it should be noted Brent also has a part to play if we are looking at the longer term where the applicability of JKM as a marker diminishes.

As EnergyQuest's *March 2021 Quarterly Report*<sup>1</sup> shows, in the December quarter 2020, all of the exports from Australia's east coast LNG facilities were destined for Asia, with the destinations for Queensland LNG cargoes in the fourth quarter of 2020 being China (4.2 Mt), Korea (1.0 Mt), Japan (0.6 Mt), Malaysia (0.4 Mt) and Singapore and India (1 cargo each of just under 0.1 Mt). As the report notes, exports from Gladstone, for example, continue to be important to China. In the fourth quarter of 2020, 22 per cent of all of China's LNG imports were supplied from Gladstone.

#### *Henry Hub*

Shell does not support the use of the US Henry Hub for calculating the LNG netback price series. The fundamentals of the supply side in the US are vastly different to Australia given that the gas is largely a by-product of liquids rich fracking compared to very lean CSG in Queensland. For this reason alone, the economics are not comparable. In addition, prices at Henry Hub are subject to local, that is, US demand and supply conditions, which have nothing to do with market conditions in Asian LNG markets or in domestic markets in Australia.

Queensland LNG cargoes are focussed into the Asian market, which is why the JKM netback has been an influencing factor on short term domestic gas prices on the East Coast. The market fundamentals of Henry Hub are the product of a transparent and liquid gas market with an extensive network of infrastructure giving access to the US, Canada and Mexico. It offers interconnections into nine intrastate and four interstate pipelines that provide supply to the whole country, while direct connections into three storage caverns add further flexibility, allowing gas to be traded.

Further it is worth noting Queensland's liquefaction costs are sunk and US Gulf Coast liquefaction is on a tolling basis which includes a capital recovery charge.

#### *Title Transfer Facility*

The Title Transfer Facility, more commonly known as TTF, is a virtual trading point for natural gas in the Netherlands. TTF has really grown in the recent years as a liquid gas price index whereas NBP (in the

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<sup>1</sup> EnergyQuest (2021), *March 2021 Quarterly Report*, page 124 (see also [www.energyquest.com.au/another-australian-lng-export-record-in-2020](http://www.energyquest.com.au/another-australian-lng-export-record-in-2020)).



UK) has not, see table below on Churn Rates table below. TTF is often looked at together with JKM as flexible US supply can be delivered to either location (subject to the challenges of the Panama Canal) and literature can be found that analyzes the spreads and how it fluctuates with the seasons and supply and demand dynamics. That said, TTF’s relevance and contribution to increasing the transparency of gas prices in the East Coast gas market would be limited.

Table 3: Churn rates - 2019

2019		TRADED GAS HUBS CHURN RATES*				
HUB	2008	2011	2017	2018	2019	
TTF	3.3	13.9	54.3	70.9	97.1	
NBP	14.4	19.8	23.9	17.0	14.3	
VTP	CEGH 2.4	CEGH 2.2	5.3	6.9	9.0	
NCG	0.4	1.8	3.4	3.8	4.3	
GPL		0.8	2.6	2.8	2.9	
TRF	FRANCE 0.4	FRANCE 1.0	PEG N 1.7 TRS 0.6	1.7	2.0	
ZEE+ZTP	5.1	4.1	2.9	3.3	1.9	
PSV	0.2	0.2	1.2	1.4	1.8	
VOB	n/a	n/a	1.1	0.9	1.0	
PVB	n/a	n/a	0.2	0.3	0.3	

\*Calculated on a Net Market Churn basis; not the same methodology in all years.

Sources: 2008: Heather (2010), Table 6, p.19; Komlev presentation 2011; calculated from BP and IEA; 2011-2019: LEBA, ICIS, ICE, ICE-Endex, EEX, Powernext, PEGAS, CME, CEGH, GME; MIBGAS; P. Heather

[European-Traded-gas-hubs-the-supremacy-of-TTF.pdf \(oxfordenergy.org\)](http://oxfordenergy.org/European-Traded-gas-hubs-the-supremacy-of-TTF.pdf)

**9. Whether the relevance of different LNG and gas price markets is different for short-term versus long-term LNG netback prices.**

AND

**10. Whether the relevance of different LNG and gas price markets, for the LNG netback price series, is likely to change over time**

Australian supply is expected to be primarily delivered to the Asia Pacific basin as demand is expected to continue and the US and Qatar can more easily be divert to Europe versus Australia due to distance. Therefore, having regard to the international price of LNG prevailing in Asia makes sense.

**Approximate Distances between Loading Ports and Discharge Ports**

(Distance in Nautical Miles)		Destination	
		Japan, Tokyo	Europe, Netherlands
Loading Port	Australia, Gladstone	3,700	12,100
	Qatar	6,500	6,300
	USA, Gulf of Mexico	9,200	4,900

Source: S&P Global Platt’s Portworld

**11. Whether the ACCC should consider additional methodological approaches, such as averaging, to account for the impact of price volatility of price markers on calculated LNG netback prices.**

We do not see this as adding more value.





**12. Any other issues that should be considered when determining which LNG and gas reference price should be used for the ACCC LNG netback price series**

It is also important to consider there are a range of factors that influence prices offered to domestic gas customers. Factors include: the cost of transportation; the cost of gas production; the 'non-price' terms C&I customers request in their gas supply agreement, retailer costs, margins and the length of contractual terms.

An important shortcoming of a benchmark price approach is its inability to properly account for the risks associated with the specific needs of a buyer, including but not limited to: daily (Maximum Daily Quantity vs. Annual Contract Quantity/365) and annual flexibilities (take or pay % vs. Annual Contract Quantity); flexibility to re-nominate, credit worthiness of buyer etc.

The price for an individual deal is also reflective of factors such as buyer alternatives and 'market price'. Additionally, LNG netbacks represent a sub-section of sellers and are not the only drivers for domestic prices.

*Price basis risk*

There is a price basis risk (e.g. A\$/GJ vs. LNG (term LNG, oil or JKM) netback) once a domestic sale is locked in.

The LNG spot market can be volatile and depends on many global factors and may change significantly (as acknowledged by the ACCC) depending on the inherent uncertainties of any LNG spot price outlook.

To value a domestic opportunity in A\$/GJ versus its opportunity cost, an LNG project would have to assume a certain oil price, JKM price, US\$/A\$ outlook. For example, a domestic deal struck for a fixed term in A\$/GJ with no re-openers, will mean it will need to have a risk premium to address the volatility of FX and oil and JKM during the contract term.

*Volume basis risk/flexibility*

Consideration is also given to the volume risk premium of making additional firm supply commitments when production is uncertain. Gas produced from unconventional sources is inherently more uncertain than from conventional sources. Greater risk mitigation measures would therefore need to be considered including, but not limited to, additional risk premiums in the price, shorter durations of supply, and pass through of upstream uncertainty to the buyer.

LNG exports are also structured with more flexibility, unlike pipe gas, which has an increased risk due to its immediacy. There are more opportunities to manage a shortfall in LNG cargoes by stored inventory, flexibility to speed up or slow down ships and relative ease of procuring replacement cargoes (LNG & ships) from the global market.

### **3. LNG freight costs**



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| 13. Available data sources for longer-term LNG freight rates (beyond a period of two years) and whether the appropriate data source would be different if different international LNG and gas price markers were used to calculate LNG netback prices.<br>14. Whether northeast Asia should be considered the appropriate delivery location for the purposes of estimating LNG freight costs for LNG exported from Gladstone<br>15. Any other issues that should be considered when sourcing longer-term LNG freight rates |
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**13. Available data sources for longer-term LNG freight rates (beyond a period of two years) and whether the appropriate data source would be different if different international LNG and gas price markers were used to calculate LNG netback prices.**

Views on longer-term LNG freight rates and on the future costs of ships and technology (which sets the boil off rate/cost) are primarily from consultant reports as there are no publicly available quotes for long term LNG freight rates.

In terms of whether the data source would be different if different international LNG and gas price markets were used, as outlined earlier in this submission we have significant concerns in using different international LNG and gas price markers.

**14. Whether northeast Asia should be considered the appropriate delivery location for the purposes of estimating LNG freight costs for LNG exported from Gladstone**

This is broadly ok, however, there are deliveries to other customers. It is important to remember that the delivery location is really driven by the location of the LNG Price in the netback formula (e.g. North East Asia price assessment requires a North East Asia shipping assessment).

**15. Any other issues that should be considered when sourcing longer-term LNG freight rates**

We note a need to recognize relativity of significance a single component has in the pricing of domestic gas. As stated previously, it is our view that the LNG netback price is a component to have regard to when considering domestic gas pricing, but it is not the only factor as local market dynamics need also to be considered. With that in mind, we consider what relativity of movements in long term LNG freight rates should actually be for consideration with domestic pricing. That is, are we concerned with long term changes in LNG freight rates that impact an LNG netback curve by only a few cents.

#### **4. Conversion to \$AUD/GJ**

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| 16. Whether the ACCC's current approach to converting FOB LNG prices to \$AUD/GJ is appropriate<br>17. Alternative approaches that should be considered by the ACCC<br>18. Any other issues that should be considered when converting FOB LNG prices to \$AUD/GJ |
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No comments

#### **5. LNG Plant Costs**

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| 19. Whether the ACCC's current approach to deducting LNG plant and liquefaction costs is appropriate. |
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20. How LNG plant and liquefaction costs should be accounted for when calculating the LNG netback price series
21. Whether different approaches to LNG plant costs should be used for different reference price markets.
22. Whether different approaches to LNG plant costs should be used for short-term and longer-term LNG netback prices.
23. Any other issues that should be considered when accounting for LNG plant and liquefaction costs.

**19. Whether the ACCC's current approach to deducting LNG plant and liquefaction costs is appropriate.**

**And**

**20. How LNG plant and liquefaction costs should be accounted for when calculating the LNG netback price series**

The current approaches used by the ACCC are appropriate. In particular, the ACCC's approach to deducting avoidable costs, set out on pages 15 and 16 of the Issues Paper is appropriate and tied to the opportunity cost concept that underpins LNG netback pricing. That is, the costs associated with producing and shipping LNG that would be avoided, or not incurred, by LNG producers if excess gas that would otherwise be avoided, or not incurred, by LNG producers if excess gas that would otherwise be exported as LNG were instead supplied to the domestic market. This means that the approach correctly:

*... does not deduct any costs that are fixed over the short-term, nor any of the capital costs incurred by the LNG producers to build the LNG facilities, since costs that cannot be avoided in the short-run would not be expected to be taken into account when making short-run commercial decisions. That is, it would be expected that when an LNG exporter is deciding whether to sell excess gas to the domestic market or for export, it would do so on the basis of a comparison between the effective price that would be received for an LNG spot cargo and the domestic gas price.*

This approach is consistent with the conceptual underpinning for an LNG netback pricing calculation and the opportunity cost approach. It should be maintained by the ACCC.

We note a number of gas users have suggested that the ACCC should also deduct from the LNG netback price a component to reflect the capital costs associated with developing and constructing the LNG plants.

Shell is strongly against this proposal. Changes such as this would significantly disadvantage LNG producers who have already sunk large capital costs in building LNG plants and associated infrastructure. It could have flow on implications for further developments, particularly in new provinces or hubs, where material development scale is required to unlock these resources. Further, if these costs were not included in the LNG netback price then a gas supplier would no longer be indifferent between supplying gas to the domestic market or to LNG export markets (as one market would not cover all costs).



**21. Whether different approaches to LNG plant costs should be used for different reference price markets.**

Shell does not support using different price markers.

**22. Whether different approaches to LNG plant costs should be used for short-term and longer-term LNG netback prices.**

No, as stated above, the plant cost calculations should remain as currently calculated by the ACCC.

**6. Pipeline transportation costs**

- 24. Whether the ACCC's current approach to deducting pipeline transportation costs is appropriate.
- 25. How pipeline transportation costs should be accounted for when calculating the LNG netback price series.
- 26. Whether different approaches to pipeline costs should be used for short-term versus longer-term LNG netback prices
- 27. Any other issues that should be considered when accounting for pipeline transportation costs.

**24. Whether the ACCC's current approach to deducting pipeline transportation costs is appropriate.**

Shell does not have specific issues to raise on this issue, except to recognize that each project will be different in terms of onshore transportation costs and this needs to be considered in any interpretation and/or use of the LNG netback formula.

**25. How pipeline transportation costs should be accounted for when calculating the LNG netback price series.**

The ACCC's current approach is appropriate given the LNG netback price at Wallumbilla is a price that LNG projects would have regard to as there may not be a single number as transportation cost could vary by LNG project and also specific transactions. For example, if gas from a project requires transport through third party pipelines to get to Wallumbilla.